Citric Acid and Certain Citrate Salts from Belgium, Colombia, and Thailand

Investigation Nos. 731-TA-1374-1376 (Review)

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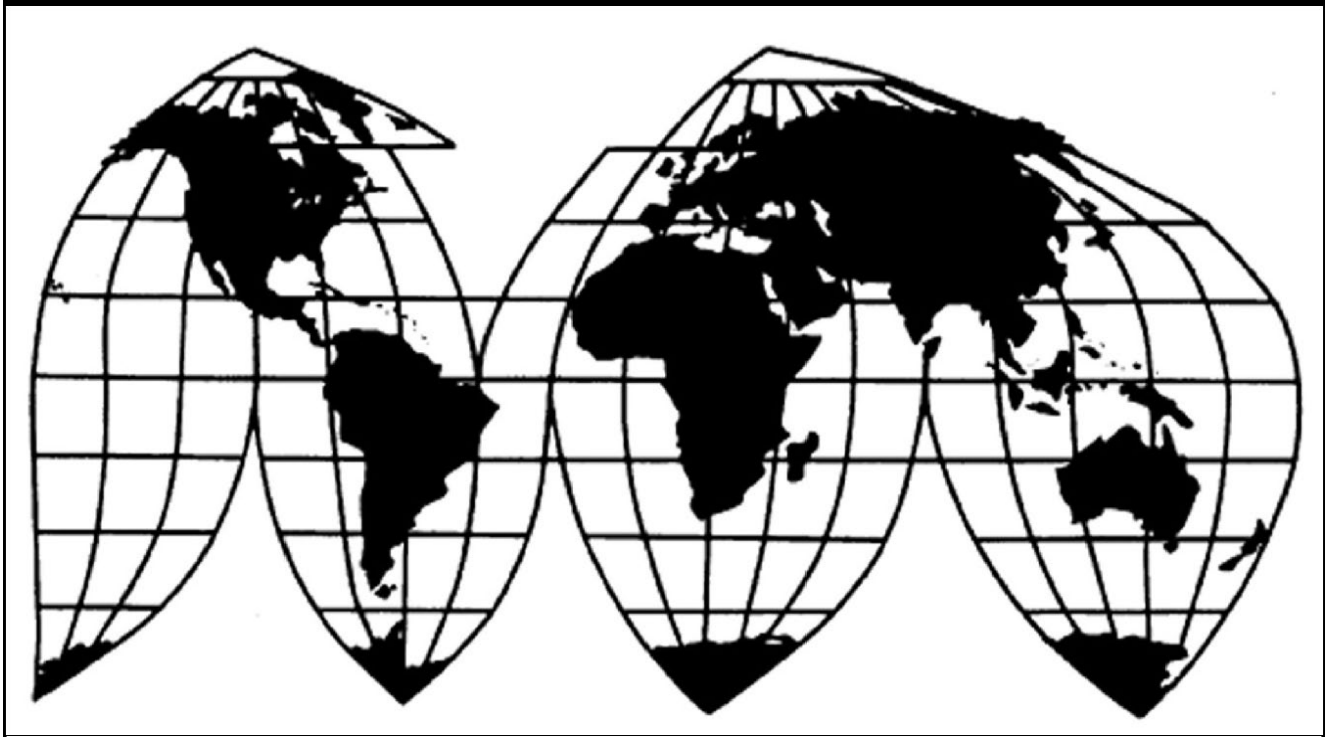
U.S. International Trade Commission



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U.S. International Trade Commission

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UNITED STATES INTERNATIONAL TRADE COMMISSION

Investigation Nos. 731-TA-1374-1376 (Review)

Citric Acid and Certain Citrate Salts from Belgium, Colombia, and Thailand

DETERMINATIONS

On the basis of the record[1] developed in the subject five-year reviews, the United States International Trade Commission ("Commission") determines, pursuant to the Tariff Act of 1930 ("the Act"), that revocation of the antidumping duty orders on citric acid and certain citrate salts from Belgium, Colombia, and Thailand would be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.

BACKGROUND

The Commission instituted these reviews on June 1, 2023 (88 FR 35923) and determined on September 5, 2023 that it would conduct full reviews (88 FR 66052, September 26, 2023). Notice of the scheduling of the Commission's reviews and of a public hearing to be held in connection therewith was given by posting copies of the notice in the Office of the Secretary, U.S. International Trade Commission, Washington, DC, and by publishing the notice in the *Federal Register* on November 21, 2023 (88 FR 81099). Since the domestic interested parties submitted a request to cancel the hearing after no other party submitted a request to appear, the public hearing in connection with these reviews, scheduled for May 16, 2024, was cancelled (89 FR 44707).

[1] The record is defined in § 207.2(f) of the Commission's Rules of Practice and Procedure (19 CFR 207.2(f)).

Views of the Commission

Based on the record in these five-year reviews, we determine under section 751(c) of the Tariff Act of 1930, as amended ("the Tariff Act"), that revocation of the antidumping duty orders on citric acid and certain citrate salts ("CACCS") from Belgium, Colombia, and Thailand would be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.

I. Background

Original Investigations. On June 2, 2017, Archer Daniels Midland Company ("ADM"), Cargill, Incorporated ("Cargill"), and Tate & Lyle Ingredients Americas, LLC ("Tate & Lyle"), filed antidumping duty petitions on CACCS from Belgium, Colombia, and Thailand and a countervailing duty petition on CACCS from Thailand.[1] In July 2018, the Commission determined that a domestic industry in the United States was materially injured by reason of imports of CACCS from Belgium, Colombia, and Thailand that were found by the U.S. Department of Commerce ("Commerce") to be sold in the United States at less than fair value ("LTFV").[2] On July 25, 2018, Commerce issued antidumping duty orders on CACCS from Belgium, Colombia, and Thailand.[3]

Current Reviews. On June 1, 2023, the Commission instituted these five-year reviews.[4] There were two responses to the notice of institution, a joint response from ADM, Cargill, and Primary Products Ingredients Americas LLC ("Primient")[5] (collectively, the "Domestic

[1] Confidential Report, Memorandum INV-WW-062, EDIS Doc. 823591 (June 12, 2024) ("CR"); *Citric Acid and Certain Citrate Salts from Belgium, Colombia, and Thailand*, Inv. Nos. 731-TA-1374-1376 (Review), USITC Pub. 5507 (July 2024) ("PR") at I-2.

[2] *Citric Acid and Certain Citrate Salts from Belgium, Colombia, and Thailand*, Inv. Nos. 731-TA-1374-1376 (Final), USITC Pub. 4799 (July 2018) ("*Original Determinations*"). On June 5, 2018, Commerce determined that countervailable subsidies were not being provided to producers and exporters of CACCS from Thailand. *Citric Acid and Certain Citrate Salts from Thailand: Final Negative Countervailing Duty Determination, and Final Negative Critical Circumstances Determination*, 83 Fed. Reg. 26,004 (June 5, 2018). The Commission subsequently terminated its countervailing duty investigation regarding CACCS from Thailand. *Citric Acid and Certain Citrate Salts from Thailand; Termination of Investigation*, 83 Fed. Reg. 26,004 (June 15, 2018).

[3] *Citric Acid and Certain Citrate Salts from Belgium, Colombia and Thailand: Antidumping Duty Orders*, 83 Fed. Reg. 35,214 (July 25, 2018).

[4] *Citric Acid and Certain Citrate Salts from Belgium, Colombia, and Thailand; Institution of Five-Year Reviews*, 88 Fed. Reg. 35,923 (June 1, 2023).

[5] Primient was established after Tate & Lyle PLC ("Tate & Lyle") sold a majority interest in its primary products division to KPS Capital Partners LP in April 2022. CR/PR at III-13 n.10, Tables III-1-2.

Producers") and a response from Citribel N.V. ("Citribel"), a Belgian producer and exporter of subject merchandise.[6] The Commission did not receive responses to the notice of institution from any producers, exporters, or U.S. importers of CACCS from Colombia or Thailand. On September 5, 2023, the Commission determined to conduct a full review of the order on CACCS from Belgium after finding the domestic interested party group response and the respondent interested party group response from Belgium adequate.[7] Although the Commission found the respondent interested party group responses from Colombia and Thailand inadequate, in light of its decision to conduct a full review of the order with respect to CACCS from Belgium, it also determined to conduct full reviews of the orders on CACCS from Colombia and Thailand to promote administrative efficiency.[8]

The Commission received joint prehearing and posthearing briefs, including responses to the Commission's written questions, as well as final comments from Domestic Producers.[9]

Only two respondent entities participated in these reviews. The Commission received a prehearing brief and a response to its written questions from Citribel.[10] It also received a prehearing brief, a response to its written questions, and final comments from The Coca-Cola Company Trading Company, LLC ("TCCTC"), a U.S. purchaser of subject merchandise.[11]

U.S. industry data are based on the questionnaire responses of three U.S. producers of CACCS that are believed to account for all domestic production of CACCS in 2023.[12] U.S. import data and related information are based on Commerce's official import statistics (used to

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[6] Domestic Producers' Response to Notice of Institution, EDIS Doc. 799744 (July 3, 2023); Citribel's Response to Notice of Institution, EDIS Doc. 799768 (July 3, 2023).

[7] *Citric Acid and Certain Citrate Salts from Belgium, Colombia, and Thailand; Notice of Commission Determinations to Conduct Full Five-Year Reviews*, 88 Fed. Reg. 66,052 (Sept. 26, 2023).

[8] *Citric Acid and Certain Citrate Salts from Belgium, Colombia, and Thailand; Notice of Commission Determinations to Conduct Full Five-Year Reviews*, 88 Fed. Reg. 66,052 (Sept. 26, 2023).

[9] Domestic Producers' Prehearing Brief, EDIS Doc. 820613 (May 6, 2024) ("Domestic Producers' Prehearing Br."); Domestic Producers' Posthearing Brief, EDIS Doc. 822367 (May 28, 2024) ("Domestic Producers' Posthearing Br."); Domestic Producers' Final Comments, EDIS Doc. 824279 (June 24, 2024). At the Domestic Producers' request, the Commission cancelled the hearing in these reviews and instead issued written questions. *Citric Acid and Certain Citrate Salts from Belgium, Colombia, and Thailand; Cancellation of Hearing for Full Five-Year Reviews*, 89 Fed. Reg. 44,707 (May 13, 2024).

[10] Citribel's Prehearing Brief, EDIS Doc. 820610 (May 6, 2024) ("Citribel's Prehearing Br."); Citribel's Response to Written Questions, EDIS Doc. 822363 (May 28, 2024) ("Citribel's Response to Written Questions").

[11] TCCTC's Prehearing Brief, EDIS Doc. 820636 (May 6, 2024) ("TCCTC's Prehearing Br."); TCCTC's Response to Written Questions, EDIS Doc. 822356 (May 28, 2024) ("TCCTC's Response to Written Questions"), TCCTC's Final Comments, EDIS Doc. 824256 (June 24, 2024).

[12] CR/PR at I-9-10. The three U.S. producers are ADM, Cargill, and Primient.

calculate subject import volume and apparent U.S. consumption) and the questionnaire responses of eleven U.S. importers of CACCS that accounted for 18.1 percent of all subject imports and 45.5 percent of total U.S. imports in 2023.[13] Foreign industry data and related information are based on the questionnaire responses of one producer of CACCS in Belgium in 2023, accounting for approximately *** percent of total production in Belgium, and one producer of CACCS in Colombia, accounting for approximately *** percent of the total production of CACCS in Colombia in 2023.[14] As no questionnaire response was received from any producer or exporter in Thailand, information on the subject industry in Thailand is based upon information submitted by the parties and public information compiled by the Commission.

Related Investigations. ADM, Cargill, and Tate & Lyle filed an antidumping duty petition on imports of CACCS from China in 1999, which was terminated after the Commission made a negative determination in the preliminary phase of the investigation.[15] Then, in 2008, the same three companies filed antidumping and countervailing duty petitions on imports of CACCS from Canada and China.[16] Both Commerce and the Commission made affirmative determinations in the investigations, leading to the imposition of a countervailing duty order on CACCS from China and antidumping duty orders on CACCS from Canada and China that remain in effect.[17]

[13] CR/PR at IV-1. Official import statistics are based on HTS statistical reporting numbers 2918.14.0000, 2918.15.1000, and 2918.15.5000, adjusted with proprietary, Census-edited Customs data for the same HTS statistical reporting numbers to report the quantities from Canada, which are redacted and not available in official U.S. import statistics. *Id*. at IV-1 n.1. Responding importers accounted for *** percent of the subject imports from Belgium, *** percent of the subject imports from Colombia, and *** percent of the subject imports from Thailand. *Id*. at IV-1.

[14] CR/PR at IV-29, IV-41.

[15] CR/PR at Table I-2; *Original Determinations*, USITC Pub. 4799 at 4.

[16] CR/PR at Table I-2; *Original Determinations*, USITC Pub. 4799 at 4.

[17] CR/PR at Table I-2; *Original Determinations*, USITC Pub. 4799 at 4.

II. Domestic Like Product and Industry

A. Domestic Like Product

In making its determination under section 751(c) of the Tariff Act, the Commission defines the "domestic like product" and the "industry."[18] The Tariff Act defines "domestic like product" as "a product which is like, or in the absence of like, most similar in characteristics and uses with, the article subject to an investigation under this subtitle."[19] The Commission's practice in five-year reviews is to examine the domestic like product definition from the original investigation and consider whether the record indicates any reason to revisit the prior findings.[20]

Commerce has defined the imported merchandise within the scope of the orders under review as follows:

> All grades and granulation sizes of citric acid, sodium citrate, and potassium citrate in their unblended forms, whether dry or in solution, and regardless of packaging type. The scope also includes blends of citric acid, sodium citrate, and potassium citrate; as well as blends with other ingredients, such as sugar, where the unblended form(s) of citric acid, sodium citrate, and potassium citrate constitute 40 percent or more, by weight, of the blend.
>
> The scope also includes all forms of crude calcium citrate, including dicalcium citrate monohydrate, and tricalcium citrate tetrahydrate, which are intermediate products in the production of citric acid, sodium citrate, and potassium citrate.
>
> The scope includes the hydrous and anhydrous forms of citric acid, the dihydrate and anhydrous forms of sodium citrate, otherwise known as citric acid sodium salt, and the monohydrate and monopotassium forms of potassium citrate. Sodium citrate also includes both trisodium citrate and monosodium citrate which are also known as citric acid trisodium salt and citric acid monosodium salt, respectively.

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[18] 19 U.S.C. § 1677(4)(A).

[19] 19 U.S.C. § 1677(10); *see*, *e.g., Cleo Inc. v. United States*, 501 F.3d 1291, 1299 (Fed. Cir. 2007); *NEC Corp. v. Dep't*, 36 F. Supp. 2d 380, 383 (Ct. Int'l Trade 1998); *Nippon Steel Corp. v. United States*, 19 CIT 450, 455 (1995); *Timken Co. v. United States*, 913 F. Supp. 580, 584 (Ct. Int'l Trade 1996); *Torrington Co. v. United States*, 747 F. Supp. 744, 748-49 (Ct. Int'l Trade 1990), *aff'd*, 938 F.2d 1278 (Fed. Cir. 1991); *see also* S. Rep. No. 249, 96th Cong., 1st Sess. 90-91 (1979).

[20] *See*, *e.g.*, *Internal Combustion Industrial Forklift Trucks from Japan*, Inv. No. 731-TA-377 (Second Review), USITC Pub. 3831 (Dec. 2005) at 8-9; *Crawfish Tail Meat from China*, Inv. No. 731-TA-752 (Review), USITC Pub. 3614 (July 2003) at 4; *Steel Concrete Reinforcing Bar from Turkey*, Inv. No. 731-TA-745 (Review), USITC Pub. 3577 (Feb. 2003) at 4.

> The scope does not include calcium citrate that satisfies the standards set forth in the United States Pharmacopeia and has been mixed with a functional excipient, such as dextrose or starch, where the excipient constitutes at least 2 percent, by weight, of the product.
>
> Citric acid and sodium citrate are classifiable under 2918.14.0000 and 2918.15.1000 of the Harmonized Tariff Schedule of the United States (HTSUS), respectively. Potassium citrate and crude calcium citrate are classifiable under 2918.15.5000 and, if included in a mixture or blend, 3824.99.9397 of the HTSUS. Blends that include citric acid, sodium citrate, and potassium citrate are classifiable under 3824.99.9397 of the HTSUS. Although the HTSUS subheadings are provided for convenience and customs purposes, the written description of the merchandise is dispositive.[21]

The scope definition set out above is substantively unchanged from the original investigations. Commerce has not issued any scope rulings concerning these orders since the original investigations.[22]

Crude calcium citrate is an intermediate product that is internally consumed for the production of citric acid, and citric acid is used to produce sodium citrate and potassium citrate.[23] Each may be produced in more than one chemical form.[24] Citric acid, sodium citrate, and potassium citrate are all available as odorless, translucent crystals.[25] They are also all available in either dry form or solution.[26] In their dry form, they are sold as either granular, fine granular, or powder products.[27] Both liquid and dry forms can be easily converted to the other and purchasers sometimes buy the dry product and put it into a solution at their own facilities or at the facilities of an independent converter.[28] Whether dry or dissolved in water, the product's chemical properties are the same.[29]

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[21] *Citric Acid and Certain Citrate Salts from Belgium: Final Results of the Sunset Review of the Antidumping Duty Order*, 88 Fed. Reg. 88,361 (Dec. 21, 2023*); Citric Acid and Certain Citrate Salts from Thailand and Colombia: Final Results of the Expedited First Sunset Reviews of the Antidumping Duty Orders*, 88 Fed. Reg. 67,239 (Sept. 29, 2023).

[22] CR/PR at I-12.

[23] CR/PR at I-20-22.

[24] *See* CR/PR at I-16.

[25] CR/PR at I-15.

[26] CR/PR at I-15.

[27] CR/PR at I-15.

[28] CR/PR at I-15.

[29] CR/PR at I-15.

Citric acid, sodium citrate, and potassium citrate are each used in food and beverage products,[30] in pharmaceutical applications,[31] and in industrial uses.[32] Citric acid, sodium citrate, and potassium citrate must meet Food Chemical Codex standards for use in beverage and food products in the United States and U.S. Pharmacopeia standards for use in pharmaceutical products in the United States.[33]

CACCS are generally categorized as being either genetically modified organism ("GMO") or non-GMO, predicated on the feedstock (or substrate) used in the production of the CACCS.[34] There are multiple certifications available to producers to document that their products are non-GMO.[35] One such certification is "Non-GMO Project" certification (or verification), which is based on a number of factors, including the feedstock being non-GMO, and enables companies to use the "Butterfly logo" on their product labels.[36] Non-GMO Project certification is generally necessary for CACCS sold to customers who want to obtain Non-GMO Project certification for their own downstream products.[37] According to Domestic Producers, other non-GMO certifications include Societe Generale de Surveillance SA ("SGS") and National Sanitation

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[30] Citric acid is used in foods and beverages (such as carbonated and non-carbonated drinks, dry powdered beverages, wine and wine coolers, jams, jellies, preserves, gelatin desserts, candies, frozen foods, and canned fruits and vegetables) as an acidulant, preservative, and flavor enhancer because of its tartness, high solubility, acidity, and buffering capabilities. Sodium citrate is used for carbonated beverages, dry beverage mixes, fruit drinks, jams, jellies, preserves, gelatin desserts, and candies, and in cheese and dairy products (to improve emulsifying properties, texture, and melting properties and to act as a preservative and aging agent). Potassium citrate can be used for many of the same food and beverage applications as sodium citrate, particularly for no- or low-sodium content products. CR/PR at I-17.

[31] Citric acid is used in pharmaceuticals and cosmetics and sodium citrate is used in pharmaceuticals as an expectorant in cough syrups and in over-the-counter antacids. Potassium citrate is also used in pharmaceutical applications as an antacid, a diuretic, and an expectorant, in dietary supplements, to treat kidney stones, and as a systemic and urinary alkalizer. CR/PR at I-17.

[32] CR/PR at I-17. Citric acid is used in industrial applications such as household detergents, metal finishers and cleaners, and durable press textile finishing treatments. Sodium citrate also is used in household cleaner products to act as a buffering agent and metal ion sequestrant, and potassium citrate also can be used in electropolishing and as a buffering agent. *Id*.

[33] CR/PR at I-17.

[34] CR/PR at II-1.

[35] CR/PR at I-17-18.

[36] CR/PR at I-17-18. Non-GMO Project certified means that a product is compliant with the Non-GMO Project standard, which includes stringent provisions for testing, traceability, and segregation. *Id*. at IV-8 n.7. Only Non-GMO Project certified products are allowed to use the verification mark, *i.e.*, the Butterfly logo. *Id*.

[37] CR/PR at I-17-18.

Foundation ("NSF"), which, unlike Non-GMO Project certification, will certify CACCS produced with GMO feedstocks as non-GMO when the CACCS have no trace of the GMO ingredient.[38]

Although U.S. producers primarily use GMO corn as their feedstock,[39] domestically produced CACCS can qualify as non-GMO CACCS because the ***.[40] The record indicates that at least two of the three U.S. producers qualified some of their CACCS for non-GMO certification during the period of review ("POR").[41] *** reported that *** of its CACCS are certified as non-GMO by *** and an executive of *** reported that ***.[42] However, *** obtained Non-GMO Project certification for their domestically produced CACCS due to their feedstocks primarily being GMO.[43]

Sucroal and Citribel, the only subject producers in Belgium and Colombia, respectively, report that *** percent of their CACCS received Non-GMO Project certification.[44] The record is less clear with respect to subject imports from Thailand. U.S. importers accounting for *** of total subject imports from Thailand reported that they were Non-GMO Project certified CACCS, but the record contains no information on the remainder, as no subject producer in Thailand responded to the Commission's questionnaire.[45]

Original Investigations. After finding that there was no new information on the record of the final phase of the investigations that would alter its definition of the domestic like product from the preliminary phase investigations, the Commission defined a single domestic like product consisting of the CACCS products corresponding to the scope of the investigations,

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[38] Domestic Producers' Posthearing Br. at Exh. 1 (Responses to Commission Questions at 11-16); CR/PR at IV-8 n.7. Domestic Producer's mentioned Eurofins as another non-GMO certification. *Id*. at Exh. 1 (Responses to Commission Questions at 8-10, 15-16).

[39] CR/PR at I-19.

[40] Domestic Producers' Posthearing Br. at Exh. 4 (Declaration of David Durkee of ADM at 2), Exh. 5 (Declaration of Chris Zeager of Primient at 2). These statements appear to be substantiated by the U.S. Department of Agriculture's ("USDA") National Bioengineered Food Disclosure Standard, effective January 1, 2022, as the USDA on its website states that bioengineered foods (or genetically modified foods) are foods that contain detectable genetic material that has been modified. CR/PR at I-18.

[41] U.S. producers' U.S. shipments in 2023 were *** percent) "Other non-GMO certified" CACCS and *** percent) "GMO" CACCS. CR/PR at Table IV-2.

[42] CR/PR at I-18; Domestic Producers' Posthearing Br. at 9-10, Exh. 4 (Declaration of David Durkee of ADM at 2).

[43] CR/PR at I-19.

[44] CR/PR at I-19.

[45] CR/PR at I-24, IV-51, Table IV-2.

including crude calcium citrate, citric acid, sodium citrate, and potassium citrate in all chemical and physical forms, and no party argued otherwise.[46]

Current Reviews. Domestic Producers argue that the Commission should again define a single domestic like product consisting of all CACCS, coextensive with the scope, as it did in the original investigations.[47] No respondent argues for a different definition, and no respondent requested that the Commission collect data concerning other possible like products in their comments on the Commission's draft questionnaires in the current reviews.[48]

The record in these reviews does not indicate that the pertinent characteristics and uses of domestically produced CACCS have changed since the original investigations so as to warrant revisiting of the domestic like product as defined in the original investigations.[49] Consequently, we again define a single domestic like product consisting of crude calcium citrate, citric acid, sodium citrate, and potassium citrate in all chemical and physical forms, coextensive with Commerce's scope.

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[46] *Original Determinations*, USITC Pub. 4799 at 9. In the preliminary phase of the investigations, the Commission found that there was a spectrum or grouping of domestically produced products corresponding to the scope of the investigations without clear dividing lines based on chemical or physical form, grade (food, pharmaceutical, or industrial and genetically modified organism ("GMO"), non-GMO, or verified non-GMO), or product type (citric acid or citrate salts). *Citric Acid and Certain Citrate Salts from Belgium, Colombia, and Thailand*, Inv. Nos. 701-TA-581 and 731-TA-1374-1376 (Preliminary), USITC Pub. 4710 (July 2017) at 10. It also found that, whether in an intermediate form as crude calcium citrate, as citric acid, or transformed into sodium citrate or potassium citrate, CACCS came in a variety of chemical and physical forms and grades for a variety of end uses, and physical appearance varies accordingly. *Id*. The Commission observed that crude calcium citrate, citric acid, and citrate salts have similar chemical composition and that, whereas crude calcium citrate is only used to produce citric acid, some citric acid is used to produce sodium citrate or potassium citrate. *Id*. It also observed that citric acid, sodium citrate, and potassium citrate were all used as buffers, acidulants, and preservatives and in some of the same food and beverage applications. *Id*. Thus, while citric acid, sodium citrate, and potassium citrate were not substitutable in applications, the Commission found that they were used in an overlapping manner in some of the same types of end products. *Id*. Further, it explained that a lack of interchangeability among types of products along the spectrum, or included in a grouping of similar products, is not unexpected. *Id*. The Commission accordingly defined a single domestic like product consisting of the CACCS products corresponding to the scope of the investigations, including crude calcium citrate, citric acid, sodium citrate, and potassium citrate in all chemical and physical forms. *Id*. at 11.

[47] Domestic Producers' Prehearing Br. at 8.

[48] CR/PR at I-22.

[49] *See generally* CR/PR at I-15-19. Although most market participants reported no changes in end uses, a minority indicated changes such as CACCS being increasingly used as catalyst in biodiesel fuel and changes in blending and product mix. *Id*. at II-10-11.

B. Domestic Industry

Section 771(4)(A) of the Tariff Act defines the relevant industry as the domestic "producers as a whole of a domestic like product, or those producers whose collective output of a domestic like product constitutes a major proportion of the total domestic production of the product."[50] In defining the domestic industry, the Commission's general practice has been to include in the industry producers of all domestic production of the like product, whether toll-produced, captively consumed, or sold in the domestic merchant market.

Original Investigations. The Commission defined the domestic industry as all U.S. producers of CACCS.[51]

Current Reviews. Domestic Producers argue that the Commission should define the domestic industry as all U.S. producers of CACCS.[52] The record indicates that there are no related parties issues in these reviews, and no respondent addressed the issue of the domestic industry definition.[53] Accordingly, consistent with our definition of the domestic like product, we again define the domestic industry as all U.S. producers of CACCS.

III. Cumulation

A. Legal Standard

With respect to five-year reviews, section 752(a) of the Tariff Act provides as follows:

> the Commission may cumulatively assess the volume and effect of imports of the subject merchandise from all countries with respect to which reviews under section 1675(b) or (c) of this title were initiated on the same day, if such imports would be likely to compete with each other and with domestic like products in the United States market. The Commission shall not cumulatively assess the volume and effects of imports of the subject merchandise in a case in which it determines

[50] 19 U.S.C. § 1677(4)(A). The definitions in 19 U.S.C. § 1677 are applicable to the entire subtitle containing the antidumping and countervailing duty laws, including 19 U.S.C. §§ 1675 and 1675a. *See* 19 U.S.C. § 1677.

[51] *Original Determinations*, USITC Pub. 4799 at 9. The Commission found that *** produced citric acid, sodium citrate, and potassium citrate, while *** produced only citric acid. *Id*. Petitioners argued for a single domestic industry consisting of the three producers and no party argued otherwise. *Id*. Further, there were no related parties issues. *Original Determinations*, USITC Pub. 4799 at 9; *Confidential Original Determinations*, EDIS Doc. 801647 at 12.

[52] Domestic Producers' Prehearing Br. at 8-9.

[53] CR/PR at I-23, Table I-12.

that such imports are likely to have no discernible adverse impact on the domestic industry.[54]

Cumulation therefore is discretionary in five-year reviews, unlike original investigations, which are governed by section 771(7)(G)(i) of the Tariff Act.[55] The Commission may exercise its discretion to cumulate, however, only if the reviews are initiated on the same day, the Commission determines that the subject imports are likely to compete with each other and the domestic like product in the U.S. market, and imports from each such subject country are not likely to have no discernible adverse impact on the domestic industry in the event of revocation. Our focus in five-year reviews is not only on present conditions of competition, but also on likely conditions of competition in the reasonably foreseeable future.

B. Original Investigations

The Commission found a reasonable overlap of competition among subject imports from Belgium, Colombia, and Thailand and between subject imports from each source and the domestic like product.[56] It found that subject imports from each subject country were reasonably fungible with the domestic like product and each other, but acknowledged some limitations on the fungibility of GMO and non-GMO CACCS due to certain customers preferring CACCS made from non-GMO substrates.[57] The Commission also found that domestic producers and importers of CACCS from all subject sources sold CACCS in the same geographic markets and similar channels of distribution, namely, to distributors and end users in the food and beverage and industrial sectors throughout the United States.[58] Lastly, it found that subject

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[54] 19 U.S.C. § 1675a(a)(7).

[55] 19 U.S.C. § 1677(7)(G)(i); *see also*, *e.g.*, *Nucor Corp. v. United States*, 601 F.3d 1291, 1293 (Fed. Cir. 2010) (Commission may reasonably consider likely differing conditions of competition in deciding whether to cumulate subject imports in five-year reviews); *Allegheny Ludlum Corp. v. United States*, 475 F. Supp. 2d 1370, 1378 (Ct. Int'l Trade 2006) (recognizing the wide latitude the Commission has in selecting the types of factors it considers relevant in deciding whether to exercise discretion to cumulate subject imports in five-year reviews); *Nucor Corp. v. United States*, 569 F. Supp. 2d 1328, 1337-38 (Ct. Int'l Trade 2008).

[56] *Original Determinations*, USITC Pub. 4799 at 15.

[57] *Original Determinations*, USITC Pub. 4799 at 12-14.

[58] *Original Determinations*, USITC Pub. 4799 at 14-15. U.S. producers and importers of CACCS from Belgium and Colombia sold mainly to end users, and food and beverage represented their largest end-use sector. *Id*. at 14. Importers of CACCS from Thailand sold mainly to distributors, and the portion of their commercial shipments that went to end users varied between the food and beverage and industrial end use sectors. *Id*.

imports from each subject country and the domestic like product were simultaneously present in the U.S. market.[59] The Commission accordingly cumulated subject imports from Belgium, Colombia, and Thailand for purposes of its material injury analysis.[60]

C. Arguments of the Parties

Domestic Producers argue that the Commission should cumulate subject imports from all three countries for purposes of its analysis in these reviews, as it did in the original investigations.[61] Specifically, they contend that imports of CACCS from all three subject countries would each have a discernible adverse impact on the domestic industry upon revocation of the orders, as producers in each subject country would significantly increase exports of CACCS to the U.S. market if the orders were revoked.[62] Domestic Producers claim that the subject foreign producers have large volumes of available capacity, export *** CACCS to third country markets around the world, and would find the U.S. market attractive due to its large size and generally higher prices than other export markets.[63] They also contend that there is a reasonable overlap of competition between subject imports from all subject sources and the domestic like product as well as among subject imports from all subject sources, which is likely to continue if the orders were revoked.[64] Domestic Producers argue that subject imports from all subject sources and the domestic like product are fungible, were sold in the same channels and geographic markets during the POR, and were simultaneously present in the market during the POR.[65] Finally, they submit that subject imports from Belgium, Colombia and Thailand are likely to compete under similar conditions of competition in the U.S. market in the event the orders were revoked.[66]

In contrast, respondent TCCTC argues that the Commission should not cumulate subject imports from Colombia.[67] It contends that subject imports from Colombia are likely to have no discernible adverse impact on the domestic industry because they are Non-GMO Project certified CACCS, which are unavailable from U.S. producers, and will likely continue to be

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[59] *Original Determinations*, USITC Pub. 4799 at 15.
[60] *Original Determinations*, USITC Pub. 4799 at 12.
[61] Domestic Producers' Prehearing Br. at 11; Domestic Producers' Posthearing Br. at 4.
[62] Domestic Producers' Prehearing Br. at 11; Domestic Producers' Posthearing Br. at 2.
[63] Domestic Producers' Prehearing Br. at 11-12.
[64] Domestic Producers' Prehearing Br. at 27.
[65] Domestic Producers' Prehearing Br. at 27-29.
[66] Domestic Producers' Prehearing Br. at 30.
[67] TCCTC's Prehearing Br. at 8-9. No respondents argued that subject imports from Belgium or Thailand should not be cumulated.

unavailable for the reasonably foreseeable future.[68] TCCTC also contends that there is not a likely reasonable overlap of competition between subject imports from Colombia and subject imports from Belgium and Thailand, or between subject imports from Colombia and the domestic like product.[69] It claims that the absence of domestically produced Non-GMO Project certified CACCS limits fungibility with subject imports from Colombia, that subject imports from Colombia and Thailand have different channels of distribution, and that subject imports from Belgium and Colombia are sold to different purchasers.[70]

D. Analysis

In these reviews, the statutory threshold for cumulation is satisfied because all reviews were initiated on the same day: June 1, 2023.[71] In addition, we consider the following issues in deciding whether to exercise our discretion to cumulate the subject imports: (1) whether imports from any of the subject countries are precluded from cumulation because they are likely to have no discernible adverse impact on the domestic industry; (2) whether there is a likelihood of a reasonable overlap of competition among subject imports from the subject countries and the domestic like product; and (3) whether subject imports are likely to compete in the U.S. market under different conditions of competition.

1. Likelihood of No Discernible Adverse Impact

The statute precludes cumulation if the Commission finds that subject imports from a country are likely to have no discernible adverse impact on the domestic industry.[72] Neither the statute nor the Uruguay Round Agreements Act ("URAA") Statement of Administrative Action ("SAA") provides specific guidance on what factors the Commission is to consider in determining that imports "are likely to have no discernible adverse impact" on the domestic industry.[73] With respect to this provision, the Commission generally considers the likely volume of subject imports and the likely impact of those imports on the domestic industry within a reasonably foreseeable time if the orders are revoked. Our analysis for each of the subject

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[68] TCCTC's Prehearing Br. at 10. No respondents addressed the likely discernible adverse impact of subject imports from Belgium and Thailand.

[69] TCCTC's Prehearing Br. at 9. No respondents addressed the likely reasonable overlap of competition between subject imports from Belgium and Thailand.

[70] TCCTC's Prehearing Br. at 9.

[71] *Initiation of Five-Year (Sunset) Reviews*, 88 Fed. Reg. 35,832 (June 1, 2023).

[72] 19 U.S.C. § 1675a(a)(7).

[73] SAA, H.R. Rep. No. 103-316, vol. I at 887 (1994).

countries takes into account, among other things, the nature of the product and the behavior of subject imports in the original investigations.

Belgium. During the original investigations, subject imports from Belgium decreased from *** dry pounds in 2015 to *** dry pounds in 2016 and *** dry pounds in 2017.[74] As a share of apparent U.S. consumption, subject imports from Belgium declined from *** percent in 2015 to *** percent in 2016 and *** percent in 2017.[75]

In the final phase of the original investigations, the Commission received a questionnaire response from one producer/exporter of CACCS from Belgium, which accounted for approximately *** percent of CACCS exports from Belgium to the United States in 2017.[76] The sole reporting subject producer from Belgium had the capacity to produce *** dry pounds, produced *** dry pounds, and had a capacity utilization rate of *** percent for CACCS in 2017.[77] On an annual basis, the sole reporting Belgian producer's exports as a share of total shipments of CACCS ranged from *** percent to *** percent, while its exports to the United States as a share of total shipments ranged from *** percent to *** percent during the period of investigation ("POI").[78]

In these reviews, subject imports from Belgium increased from 8.6 million dry pounds in 2018 to 8.8 million dry pounds in 2019, 9.7 million dry pounds in 2020, and 11.0 million dry pounds in 2021, then decreased to 9.2 million dry pounds in 2022 and 4.7 million dry pounds in 2023.[79] As a share of apparent U.S. consumption, subject imports from Belgium remained constant from 2018 to 2019 at *** percent, then increased to *** percent in 2020 and 2021, and decreased to *** percent in 2022 and *** percent in 2023.[80]

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[74] Confidential Original Staff Report, EDIS Doc. 801633 (June 7, 2018) ("Confidential Original Staff Report") at Table IV-2.

[75] Confidential Original Staff Report at Table IV-10.

[76] Confidential Original Staff Report at VII-3, Table VII-3.

[77] Confidential Original Staff Report at Table VII-3.

[78] Confidential Original Staff Report at Table VII-3. After imposition of the order, Commerce conducted four successive administrative reviews and assigned an antidumping duty margin of 0.00 percent in the first, second, and third administrative reviews and 9.13 percent in the fourth administrative review. CR/PR at Table I-5. Commerce also conducted a changed circumstances review regarding the antidumping order on CACCS from Belgium, finding that Citribel, the successor in-interests to Citrique Belge, was entitled to the same cash deposit as Citrique Belge under the antidumping duty order on CACCS from Belgium. *Id*. at I-12.

[79] CR/PR at Table IV-1.

[80] CR/PR at Tables I-14, C-1.

In these reviews, the Commission received a questionnaire response from Citribel, which accounted for approximately *** percent of CACCS production in Belgium in 2023.[81] Citribel's capacity to produce CACCS remained constant from 2018 to 2022 at *** dry pounds, but decreased to *** dry pounds in 2023.[82] Citribel reported that ***.[83] Citribel's production decreased from *** dry pounds in 2018 to *** dry pounds in 2019, then increased to *** dry pounds in 2020 and *** dry pounds in 2021, and decreased to *** dry pounds in 2022 and *** dry pounds in 2023.[84] Its capacity utilization rate decreased from *** percent in 2018 to *** percent in 2019, then increased to *** percent in 2020 and *** percent in 2021 and 2019, and decreased to *** percent in 2022 and *** percent in 2023.[85] Citribel reported capacity constraints during the POR, including ***.[86] It also reported that ***.[87] Citribel *** report producing other products on the same equipment and machinery used to produce CACCS.[88]

Total shipments of CACCS by Citribel decreased from *** dry pounds in 2018 to *** dry pounds in 2019, then increased to *** dry pounds in 2020 and *** dry pounds in 2021, and decreased to *** dry pounds in 2022 and *** dry pounds in 2023.[89] Citribel's exports of subject merchandise from Belgium decreased from *** dry pounds in 2018 to *** dry pounds in 2019, then increased to *** dry pounds in 2020 and *** dry pounds in 2021, and decreased to *** dry pounds in 2022 and *** dry pounds in 2023.[90] On an annual basis during the POR, between *** and *** percent of Citribel's total shipments were exported and between *** and *** percent of its total shipments were exported to the United States.[91]

According to Global Trade Atlas ("GTA") data, exports of CACCS from Belgium under HS subheadings 2918.14 and 2918.15, a category that may include out-of-scope products, increased from 289.7 million dry pounds in 2018 to 295.8 million dry pounds in 2019, 314.1 million dry pounds in 2020, and 321.6 million dry pounds in 2021, then decreased to 257.9 million dry pounds in 2022 and 165.1 million dry pounds in 2023.[92] GTA data also indicate that

[81] CR/PR at IV-29.
[82] CR/PR at Table IV-12.
[83] CR/PR at IV-29, Table IV-11.
[84] CR/PR at Table IV-12.
[85] CR/PR at Table IV-12.
[86] CR/PR at Table IV-13.
[87] CR/PR at IV-29, Table IV-11.
[88] CR/PR at IV-34.
[89] CR/PR at Table IV-14.
[90] CR/PR at Table IV-14.
[91] CR/PR at Tables IV-14-15.
[92] CR/PR at Table IV-25.

Belgium was the third largest global exporter of CACCS by quantity in 2023.[93] The largest export markets for CACCS from Belgium in 2023 were ***.[94]

In the original investigations, subject imports from Belgium undersold the domestic like product in *** of *** comparisons (*** percent) with underselling margins ranging from *** to *** percent.[95] In these reviews, subject imports from Belgium undersold the domestic like product in 14 of 59 comparisons (23.7 percent), involving *** dry pounds (or *** percent of the reported subject import sales volume), at underselling margins ranging from *** to *** percent and averaging *** percent, and oversold the domestic like product in the remaining 45 quarterly comparisons, involving *** pounds dry weight, at overselling margins ranging from *** to *** percent and averaging *** percent.[96]

In view of the foregoing, including the continued presence of subject imports from Belgium in the U.S. market during the POR, the somewhat greater extent of underselling by subject imports from Belgium in the POR relative to the POI despite the disciplining effect of the antidumping duty order, and the Belgian industry's capacity, excess capacity, and export-orientation (the third largest global exporter of CACCS by quantity in 2023),[97] we find that revocation of the antidumping duty order on subject imports from Belgium would not likely have no discernible adverse impact on the domestic industry.

Colombia. During the original investigations, subject imports from Colombia increased from *** dry pounds in 2015 to *** dry pounds in 2016, then declined to *** dry pounds in 2017.[98] As a share of apparent U.S. consumption, subject imports from Colombia increased from *** percent in 2015 to *** percent in 2016, but then declined to *** percent in 2017.[99]

In the final phase of the original investigations, the Commission received a questionnaire response from one producer/exporter of CACCS in Colombia, which accounted for approximately *** percent of CACCS exports from Colombia to the United States in 2017.[100] The sole reporting subject producer from Colombia had the capacity to produce *** dry pounds, produced *** dry pounds, and had a capacity utilization rate of *** percent for CACCS

[93] CR/PR at Table IV-25.
[94] CR/PR at Table IV-15.
[95] Confidential Original Staff Report at Table V-12.
[96] CR/PR at Table V-10.
[97] We note that although Citribel's capacity declined, it was the result of a voluntary reduction planned to last through 2025. CR/PR at IV-29, Table IV-11; Citribel's Response to Written Questions at 4.
[98] Confidential Original Staff Report at Table IV-2.
[99] Confidential Original Staff Report at Table IV-10.
[100] Confidential Original Staff Report at VII-9, Table VII-7.

in 2017.[101] On an annual basis, the sole reporting Colombian producer's exports as a share of total shipments of CACCS ranged from *** percent to *** percent, while its exports to the United States as a share of total shipments ranged from *** percent to *** percent during the POI.[102]

In these reviews, subject imports from Colombia decreased from 20.6 million dry pounds in 2018 to 13.6 million dry pounds in 2019, then increased to 16.7 million dry pounds in 2020, decreased to 12.6 million dry pounds in 2021, and increased to 18.4 million dry pounds in 2022 and 34.2 million dry pounds in 2023.[103] As a share of apparent U.S. consumption, subject imports from Colombia decreased from *** percent in 2018 to *** percent in 2019, then increased to *** percent in 2020, decreased to *** percent in 2021, and increased to *** percent in 2022 and *** percent in 2023.[104]

In these reviews, the Commission received a questionnaire response from one firm, Sucroal, which accounted for *** percent of CACCS production in Colombia in 2023.[105] Sucroal's reported production capacity of the CACCS industry in Colombia remained constant from 2018 to 2023 at *** dry pounds.[106] Sucroal's production increased from *** dry pounds in 2018 to *** dry pounds in 2019, then decreased to *** dry pounds in 2020 and *** dry pounds in 2021, increased to *** dry pounds in 2022, and decreased to *** dry pounds in 2023.[107] Its capacity utilization rate increased from *** percent in 2018 to *** percent in 2019, then decreased to *** percent in 2020 and *** percent in 2021, increased to *** percent in 2022, and decreased to *** percent in 2023.[108] Sucroal reported that ***.[109]

Total shipments of CACCS by the industry in Colombia increased from *** dry pounds in 2018 to *** dry pounds in 2019, then decreased to *** million dry pounds in 2020 and *** dry pounds in 2021, and increased to *** dry pounds in 2022 and *** dry pounds in 2023.[110]

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[101] Confidential Original Staff Report at Table VII-7.

[102] Confidential Original Staff Report at Table VII-7. After imposition of the order, Commerce conducted four successive administrative reviews and assigned an antidumping duty margin of 4.59 percent in the first administrative review, 2.50 percent in the second administrative review, 3.58 percent in the third administrative review, and 6.10 percent in the fourth administrative review. CR/PR at Table I-6.

[103] CR/PR at Table IV-1.

[104] CR/PR at Table I-14.

[105] CR/PR at IV-41.

[106] CR/PR at Table IV-19.

[107] CR/PR at Table IV-19.

[108] CR/PR at Table IV-19.

[109] CR/PR at Table IV-18.

[110] CR/PR at Table IV-20.

Sucroal's exports of CACCS from Colombia increased from *** dry pounds in 2018 to *** dry pounds in 2019 and *** dry pounds in 2020, then decreased to *** dry pounds in 2021, and increased to *** dry pounds in 2022 and *** dry pounds in 2023.[111] On an annual basis during the POR, between *** and *** percent of Sucroal's total shipments were exported and between *** and *** percent of its total shipments were exported to the United States.[112]

GTA data indicate that global exports of CACCS from Colombia under HS subheadings 2918.14 and 2918.15, a category that may include out-of-scope products, increased from 51.9 million dry pounds in 2018 to 65.9 million dry pounds in 2019 and 70.7 million dry pounds in 2020, then decreased to 59.1 million dry pounds in 2021, and increased to 59.9 million dry pounds in 2022 and 67.2 million dry pounds in 2023.[113] Further, GTA data indicate that Colombia was the sixth largest exporter of CACCS by quantity in 2023.[114] The largest export markets for CACCS from Colombia in 2023 were ***.[115] CACCS from Colombia are subject to an antidumping duty order in Brazil, effective August 2022.[116]

In the original investigations, subject imports from Colombia undersold the domestic like product in *** of *** comparisons (*** percent) with underselling margins ranging from *** to *** percent.[117] In these reviews, subject imports from Colombia undersold the domestic like product in 17 of 48 comparisons (35.4 percent), involving *** dry pounds (or *** percent of the reported subject import sales volume), at underselling margins ranging from *** to *** percent and averaging *** percent, and oversold the domestic like product in the remaining 31 quarterly comparisons, involving *** dry pounds, at overselling margins ranging from *** to *** percent and averaging *** percent.[118]

Subject imports from Colombia have remained in the U.S. market and increased during the POR, particularly in 2023, and undersold the domestic like product to a somewhat greater extent despite the disciplining effect of the antidumping duty order.[119] Furthermore, the CACCS

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[111] CR/PR at Table IV-20.
[112] CR/PR at Tables IV-20-21.
[113] CR/PR at Table IV-25.
[114] CR/PR at Table IV-25.
[115] CR/PR at Table IV-21.
[116] CR/PR at IV-57.
[117] Confidential Original Staff Report at Table V-12.
[118] CR/PR at Table V-10.
[119] TCCTC argues that subject imports from Colombia are Non-GMO Project certified CACCS that do not compete with the domestic like product and, therefore, have no discernible adverse impact on the domestic industry. TCCTC's Prehearing Br. at 10. As discussed in section IV.B.3. below, we find that the certification status of subject imports from Colombia does not prevent them from competing with the domestic like product.

industry in Colombia is export-oriented (the sixth largest global exporter of CACCS by quantity in 2023) and has significant capacity as well as some excess capacity. In light of this, we find that revocation of the antidumping duty order on subject imports from Colombia would not likely have no discernible adverse impact on the domestic industry.

Thailand. During the original investigations, subject imports from Thailand increased from *** dry pounds in 2015 to *** dry pounds in 2016 and to *** dry pounds in 2017.[120] As a share of apparent U.S. consumption, subject imports from Thailand increased from *** percent in 2015 to *** percent in 2016 and *** percent in 2017.[121]

In the final phase of the original investigations, the Commission received questionnaire responses from three producers of CACCS in Thailand, which accounted for approximately 92.8 percent of CACCS exports from Thailand to the United States in 2017.[122] The reporting producers had the aggregated capacity to produce 291.5 million dry pounds, produced 287.3 million dry pounds, and had a capacity utilization rate of 98.6 percent for CACCS in 2017.[123] On an annual basis, the reporting producers' exports as a share of total shipments of CACCS ranged from *** percent to *** percent, while their exports to the United States as a share of total shipments ranged from *** percent to *** percent during the POI.[124]

In these reviews, subject imports from Thailand increased from 113.3 million dry pounds in 2018 to 123.2 million dry pounds in 2019, 128.9 million dry pounds in 2020, and 163.0 million dry pounds in 2021, then decreased to 133.6 million dry pounds in 2022, and increased to 176.6 million dry pounds in 2023.[125] The share of apparent U.S. consumption accounted for by subject imports from Thailand increased from *** percent in 2018 to *** percent in 2019, *** percent in 2020, and *** percent in 2021, then decreased to *** percent in 2022, and increased to *** percent in 2023.[126]

In these reviews, the Commission did not receive any questionnaire responses from any producers or exporters of CACCS in Thailand.[127] According to GTA data, global exports of CACCS

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[120] Confidential Original Staff Report at Table IV-2.

[121] Confidential Original Staff Report at Table IV-10.

[122] CR/PR at IV-51.

[123] *Original Determinations*, USITC Pub. 4799 at VII-12.

[124] Confidential Original Staff Report at Table VII-11. After imposition of the order, Commerce conducted four successive administrative reviews and assigned antidumping duty margins of 0.00, 0.76, and 54.11 percent in the first administrative review, 0.00 percent in the second and third administrative reviews, and 0.00 and 0.78 percent in the fourth administrative review. CR/PR at Table I-7.

[125] CR/PR at Table IV-1.

[126] CR/PR at Table I-14.

[127] CR/PR at IV-51.

from Thailand under HS subheadings 2918.14 and 2918.15, a category that may include out-of-scope products, decreased from 193.0 million dry pounds in 2018 to 186.7 million dry pounds in 2019, then increased to 216.1 million dry pounds in 2020 and 233.9 million dry pounds in 2021, decreased to 177.8 million dry pounds in 2022, and increased to 248.2 million dry pounds in 2023.[128] GTA data also indicate that Thailand was the second largest global exporter of CACCS by quantity in 2023.[129] On an annual basis during the POR, between *** and *** percent of the total exports of CACCS from Thailand were exported to the United States, making it the largest export market for CACCS from Thailand throughout the POR.[130] The next largest export markets for CACCS from Thailand in 2023 were Brazil and Israel.[131] CACCS from Thailand are subject to an antidumping duty order in Brazil, effective August 2022.[132]

In the original investigations, subject imports from Thailand undersold the domestic like product in *** of *** comparisons (*** percent) with underselling margins ranging from *** to *** percent.[133] In the absence of U.S. importer questionnaires covering *** in these reviews, the quarterly comparisons were limited, with subject imports from Thailand overselling the domestic like product in all three comparisons, involving *** dry pounds of the U.S. shipments of subject imports from Thailand during the POR, at overselling margins ranging from *** to *** percent and averaging *** percent.[134]

In light of the foregoing, including the significant volume of subject imports from Thailand in the original investigations, the continued and increased presence of subject imports from Thailand in the U.S. market while under the disciplining effect of the orders, the significant underselling by subject imports from Thailand during the original investigations, and the large size and volume of exports of the CACCS industry in Thailand (the second largest global exporter of CACCS in 2023), we find that revocation of the antidumping duty order on subject imports from Thailand would not likely have no discernible adverse impact on the domestic industry.

[128] CR/PR at Tables IV-23, IV-25.
[129] CR/PR at Table IV-25.
[130] CR/PR at Table IV-23.
[131] CR/PR at Table IV-23.
[132] CR/PR at IV-57.
[133] Confidential Original Staff Report at Table V-12.
[134] CR/PR at Table V-10.

2. Likelihood of a Reasonable Overlap of Competition

The Commission generally has considered four factors intended to provide a framework for determining whether subject imports compete with each other and with the domestic like product.[135] Only a "reasonable overlap" of competition is required.[136] In five-year reviews, the relevant inquiry is whether there likely would be competition even if none currently exists because the subject imports are absent from the U.S. market.[137]

Fungibility. In the original investigations, the Commission found that all CACCS, regardless of source, had a reasonable level of fungibility.[138]

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[135] The four factors generally considered by the Commission in assessing whether imports compete with each other and with the domestic like product are as follows: (1) the degree of fungibility between subject imports from different countries and between subject imports and the domestic like product, including consideration of specific customer requirements and other quality-related questions; (2) the presence of sales or offers to sell in the same geographical markets of imports from different countries and the domestic like product; (3) the existence of common or similar channels of distribution for subject imports from different countries and the domestic like product; and (4) whether subject imports are simultaneously present in the market with one another and the domestic like product. *See, e.g., Wieland Werke, AG v. United States*, 718 F. Supp. 50 (Ct. Int'l Trade 1989).

[136] *See Mukand Ltd. v. United States*, 937 F. Supp. 910, 916 (Ct. Int'l Trade 1996); *Wieland Werke,* 718 F. Supp. at 52 ("Completely overlapping markets are not required."); *United States Steel Group v. United States,* 873 F. Supp. 673, 685 (Ct. Int'l Trade 1994), *aff'd*, 96 F.3d 1352 (Fed. Cir. 1996). We note, however, that there have been investigations where the Commission has found an insufficient overlap in competition and has declined to cumulate subject imports. *See, e.g*., *Live Cattle from Canada and Mexico*, Inv. Nos. 701-TA-386 and 731-TA-812-13 (Preliminary), USITC Pub. 3155 (Feb. 1999) at 15, *aff'd sub nom., Ranchers-Cattlemen Action Legal Foundation v. United States*, 74 F. Supp. 2d 1353 (Ct. Int'l Trade 1999); *Static Random Access Memory Semiconductors from the Republic of Korea and Taiwan*, Inv. Nos. 731-TA-761-62 (Final), USITC Pub. 3098 (Apr. 1998) at 13-15.

[137] *See generally*, *Chefline Corp. v. United States*, 219 F. Supp. 2d 1313, 1314 (Ct. Int'l Trade 2002).

[138] *Original Determinations*, USITC Pub. 4799 at 12-14. In the original investigations, the Commission found that subject imports from each subject country were generally interchangeable with each other and the domestic like product. *Id*. at 12. Most market participants reported that the domestic like product was always or frequently interchangeable with subject imports from Belgium; always, frequently, or sometimes interchangeable with subject imports from Colombia; and always or sometimes interchangeable with subject imports from Thailand. *Id*. The Commission specifically analyzed the fungibility of subject imports from Belgium with the domestic like product, the former being made with non-GMO substrates and the latter being made with GMO substrates. *Id*. at 13. It observed that all CACCS produced from non-GMO substrates could be used in the same applications as CACCS produced from GMO substrates, with interchangeability limited with respect to certain purchasers that specifically required non-GMO products. *Id*. Furthermore, purchasers of GMO products purchased subject imports from Belgium and purchasers of non-GMO products purchased the domestic like product. *Id*. Most market participants reported that CACCS imported from each subject country (Continued…)

The record in the current reviews indicates that domestically produced CACCS and CACCS from each subject source remain generally fungible. With regard to interchangeability, all responding U.S. producers reported that domestically produced CACCS was always interchangeable with imports from each subject source.[139] Responding U.S. importers' responses were mixed, with a plurality reporting that domestically produced CACCS are always interchangeable with subject imports from Belgium and all importers reporting at least some level of interchangeability between domestically produced CACCS and subject imports from Colombia and Thailand.[140] The majority of responding purchasers reported that CACCS imported from Belgium and Thailand are always or frequently interchangeable with the domestic like product.[141] Responding purchasers were evenly divided when comparing the domestic like product to subject imports from Colombia, with three of six responding purchasers reporting that they were always or frequently interchangeable and the other three reporting that they were only sometimes interchangeable.[142]

Most responding purchasers reported that domestically produced CACCS and subject imports from Belgium, Colombia, and Thailand were comparable across most purchasing factors.[143] Two of three U.S. producers reported that differences other than price were never significant when comparing the domestic like product to subject imports from Belgium,

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were always or sometimes interchangeable with the CACCS imported from each of the other subject countries. *Id*. at 12. Specifically, CACCS from Belgium and Colombia were comparable across all factors, except in terms of Non-GMO Project verified; CACCS from Belgium and Thailand were comparable across all factors; and CACCS from Colombia and Thailand were comparable across all factors, except for delivery time and price. *Id*. at 13-14. Furthermore, U.S. purchasers reported that CACCS from all sources were comparable across nearly all factors, with the exception of non-GMO factors. *Id*. at 12. The Commission recognized that certain customers' preference for CACCS made from non-GMO substrates may have limited the fungibility of GMO and non-GMO CACCS, but found that the evidence overall indicated a reasonable level of fungibility between and among the domestic like product and CACCS from each subject country. *Id*. at 12-13.

[139] CR/PR at Table II-13.

[140] CR/PR at Table II-14. With respect to the interchangeability of domestically produced CACCS and subject imports from Colombia, two importers reported always, one importer reported frequently, and two importers reported sometimes. *Id*. As for the interchangeability of domestically produced CACCS and subject imports from Thailand, three importers reported always, one importer reported frequently, and three importers reported sometimes. *Id*.

[141] CR/PR at Table II-15.

[142] CR/PR at Table II-15.

[143] CR/PR at Table II-12. Factors that some purchasers did not find comparable among the domestic like product and subject imports include Non-GMO Project certification, non-GMO whether or not specifically being Non-GMO Project verified, delivery time, price, reliability of supply, and U.S. transportation costs. *Id*.

Colombia, and Thailand, and among the subject sources, with the other U.S. producer reporting them as sometimes significant.[144] Most responding importers reported differences other than price as frequently or sometimes significant when comparing the domestic like product to subject imports from Belgium, Colombia, and Thailand, and when comparing the subject sources.[145] Purchasers' responses were mixed, with pluralities reporting that differences other than price were sometimes significant when comparing imports from the subject sources to each other and the domestic like product to subject imports from Thailand, a plurality reporting that they were always significant when comparing the domestic like product to subject imports from Belgium, and a majority reporting that they were sometimes or never significant when comparing the domestic like product to subject imports from Colombia.[146]

TCCTC argues that subject imports from Colombia are not fungible with the domestic like product because all imports of CACCS from Colombia are Non-GMO Project certified, which the domestic like product is not.[147] The record shows that *** of U.S. importers' reported U.S. shipments of subject imports from Colombia in 2023 were Non-GMO Project certified CACCS, while responding U.S. producers' shipments in 2023 were GMO and non-GMO certified CACCS.[148] U.S. importers' reported U.S. shipments of subject imports from Belgium were also *** Non-GMO Project certified CACCS.[149] As indicated in section II.A., the record contains no information on whether *** of subject imports from Thailand were covered by any type of non-GMO certification.[150]

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[144] CR/PR at Table II-16.

[145] CR/PR at Table II-17.

[146] CR/PR at Table II-18.

[147] TCCTC's Prehearing Br. at 9.

[148] CR/PR at Table IV-2. Although U.S. importers' reported U.S. shipments of subject imports from Colombia in 2023 only represented *** percent of subject imports from Colombia in 2023, the record indicates that *** subject imports from Colombia are Non-GMO Project certified CACCS. *Id*. at IV-1, I-19. Furthermore, subject imports from Colombia accounted for the largest share of importers' reported U.S. shipments of subject imports in 2023, at *** percent. *Calculated from* CR/PR at Table IV-2.

[149] CR/PR at Table IV-2. U.S. importers' reported U.S. shipments of subject imports from Belgium in 2023 represented *** percent of subject imports from Belgium in 2023 and the record indicates that *** subject imports from Belgium are Non-GMO Project certified CACCS. CR/PR at IV-1, I-19.

[150] U.S. importers' reported U.S. shipments of subject imports from Thailand in 2023 represented *** percent of subject imports from Thailand that year and the record does not indicate if all subject imports from Thailand are non-GMO Project certified. *See* CR/PR at I-24, IV-1, IV-51, Table IV-2.

We note, however, that the record indicates that there was substantial competitive overlap between CACCS of different GMO certifications during the POR. *** reported U.S. shipments of subject imports and *** U.S. shipments of the domestic like product were Halal and Kosher certified in 2023.[151] Most market participants reported that there are no physical limitations to the interchangeability of GMO and non-GMO CACCS in any specific end use application.[152] Indeed, the parties generally agree that the primary difference between Non-GMO Project certified CACCS and domestically produced CACCS is the feedstock used, with Non-GMO Project certified CACCS requiring non-GMO feedstocks and domestically produced CACCS primarily using GMO feedstocks.[153] Purchasers' responses regarding the importance of Non-GMO Project certification as a purchasing factor were mixed, but most purchasers reported that the factor was either somewhat or not important to their purchasing decisions.[154] Furthermore, most purchasers reported that they sometimes or never make purchasing decisions based on the producer, country of origin, or the product having non-GMO certification.[155] Based on the foregoing considerations, there appears to be a sufficient degree of fungibility between and among subject imports from Colombia, Belgium, and Thailand, and the domestic like product, for purposes of cumulation, notwithstanding differences in GMO certification.

Channels of Distribution. In the original investigations, the Commission found that domestic producers and importers of CACCS from all subject countries sold to distributors and end users for use in both the food and beverage and industrial end-use sectors.[156]

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[151] CR/PR at Tables IV-3-4. Halal certification means that a product is certified to comply with the precepts of Islamic Law and does not include forbidden components. *Id*. at IV-8 n.7. Kosher certification is the stamp of approval by a rabbinic Agency verifying that it has checked the product's ingredients, production facility, and actual production to ensure all ingredients, derivatives, tools and machinery have no trace of non-kosher substances. *Id*.

[152] CR/PR at II-14.

[153] Domestic Producers' Posthearing Br. at Exh. 1 (Responses to Commission Questions at 12); CR/PR at IV-8 n.7; TCCTC's Response to Written Questions at 3; Citribel's Prehearing Br. at 3-4.

[154] CR/PR at Table II-9. Of 16 purchasers, two purchasers rated the importance of CACCS being Non-GMO Project certified as very important and the remaining 14 purchasers were split (seven each) among it being somewhat important and never important. *Id*.

[155] CR/PR at II-15, Table II-7.

[156] *Original Determinations*, USITC Pub. 4799 at 14. Domestic producers and importers of CACCS from Belgium and Colombia sold mainly to end users, while importers of CACCS from Thailand sold mainly to distributors. *Id*. The food and beverage sector represented the largest end use sector for domestic producers and importers of CACCS from Belgium and Colombia, while the largest end use sector for importers of CACCS from Thailand varied between the food and beverage and industrial sectors for each year of the POI. *Id*.

In these reviews, domestic producers and importers of CACCS from all subject countries had overlapping sales to end users in the food and beverage sector.[157] The domestic industry primarily shipped CACCS to end users in the industrial and food and beverage sectors and distributors, while end users in the pharmaceutical sector accounted for a lower but not-insignificant share of domestic producers' shipments, and end users in other channels accounted for a very small share.[158] U.S. importers of CACCS from Belgium primarily sold to distributors and other channels, with a smaller but significant share of their shipments also going to end users in the food and beverage sector.[159] U.S. importers of CACCS from Colombia primarily sold to distributors, with a smaller but significant share of their shipments also going to end users in the food and beverage sector.[160] Importers of CACCS from Thailand sold to end users in the industrial and food and beverage sectors.[161]

TCCTC argues that subject imports from Colombia and Thailand have different channels of distribution and, therefore, cannot satisfy the reasonable overlap requirement for cumulation.[162] However, the record shows that the domestic like product and subject imports from all three countries (including Colombia and Thailand) were sold to end-users in the food and beverage sector during the POR.[163] Further, during the original investigations, subject imports from each subject country (including Thailand) were sold to both distributors and end users in the food and beverage and industrial end-use sectors.[164] Nothing in the record indicates that subject imports from all three countries would not resume the distribution patterns reflected in the original investigations upon revocation of the orders.

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[157] CR/PR at Table II-1.

[158] CR/PR at Table II-1.

[159] CR/PR at Table II-1.

[160] CR/PR at Table II-1.

[161] CR/PR at Table II-1.

[162] TCCTC's Prehearing Br. at 9.

[163] TCCTC seeks to support this argument by asserting that there are differences between subject imports from Colombia and subject imports from other sources in terms of shipment quantities and product type. TCCTC's Prehearing Br. at 9. However, with respect to product type, the record shows that *** shipments of imported CACCS from both Belgium and Colombia in 2023 were Non-GMO Project certified CACCS. CR/PR at Table IV-2. Further, subject imports from Belgium and Colombia both included shipments of products 1 and 3 throughout the POR. *Id*. at Tables V-4, V-6. With respect to shipment quantities, although the record shows some differences between shipments of subject imports from Belgium and Colombia, U.S. importers sold a significant volume of the CACCS they imported from both Belgium and Colombia to distributors during the POR. *Id*. at Table II-1.

[164] *Original Determinations*, USITC Pub. 4799 at 14.

Geographic Overlap. In the original investigations, the Commission found that domestically produced CACCS and subject imports from Belgium, Colombia, and Thailand were sold throughout the United States.[165] In these reviews, Commerce import statistics indicate that imports of CACCS from all three subject countries entered through ports located in every region of the United States in 2023, with most subject imports from Belgium entering through the East and South borders, most subject imports from Colombia entering through the East, South, and West borders, and most subject imports from Thailand entering through the East and West borders.[166]

Simultaneous Presence in Market. In the original investigations, the Commission found that domestically produced CACCS and subject imports from Belgium, Colombia, and Thailand were present in the U.S. market throughout the POI.[167] In these reviews, based on official U.S. import statistics, subject imports from Belgium, Colombia, and Thailand were present in the U.S. market in every month of the POR.[168]

Conclusion. The record indicates that there would likely be a reasonable overlap of competition between and among subject imports from Belgium, Colombia, and Thailand, and the domestic like product if the orders were revoked. Specifically, the record of these reviews shows that the domestic like product and imports from each subject source are generally fungible, notwithstanding differences in non-GMO certification that may limit their fungibility to some degree. The record also shows that if the orders were revoked, domestically produced CACCS and subject imports from each source would likely be sold through similar channels of distribution and in overlapping geographic markets and would likely be simultaneously present in the U.S. market, as they were during the original investigations and POR. Consequently, we find that that there would likely be a reasonable overlap of competition among subject imports from Belgium, Colombia, and Thailand, and between subject imports from each source and the domestic like product, were the orders to be revoked.

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[165] *Original Determinations*, USITC Pub. 4799 at 15.

[166] CR/PR at Table IV-6. U.S. producers and importers of CACCS from Belgium and Colombia reported selling CACCS to all regions in the United States, while importers of CACCS from Thailand reported selling only to the Pacific Coast. *Id*. at Table II-2.

[167] *Original Determinations*, USITC Pub. 4799 at 15.

[168] CR/PR at IV-18.

3. Likely Conditions of Competition

The record in these reviews does not indicate that there would be significant differences between the conditions of competition under which imports from each subject country are likely to compete if the orders were revoked. Producers in each subject country produce and export substantial volumes of CACCS, and subject imports from each source have maintained a presence in the U.S. market throughout the POR, demonstrating a continued interest in supplying U.S. purchasers. Non-GMO Project certification is also not a distinguishing characteristic among subject imports from the three subject countries. Further, as discussed above, we have found that there would likely be a reasonable overlap of competition between and among imports from each subject country and the domestic like product if the orders were revoked.

Based on this record, we find that imports from each subject country are likely to compete under similar conditions of competition in the U.S. market if the orders were revoked.

4. Conclusion

Based on the foregoing, we find that subject imports from Belgium, Colombia, and Thailand would each not be likely to have no discernible adverse impact on the domestic industry if the orders under review were revoked. We also find a likely reasonable overlap of competition among subject imports from the different sources and between the subject imports from each subject country and the domestic like product. Finally, we find that imports from each subject country are likely to compete in the U.S. market under similar conditions of competition should the orders be revoked. We therefore exercise our discretion to cumulate subject imports from Belgium, Colombia, and Thailand for purposes of our analysis in these reviews.

IV. Revocation of the Antidumping Duty Orders Would Likely Lead to Continuation or Recurrence of Material Injury Within a Reasonably Foreseeable Time

A. Legal Standards

In a five-year review conducted under section 751(c) of the Tariff Act, Commerce will revoke an antidumping or countervailing duty order unless: (1) it makes a determination that dumping or subsidization is likely to continue or recur and (2) the Commission makes a determination that revocation of the antidumping or countervailing duty order "would be likely

to lead to continuation or recurrence of material injury within a reasonably foreseeable time."[169] The SAA states that "under the likelihood standard, the Commission will engage in a counterfactual analysis; it must decide the likely impact in the reasonably foreseeable future of an important change in the status quo – the revocation or termination of a proceeding and the elimination of its restraining effects on volumes and prices of imports."[170] Thus, the likelihood standard is prospective in nature.[171] The U.S. Court of International Trade ("CIT") has found that "likely," as used in the five-year review provisions of the Act, means "probable," and the Commission applies that standard in five-year reviews.[172]

The statute states that "the Commission shall consider that the effects of revocation or termination may not be imminent, but may manifest themselves only over a longer period of time."[173] According to the SAA, a "'reasonably foreseeable time' will vary from case-to-case, but normally will exceed the 'imminent' timeframe applicable in a threat of injury analysis in original investigations."[174]

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[169] 19 U.S.C. § 1675a(a).

[170] SAA at 883-84. The SAA states that "{t}he likelihood of injury standard applies regardless of the nature of the Commission's original determination (material injury, threat of material injury, or material retardation of an industry). Likewise, the standard applies to suspended investigations that were never completed." *Id*. at 883.

[171] While the SAA states that "a separate determination regarding current material injury is not necessary," it indicates that "the Commission may consider relevant factors such as current and likely continued depressed shipment levels and current and likely continued {sic} prices for the domestic like product in the U.S. market in making its determination of the likelihood of continuation or recurrence of material injury if the order is revoked." SAA at 884.

[172] *See NMB Singapore Ltd. v. United States*, 288 F. Supp. 2d 1306, 1352 (Ct. Int'l Trade 2003) ("'likely' means probable within the context of 19 U.S.C. § 1675(c) and 19 U.S.C. § 1675a(a)"), *aff'd mem.*, 140 Fed. Appx. 268 (Fed. Cir. 2005); *Nippon Steel Corp. v. United States*, 26 CIT 1416, 1419 (2002) (same); *Usinor Industeel, S.A. v. United States*, 26 CIT 1402, 1404 nn.3, 6 (2002) ("more likely than not" standard is "consistent with the court's opinion;" "the court has not interpreted 'likely' to imply any particular degree of 'certainty'"); *Indorama Chemicals (Thailand) Ltd. v. United States*, 26 CIT 1059, 1070 (2002) ("standard is based on a likelihood of continuation or recurrence of injury, not a certainty"); *Usinor v. United States*, 26 CIT 767, 794 (2002) ("'likely' is tantamount to 'probable,' not merely 'possible'").

[173] 19 U.S.C. § 1675a(a)(5).

[174] SAA at 887. Among the factors that the Commission should consider in this regard are "the fungibility or differentiation within the product in question, the level of substitutability between the imported and domestic products, the channels of distribution used, the methods of contracting (such as spot sales or long-term contracts), and lead times for delivery of goods, as well as other factors that may only manifest themselves in the longer term, such as planned investment and the shifting of production facilities." *Id*.

Although the standard in a five-year review is not the same as the standard applied in an original investigation, it contains some of the same fundamental elements. The statute provides that the Commission is to "consider the likely volume, price effect, and impact of imports of the subject merchandise on the industry if the orders are revoked or the suspended investigation is terminated."[175] It directs the Commission to take into account its prior injury determination, whether any improvement in the state of the industry is related to the order or the suspension agreement under review, whether the industry is vulnerable to material injury if an order is revoked or a suspension agreement is terminated, and any findings by Commerce regarding duty absorption pursuant to 19 U.S.C. § 1675(a)(4).[176] The statute further provides that the presence or absence of any factor that the Commission is required to consider shall not necessarily give decisive guidance with respect to the Commission's determination.[177]

In evaluating the likely volume of imports of subject merchandise if an order under review is revoked and/or a suspended investigation is terminated, the Commission is directed to consider whether the likely volume of imports would be significant either in absolute terms or relative to production or consumption in the United States.[178] In doing so, the Commission must consider "all relevant economic factors," including four enumerated factors: (1) any likely increase in production capacity or existing unused production capacity in the exporting country; (2) existing inventories of the subject merchandise, or likely increases in inventories; (3) the existence of barriers to the importation of the subject merchandise into countries other than the United States; and (4) the potential for product shifting if production facilities in the foreign country, which can be used to produce the subject merchandise, are currently being used to produce other products.[179]

In evaluating the likely price effects of subject imports if an order under review is revoked and/or a suspended investigation is terminated, the Commission is directed to consider whether there is likely to be significant underselling by the subject imports as

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[175] 19 U.S.C. § 1675a(a)(1).

[176] 19 U.S.C. § 1675a(a)(1). Commerce has not made any duty absorption findings with respect to the antidumping duty orders under review. Issues and Decision Memorandum for the Final Results of the Expedited First Sunset Reviews of the Antidumping Duty Orders on Citric Acid and Certain Citrate Salts from Thailand and Colombia (Sept. 22, 2023) at 4; Preliminary Decision Memorandum for the Preliminary Results of Sunset Review of the Antidumping Duty Order on Citric Acid and Certain Citrate Salts from Belgium (Sept. 15, 2023) at 4.

[177] 19 U.S.C. § 1675a(a)(5). Although the Commission must consider all factors, no one factor is necessarily dispositive. SAA at 886.

[178] 19 U.S.C. § 1675a(a)(2).

[179] 19 U.S.C. § 1675a(a)(2)(A-D).

compared to the domestic like product and whether the subject imports are likely to enter the United States at prices that otherwise would have a significant depressing or suppressing effect on the price of the domestic like product.[180]

In evaluating the likely impact of imports of subject merchandise if an order under review is revoked and/or a suspended investigation is terminated, the Commission is directed to consider all relevant economic factors that are likely to have a bearing on the state of the industry in the United States, including but not limited to the following: (1) likely declines in output, sales, market share, profits, productivity, return on investments, and utilization of capacity; (2) likely negative effects on cash flow, inventories, employment, wages, growth, ability to raise capital, and investment; and (3) likely negative effects on the existing development and production efforts of the industry, including efforts to develop a derivative or more advanced version of the domestic like product.[181] All relevant economic factors are to be considered within the context of the business cycle and the conditions of competition that are distinctive to the industry. As instructed by the statute, we have considered the extent to which any improvement in the state of the domestic industry is related to the orders under review and whether the industry is vulnerable to material injury upon revocation.[182]

B. Conditions of Competition and the Business Cycle

In evaluating the likely impact of the subject imports on the domestic industry if an order is revoked, the statute directs the Commission to consider all relevant economic factors "within the context of the business cycle and conditions of competition that are distinctive to the affected industry."[183] The following conditions of competition inform our determinations.

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[180] *See* 19 U.S.C. § 1675a(a)(3). The SAA states that "{c}onsistent with its practice in investigations, in considering the likely price effects of imports in the event of revocation and termination, the Commission may rely on circumstantial, as well as direct, evidence of the adverse effects of unfairly traded imports on domestic prices." SAA at 886.

[181] 19 U.S.C. § 1675a(a)(4).

[182] The SAA states that in assessing whether the domestic industry is vulnerable to injury if the order is revoked, the Commission "considers, in addition to imports, other factors that may be contributing to overall injury. While these factors, in some cases, may account for the injury to the domestic industry, they may also demonstrate that an industry is facing difficulties from a variety of sources and is vulnerable to dumped or subsidized imports." SAA at 885.

[183] 19 U.S.C. § 1675a(a)(4).

1. Demand Conditions

Original Investigations. The Commission found that demand for CACCS was driven by demand for U.S.-produced downstream products, such as acidulants, baby care wipes, beverages, candy, cosmetics, dairy formulas, detergents and cleaners, citrate salts, and pharmaceuticals.[184] It observed that CACCS generally accounted for a small share of the cost of these end-use products, and that most market participants reported there being very few substitutes for CACCS.[185] The Commission also found that demand for CACCS was highly seasonal, peaking during the spring and summer months when demand for soft drinks and other beverage applications were at their highest.[186] It noted that demand was increasing for all non-GMO CACCS, including Non-GMO Project certified and other non-GMO certified CACCS.[187] Apparent U.S. consumption of CACCS decreased from *** dry pounds in 2015 to *** dry pounds in 2016, then increased to *** dry pounds in 2017.[188]

Current Reviews. Demand for CACCS continues to be driven by demand for U.S.-produced downstream products, such as acidulants, baby care wipes, beverages, candy, cosmetics, dairy formulas, detergents and cleaners, citrate salts, and pharmaceuticals.[189] There also continue to be few substitutes for CACCS.[190]

All U.S. producers reported that demand for CACCS in the U.S. market steadily increased or fluctuated up since January 1, 2018.[191] Most U.S. importers, purchasers, and foreign

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[184] *Original Determinations*, USITC Pub. 4799 at 19.

[185] *Original Determinations*, USITC Pub. 4799 at 19.

[186] *Original Determinations*, USITC Pub. 4799 at 19.

[187] *Original Determinations*, USITC Pub. 4799 at 19 n.82.

[188] *Original Determinations*, USITC Pub. 4799 at 19; *Confidential Original Determinations*, EDIS Doc. 801647 at 28.

[189] CR/PR at II-10; Domestic Producers' Prehearing Br. at 34; Citribel's Prehearing Br. at 5. Most market participants reported that the CACCS market was not subject to business cycles. CR/PR at II-11. The market participants that did report the market being subject to business cycles, including one U.S. producer, two U.S. importers, and four purchasers, generally described different end uses triggering different seasonal demand patterns. *Id*. Importer *** reported higher demand in the beverage end use sector in the spring and summer, the dairy end use sector in the winter, the agricultural end use sector in the early planting season, and the cleaning end use sector during periods of industrial cleaning. *Id*. Purchasers *** also reported that the beverage end use sector is seasonal and purchaser *** reported that the agricultural end use sector is seasonal but did not specify how that affected volume. *Id*. Both *** reported seasonality in the canning market, and purchaser *** reported that CACCS is used in manufacturing products sold during the winter. *Id*.

[190] CR/PR at II-14.

[191] CR/PR at Table II-4.

producers reported that demand fluctuated up or did not change during the period.[192] Market participants generally reported that the demand trends experienced during the POR were related to the COVID-19 pandemic.[193] Specifically, Domestic Producers reported that the COVID-19 pandemic increased demand for downstream products, which also caused ***, and that the subsequent sell-off of purchasers' increased inventory resulted in demand decreasing in 2023.[194] Similarly, U.S. importer *** reported that the COVID-19 pandemic led to panic buying in 2021, and reduced demand in 2022 and 2023 as purchasers drew down their built-up inventories.[195] U.S. importers *** also reported that the COVID-19 pandemic impacted demand for CACCS in the U.S. market during the POR.[196]

The parties disagree on the demand trend for non-GMO certified CACCS, including Non-GMO Project certified CACCS, in the U.S. market. Domestic Producers claim that demand for such CACCS did not increase significantly during the POR and, therefore, remains very small – *** of the total market for CACCS, at most.[197] TCCTC contends that demand for non-GMO beverages and clean-label and natural/organic ingredients has increased demand for such CACCS.[198]

Regarding future demand, all U.S. producers reported that they anticipate demand for CACCS to increase steadily or fluctuate up.[199] The responses of U.S. importers and purchasers were mixed, but pluralities of each reported that they do not anticipate demand to change in the reasonably foreseeable future.[200] All foreign producers reported that they anticipate demand to fluctuate up or not change.[201] Reasons cited for why demand is expected to increase include the following: CACCS being an important ingredient of downstream products and not easily replaceable; increased demand for "green" products; and heightened food safety requirements.[202] Purchaser *** reported that demand will decrease due to consumers moving away from carbonated beverages.[203]

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[192] CR/PR at Table II-4.
[193] CR/PR at II-11.
[194] Domestic Producers' Prehearing Br. at 35; CR/PR at II-11.
[195] CR/PR at II-11.
[196] CR/PR at II-11.
[197] Domestic Producers' Posthearing Br. at Exh. 1 (Responses to Commission Questions at 18).
[198] TCCTC's Prehearing Br. at 3-4.
[199] CR/PR at Table II-5.
[200] CR/PR at Table II-5.
[201] CR/PR at Table II-5.
[202] CR/PR at II-12.
[203] CR/PR at II-12.

Apparent U.S. consumption increased from *** million dry pounds in 2018 to *** dry pounds in 2019, *** dry pounds in 2020, and *** dry pounds in 2021, then decreased to *** dry pounds in 2022 and *** dry pounds in 2023, a level *** percent higher than in 2018.[204]

2. Supply Conditions

Original Investigations. The domestic industry was the largest supplier to the U.S. market, but its market share decreased over the POI from *** percent in 2015 to *** percent in 2017.[205] Cumulated subject imports, the smallest supplier to the U.S. market during the POI, increased their share of apparent U.S. consumption from *** percent in 2015 to *** percent in 2017.[206] Nonsubject imports, the second largest supplier to the U.S. market, also supplied an increasing portion of the U.S. market, with their share of apparent U.S. consumption increasing from *** percent in 2015 to *** percent in 2017.[207] Canada was the largest source of nonsubject imports during the POI, accounting for *** percent of such imports in 2017.[208]

Current Reviews. The U.S. market for CACCS was supplied by the domestic industry, subject imports from Belgium, Colombia, and Thailand, and nonsubject imports.[209]

The domestic industry's ability to respond to changes in demand in the U.S. market is helped by its available unused capacity and inventory.[210] However, U.S. producers do not export much of their CACCS or produce other products on the same equipment they use to produce CACCS, so they do not have the option of responding to domestic demand by shifting export sales to the domestic market or shifting production among products.[211] All U.S. producers, eight U.S. importers, and a majority of purchasers (ten of fifteen) reported that the

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[204] CR/PR at Tables C-1, I-14.

[205] *Original Determinations*, USITC Pub. 4799 at 19; *Confidential Original Determinations*, EDIS Doc. 801647 at 28.

[206] *Original Determinations*, USITC Pub. 4799 at 20; *Confidential Original Determinations*, EDIS Doc. 801647 at 28.

[207] *Original Determinations*, USITC Pub. 4799 at 20; *Confidential Original Determinations*, EDIS Doc. 801647 at 28.

[208] *Original Determinations*, USITC Pub. 4799 at 20; *Confidential Original Determinations*, EDIS Doc. 801647 at 28-29.

[209] CR/PR at Tables I-14, C-1. Most purchasers (13 of 16) reported that there were no new suppliers since January 1, 2018. *Id*. at II-9. Of the three that did, two purchasers named Tezkim and one purchaser named JBL. *Id*.

[210] CR/PR at II-5.

[211] CR/PR at II-5.

availability of domestically produced CACCS had not changed since January 1, 2018.[212] Importer *** and purchaser *** reported that U.S. producers experienced supply disruptions for CACCS, with *** reporting that the domestic industry recovered from such disruptions in 2022.[213]

The domestic industry was the largest source of supply to the U.S. market throughout the POR, and its share of apparent U.S. consumption increased from *** percent in 2018 to *** percent in 2019, then decreased to *** percent in 2020, *** percent in 2021, *** percent in 2022, and *** percent in 2023.[214] Its practical capacity was constant from 2018 to 2019 at 504.5 million dry pounds, then decreased to 494.6 million dry pounds in 2020, 494.4 million dry pounds in 2021, 493.0 million dry pounds in 2022, and 488.0 million dry pounds in 2023.[215] The industry's practical capacity utilization rate increased from 92.0 percent in 2018 to 94.7 percent in 2019, then decreased to 92.2 percent in 2020 and 2021, 88.6 percent in 2022, and 76.7 percent in 2023.[216]

As noted above, Tate & Lyle's CACCS operations became Primient in April 2022 after KPS acquired a majority share of Tate & Lyle's primary product division.[217] *** reported that ***.[218] *** reported that ***.[219]

Subject imports were the smallest source of supply to the U.S. market throughout the POR, and their share of apparent U.S. consumption decreased from *** percent in 2018 to *** percent in 2019, then increased to *** percent in 2020 and *** percent in 2021, decreased to *** percent in 2022, and increased to *** percent in 2023.[220] Nonsubject imports were the second largest source of supply to the U.S. market throughout the POR, and their share of apparent U.S. consumption was *** percent in 2018 and 2019, then increased to *** percent in 2020, *** percent in 2021, and *** percent in 2022, and decreased to *** percent in 2023.[221]

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[212] CR/PR at II-5-6.

[213] CR/PR at II-6.

[214] CR/PR at Table I-14. The domestic industry's share of apparent U.S. consumption declined *** percentage points during the POR. *Id*. at Table C-1.

[215] CR/PR at Table III-3. Thus, the industry's practical capacity declined 3.3 percent during the POR. *Id*. at Table C-1.

[216] CR/PR at Table III-13. Accordingly, the domestic industry's capacity utilization rate declined 15.3 percentage points during the POR. *Id*. at Table C-1.

[217] CR/PR at III-13 n.10.

[218] CR/PR at Tables III-2, III-4.

[219] CR/PR at Table III-2.

[220] CR/PR at Table I-14. Thus, subject imports' share of apparent U.S. consumption increased *** percentage points during the POR. *Id*. at Table C-1.

[221] CR/PR at Table I-14.

Two of three U.S. producers and eight of ten responding importers reported experiencing no supply constraints during the POR.[222] U.S. producer *** reported that ***.[223] Importer *** reported supply disruptions from Asia during the COVID-19 pandemic.[224] A majority of purchasers (nine of 15) reported that no firm refused to supply or was unable to supply CACCS during the POR.[225] Of the six that did, three purchasers, including *** and ***, reported supply constraints related to the COVID-19 pandemic.[226] Purchaser *** also reported that U.S. producers experienced supply constraints due to ***.[227]

According to Citribel and TCCTC, U.S. producers have insufficient capacity to supply the demand for non-GMO certified CACCS, particularly Non-GMO Project certified CACCS, in the U.S. market, as the domestic industry has not invested in the production capabilities for such CACCS in the past five years.[228] TCCTC expressed concern that domestic supply will be particularly insufficient in light of an increase in demand that it expects to occur in the reasonably foreseeable future.[229] According to Domestic Producers, they can supply every type of CACCS demanded by customers in the U.S. market, including non-GMO certified products.[230]

3. Substitutability and Other Conditions

Original Investigations. The Commission found that there was at least a moderate degree of substitutability between the domestic like product and subject imports, and that price was an important factor in purchasing decisions for CACCS.[231] In doing so, it recognized that interchangeability between the sources was potentially limited by CACCS including a broad spectrum of product types with different end uses and some applications requiring non-GMO

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[222] CR/PR at II-9.

[223] CR/PR at II-9.

[224] CR/PR at II-9.

[225] CR/PR at II-9.

[226] CR/PR at II-9. Purchaser *** reported that two suppliers restricted shipments in 2021 and capped their supplies in 2022, before their supplies returned to normal in 2023. *Id*.

[227] CR/PR at II-9.

[228] Citribel's Prehearing Br. at 6; TCCTC's Prehearing Br. at 2-3; TCCTC's Response to Written Questions at 2. TCCTC specifically claims that the domestic industry cannot produce commercial quantities of non-GMO CACCS. TCCTC's Prehearing Br. at 2-3.

U.S. importer *** and purchaser *** also reported that the domestic industry's supply is inadequate to satisfy demand for CACCS in the U.S. market, although they did not specify if supply is in inadequate in the context of demand for all CACCS or only non-GMO certified CACCS. CR/PR at II-5-6.

[229] TCCTC's Prehearing Br. at 2-3; TCCTC's Response to Written Questions at 2.

[230] Domestic Producers' Posthearing Br. at Exh. 1 (Responses to Commission Questions at 3).

[231] *Original Determinations*, USITC Pub. 4799 at 20.

certified products.[232] Nonetheless, the Commission found that the distinction between GMO and non-GMO CACCS certification did not play a significant role in the overall U.S. market, as the vast majority of purchasers were indifferent to non-GMO certifications.[233] The Commission found that there was no official standard in the U.S. market for determining what constituted a non-GMO product or for labelling non-GMO products, and that of the multiple means to certify CACCS as non-GMO, Non-GMO Project certification was one of the more recognizable of the multiple available certifications.[234] The Commission recognized that domestically produced CACCS could not be Non-GMO Project certified due to domestic producers' use of GMO corn as a feedstock, and found that no subject producer had Non-GMO Project certification for the entire POI.[235] However, U.S. purchasers considered CACCS sold by both domestic producers and importers of CACCS from all subject countries to be non-GMO.[236] The majority of responding purchasers also reported that non-GMO and Non-GMO Project certifications were not important purchasing factors for CACCS.[237] Additionally, despite the relative consensus among the parties that demand for non-GMO CACCS was increasing in the U.S. market, the Commission found that the segment of the U.S. market that required non-GMO CACCS was relatively small, accounting for 5 to 15 percent of the total U.S. market, of which an even smaller portion required Non-GMO Project certification.[238]

Current Reviews. We find that there is a moderate-to-high degree of substitutability between domestically produced CACCS and subject imports.[239] As noted in section III.D.2. above, all responding U.S. producers reported that subject imports from all sources were always interchangeable with domestically produced CACCS.[240] A plurality of responding U.S. importers reported that domestically produced CACCS are always interchangeable with subject imports from Belgium, and in the comparisons of domestically produced CACCS with subject imports from Colombia and Thailand, most responding importers were split between always

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[232] *Original Determinations*, USITC Pub. 4799 at 20.

[233] *Original Determinations*, USITC Pub. 4799 at 21-23. The Commission noted that only seven purchasers reported certification/non-GMO as one of their top three purchasing factors, compared to 34 purchasers that listed price. *Id*. at 22-23. Further, the majority of purchasers reported that being non-GMO and Non-GMO Project certified were not important purchasing factors. *Id*. at 23.

[234] *Original Determinations*, USITC Pub. 4799 at 21.

[235] *Original Determinations*, USITC Pub. 4799 at 21.

[236] *Original Determinations*, USITC Pub. 4799 at 21.

[237] *Original Determinations*, USITC Pub. 4799 at 23.

[238] *Original Determinations*, USITC Pub. 4799 at 22.

[239] CR/PR at II-14.

[240] CR/PR at Table II-13.

and sometimes.[241] A majority of purchasers agreed with respect to subject imports from Belgium and Thailand, but were split with respect to subject imports from Colombia.[242] When asked to compare domestically produced CACCS with subject imports from each subject country based on 19 purchasing factors, most responding purchasers reported domestically produced CACCS and subject imports from all sources as comparable across most factors.[243] A majority of purchasers familiar with CACCS from the different sources reported that domestically produced CACCS and subject imports from all three sources always met such specifications.[244] Our evaluation of substitutability further reflects that some purchasers indicated differences in non-GMO certifications and otherwise among CACCS from different sources.[245]

The record in these reviews indicates that price is an important factor in purchasing decisions for CACCS. Responding purchasers most often cited price (15 firms), availability/capacity (13 firms), and quality/specifications/certifications (11 firms) as the top three factors influencing their purchasing decisions.[246] Additionally, 15 of 16 responding purchasers reported that price was a very important purchasing factor.[247] In reporting the significance of non-price factors in comparisons of domestically produced CACCS with imports from all three subject countries, all responding U.S. producers reported that non-price differences were sometimes or never significant and a majority of responding importers reported them as frequently and sometimes significant.[248] Responding purchasers' responses varied, but pluralities reported that non-price differences were sometimes significant for most comparisons between the domestic like product and imports from subject sources and among subject sources.[249] Furthermore, of the 16 responding purchasers, nine reported that they

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[241] CR/PR at Table II-14.

[242] CR/PR at Table II-15. Two purchasers found domestically produced CACCS and subject imports from Colombia always interchangeable, one found them frequently interchangeable, and three found them sometimes interchangeable. *Id*.

[243] CR/PR at Table II-12.

[244] CR/PR at II-14, Table II-10.

[245] CR/PR at I-14.

[246] CR/PR at Table II-8.

[247] CR/PR at Table II-9.

[248] CR/PR at Table II-16.

[249] CR/PR at Table II-18. The exceptions were comparisons between the domestic like product and subject imports from Belgium, in which a plurality reported that non-price differences were always significant, and between the domestic like product and subject imports from Colombia, in which a majority of purchasers were evenly split between non-price differences being sometimes and never significant. *Id*.

sometimes purchase the lowest-priced product, five reported that they usually do, and two reported that they always do.[250]

The parties disagree as to the significance of the distinction between Non-GMO Project certified CACCS and the other CACCS sold in the U.S. market. Citribel and TCCTC argue that Non-GMO Project certified CACCS do not compete with other CACCS.[251] Specifically, they claim that Non-GMO Project certified CACCS are required for customers that want to obtain Non-GMO Project certification for downstream products, with TCCTC specifically claiming that such CACCS are essential to meet the growing demand for non-GMO soda alternatives.[252] Domestic Producers argue that Non-GMO Project certification is not a significant factor for purchasers in the U.S. market.[253]

The record indicates that non-GMO certification, including Non-GMO Project certification, is not a significant factor in the U.S. market. Majorities of responding purchasers reported that they and their customers never base purchasing decisions on CACCS having non-GMO certification.[254] In rating the importance of Non-GMO Project certification, only two responding purchasers rated it as very important, while the other 14 responding purchasers were evenly split (seven each) between it being somewhat important and not important.[255] In declarations submitted by Domestic Producers, an executive from Cargill *** and an executive from ADM ***.[256] Purchaser *** reported that non-GMO certification was important for about 5 percent of its purchases.[257] Thus, while Non-GMO Project certified CACCS may be required for purchasers that want to obtain Non-GMO Project certification for their own downstream products, the available information on the record indicates that the share of the market requiring Non-GMO Project certified CACCS is relatively small.

Further, the record indicates that, as in the original investigations, the distinction between GMO and non-GMO generally does not play a significant role in the U.S. market. A plurality (seven) of responding purchasers reported that non-GMO was a somewhat important purchasing factor, with the remaining purchasers split (four each) between it being very

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[250] CR/PR at II-17.

[251] Citribel's Prehearing Br. at 4; TCCTC's Written Response to Questions at 3.

[252] Citribel's Prehearing Br. at 4; TCCTC's Prehearing Br. at 6-7.

[253] Domestic Producers' Posthearing Br. at 9-11.

[254] CR/PR at Table II-7.

[255] CR/PR at Table II-9.

[256] Domestic Producers' Posthearing Br. at Exh. 3 (Declaration of Elmar Guseyn-Zade of Cargill at 2), Exh. 4 (Declaration of David Durkee of ADM at 2). No respondent party commented on the size of the market that requires Non-GMO Project certified CACCS.

[257] CR/PR at II-16.

important and not important.[258] Most responding U.S. producers, importers, and purchasers reported that there were no physical limitations to being able to use GMO and non-GMO CACCS interchangeably in any specific end use application.[259] All responding U.S. producers and majorities of U.S. importers and purchasers reported that their customers sometimes or never prefer non-GMO CACCS to GMO CACCS across all end uses, with the exception of pharmaceutical end uses, to which responding purchasers were evenly split.[260] Moreover, the domestic industry shipped a significant volume of non-GMO certified CACCS in 2023.[261]

In light of the above and subject imports' share of apparent U.S. consumption during the POR, ranging from *** percent to *** percent,[262] the record indicates that competition occurred between subject imports and the domestic like product for a significant portion of the market, namely, purchasers that did not require Non-GMO Project certified CACCS. This competition is also reflected in the pricing data collected by the Commission, which shows that subject imports and the domestic like product had overlapping sales throughout the POR in three of the four pricing products.[263]

We acknowledge some limitation in the interchangeability between domestically produced CACCS and subject imports based on some purchasers requiring Non-GMO Project certified CACCS. However, the record shows that there is asymmetric competition, in that the purchasers who do not insist on Non-GMO Project certification may nonetheless use Non-GMO Project certified CACCS, which then compete against other non-GMO certified CACCS and GMO CACCS for those sales. Therefore, we find that the record in these reviews indicates that the distinction between Non-GMO Project certification and other types of CACCS, including GMO CACCS and non-GMO certified CACCS, does not play a significant role in the market.

The record indicates that CACCS were primarily sold from inventory to the U.S. market during the POR.[264] U.S. producers sold 80.7 percent of their commercial shipments from inventory, with lead times averaging 17.9 days, and the remaining 19.3 percent of their

[258] CR/PR at Table II-9.

[259] CR/PR at II-15.

[260] CR/PR at Table II-6. Responding purchasers were evenly split (two each) across always, frequently, sometimes, and never. *Id*.

[261] CR/PR at Table IV-2.

[262] CR/PR at Tables I-14, C-1. Further, as noted above, subject imports' share of apparent U.S. consumption increased *** percentage points during the POR. *Id*. at Table C-1.

[263] CR/PR at Tables V-4-6.

[264] CR/PR at II-18.

commercial shipments were made to order, with lead times averaging 7.5 days.[265] U.S. importers sold 19.2 percent of their commercial U.S. shipments from foreign inventory and 37.1 percent of their commercial U.S. shipments from U.S. inventory, with lead times averaging 55.9 and 35.4 days, respectively, and the remaining 43.7 percent of their commercial U.S. shipments were produced to order, with lead times averaging 45 days.[266]

Twelve of sixteen responding purchasers reported that they require their CACCS suppliers to undergo a certification or qualification process.[267] The responding purchasers described the qualification process as including confirmation of specifications, lab trials, third party audits, and site quality approval, with five purchasers reporting that the process took 10 to 30 days and four purchasers reporting a range from six months to a year.[268]

The majority of U.S. producers' sales in 2023 were made via annual contracts, representing *** percent of their commercial U.S. shipments that year, with a smaller but significant share made via long-term contracts, at *** percent, and minimal sales made via short-term contracts and spot sales.[269] The majority of U.S. importers' sales were made via short-term contracts in 2023, representing *** percent of their commercial U.S. shipments that year, with a smaller but significant share made via spot sales, at *** percent, and a smaller share via annual contracts, at *** percent.[270] The majority of foreign producers' sales were also made via short-term contracts in 2023, representing *** percent of their commercial U.S. shipments that year, with smaller shares made via annual contracts and spot sales, at *** percent and *** percent, respectively.[271] According to Domestic Producers, U.S. importers are able to adjust to market prices more quickly due to the majority of their sales being made via short-term contracts, which making subject imports more attractive to purchasers looking for lower prices.[272]

Raw materials represented the second largest share of cost of goods sold ("COGS") during the POR.[273] Raw material costs increased from 24.3 percent in 2018 to 24.7 percent in 2019, 25.3 percent in 2020, and 27.5 percent in 2021, then decreased to 25.1 percent in 2022

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[265] CR/PR at II-18. Domestic Producers explained that longer lead times for shipments from inventory ***. *Id*. at II-18 n. 22.

[266] CR/PR at II-18.

[267] CR/PR at II-19.

[268] CR/PR at II-19.

[269] CR/PR at Table V-3.

[270] CR/PR at Table V-3.

[271] CR/PR at Table V-3.

[272] Domestic Producers' Prehearing Br. at 39-40.

[273] CR/PR at Table III-10.

and 24.5 percent in 2023.[274] The raw material cost per pound steadily increased over the POR from $0.13 in 2018 to $0.14 in 2019 and 2020, $0.17 in 2021, $0.20 in 2022, and $0.26 in 2023, a level 96.9 percent higher than in 2018.[275] The primary raw material for CACCS production is a starch (or substrate), which varies by producer, that is fermented by yeast or mold.[276] U.S. producers largely use corn starch as their substrate, accounting for *** percent, by value, of their raw material costs in 2023.[277] According to USDA data, U.S. corn prices increased by 45.9 percent from January 2018 to December 2023.[278] *** and TCCTC generally agree that the price of corn has a limited impact on the price of domestically produced CACCS given the other costs associated with production.[279]

C. Likely Volume of Subject Imports

Original Investigations. The Commission found that the volume of cumulated subject imports and the increase in that volume were significant in absolute terms and relative to apparent U.S. consumption.[280] The volume of cumulated subject imports increased from 159.9 million dry pounds in 2015 to 175.5 million dry pounds in 2016 and 201.6 million dry pounds in 2017, an increase of 26.0 percent during the POI.[281] The Commission also found that the increase in the market share of cumulated subject imports came at the expense of the domestic industry.[282] Cumulated subject imports increased their share of apparent U.S. consumption from *** percent in 2015 to *** percent in 2016 and *** percent in 2017, while the domestic

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[274] CR/PR at Table III-10. Thus, raw material costs as a share of COGS increased 0.2 percentage points from 2018 to 2023. *Id*.

[275] CR/PR at Tables III-10-11.

[276] CR/PR at V-1. ***. *Id*. at III-24 n.16.

[277] CR/PR at V-1, Table III-13. *** was *** U.S. producer to report ***. *Id*. at III-24. U.S. producers reported that ***. *Id*. at Table III-13.

[278] *Derived from* CR/PR at Table V-1.

[279] ***; TCCTC's Written Response to Questions at 6.

[280] *Original Determinations*, USITC Pub. 4799 at 24. As part of its analysis, the Commission recognized that a growing portion of the U.S. market required non-GMO CACCS that the domestic industry could not satisfy. However, it found that this segment of the market was relatively small, leaving the vast majority of the market indifferent to the distinction between GMO and non-GMO CACCS. *Id*. at 24 n.120.

[281] *Original Determinations*, USITC Pub. 4799 at 24.

[282] *Original Determinations*, USITC Pub. 4799 at 24.

industry's share of apparent U.S. consumption decreased from *** percent in 2015 to *** percent in 2016 and *** percent in 2017.[283]

Current Reviews. As discussed in section III.D.2. above, despite the disciplining effects of the orders, subject imports maintained a continuous presence in the U.S. market during the POR. Subject imports increased from 142.4 million dry pounds in 2018 to 145.6 million dry pounds in 2019, 155.2 million dry pounds in 2022, and 186.6 million dry pounds in 2021, then decreased to 161.1 million dry pounds in 2022, and increased to 215.6 million dry pounds in 2023.[284] U.S. shipments of subject imports as a share of apparent U.S. consumption decreased from *** percent in 2018 to *** percent in 2019, then increased to *** percent in 2020 and *** percent in 2021, decreased to *** percent in 2022, and increased to *** percent in 2023, a level *** percent higher than in 2018.[285]

The record shows that subject foreign producers have substantial capacities, as well as excess capacity and large inventories that can be directed to the U.S. market. Subject producers' capacity was constant from 2018 to 2022 at *** dry pounds, then decreased to *** dry pounds in 2023.[286] Their production decreased from *** dry pounds in 2018 to *** dry pounds in 2019, then increased to *** dry pounds in 2020, and decreased to *** dry pounds in 2021, *** dry pounds in 2022, and *** dry pounds in 2023.[287] Subject producers' capacity utilization rate decreased from *** percent in 2018 to *** percent in 2019, then increased to *** percent in 2020 and 2021, and decreased to *** percent in 2022 and *** percent in 2023.[288] The decline in subject producers' operations in 2023 is at least partially explained by

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[283] *Original Determinations*, USITC Pub. 4799 at 24; *Confidential Original Determinations*, EDIS Doc. 801647 at 35.

[284] CR/PR at Tables C-1, I-14, IV-1. Therefore, subject imports increased 51.3 percent during the POR. *Id*. at Table C-1.

[285] CR/PR at Tables C-1, I-14. TCCTC argues that the volume trends of subject imports during the POR are attributable to the domestic industry's reduced production capacity and capacity constraints. TCCTC's Written Response to Questions at 7. While ***, ***, and *** may have contributed to the domestic industry's reduced production in the 2022-23 period, a decrease of 62.8 million dry pounds, when subject imports had their largest volume increase of the POR, at 54.4 million dry pounds, a significant increase in subject import volume also occurred in the 2020-21 period, at 31.4 million dry pounds, when the domestic industry's production was relatively flat, decreasing by only 165,000 dry pounds over the period. *Calculated from* CR/PR at Table C-1; *see also* Domestic Producers' Posthearing Br. at Exh.1 (Responses to Commission Questions at 27) (discussing impact on U.S. market of Brazil's imposition of antidumping duty orders on CACCS from Colombia and Thailand). Accordingly, we are unpersuaded by TCCTC's argument.

[286] CR/PR at Table IV-24.

[287] CR/PR at Table IV-24.

[288] CR/PR at Table IV-24.

Citribel's voluntary reduction of its production to 70 percent of its installed capacity in January 2023.[289] According to Citribel, this voluntary reduction will remain through 2025,[290] but the record indicates that nothing prevents Citribel from increasing its production in the reasonably foreseeable future to the levels witnessed in the preceding years of the POR.[291] Nonetheless, subject producers' capacity as a share of apparent U.S. consumption ranged from *** percent to *** percent during the POR.[292] Subject producers' end-of-period inventories decreased from *** dry pounds in 2018 to *** dry pounds in 2019, then increased to *** dry pounds in 2020, decreased to *** dry pounds in 2021, increased to *** dry pounds in 2022, and decreased to *** dry pounds in 2023, a level *** percent higher than in 2018.[293]

The record also shows that subject producers have exported large volumes of CACCS. Their export shipments decreased from *** dry pounds in 2018 to *** dry pounds in 2019, then increased to *** dry pounds in 2020, *** dry pounds in 2021, and decreased to *** dry pounds in 2022 and *** dry pounds in 2023.[294] Subject producers' export shipments as a share of their total shipments ranged from *** percent to *** percent during the POR.[295] According to GTA data covering HS subheadings 2918.14 and 2918.15, a category that includes CACCS and potentially out-of-scope products, global exports of such merchandise from cumulated subject producers were at high levels throughout the POR, although they decreased irregularly from *** dry pounds in 2018 to *** dry pounds in 2023.[296] Specifically, the data show that Belgium, Colombia, and Thailand were the world's third, sixth, and second largest exporters of such merchandise, respectively, in 2023.[297]

The U.S. market also remains attractive to subject producers, providing them with an incentive to export increasing volumes of subject merchandise to the United States in the event

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[289] CR/PR at II-17, IV-29; Citribel's Prehearing Br. at 8-9; Citribel's Response to Written Questions at 4.

[290] Citribel's Prehearing Br. at 8-9; Citribel's Response to Written Questions at 4.

[291] According to Citribel, increasing its production to previous levels would only require substantial time and effort. CR/PR at II-7; Citribel's Prehearing Br. at 4.

[292] *Calculated from* CR/PR at Tables I-14, IV-24.

[293] CR/PR at Table IV-24.

[294] CR/PR at Table IV-24.

[295] CR/PR at Table IV-24.

[296] CR/PR at Table IV-25.

[297] CR/PR at Table IV-25. Belgium, Colombia, and Thailand accounted for 3.8 percent, 1.6 percent, and 5.8 percent, respectively, of all global exports of such merchandise in 2023. *Id*. In the preceding years of the POR, Belgium's share of total world exports ranged from 5.8 percent to 8.4 percent, so its 3.8 percent share in 2023 likely reflects Citribel's voluntary capacity reduction that year, as described in more detail above. China accounted for the largest share of all global exports of the product in 2023, at 74.6 percent. *Id*.

the orders were revoked. As noted above, subject producers maintained a continuous presence in the U.S. market during the POR, indicating that they retain access to U.S. distribution networks and customers that could be used to expand their presence in the market. The AUVs of subject imports in the U.S. market exceeded the AUVs of subject producers' export and home market shipments throughout the POR.[298] Finally, Brazil imposed antidumping duty orders on CACCS from Colombia and Thailand, effective August 2022,[299] further enhancing the relative attractiveness of the U.S. market to the subject producers in these two countries.

Accordingly, based on the behavior of subject producers during the original investigations, subject producers' substantial capacity, excess capacity, increased inventory, and the large volumes of exports in these current reviews, the continued attractiveness of the U.S. market to subject producers, and the continued and increasing presence of cumulated subject imports in the U.S. market during the POR, we find that the likely volume of cumulated subject imports would be significant in the event the orders were revoked.[300]

D. Likely Price Effects

Original Investigations. The Commission found that cumulated subject imports were at least moderately substitutable for the domestic like product and that price was an important factor in purchasing decisions.[301] Despite cumulated subject imports overselling the domestic like product in a majority of the quarterly comparisons, it nonetheless found that cumulated subject imports significantly undersold the domestic like product during the POR because the

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[298] *Comparing* CR/PR at Tables C-1 *with id*. at Table IV-24. Cumulated subject imports' AUV was $0.63 in 2018, $0.57 in 2019, $0.59 in 2020, $0.92 in 2021, $1.49 in 2022, and $1.05 in 2023. *Id*. at Table C-1. In contrast, cumulated subject producers' AUV for their home market shipments was $*** in 2018, $*** in 2019, $*** in 2020, $*** in 2021, $*** in 2022, and $*** in 2023. *Id*. at Table IV-24. The AUV for their export shipments was $*** in 2018, $*** in 2019, $*** in 2020, $*** in 2021, $*** in 2022, and $*** in 2023. *Id*.

[299] CR/PR at IV-57.

[300] Citribel argues that revocation of the orders would not result in a significant change to the volume of subject imports in the reasonably foreseeable future since, in its view, subject imports do not compete with domestically produced CACCS. Citribel's Prehearing Br. at 7-8. As discussed in section IV.B.3. above, we find that the domestic like product and subject imports are competing in the U.S. market.

[301] *Original Determinations*, USITC Pub. 4799 at 24.

underselling comparisons on a volume basis involved *** million dry pounds of subject imports while the overselling comparisons involved only *** million dry pounds of subject imports.[302]

The Commission also found that low-priced subject imports depressed prices of the domestic like product to a significant degree, as domestic prices for seven of the eight pricing products declined over the POI.[303] Further, it found that the falling cost of corn, U.S. producers' primary feedstock for CACCS production, did not explain the domestic industry's price declines.[304] While certain domestic producers indicated that some contracts tied the price of CACCS to the price of corn, it was not a universal practice for domestic producers and the domestic prices of CACCS did not follow the price trends of corn in 2016 or 2017.[305] Additionally, raw materials only accounted for between *** and *** percent of the domestic industry's COGS, and the domestic industry's raw material costs and the price of corn had an inverse relationship in 2016 and 2017.[306] The Commission also found that demand for GMO CACCS could not explain the domestic industry's price declines because such demand had increased from 2015 to 2017.[307]

Current Reviews. As discussed in section IV.B.3. above, we find a moderate-to-high degree of substitutability between domestically produced CACCS and subject imports, and that price is an important factor in purchasing decisions.

The Commission requested pricing data for four pricing products in these reviews.[308] Three U.S. producers and five importers provided usable pricing data for sales of the requested

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[302] *Original Determinations*, USITC Pub. 4799 at 26; *Confidential Original Determinations*, EDIS Doc. 801647 at 38. The Commission also broke out the pricing products in terms of spot/short term sales and annual contracts and this analysis showed similar underselling trends. *Original Determinations*, USITC Pub. 4799 at 26; *Confidential Original Determinations*, EDIS Doc. 801647 at 38-39.

[303] *Original Determinations*, USITC Pub. 4799 at 27-28.

[304] *Original Determinations*, USITC Pub. 4799 at 28.

[305] *Original Determinations*, USITC Pub. 4799 at 27.

[306] *Original Determinations*, USITC Pub. 4799 at 27; *Confidential Original Determinations*, EDIS Doc. 801647 at 40.

[307] *Original Determinations*, USITC Pub. 4799 at 28.

[308] CR/PR at V-9. The pricing product definitions are as follows:

Product 1.-- Citric acid, fine granular, in dry form in 25 kilogram and 50 pound bags, spot/short term sales.

Product 2.-- Citric acid, fine granular, in dry form in 25 kilogram and 50 pound bags, annual contract sales.

Product 3.-- Citric acid, granular, in dry form packed in bulk sacks ("supersacks"), spot/short term sales.

Product 4.-- Citric acid, granular, in dry form packed in bulk sacks ("supersacks"), annual contract sales.

products, although not all firms reported pricing for all products for all quarters.[309] Pricing data reported by the firms accounted for approximately 61.5 percent of U.S. producers' U.S. shipments of CACCS, 100.0 percent of U.S. shipments of subject imports from Belgium, and 88.7 percent of U.S. shipments of subject imports from Colombia in 2023.[310] No pricing data were reported for subject imports from Thailand in 2023.[311]

The available pricing data indicate that cumulated subject imports undersold the domestic like product in 31 of 110 (or 28.2 percent of) quarterly comparisons, involving 62.3 million dry pounds (or 41.7 percent of the reported total volume) of cumulated subject imports, at underselling margins that ranged from 0.2 percent to 40.6 percent and averaged 8.6 percent.[312] Cumulated subject imports oversold the domestic like product in the remaining 79 (or 71.8 percent of) quarterly comparisons, involving 87.0 million dry pounds (or 58.3 percent of the reported total volume) of cumulated subject imports, at overselling margins that ranged from 0.1 percent to 174.7 percent and averaged 19.3 percent.[313]

We have also considered price trends. The sales prices of domestically produced CACCS for all four pricing products increased over the POR, with the increases ranging from *** percent to *** percent.[314] The sales prices of subject imports from Belgium and Colombia for pricing product 1 also increased by *** percent and *** percent, respectively, over the POR.[315] Further, the sales price of subject imports from Colombia for pricing product 3 increased by *** percent over the POR.[316]

In light of the significant underselling observed in the original investigations, the continued underselling observed during the POR with the orders in place, the moderate-to-high degree of substitutability between the domestic like product and subject imports, and the

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[309] CR/PR at V-9. There was no reported pricing data for subject imports from Colombia or Thailand for product 2, for subject imports from Thailand for product 3, nor for subject imports from Belgium, Colombia, or Thailand for product 4. *Id*. at Tables V-5-7.

[310] CR/PR at V-9.

[311] CR/PR at V-9.

[312] CR/PR at Table V-9. We note that the extent of the underselling in these current reviews cannot be determined due to the *** pricing data reported by U.S. importers of subject imports from Thailand. *Id*. In the original investigations, subject imports from Thailand undersold the domestic like product in *** of *** (or *** percent of) quarterly comparisons, involving *** dry pounds (or *** percent) of the reported subject import sales volume. *Id*. at V-21 n.10; Confidential Original Staff Report at Table V-12.

[313] CR/PR at Table V-9.

[314] CR/PR at Table V-8.

[315] CR/PR at Table V-8.

[316] CR/PR at Table V-8.

significance of price in purchasing decisions, we find that significant underselling by cumulated subject imports is likely in the event the orders were revoked.

Absent the disciplining effects of the orders, the likely significant volume of low-priced subject imports would likely force the domestic industry to either reduce its prices, forego price increases that would otherwise have occurred, or risk losing market share to subject imports. Accordingly, we find that the significant volume of low-priced subject imports would likely have significant price effects in the event of revocation within a reasonably foreseeable time.[317]

E. Likely Impact[318]

Original Investigations. The Commission found that cumulated subject imports had a significant adverse impact on the domestic industry.[319] It observed that the domestic industry's output and many of its financial indicators declined during the POI.[320] It found that the significant underselling by cumulated subject imports caused the domestic industry to lose sales to cumulated subject imports and suffer declines in its production, capacity utilization, and U.S. shipments.[321] It also found that the significant depressing effects of cumulated subject imports on domestic prices resulted in declines to the domestic industry's revenues and financial performance.[322]

In its non-attribution analysis, the Commission found that the presence of nonsubject imports did not explain the significant price effects caused by subject imports nor the sales and revenues the domestic industry lost to lower-priced subject imports, as nonsubject imports

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[317] Citribel argues that subject imports would not have adverse price effects if the orders were revoked because, in its view, subject imports and domestically produced CACCS are different products and therefore not competing in the U.S. market. Citribel's Prehearing Br. at 10. As discussed in section IV.B.3. above, we find that the domestic like product and subject imports are competing in the U.S. market.

[318] In its full sunset review of the antidumping duty order on subject imports from Belgium, Commerce calculated likely weighted-average margins of up to 19.30 percent *ad valorem* for all producers/exports in Belgium. *Citric Acid and Certain Citrate Salts from Belgium: Final Results of the Sunset Review of the Antidumping Duty Order*, 88 Fed. Reg. 88,361 (Dec. 21, 2023). In its expedited sunset reviews of the antidumping duty orders on subject imports from Colombia and Thailand, Commerce calculated likely weighted-average margins of up to 24.48 percent *ad valorem* for all producers/exporters in Colombia and up to 15.71 percent for all producers/exporters in Thailand. *Citric Acid and Certain Citrate Salts from Thailand and Colombia: Final Results of the Expedited First Sunset Reviews of the Antidumping Duty Orders*, 88 Fed. Reg. 67,239 (Sept. 29, 2023).

[319] *Original Determinations*, USITC Pub. 4799 at 33.

[320] *Original Determinations*, USITC Pub. 4799 at 29.

[321] *Original Determinations*, USITC Pub. 4799 at 30.

[322] *Original Determinations*, USITC Pub. 4799 at 30.

from Canada, the largest source of nonsubject imports during the POI, were predominately higher priced than both the domestic like product and cumulated subject imports.[323] The Commission also considered respondents' argument that the domestic industry was unable to meet demand for non-GMO CACCS in the U.S. market during the POI.[324] Given the relatively small size of the market for which the domestic industry did not compete, it found that the domestic industry's non-participation in this market was insufficient to break the causal chain.[325] The Commission rejected respondents' argument that purchasers turned to subject imports because the domestic industry was unable to meet their needs.[326] It observed that the domestic industry had available capacity to supply additional CACCS to the U.S. market during the POI, that purchasers and importers also reported supply constraints involving subject imports, and that a majority of purchasers reported that domestically produced CACCS was comparable with CACCS from each of the subject countries in terms of reliability of supply.[327] Lastly, the Commission rejected respondents' argument that the declines in the domestic industry's performance were explained by competition among the three producers, specifically aggressive pricing by ***, because the record did not support the argument.[328]

Current Reviews. The domestic industry's performance over the POR was mixed, as its trade-related indicators generally declined and its financial indicators generally improved over the period.

The industry's capacity was constant from 2018 to 2019 at 504.5 million dry pounds, then decreased to 494.6 million dry pounds in 2020, 494.4 million dry pounds in 2021, 493.0 million dry pounds in 2022, and 488.0 million dry pounds in 2023.[329] Its production increased from 464.0 million dry pounds in 2018 to 477.7 million dry pounds in 2019, then decreased to 455.8 million dry pounds in 2020, 455.7 million dry pounds in 2021, 437.0 million dry pounds in 2022, and 374.2 million dry pounds in 2023.[330] The industry's capacity utilization rate increased

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[323] *Original Determinations*, USITC Pub. 4799 at 30-31.
[324] *Original Determinations*, USITC Pub. 4799 at 31.
[325] *Original Determinations*, USITC Pub. 4799 at 31.
[326] *Original Determinations*, USITC Pub. 4799 at 31.
[327] *Original Determinations*, USITC Pub. 4799 at 31-32.
[328] *Original Determinations*, USITC Pub. 4799 at 33-33; *Confidential Original Determinations*, EDIS Doc. 801647 at 48-49.
[329] CR/PR at Tables III-3, C-1. Thus, the domestic industry's capacity declined 3.3 percent during the POR. *Id*. at Table C-1.
[330] CR/PR at Tables III-3, C-1. Accordingly, the industry's production declined 19.4 percent during the POR. *Id*. at Table C-1.

from 92.0 percent in 2018 to 94.7 percent in 2019, then decreased to 92.2 percent in 2020 and 2021, 88.6 percent in 2022, and 76.7 percent in 2023.[331]

The domestic industry's employment-related indicators improved over the POR, except for productivity, which decreased by 34.4 percent over the period.[332] Its number of production-related workers ("PRWs") steadily increased over the POR from 280 PRWs in 2018 to 289 PRWs in 2019, 298 PRWs in 2020, 316 PRWs in 2021, 319 PRWs in 2022, and 330 PRWs in 2023.[333] The industry's total number of hours worked increased from 528,000 hours in 2018 to 592,000 hours in 2019, then decreased to 559,000 hours in 2020, increased to 617,000 hours in 2021, decreased to 587,000 hours in 2022, and increased to 649,000 hours in 2023.[334] Its wages paid decreased from $22.2 million in 2018 to $21.4 million in 2019, then increased to $22.0 million in 2020, $23.5 million in 2021, $26.2 million in 2022, and $28.8 million in 2023.[335] The industry's hourly wages decreased from $42.04 in 2018 to $36.19 in 2019, then increased to $39.27 in 2020, decreased to $38.02 in 2021, increased to $44.57 in 2022, and decreased to $44.37 in 2023.[336] Its productivity, as measured in dry pounds per hour, decreased from 878.7 dry pounds in 2018 to 806.9 dry pounds in 2019, then increased to 815.5 dry pounds in 2020, decreased to 738.5 dry pounds in 2021, increased to 744.4 dry pounds in 2022, and decreased to 576.5 dry pounds in 2023.[337]

The domestic industry's U.S. shipments increased from 445.6 million dry pounds in 2018 to 458.0 million dry pounds in 2019 and 461.4 million dry pounds in 2020, then decreased to 448.4 million dry pounds in 2021, 417.6 million dry pounds in 2022, and 337.8 million dry pounds in 2023.[338] Its U.S. shipments as a share of apparent U.S. consumption increased from *** percent in 2018 to *** percent in 2019, then decreased to *** percent in 2020, *** percent in 2021, *** percent in 2022, and *** percent in 2023.[339]

The domestic industry's end-of-period inventories increased from 62.7 million dry pounds in 2018 to 66.8 million dry pounds in 2019, then decreased to 46.5 million dry pounds in 2020 and 39.7 million dry pounds in 2021, and increased to 40.6 million dry pounds in 2022

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[331] CR/PR at Tables III-3, C-1. Therefore, the domestic industry's capacity utilization declined 15.3 percent during the POR. *Id*. at Table C-1.

[332] CR/PR at Table C-1.

[333] CR/PR at Tables III-9, C-1.

[334] CR/PR at Tables III-9, C-1.

[335] CR/PR at Tables III-9, C-1.

[336] CR/PR at Tables III-9, C-1.

[337] CR/PR at Tables III-9, C-1.

[338] CR/PR at Tables I-14, III-7, C-1.

[339] CR/PR at Tables I-14, C-1.

and 59.9 million dry pounds in 2023.[340] Its end-of-period inventories as a share of its U.S. shipments increased from 14.1 percent in 2018 to 14.6 percent in 2019, then decreased to 10.1 percent in 2020, 8.8 percent in 2021, and 9.7 percent in 2022, and increased to 17.7 percent in 2023.[341]

Most of the domestic industry's financial indicators declined from 2018 to 2021, then substantially increased in 2022, and then decreased, although remaining at heightened levels, in 2023. Its sales revenue decreased from $309.9 million 2018 to $309.8 million in 2019, then increased to $310.1 million in 2020, decreased to $304.2 million in 2021, increased to 535.4 million in 2022, and decreased to $466.4 million in 2023.[342] The industry's gross profit decreased from $60.2 million 2018 to $50.5 million in 2019, $50.1 million in 2020, and $22.4 million in 2021, then increased to $181.7 million in 2022, and decreased to $91.6 million in 2023.[343] Its operating income decreased from $*** in 2018 to $*** in 2019, $*** in 2020, and $*** in 2021, then increased to $*** in 2022, and decreased to $*** in 2023.[344] The industry's operating to net sales ratio decreased from *** percent in 2018 to *** percent in 2019, *** percent in 2020, and *** percent in 2021, then increased to *** percent in 2022, and decreased to *** percent in 2023.[345] Its net income decreased from $*** in 2018 to $*** in 2019, $*** in 2020, and $*** in 2021, then increased to $*** in 2022, and decreased to $*** in 2023.[346] The industry's net income to net sales ratio decreased from *** percent in 2018 to *** percent in 2019, *** percent in 2020, and *** percent in 2021, then increased to *** percent in 2022, and decreased to *** percent in 2023.[347] The industry's net sales AUVs increased irregularly over the POR, with a notable spike in 2022, and its COGS to net sales ratio increased each year from 2018 to 2021, then decreased sharply in 2022, aligning with the spike in the net sales AUV, and increased in 2023 to a level slightly below that of 2018.[348]

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[340] CR/PR at Tables III-8, C-1.
[341] CR/PR at Table III-8.
[342] CR/PR at Tables III-10, C-1.
[343] CR/PR at Tables III-10, C-1.
[344] CR/PR at Tables III-10, C-1.
[345] CR/PR at Tables III-10, C-1.
[346] CR/PR at Tables III-10, C-1.
[347] CR/PR at Tables III-10, C-1.
[348] CR/PR at Tables III-10, C-1. The domestic industry's net sales value (in dollars per dry pound) was $0.67 in 2018, $0.65 in 2019 and 2020, $0.66 in 2021, $1.23 in 2022, and $1.31 in 2023. *Id*. The industry's COGS to net sales ratio was 80.6 percent in 2018, 83.7 percent in 2019, 83.8 percent in 2020, 92.6 percent in 2021, 66.1 percent in 2022, and 80.4 percent in 2023. *Id*.

The domestic industry's capital expenditures were flat from 2018 to 2019 at $***, then increased to $*** in 2020, decreased to $*** in 2021, and increased to $*** in 2022 and $*** in 2023.[349] Its research and development ("R&D") expenses increased from $*** in 2018 to $*** in 2019, then decreased to $*** in 2020, increased to $*** in 2021, decreased to $*** in 2022, and increased to $*** in 2023.[350] The industry's return on assets decreased from *** percent in 2018 to *** percent in 2019, *** percent in 2020, and *** percent in 2021, then increased to *** percent in 2022, and decreased to *** percent in 2023.[351]

The record evidence is mixed with respect to the vulnerability of the domestic industry. On the one hand, there were significant declines in the domestic industry's trade-related indicators over the POR. The domestic industry also experienced significant declines in its productivity, U.S. shipments, and market share, losing *** percentage points of market share over the POR to both subject imports (*** percentage points) and nonsubject imports (*** percentage points).[352] However, most of the domestic industry's financial indicators improved over the POR. The industry's COGS-to-net sales ratio in 2023, at 80.4 percent, was the second lowest level recorded in the POR (after 2022), and better than two of the three years of the POI.[353] Its operating margin in 2023, at *** percent, was the second highest annual level recorded during the POR (after 2022), and higher than at any point during the POI.[354] The industry's capital expenditures in 2023 were higher than at any other point in the POR and POI.[355] It was also profitable throughout the POR, and its profits increased 52.0 percent over the period.[356] Consequently, we do not make a vulnerability finding in these reviews.

As discussed above, we have found that cumulated subject imports would likely be significant in the reasonably foreseeable future if the orders were revoked and would likely undersell the domestic like product to a significant degree. Given the moderate-to-high degree of substitutability between the domestic like product and subject imports and the importance of price, the likely volume of low-priced cumulated subject imports would cause the domestic industry to either cut prices or forego needed price increases, or else lose sales and market share to subject imports. The likely significant volume of low-priced subject imports and their

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[349] CR/PR at Tables III-15, C-1.

[350] CR/PR at Tables III-17, C-1. U.S. producer *** did not report any expenses related to R&D during the POR. *Id*. at Tables III-17-18.

[351] CR/PR at Table III-20.

[352] CR/PR at Table C-1.

[353] CR/PR at Table C-1.

[354] CR/PR at Table C-1.

[355] CR/PR at Table C-1.

[356] CR/PR at Table C-1.

adverse price effects would, therefore, likely have a significant adverse impact on the production, shipments, sales, market share, and revenues of the domestic industry, which, in turn, would have a direct adverse impact on the industry's profitability and employment, as well as its ability to raise capital and make and maintain necessary capital investments. Accordingly, we find that revocation of the orders under review would likely have a significant impact on the domestic industry.

Citribel and TCCTC argue that the domestic industry is unable to satisfy the demand for non-GMO certified CACCS in the U.S. market and is particularly unable to supply commercial quantities of Non-GMO Project certified CACCS.[357] TCCTC therefore claims that purchasers such as itself had no choice but to source CACCS from Colombia.[358] As discussed in section IV.B.3. above, the record in these investigations indicates that the size of the non-GMO certified market, including Non-GMO Project certified CACCS, is relatively small, leaving a significant portion of the market indifferent to non-GMO certifications. Domestic Producers even stated that some U.S. producers ***.[359] Thus, the fact that there is a small portion of the market in which the domestic industry does not compete, namely, the purchasers requiring Non-GMO Project certified CACCS, does not attenuate competition sufficiently to break the causal nexus. Moreover, the record shows that the U.S. producers have the capability to produce and ship a significant volume of non-GMO certified CACCS. In 2023, the domestic industry shipped *** dry pounds of non-GMO certified CACCS, equivalent to *** percent of its U.S. shipments and *** the Non-GMO Project certified CACCS shipments from all import sources that year.[360] [361]

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[357] Citribel's Prehearing Br. at 6; TCCTC's Prehearing Br. at 2-3; TCCTC'S Response to Written Questions at 2.

[358] TCCTC's Prehearing Br. at 2-3; TCCTC'S Response to Written Questions at 2.

[359] Domestic Producers' Posthearing Br. at Exh. 1 (Responses to Commission Questions at 9, 11).

[360] CR/PR at Table IV-2. We recognize that the volume of Non-GMO Project certified CACCS may be understated due to the *** coverage of subject imports from Thailand in our questionnaires. However, the record nevertheless shows that the domestic industry's U.S. shipments of non-GMO certified CACCS were almost *** that of subject imports. *Id*.

[361] TCCTC argues that subject imports, upon revocation of the orders, would not have a significant impact on the domestic industry, as the domestic industry's improvement during the POR is unrelated to the orders on subject imports. TCCTC's Prehearing Br. at 13; TCCTC's Written Response to Questions at 8-9. Specifically, it claims that the domestic industry's declining production capacity over the POR was caused by a multitude of factors other than subject imports, including U.S. producers shifting their focus to other products, supply constraints, energy curtailments, maintenance activities, and capital projects. TCCTC's Prehearing Br. at 4, 14. It asserts that the increase in the volume of subject imports was less than the reduction in the domestic industry's production capacity. *Id*. TCCTC also claims that the increase in the AUVs of subject imports was caused by changing market conditions, (Continued…)

We have also considered the role of factors other than subject imports so as not to attribute likely injury from other factors to subject imports upon revocation of the orders. Nonsubject imports increased steadily from 2018, at *** dry pounds, to 2022, at *** dry pounds, then decreased to *** dry pounds in 2023, a level *** percent higher than in 2018.[362] Similarly, their share of apparent U.S. consumption steadily increased from *** percent in 2018 and 2019 to *** percent in 2022, then decreased to *** percent in 2023, a level *** percent higher than in 2018.[363] The increase in nonsubject imports during the POR was largely due to an increase in imports from Canada, but imports from Israel, India, and China also played a role.[364] Although nonsubject imports are likely to remain in the U.S. market upon revocation of the orders, the record provides no indication that their presence would prevent subject imports from entering the U.S. market in significant volumes. Further, given that the domestic industry accounted for the largest share of the U.S. market throughout the POR,[365] the moderate-to-high

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including increased demand. *Id*. at 11-12. As discussed in section IV.C. above, while ***, ***, and *** may have contributed to reduced capacity and production for the domestic industry in the 2022-23 period, when subject imports had their largest volume and market share increases of the POR, a significant increase in subject import volume also occurred in the 2020-21 period, when the domestic industry's production was relatively flat. Although changes in subject imports' AUVs during the POR appear to have aligned with demand trends only on occasion, changes in their AUVs showed an inverse relationship to demand trends in both 2019 and 2022. CR/PR at Table C-1. Further, subject imports' AUVs declined from 2018 to 2019 and from 2022 to 2023, the periods during the POR when the domestic industry was encountering the majority of its supply and capacity constraints. *Id*. Accordingly, we are unpersuaded by TCCTC's argument.

Similarly, Citribel argues that the orders had little effect on the subject imports during the POR because subject imports increased as their prices doubled. Citribel's Prehearing Br. at 7-8. We are unpersuaded by Citribel's argument. Increases in prices may be the result of the disciplining effect of the antidumping duty orders, which may also have kept the increase in subject imports volumes from being even greater.

TCCTC also argues that subject imports consisted of Non-GMO Project certified CACCS and are accordingly not likely to have a negative impact on the domestic industry, which is not currently eligible for Non-GMO Project certification. TCCTC's Prehearing Br. at 5. As discussed in section IV.B.3. above, we find that Non-GMO Project certified subject merchandise competes with the domestic like product in the U.S. market.

[362] CR/PR at Tables I-14, IV-1, C-1.

[363] CR/PR at Tables I-14, C-1.

[364] CR/PR at IV-3. In 2020, the Commission revoked an antidumping duty order on imports of CACCS from Canada. *Id*. at Table I-2. Furthermore, imports of CACCS from China are currently subject to antidumping and countervailing duty orders, which have been in effect since 2008, and a 25 percent *ad valorem* duty under section 301 of the Trade Act of 1974. *Id*. at I-15, Table I-2.

[365] As noted in section IV.B.2. above, the domestic industry's share of apparent U.S. consumption declined from *** percent in 2018 to *** percent in 2023, a decrease of *** percentage points. CR/PR at Table C-1.

degree of substitutability between the domestic like product and subject imports, and the importance of price in purchasing decisions, the effects of the likely significant volumes of low-priced subject imports would come at least in part at the expense of the domestic industry, adversely affecting the industry's prices or market share. For these reasons, we find that any effects of nonsubject imports would be distinct from the likely effects attributable to the subject imports and that nonsubject imports would not prevent cumulated subject imports from having a significant impact on the domestic industry.[366]

In sum, we conclude that, if the antidumping duty orders were revoked, cumulated subject imports from Belgium, Colombia, and Thailand would likely have a significant adverse impact on the domestic industry within a reasonably foreseeable time.

V. Conclusion

For the above reasons, we determine that revocation of the antidumping duty orders on CACCS from Belgium, Colombia, and Thailand would be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.

[366] Citribel argues that the strong and increasing demand for CACCS in the U.S. market would prevent subject imports from negatively impacting the domestic industry upon revocation of the orders, and that the U.S. market needs imported CACCS, particularly non-GMO CACCS, to satisfy the growing demand. Citribel's Prehearing Br. at 12-13. As noted in section IV.B.1. above, market participants expect demand to either increase or remain unchanged. Given this expectation and the small (*** percent) increase in apparent U.S. consumption witnessed over the POR, any increase in demand in the reasonably foreseeable future is not likely to be significant. CR/PR at Table C-1. The domestic industry would be able to satisfy any such increase in demand given its 76.7 percent capacity utilization in 2023 and the moderate-to-high degree of substitutability between the domestic like product and subject imports. *Id*. Moreover, an increase in demand would not prevent subject imports taking additional market share from the domestic industry, as they did in the original investigations. *See id*. Accordingly, we are not persuaded that a potential increase in demand would prevent subject imports from injuring the domestic industry in the reasonably foreseeable future, nor that the U.S. market needs imported CACCS to satisfy any potential increase in demand. *Id*.

Part I: Introduction

Background

On June 1, 2023, the U.S. International Trade Commission ("Commission" or "USITC") gave notice, pursuant to section 751(c) of the Tariff Act of 1930, as amended ("the Act"),[1] that it had instituted reviews to determine whether revocation of the antidumping duty orders on citric acid and certain citrate salts ("CACCS") from Belgium, Colombia, and Thailand would likely lead to the continuation or recurrence of material injury to a domestic industry.[2] [3] On September 5, 2023, the Commission determined that it would conduct full reviews pursuant to section 751(c)(5) of the Act. [4] Table I-1 presents information relating to the background and schedule of this proceeding.[5]

[1] 19 U.S.C. 1675(c).

[2] 88 FR 35923, June 1, 2023. All interested parties were requested to respond to this notice by submitting the information requested by the Commission.

[3] In accordance with section 751(c) of the Act, the U.S. Department of Commerce ("Commerce") published a notice of initiation of five-year reviews of the subject antidumping and countervailing duty orders. 88 FR 35832, June 1, 2023.

[4] 88 FR 66052, September 5, 2023. The Commission found that the domestic interested party group response and the respondent interested party group response from Belgium to its notice of institution were adequate, and determined to conduct a full review of the order on imports from Belgium. The Commission also found that the respondent interested party group responses from Colombia and Thailand were inadequate but determined to conduct full reviews of the orders on imports from those countries in order to promote administrative efficiency in light of its determination to conduct a full review of the order with respect to Belgium.

[5] The Commission's notice of institution, notice to conduct full reviews, and scheduling notice are referenced in appendix A and may also be found at the Commission's website (internet address *www.usitc.gov*). Commissioners' votes on whether to conduct expedited or full reviews may also be found at the website. Appendix B is reserved for the witnesses appearing at the Commission's hearing. However, the hearing was canceled.

Table I-1
CACCS: Information relating to the background and schedule of this proceeding

Effective date	Action
July 25, 2018	Commerce's antidumping duty orders on CACCS from Belgium, Colombia, and Thailand (83 FR 35214)
June 1, 2023	Commission's institution of five-year reviews (88 FR 35923)
June 1, 2023	Commerce's initiation of five-year reviews (88 FR 35832)
September 5, 2023	Commission's determinations to conduct full five-year reviews (88 FR 66052)
September 29, 2023	Commerce's final results of the expedited reviews of the antidumping duty orders from Colombia and Thailand (88 FR 67239)
November 15, 2023	Commission's scheduling of the reviews (88 FR 81099)
December 21, 2023	Commerce's final results of full five-year review of the antidumping duty order from Belgium (88 FR 88361)
May 16, 2024	Commission's hearing (CANCELED)
July 1, 2024	Commission's vote
July 16, 2024	Commission's determinations and views

The original investigations

The original investigations resulted from petitions filed by Archer Daniels Midland Company, Decatur, Illinois; Cargill, Incorporated, Minneapolis, Minnesota; and Tate & Lyle Ingredients Americas, LLC, Hoffman Estates, Illinois, on June 2, 2017, alleging that an industry in the United States is materially injured and threatened with material injury by reason of subsidized imports of CACCS from Thailand and less-than-fair-value ("LTFV") imports of CACCS from Belgium, Colombia, and Thailand. On June 5, 2018, Commerce determined that imports of CACCS from Belgium, Colombia, and Thailand were being sold at LTFV[6] and that imports of CACCS from Thailand were not being subsidized by the government of Thailand.[7] Following notification of these final determinations by Commerce, the Commission terminated the countervailing duty investigation concerning CACCS from Thailand[8] and determined on July 10, 2018 that a domestic industry was materially injured by reason of LTFV imports of CACCS from Belgium, Colombia, and Thailand.[9] Commerce published the antidumping duty orders on CACCS from Belgium, Colombia, and Thailand on July 25, 2018.[10]

[6] 83 FR 26001, 83 FR 26002, and 83 FR 25998, June 5, 2018.
[7] 83 FR 26004, June 5, 2018.
[8] 83 FR 28011, June 5, 2018.
[9] 83 FR 32905, July 16, 2018. Citric Acid and Certain Citrate Salts from Belgium, Colombia, and Thailand, Inv. Nos. 731-TA-1374-1376 (Final), USITC Publication 4799, July 2018 ("Original publication").
[10] 83 FR 35214, July 25, 2018.

Previous and related investigations

The Commission conducted four previous import relief investigations on CACCS or similar merchandise, as presented in table I-2.

Table I-2
CACCS: Previous and related Commission proceedings and status of orders

Date	Number	Country	ITC original determination	Current status of order
1999	731-TA-863	China	Negative	NA
2008	701-TA-456	China	Affirmative	Order continued after second review 2020.
2008	731-TA-1151	Canada	Affirmative	Order revoked after second review 2020.
2008	731-TA-1152	China	Affirmative	Order continued after second review 2021.

Source: U.S. International Trade Commission publications and Federal Register notices.

Note: On June 23, 2020, the Department of Commerce published a notice revoking the antidumping duty order on citric acid and certain citrate salts from Canada effective June 24, 2020, because the domestic interested parties withdrew their intent to participate. 85 FR 37626. Accordingly, the Commission terminated its second five-year review of the antidumping duty order on citric acid and certain citrate salts from Canada. 85 FR 44546, July 23, 2020.

Summary data

Table I-3 presents a summary of data from the original investigations and the current full five-year reviews.

The quantity of apparent U.S. consumption was *** percent higher in 2023 than in 2017, and the value of apparent U.S. consumption was *** percent higher. U.S. producers' market share, by quantity, decreased by *** percentage points from 2017 to 2023. The market share of subject source imports, by quantity, increased by *** percentage points from 2017 to 2023, and the quantity of market share for imports from nonsubject sources increased by *** percentage points. The quantity of subject U.S. imports from Belgium were 75.7 lower in 2023 than in 2017 while the quantity of U.S. imports from Colombia and Thailand were 4.6 percent and 18.2 percent higher, respectively, in 2023 than in 2017. Overall, U.S. imports from subject sources, by quantity and value, were 6.9 and 99.3 percent higher, respectively, in 2023 than in 2017, while nonsubject sources also increased by 53.0 and 173.6 percent respectively, by quantity and value in the same period. The U.S. producers' capacity and production were 11.6 and 19.5 percent lower, respectively, in 2023 than in 2017.

The number of U.S. producers' production-related workers increased from 319 in 2017 to 330 in 2023, but productivity decreased from 625.1 pounds dry weight per hour in 2017 to 576.5 pounds dry weight per hour in 2023. The U.S. producers' reported operating income increased by *** percent, from $14 million in 2017 to *** in 2023. The ratio of operating income to sales also increased from 4.8 percent in 2017 to *** percent in 2023.

Table I-3
CACCS: Comparative data from the original investigations and current reviews, (terminal years)

Quantity in 1,000 pounds dry weight; value in 1,000 dollars; unit values in dollars per pound dry weight; shares in percent

Item	Measure	2017	2023
Apparent consumption	Quantity	***	***
U.S. producers market share	Share of quantity	***	***
Belgium market share	Share of quantity	***	***
Colombia market share	Share of quantity	***	***
Thailand market share	Share of quantity	***	***
Subject market share	Share of quantity	***	***
Nonsubject market share	Share of quantity	***	***
Import market share	Share of quantity	***	***
Apparent consumption	Value	***	1,052,147
U.S. producers market share	Share of value	***	41.9
Belgium market share	Share of value	***	0.6
Colombia market share	Share of value	***	3.5
Thailand market share	Share of value	***	17.3
Subject market share	Share of value	***	21.5
Nonsubject market share	Share of value	***	36.5
Import market share	Share of value	***	58.1
Belgium	Quantity	19,333	4,698
Belgium	Value	12,923	6,836
Belgium	Unit value	$0.67	$1.46
Colombia	Quantity	32,729	34,224
Colombia	Value	19,993	37,077
Colombia	Unit value	$0.61	$1.08
Thailand	Quantity	149,506	176,644
Thailand	Value	80,678	182,452
Thailand	Unit value	$0.54	$1.03
Subject sources	Quantity	201,568	215,566
Subject sources	Value	113,595	226,365
Subject sources	Unit value	$0.56	$1.05
Nonsubject sources	Quantity	***	***
Nonsubject sources	Value	***	384,510
Nonsubject sources	Unit value	***	***
All import sources	Quantity	***	***
All import sources	Value	***	610,876
All import sources	Unit value	***	***

Table continued.

Table I-3 Continued
CACCS: Comparative data from the original investigations and current reviews, (terminal years)

Quantity in 1,000 pounds dry weight; value in 1,000 dollars; unit values in dollars per pound dry weight; shares in percent

Item	Measure	2017	2023
Capacity	Quantity	551,710	487,978
Production	Quantity	465,038	374,150
Capacity utilization	Ratio	84.3	76.7
Producer U.S. shipments	Quantity	459,114	337,823
Producer U.S. shipments	Value	275,933	441,271
Producer U.S. shipments	Unit value	$0.60	$1.31
Producer inventories	Quantity	***	59,923
Producer inventory ratio to total shipments	Ratio	***	***
Production workers (number)	Noted in label	319	330
Hours worked (in 1,000 hours)	Noted in label	744	649
Wages paid (1,000 dollars)	Value	26,671	28,797
Hourly wages (dollars per hour)	Value	35.85	44.37
Productivity (pounds dry weight per hour)	Noted in label	625.1	576.5
Net sales	Quantity	480,508	354,813
Net sales	Value	291,642	466,368
Net sales	Unit value	$0.61	$1.31
Cost of goods sold	Value	256,133	374,817
Gross profit or (loss)	Value	35,509	91,551
SG&A expense	Value	21,494	***
Operating income or (loss)	Value	14,015	***
Unit COGS	Unit value	$0.53	$1.06
Unit operating income	Unit value	$0.03	***
COGS/ Sales	Ratio	87.8	80.4
Operating income or (loss)/ Sales	Ratio	4.8	***

Source: Office of Investigations memorandum INV-QQ-064 (June 7, 2018), data submitted in response to Commission questionnaires, and official U.S. imports statistics of the U.S. Department of Commerce using HTS statistical reporting numbers 2918.14.0000, 2918.15.1000, and 2918.15.5000, accessed March 26, 2024, adjusted using proprietary, Census-edited Customs data for the same HTS statistical reporting numbers accessed March 26, 2024 to report the quantities from Canada suppressed in official U.S. import statistics.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Data for 2017 are from the last year of the original investigations, and for 2023 the last year of this review, the first review.

Table I-4 and figure I-1 present U.S. producers' U.S. shipments and U.S. imports from the original investigations and the current full five-year reviews.

Table I-4
CACCS: U.S. producers' U.S. shipments and U.S. importers' imports, by source and period

Quantity in 1,000 pounds dry weight

Item	Measure	2015	2016	2017
U.S. producers	Quantity	470,152	452,062	459,114
Subject sources	Quantity	159,934	175,473	201,568
Nonsubject sources	Quantity	***	***	***
All imports sources	Quantity	***	***	***
All sources	Quantity	***	***	***

Table continued.

Table I-4 Continued
CACCS: U.S. producers' U.S. shipments and U.S. importers' imports, by source and period

Quantity in 1,000 pounds dry weight

Item	Measure	2018	2019	2020
U.S. producers	Quantity	445,614	457,986	461,399
Subject sources	Quantity	142,436	145,594	155,233
Nonsubject sources	Quantity	***	***	***
All imports sources	Quantity	***	***	***
All sources	Quantity	***	***	***

Table continued.

Table I-4 Continued
CACCS: U.S. producers' U.S. shipments and U.S. importers' imports, by source and period

Quantity in 1,000 pounds dry weight

Item	Measure	2021	2022	2023
U.S. producers	Quantity	448,359	417,647	337,823
Subject sources	Quantity	186,601	161,144	215,566
Nonsubject sources	Quantity	***	***	***
All imports sources	Quantity	***	***	***
All sources	Quantity	***	***	***

Source: Office of Investigations memorandum INV-QQ-064 (June 7, 2018), data submitted in response to Commission questionnaires, and official U.S. imports statistics of the U.S. Department of Commerce using HTS statistical reporting numbers 2918.14.0000, 2918.15.1000, and 2918.15.5000, accessed March 26, 2024, adjusted using proprietary, Census-edited Customs data for the same HTS statistical reporting numbers accessed March 26, 2024 to report the quantities from Canada suppressed in official U.S. import statistics.

Figure I-1
CACCS: U.S. producers' U.S. shipments and U.S. imports, by source and period

* * * * * * *

Source: Office of Investigations memorandum INV-QQ-064 (June 7, 2018), data submitted in response to Commission questionnaires, and official U.S. imports statistics of the U.S. Department of Commerce using HTS statistical reporting numbers 2918.14.0000, 2918.15.1000, and 2918.15.5000, accessed March 26, 2024, adjusted using proprietary, Census-edited Customs data for the same HTS statistical reporting numbers accessed March 26, 2024 to report the quantities from Canada suppressed in official U.S. import statistics.

Statutory criteria

Section 751(c) of the Act requires Commerce and the Commission to conduct a review no later than five years after the issuance of an antidumping or countervailing duty order or the suspension of an investigation to determine whether revocation of the order or termination of the suspended investigation "would be likely to lead to continuation or recurrence of dumping or a countervailable subsidy (as the case may be) and of material injury."

Section 752(a) of the Act provides that in making its determination of likelihood of continuation or recurrence of material injury--

(1) IN GENERAL.-- . . . the Commission shall determine whether revocation of an order, or termination of a suspended investigation, would be likely to lead to continuation or recurrence of material injury within a reasonably foreseeable time. The Commission shall consider the likely volume, price effect, and impact of imports of the subject merchandise on the industry if the order is revoked or the suspended investigation is terminated. The Commission shall take into account--

(A) its prior injury determinations, including the volume, price effect, and impact of imports of the subject merchandise on the industry before the order was issued or the suspension agreement was accepted,

(B) whether any improvement in the state of the industry is related to the order or the suspension agreement,

(C) whether the industry is vulnerable to material injury if the order is revoked or the suspension agreement is terminated, and

(D) in an antidumping proceeding . . ., (Commerce's findings) regarding duty absorption . . ..

(2) VOLUME.--In evaluating the likely volume of imports of the subject merchandise if the order is revoked or the suspended investigation is terminated, the Commission shall consider whether the likely volume of imports of the subject merchandise would be significant if the order is revoked or the suspended investigation is terminated, either in absolute terms or relative to production or consumption in the United States. In so doing, the Commission shall consider all relevant economic factors, including--

(A) any likely increase in production capacity or existing unused production capacity in the exporting country,

(B) existing inventories of the subject merchandise, or likely increases in inventories,

(C) the existence of barriers to the importation of such merchandise into countries other than the United States, and

(D) the potential for product-shifting if production facilities in the foreign country, which can be used to produce the subject merchandise, are currently being used to produce other products.

(3) PRICE.--In evaluating the likely price effects of imports of the subject merchandise if the order is revoked or the suspended investigation is terminated, the Commission shall consider whether--

(A) there is likely to be significant price underselling by imports of the subject merchandise as compared to domestic like products, and

(B) imports of the subject merchandise are likely to enter the United States at prices that otherwise would have a significant depressing or suppressing effect on the price of domestic like products.

(4) IMPACT ON THE INDUSTRY.--In evaluating the likely impact of imports of the subject merchandise on the industry if the order is revoked or the suspended investigation is terminated, the Commission shall consider all relevant economic factors which are likely to have a bearing on the state of the industry in the United States, including, but not limited to–

(A) likely declines in output, sales, market share, profits, productivity, return on investments, and utilization of capacity,

(B) likely negative effects on cash flow, inventories, employment, wages, growth, ability to raise capital, and investment, and

(C) likely negative effects on the existing development and production efforts of the industry, including efforts to develop a derivative or more advanced version of the domestic like product.

The Commission shall evaluate all such relevant economic factors . . . within the context of the business cycle and the conditions of competition that are distinctive to the affected industry.

Section 752(a)(6) of the Act states further that in making its determination, "the Commission may consider the magnitude of the margin of dumping or the magnitude of the net countervailable subsidy. If a countervailable subsidy is involved, the Commission shall consider information regarding the nature of the countervailable subsidy and whether the subsidy is a subsidy described in Article 3 or 6.1 of the Subsidies Agreement."

Organization of report

Information obtained during the course of the reviews that relates to the statutory criteria is presented throughout this report. A summary of trade and financial data for CACCS as collected in the original investigations and the current full five-year reviews is presented in appendix C. U.S. industry data are based on the questionnaire responses of three U.S. producers of CACCS that are believed to have accounted for all domestic production of CACCS

in 2023.[11] U.S. import data and related information are based on Commerce's official import statistics[12] and the questionnaire responses of eleven U.S. importers of CACCS that are believed to have accounted for the *** of imports from Belgium and Colombia and *** percent of subject U.S. imports from Thailand during 2023. Foreign industry data and related information are based on the questionnaire responses of two producers of CACCS. One producer estimated it accounted for *** percent of total production in Belgium and one producer estimated it accounted for *** percent of total production in Colombia.[13] Responses by U.S. producers, importers, purchasers, and foreign producers of CACCS to a series of questions concerning the significance of the existing antidumping duty orders and the likely effects of revocation of such orders are presented in appendix D.

Commerce's reviews[14]

Administrative reviews

Commerce has completed a total of twelve (or four for each order) administrative reviews of the outstanding antidumping duty orders on CACCS from Belgium, Colombia, and Thailand.[15]

Belgium

Commerce has completed four antidumping duty administrative reviews with regard to subject imports of CACCS from Belgium. The results of the administrative reviews are shown in table I-5.

[11] Domestic interested parties' response to the notice of institution, July 3, 2023, p. 34.

[12] Official U.S. import statistics were adjusted using proprietary, Census-edited Customs data to report suppressed quantities from Canada.

[13] Foreign producer questionnaire responses, section II-7.

[14] Commerce has not conducted any changed circumstances review or scope rulings since the completion of the original investigations. In addition, Commerce has not issued any duty absorption findings, any company revocations, anti-circumvention findings since the imposition of the order.

[15] For previously reviewed or investigated companies not included in an administrative review, the cash deposit rate continues to be the company-specific rate published for the most recent period.

Table I-5
CACCS: Administrative reviews of the antidumping duty order for Belgium

Date results published	Period of review	Producer or exporter	Margin (percent)
February 26, 2021 (86 FR 11723)	January 8, 2018 - June 30, 2019	S.A. Citrique Belge n.v	0.00
November 15, 2021(86 FR 62993)	July 1, 2019 – June 30, 2020	S.A. Citrique Belge n.v	0.00
November 16, 2022 (87 FR 68681)	July 1, 2020 - June 30, 2021	Citribel n.v. (formerly S.A. Citrique Belge n.v)	0.00
December 29, 2023 (88 FR 90167)	July 1, 2021 – June 30, 2022	Citribel n.v.	9.13

Source: Cited Federal Register notices.

Colombia

Commerce has completed four antidumping duty administrative reviews with regard to subject imports of CACCS from Colombia. The results of the administrative reviews are shown in table I-6.

Table I-6
CACCS: Administrative reviews of the antidumping duty order for Colombia

Date results published	Period of review	Producer or exporter	Margin (percent)
November 13, 2020 (85 FR 72621	January 8, 2018 - June 30, 2019	Sucroal S.A.	4.59
November 15, 2021(86 FR 62992)	Jan. 8, 2018 - June 30, 2019	Sucroal S.A.	2.50
November 10, 2022 (87 FR 67872)	January 8, 2018 - June 30, 2019	Sucroal S.A.	3.58
September 25, 2023 (88 FR 65654)	July 1, 2021 – June 30, 2022	Sucroal S.A.	6.10

Source: Cited Federal Register notices.

Thailand

Commerce has completed four antidumping duty administrative reviews with regard to subject imports of CACCS from Thailand. The results of the administrative reviews are shown in table I-7.

Table I-7
CACCS: Administrative reviews of the antidumping duty order for Thailand

Date results published	Period of review	Producer or exporter	Margin (percent)
February 11, 2021(86 FR 9055)	January 8, 2018 – June 30, 2019	COFCO Biochemical (Thailand) Co. (COFCO)	0.76
February 11, 2021(86 FR 9055)	January 8, 2018 – June 30, 2019	Niran (Thailand) Co., Ltd. (Niran)	54.11
February 11, 2021(86 FR 9055)	January 8, 2018 – June 30, 2019	Sunshine Biotech International Co., Ltd. (Sunshine)	0.00 (de minimis)
July 14, 2021 (86 FR 37117)	January 1, 2019 – June 30, 2020	COFCO Biochemical (Thailand) Co., Ltd. (COFCO); Sunshine Biotech International Co., Ltd.	0.00
July 25, 2022 (87 FR 44085)	July 1, 2020 – June 30, 2021	COFCO Biochemical (Thailand) Co., Ltd. (COFCO); Sunshine Biotech International Co., Ltd.	0.00
August 7, 2023 (88 FR 52128)	July 1, 2021 – June 30, 2022	COFCO Biochemical (Thailand) Co., Ltd.	0.00
August 7, 2023 (88 FR 52128)	July 1, 2021 – June 30, 2022	Sunshine Biotech International Co., Ltd.; Xitrical Group Co., Ltd.	0.78

Source: Cited Federal Register notices.

Changed circumstances reviews

Commerce has conducted one changed circumstances review with respect to CACCS from Belgium. On July 29, 2022, Commerce continued to find that Citribel is the successor-in-interest to Citrique Belge and is entitled to the same cash deposit treatment as Citrique Belge under the AD order on CACCS from Belgium.[16]

Scope rulings

Commerce has conducted no scope rulings with respect to CACCS from Belgium, Colombia, and Thailand.

[16] 87 FR 45750, July 29, 2022.

Five-year reviews

Commerce has issued the final results of its full review with respect to CACCS from Belgium and expedited reviews with respect to CACCS from Colombia and Thailand.[17] Tables I-8 through I-10 present the dumping margins calculated by Commerce in its original investigations and five-year reviews for Belgium, Colombia, and Thailand.

Table I-8
CACCS: Commerce's original and first five-year dumping margins for producers/exporters in Belgium

Producer/exporter	Original margin (*percent*)	First five-year review margin (*percent*)
Citribel n.v.	19.30	19.30
All others	19.30	19.30

Source: 83 FR 26001, June 5, 2018; 88 FR 88361, December 21, 2023.

Table I-9
CACCS: Commerce's original and first five-year dumping margins for producers/exporters in Colombia

Producer/exporter	Original margin (*percent*)	First five-year review margin (*percent*)
Sucroal S.A.	28.48	28.48
All others	28.48	28.48

Source: 83 FR 26002, June 5, 2018; 88 FR 67239, September 29, 2023.

Table I-10
CACCS: Commerce's original and first five-year dumping margins for producers/exporters in Thailand

Producer/exporter	Original margin (*percent*)	First five-year review margin (*percent*)
COFCO Biochemical (Thailand) Co., Ltd. (COFCO)	15.71	15.71
Niran (Thailand) Co., Ltd. (Niran)	13.00	15.71
Sunshine Biotech International Co., Ltd. (Sunshine)	6.47	15.71
All others	11.25	15.71

Source: 83 FR 25998, June 5, 2018; 88 FR 67239, September 29, 2023.

[17] 88 FR 88361, December 21, 2023; Commerce conducted expedited reviews with respect to CACCS from Colombia and Thailand. 88 FR 67239, September 29, 2023.

The subject merchandise

Commerce's scope

In the current proceeding, Commerce has defined the scope as follows:

> *All grades and granulation sizes of citric acid, sodium citrate, and potassium citrate in their unblended forms, whether dry or in solution, and regardless of packaging type. The scope also includes blends of citric acid, sodium citrate, and potassium citrate; as well as blends with other ingredients, such as sugar, where the unblended form(s) of citric acid, sodium citrate, and potassium citrate constitute 40 percent or more, by weight, of the blend.*
>
> *The scope also includes all forms of crude calcium citrate, including dicalcium citrate monohydrate, and tricalcium citrate tetrahydrate, which are intermediate products in the production of citric acid, sodium citrate, and potassium citrate.*
>
> *The scope includes the hydrous and anhydrous forms of citric acid, the dihydrate and anhydrous forms of sodium citrate, otherwise known as citric acid sodium salt, and the monohydrate and monopotassium forms of potassium citrate. Sodium citrate also includes both trisodium citrate and monosodium citrate which are also known as citric acid trisodium salt and citric acid monosodium salt, respectively.*
>
> *The scope does not include calcium citrate that satisfies the standards set forth in the United States Pharmacopeia and has been mixed with a functional excipient, such as dextrose or starch, where the excipient constitutes at least 2 percent, by weight, of the product.*[18]

Tariff treatment

Citric acid and certain citrate salts (CACCS) are currently provided for in multiple Harmonized Tariff Schedule of the United States ("HTS") subheadings. Citric acid and sodium citrate are provided for in eo nomine[19] subheadings 2918.14.00 and 2918.15.10 of the HTS, respectively, with column 1-general duty rates of 6.0 and 6.5 percent ad valorem. Potassium citrate and crude calcium citrate are provided for in subheading 2918.15.50 with a column 1-general duty rate of 3.7 percent ad valorem. Blends that include citric acid, sodium citrate, and

[18] 88 FR 88361, December 21, 2023; 88 FR 67239, September 29, 2023.

[19] Eo nomine HTS entries specify individual products by name rather than providing for a collection of products under a general category description.

potassium citrate are imported under statistical reporting number 3824.99.9397 with a column 1-general duty rate of 5.0 percent ad valorem.[20] Eligible goods originating in the territory of Colombia are eligible for duty-free entry upon proper importer claim under the U.S.-Colombia Trade Promotion Agreement, as set forth in general note 34 to the HTS.[21]

Effective September 24, 2018, CACCS originating in China is subject to an additional duty under Section 301 of the Trade Act of 1974. The additional duty provided for in subheading 9903.88.03 was 10 percent ad valorem from September 24, 2018, through December 31, 2018. On January 1, 2019, the additional duty increased to 25 percent ad valorem.[22] Decisions on the tariff classification and treatment of imported goods are within the authority of U.S. Customs and Border Protection.

The product

Description and applications[23]

The imported products subject to these investigations are citric acid and certain citrate salts, specifically sodium citrate and potassium citrate; blends containing citric acid, sodium citrate, and potassium citrate; and crude calcium citrate ("CCC"). Citric acid, sodium citrate, and potassium citrate are all available in either dry form or in solution. CCC is an intermediate form in the production of citric acid via the lime/sulfuric acid process. CCC can be shipped to another facility for further processing into refined citric acid.

Citric acid, sodium citrate, and potassium citrate are all available as odorless, translucent crystals. These crystals are normally sold in three granulations: granular, fine granular, and powder. Purchasers can buy the dry product and put it into solution, or they can have an independent converter do it. Petitioners argue that the products have only minor molecular differences which do not significantly alter their essential characteristics or uses.

Citric acid is produced and sold in the U.S. market in both its dry and solution forms, and can be easily and reversibly converted between these two forms. Whether dry or dissolved in water, the product's chemical properties are the same. In the original investigations, the

[20] USITC, HTS (2024) Revision 1.

[21] USITC, HTS (2024) Revision 1.

[22] 83 FR 47974, September 21, 2018. See also HTS heading 9903.88.03 and U.S. note 20(f) to subchapter III of chapter 99 and related tariff provisions for this duty treatment. USITC, HTS (2024) Revision 1.

[23] Unless otherwise noted, this information is based on Citric Acid and Citrate Salts from Belgium, Colombia, and Thailand, Investigation Nos. 731-TA-1374-1376 (Final), USITC Publication 4799, July 2018 ("Original publication"), pp. I-9-I-14, or questionnaire responses.

petitioners stated that the bulk of their shipments were in the dry form, but that they did ship some citric acid in solution, generally only to nearby customers. According to the domestic interested parties, in these current reviews the three products were used basically for the same purposes, sold in the same markets, and produced in the same production facilities.

ADM and Cargill produce citric acid, sodium citrate, and potassium citrate. Primient produces only citric acid. The Belgian respondent makes citric acid and sodium citrate. The Colombian producer reported making ***.[24] In the original investigations all three Thai producers reported making citric acid, ***.[25] Neither the petitioners nor the Belgian producer sells blends or CCC. In the original investigations neither the Colombian nor the Thai producers commented directly on the production or sales of blends or CCC.

The formal chemical names and formulas for the typical commercial forms of the products are:

- Citric acid: Citric acid anhydrous ($C_6H_8O_7$) and citric acid monohydrate ($C_6H_8O_7 \bullet H_2O$);
- Sodium citrate: Sodium citrate anhydrous or trisodium citrate anhydrous ($Na_3C_6H_5O_7$), sodium citrate dihydrate or trisodium citrate dihydrate ($Na_3C_6H_5O_7 \bullet 2H_2O$), and monosodium citrate ($NaH_2(C_3H_5O(COO)_3$);
- Potassium citrate: Potassium citrate monohydrate or tripotassium citrate monohydrate ($K_3C_6H_5O_7 \bullet H_2O$), and monopotassium citrate ($KH_2C_6H_5O_7$); and
- Calcium citrate: Tricalcium citrate ($Ca_3(C_6H_5O_7)_2$), dicalcium citrate ($Ca_2(C_3H_4O)(COO)_3 \bullet H_2O$), and tricalcium citrate tetrahydrate ($Ca_3(C_6H_5O_7)_2 \bullet 4H_2O$).

Citric acid is produced as a white granular or crystalline powder and has strong acidic taste. It is produced by the fermentation of glucose from a substrate such as corn, molasses, beet molasses, sugarcane, or tapioca. Citric acid is produced both in anhydrous form and as a monohydrate. Both forms are isolated and purified through successive recrystallizations.

[24] Email correspondence from counsel for the Colombian respondent dated April 22, 2024.
[25] No Thai producer submitted a questionnaire response in these current reviews.

Sodium citrate is a white, granular crystalline powder with a pleasant acidic taste. Sodium citrate is produced by mixing citric acid slurry with sodium hydroxide (or sodium carbonate) and then crystallizing the resulting sodium citrate. Potassium citrate is produced by reacting citric acid slurry with potassium hydroxide (or potassium carbonate).

Citric acid, sodium citrate, and potassium citrate are chemical products used in the production and formulation of a wide variety of foods, beverages, pharmaceuticals, and cosmetics, as well as commercial and household products including detergents and metal cleaners, and in textile finishing treatments and other industrial applications. Citric acid is used in the food and beverage industry as an acidulant, preservative, and flavor enhancer because of its tart flavor, high solubility, acidity, and buffering capabilities. It is commonly used in carbonated and non-carbonated drinks, dry powdered beverages, wines and wine coolers, jams, jellies, preserves, gelatin desserts, candies, frozen foods, and canned fruits and vegetables.

Sodium citrate is used in similar applications to those of citric acid, as well as in cheese and dairy products to improve emulsifying properties, texture, and melting properties and to act as a preservative and aging agent. It also has pharmaceutical applications such as a diuretic and an expectorant in cough syrup.

Potassium citrate is used as an antacid, a diuretic, an expectorant, and as a systemic and urinary alkalizer. In industrial applications, potassium citrate can be used in electropolishing and as a buffering agent. In food and beverage applications, potassium citrate has been replacing sodium citrate as a means of reducing sodium content in low- or no-salt products.

The domestic and subject producers stated in the original investigations that they always produce citric acid and certain citrate salts to meet the high purity U.S. Pharmacopoeia ("USP") or Food Chemical Codex ("FCC") standards, regardless of the intended customer/application. The domestic and subject producers stated that the products must meet these high standards to be used in food and beverage or pharmaceutical applications and some of the largest customers are in the food and beverage business.

Although CACCS is chemically identical regardless of its feedstock and certification, all parties acknowledged in the original investigations that there is increasing demand for non-genetically modified organism (non-GMO) certified CACCS. While U.S. producers claimed in the original investigations that they can make, and had made, CACCS that qualifies as non-GMO, they did not have dedicated production facilities for such production and saw no business case for changing their current processes. Petitioners asserted that demand was still too small and the price premium was insufficient to profitably make CACCS that qualified for the Non-GMO

Project certification. In these reviews, *** reported that *** of its CACCS is certified as non-GMO by ***.[26]

Domestic interested parties asserted in the original investigations and in these current reviews that, as a consequence of a chemical transformation, all CACCS is non-GMO regardless of the feedstock since none of the feedstock remains in the CACCS. USDA has implemented a new standard on non-GMO products since the original investigations. Since January 1, 2022, the National Bioengineered Food Disclosure Standard has been in effect, requiring labels on bioengineered (BE) food.[27] On its website, USDA's Agricultural Marketing Service (AMS) states that "the Standard defines bioengineered foods as those that contain detectable genetic material that has been modified through *in vitro* recombinant deoxyribonucleic acid (rDNA) techniques and for which the modification could not otherwise be obtained through conventional breeding or found in nature."[28] AMS also provides an example of a process that can use BE inputs and still produce an output that is not considered BE:

"Q. Is an animal product considered a bioengineered food if the animal ate bioengineered feed?

- At 7 CFR 66.5, the Standard states that food produced from an animal fed bioengineered feed is not considered a bioengineered food solely because the animal ate a bioengineered feed.
- For example, the milk from a cow that ate bioengineered alfalfa is not considered a bioengineered food just because the cow ate bioengineered alfalfa."[29]

For certain applications, users want CACCS to be certified as non-GMO. The Non-GMO Project certification is generally necessary for CACCS sold to customers who want to obtain the Non-GMO Project certification for their own downstream products. For other applications, petitioners asserted in the original investigations that the purchasers were GMO indifferent, implying that they could use GMO, uncertified non-GMO, or certified non-GMO CACCS to make their downstream products. According to the Non-GMO Project staff contacted during the

[26] Questionnaire responses and Petitioners' Posthearing brief, pp. 11 and 14.

[27] "Bioengineered" is the preferred technical term for genetically modified. "What Is Bioengineered Food?," https://www.nongmoproject.org/blog/what-is-bioengineered-food/, August 26, 2021. According to Cargill, CACCS is ***. Declaration of Elmar Guseyn-Zade, Petitioners' Posthearing brief, Exh. 3, p. 2.

[28] "BE Frequently Asked Questions – General," https://www.ams.usda.gov/rules-regulations/be/faq/general, accessed May 3, 2024.

[29] "BE Frequently Asked Questions – General," https://www.ams.usda.gov/rules-regulations/be/faq/general, accessed May 3, 2024.

original investigations, companies are free to put "non-GMO" on their labels without restriction.

The Non-GMO Project certification, which enables companies to use the "Butterfly logo" on their labels, is conferred based on a number of factors, including that the feedstock at each stage be non-GMO. U.S. producers use genetically modified corn as their primary feedstock so they would have to change their feedstocks to meet the current Non-GMO Project requirements.[30] All of the information on the record indicates that the subject producers use non-GMO feedstock. Citribel and Sucroal reported that *** of their CACCS production has received the Non-GMO Project certification. Although none of the U.S. producers had obtained this certification for its U.S. production facilities, Primient had obtained it for its Brazilian operations.

There are multiple sources of non-GMO certification. In the original investigations the petitioners had obtained EU certification. There are also other certifiers in the U.S. market. The Non-GMO Project administers its non-GMO certification process, but it does not directly test the material. The independent firms that conduct the tests for the Non-GMO Project can also provide non-GMO certification for CACCS and other products. For example, Cargill's CACCS had been certified as non-GMO by SGS, a global company that provides testing and certification services, including acting as a technical administrator for the Non-GMO Project. NSF International is another technical administrator for the Non-GMO Project and listed Jungbunzlauer, the Canadian nonsubject producer of CACCS, on its site as being a certified non-GMO provider of CACCS. In these review investigations, *** reported that *** of its CACCS is certified as non-GMO by ***, and *** reported that *** of its CACCS in 2023 was certified as non-GMO but did not specify the certifying body.[31]

[30] Corn is included in the List of Bioengineered Foods. USDA, AMS, "List of Bioengineered Foods," https://www.ams.usda.gov/rules-regulations/be/bioengineered-foods-list, accessed May 29, 2024.

[31] Questionnaire responses and Petitioners' Posthearing brief, pp. 11 and 14, and Exh. 3, Attachments 1 and 2.

Manufacturing processes[32]

Citric acid is produced in a two-stage process: fermentation and recovery/refinement of crude citric acid. Sodium citrate and potassium citrate are produced by reacting citric acid slurry with a solution containing certain sodium or potassium compounds (e.g., sodium hydroxide or potassium hydroxide). In the original investigations, the petitioners reported producing sodium citrate and potassium citrate using the same equipment and workers that are used for citric acid.

The first stage of modern, large-scale production of citric acid is achieved through fermentation involving the actions of specific strains of organisms such as the *Aspergillus niger* mold or the *Candida lipolytica* or *Candida guilliermondii* yeast upon a substrate. Once the substrate is turned into glucose, it is fermented into crude citric acid by the organism. The yield of citric acid can be optimized through the careful control of fermentation conditions, such as temperature, acidity or alkalinity, dissolved air or oxygen, and the rate of stirring of the mixture. Each fermentation reaction is done in batches in large tanks which hold several thousand gallons and takes approximately *** to achieve a citric acid yield of *** percent, based on the weight of the sugar.

Producers ferment the substrate by one of three different methods: shallow pan, deep tank, or solid-state. Citric acid was originally produced using a shallow pan or liquid surface culture technology, where microbial fermentation occurred on the surface of the liquid. Most modern production of citric acid uses a deep tank or a submerged culture process, where the reaction is constantly agitated or stirred with air in order to allow the organism to grow throughout the mixture. The submerged culture process is generally favored due to the economics of increased yields and lower labor costs, although reaction conditions must be more tightly controlled. In the original investigations the petitioners, the Colombian producers, and *** Thai producers reported using the deep tank method. The Belgian respondent reported using the shallow pan method, claiming that this fermentation method results in higher yields. Petitioners stated in the original investigations that solid-state fermentation is used only in Japan.

Corn starch is the principal substrate used in the United States, although other feedstocks such as molasses are also used. In the original investigations the Belgian producer reported using sugar beet molasses, the Colombian producer reported using sugarcane, and the Thai producers reported using tapioca *** as the substrate.

[32] Unless otherwise noted, this information is based on original confidential report, pp. I-20-I-24 and original publication, pp. I-14-I-16.

The second stage of production, recovery and refining, is normally performed by one of three common processes: the lime/sulfuric acid method, the solvent extraction method, or the ion exchange method. All three of these processes are compatible with either the shallow pan or deep tank fermentation processes.

In the lime/sulfuric acid refining process, calcium hydroxide (lime) is added to the fermentation broth to precipitate out calcium citrate slurry, the CCC that is also part of the scope. After the calcium citrate is separated by filtration, it is washed to remove soluble impurities. The citrate is then mixed with sulfuric acid to produce a citric acid/charcoal slurry and gypsum (calcium sulfate). The citric acid is then purified through evaporation, crystallization, centrifugation, and drying. In the original investigations *** reported using this process.

The second common refining method, reported in the original investigations as being used by ***, is the solvent extraction process. This process does not involve the production of calcium citrate or gypsum. Instead, solvents separate the citric acid slurry from spent biomass. The subsequent processes of evaporation, crystallization, centrifugation, and drying are similar to those used in the lime/sulfuric acid process.

The third refining method, ion exchange, is a recent development. In this method, the slurry is passed through a bed of polymer-based resin. Ionic mineral elements such as calcium and magnesium adhere to the resin, thus removing them from the citric acid slurry. The subsequent steps are similar to those in the other two processes.

All three refining methods produce citric acid that is dissolved in water. The temperature used for the crystallization process determines whether the anhydrous or hydrous form is produced. Some manufacturers use different equipment for crystallizing hydrous versus anhydrous citric acid, whereas other producers use the same equipment and adjust the process to produce the preferred product.

Producers can either sell the citric acid or convert it into salts. Petitioners reported in the original investigations that they produce dihydrate sodium citrate and anhydrous sodium citrate by diverting some of the citric acid slurry to a line dedicated to citric salt production, where the slurry is reacted with sodium hydroxide or sodium carbonate. Similarly, potassium citrate is produced by reacting citric acid slurry with potassium hydroxide or potassium carbonate.

The dry forms of the subject merchandise are packaged in polyethylene-lined paper bags, typically holding 50 pounds or 25 kilograms. “Super sacks” containing 500 to 2,000 pounds are also used. When preferred in solution form, the subject product is shipped in drums, railcars, or tank trucks. Drums usually contain 200 to 275 pounds of solution.

Sodium citrate and potassium citrate can also be produced by some distributors that are known as "converters." Converters can provide either citric acid as purchased from the manufacturer, or have the equipment on hand to blend sodium hydroxide or potassium hydroxide with citric acid, thus producing sodium citrate or potassium citrate, respectively.

Domestic like product issues

In its original determinations, the Commission defined the domestic like product as a single domestic like product consisting of all CACCS coextensive with Commerce's scope.[33] In its notice of institution in these current five-year reviews, the Commission solicited comments from interested parties regarding the appropriate domestic like product and domestic industry.[34] The domestic interested parties indicated that they agree with the Commission's definition of the domestic like product, whereas the respondent interested parties did not comment on the Commission's definitions.[35] No party requested that the Commission collect data concerning other possible domestic like products in their comments on the Commission's draft questionnaires.[36]

U.S. market participants

U.S. producers

During the original investigations, three firms supplied the Commission with information on their U.S. operations with respect to CACCS. These firms accounted for 100 percent of U.S. production of CACCS in 2017.[37] In these current proceedings, the Commission issued U.S. producers' questionnaires to three firms, all of which provided the Commission with information on their CACCS operations. These three firms are believed to account for all U.S. production of CACCS in 2023. Presented in table I-11 is a list of current domestic producers of CACCS and each company's position on continuation of the orders, production locations, and share of reported production of CACCS in 2023.

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[33] *Citric Acid and Certain Citrate Salts from Belgium, Colombia, and Thailand*, *Inv. Nos. 731-TA-1374-1376 (Final)*, USITC Publication 4799, July 2018, p. 9.

[34] 88 FR 35923, June 1, 2023.

[35] Domestic interested parties' response to the notice of institution, July 3, 2023, p. 37 and Citribel's response to the notice of institution, July 3, 2023, p.11.

[36] Domestic interested parties' comments on draft questionnaires, January 17, 2024; The Coca-Cola Trading Company LLC's comments on draft questionnaires, January 17, 2024.

[37] The three U.S. producers that supplied the Commission with usable questionnaire information during the original investigations were: ADM, Cargill, and Tate & Lyle.

Table I-11
CACCS: U.S. producers, positions on orders, U.S. production locations, and shares of reported U.S. production, 2023

Share in percent

Firm	Position on orders	Production location(s)	Share of production
ADM	***	Southport, NC	***
Cargill	***	Eddyville, IA	***
Primient	***	Dayton, Ohio	***
All firms	Various	Various	***

Source: Compiled from data submitted in response to Commission questionnaires.

As indicated in table I-12, two U.S. producers are related to foreign producers of CACCS.[38] As discussed in greater detail in Part III, *** U.S. producer directly imports the merchandise from subject sources and *** purchase CACCS from subject sources from U.S. importers.

Table I-12
CACCS: U.S. producers' ownership, related and/or affiliated firms

Reporting firm	Relationship type and related firm	Details of relationship
***	***	***
***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

[38] U.S. Cargill is related to Cargill Agricola, a CACCS producer in Uberlandia, Brazil. U.S. producer *** is related to (***), a CACCS producer in ***.

U.S. importers

In the original investigations, 36 U.S. importing firms supplied the Commission with usable information on their operations involving the importation of CACCS, accounting for 71.0 percent of U.S. imports of CACCS from Belgium, 67.8 percent of U.S. imports of CACCS from Colombia, and 91.5 percent of U.S. imports from Thailand during 2017. Of the responding U.S. importers, none were a domestic producer.

In the current proceedings, the Commission issued U.S. importers' questionnaires to 44 firms believed to be importers of CACCS as well as to all U.S. producers of CACCS. Usable questionnaire responses were received from eleven firms, representing the *** of U.S. imports from Belgium and Colombia, and *** of U.S. imports from Thailand.[39] Table I-13 lists all responding U.S. importers of CACCS from Belgium, Colombia, Thailand, and other sources, their locations, and their shares of U.S. imports in 2023.

Table I-13
CACCS: U.S. importers, their headquarters, and share of imports within each source, 2023

Share in percent

Firm	Headquarters	Belgium	Colombia	Thailand	Subject sources	Nonsubject sources	All import sources
Cargill	Wayzata, MN	***	***	***	***	***	***
Catalynt Solutions	Edmonds, WA	***	***	***	***	***	***
Citribel	Tienen, Belgium	***	***	***	***	***	***
Gadot	Florida, NY	***	***	***	***	***	***
Jungbunzlauer	Newton, MA	***	***	***	***	***	***
Kalmia	Trujillo Alto, PR	***	***	***	***	***	***
Nutrilo	Cuxhaven, DE	***	***	***	***	***	***
Sucroal	Palmira,	***	***	***	***	***	***
Tampico	Chicago, IL	***	***	***	***	***	***
Thatcher	Salt Lake City, UT	***	***	***	***	***	***
Two Rivers	Pasco, WA	***	***	***	***	***	***
All firms	Various	100.0	100.0	100.0	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "---". Gadot ***.

[39] See Part IV of this report for more information on coverage of U.S. imports.

U.S. purchasers

The Commission received questionnaires from 16 purchasers of CACCS. These firms purchased almost 250 million dry pounds[40] of CACCS in 2023, with 63 percent of these purchases being of domestic product, 9 percent being of subject imports (mostly ***), and 28 percent being from nonsubject countries, including Brazil, Canada, China, Israel, Mexico, and Turkey. Large purchasers include ***. Nine purchasers were distributors, four were food and beverage end users, four were industrial end users, one (***) produces ***, and one (***) produces sanitation products. Three distributors reported competing with their suppliers for sales to their own customers, but no other firms reported doing so. Distributors reported selling CACCS to a wide range of customers, including municipalities (for transportation uses), food and beverage producers, cleaning product producers, pharmaceutical companies, agricultural producers, chemical companies, aerospace companies, and water and wastewater treatment customers.

Apparent U.S. consumption and market shares

Quantity

Table I-14 and figure I-2 present data on apparent U.S. consumption and U.S. market shares by quantity for CACCS. Apparent U.S. consumption quantities of CACCS increased from *** to *** pounds dry weight during 2018-23, an overall increase of *** percent during the same period. U.S. producers' share of apparent consumption by quantity declined by *** percentage points during 2018-23. Compared to subject and nonsubject sources, U.S. producers held the largest, but a declining share of U.S. apparent consumption quantities, accounting for *** percent in 2023. Nonsubject imports' accounted for the second largest source (*** percent) in 2023, and increased by *** percentage points during 2018-23. Nonsubject imports were present in the market throughout the period of review, accounting for between *** and *** percent of the market. Subject sources' market share increased by *** percentage points during 2018-23 and accounted for *** percent in 2023, combined.[41]

[40] One firm (***) likely provided its purchase data in pounds, not thousands of pounds, and did not respond to staff inquiries. Staff has adjusted its data to be in thousands of pounds.

[41] ***.

Table I-14
CACCS: Apparent U.S. consumption and market shares based on quantity, by source and period

Quantity in 1,000 pounds dry weight; shares in percent

Source	Measure	2018	2019	2020
U.S. producers	Quantity	445,614	457,986	461,399
Belgium	Quantity	8,568	8,797	9,682
Colombia	Quantity	20,576	13,563	16,658
Thailand	Quantity	113,292	123,233	128,893
Subject sources	Quantity	142,436	145,594	155,233
Nonsubject sources	Quantity	***	***	***
All import sources	Quantity	***	***	***
All sources	Quantity	***	***	***
U.S. producers	Share	***	***	***
Belgium	Share	***	***	***
Colombia	Share	***	***	***
Thailand	Share	***	***	***
Subject sources	Share	***	***	***
Nonsubject sources	Share	***	***	***
All import sources	Share	***	***	***
All sources	Share	100.0	100.0	100.0

Table continued.

Table I-14 Continued
CACCS: Apparent U.S. consumption and market shares based on quantity, by source and period

Quantity in 1,000 pounds dry weight; shares in percent

Source	Measure	2021	2022	2023
U.S. producers	Quantity	448,359	417,647	337,823
Belgium	Quantity	10,988	9,205	4,698
Colombia	Quantity	12,638	18,351	34,224
Thailand	Quantity	162,975	133,589	176,644
Subject sources	Quantity	186,601	161,144	215,566
Nonsubject sources	Quantity	***	***	***
All import sources	Quantity	***	***	***
All sources	Quantity	***	***	***
U.S. producers	Share	***	***	***
Belgium	Share	***	***	***
Colombia	Share	***	***	***
Thailand	Share	***	***	***
Subject sources	Share	***	***	***
Nonsubject sources	Share	***	***	***
All import sources	Share	***	***	***
All sources	Share	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires and from official U.S. imports statistics of the U.S. Department of Commerce using HTS statistical reporting numbers 2918.14.0000, 2918.15.1000, and 2918.15.5000, accessed March 26, 2024, adjusted using proprietary, Census-edited Customs data for the same HTS statistical reporting numbers accessed March 26, 2024 to report the quantities from Canada suppressed in official U.S. import statistics.

Figure I-2
CACCS: Apparent U.S. consumption based on quantity, by source and period

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires and from official U.S. imports statistics of the U.S. Department of Commerce using HTS statistical reporting numbers 2918.14.0000, 2918.15.1000, and 2918.15.5000, accessed March 26, 2024, adjusted using proprietary, Census-edited Customs data for the same HTS statistical reporting numbers accessed March 26, 2024 to report the quantities from Canada suppressed in official U.S. import statistics.

Value

Table I-15 and figure I-3 present data on apparent U.S. consumption and U.S. market shares by value for CACCS. The value of apparent U.S. consumption increased from 2018 to 2023, peaking in 2022 and increasing overall by 88.0 percent during the same period. As in apparent consumption quantities, U.S. producers accounted for the largest share (41.9 percent) in 2023, followed by nonsubject sources (36.5 percent), and subject sources (21.5 percent), that same year. While the share of value by U.S. producers U.S. shipments and Belgium's imports declined during 2018-23, the share of subject and nonsubject sources increased by 5.6 percentage points during the same period.

Table I-15
CACCS: Apparent U.S. consumption and market shares based on value, by source and period

Value in 1,000 dollars; shares in percent

Source	Measure	2018	2019	2020
U.S. producers	Value	297,431	297,855	298,991
Belgium	Value	6,319	5,837	6,638
Colombia	Value	12,954	7,135	8,914
Thailand	Value	69,973	70,278	75,913
Subject sources	Value	89,246	83,250	91,466
Nonsubject sources	Value	173,119	164,604	185,009
All import sources	Value	262,365	247,854	276,475
All sources	Value	559,796	545,709	575,466
U.S. producers	Share of value	53.1	54.6	52.0
Belgium	Share of value	1.1	1.1	1.2
Colombia	Share of value	2.3	1.3	1.5
Thailand	Share of value	12.5	12.9	13.2
Subject sources	Share of value	15.9	15.3	15.9
Nonsubject sources	Share of value	30.9	30.2	32.1
All import sources	Share of value	46.9	45.4	48.0
All sources	Share of value	100.0	100.0	100.0

Table continued.

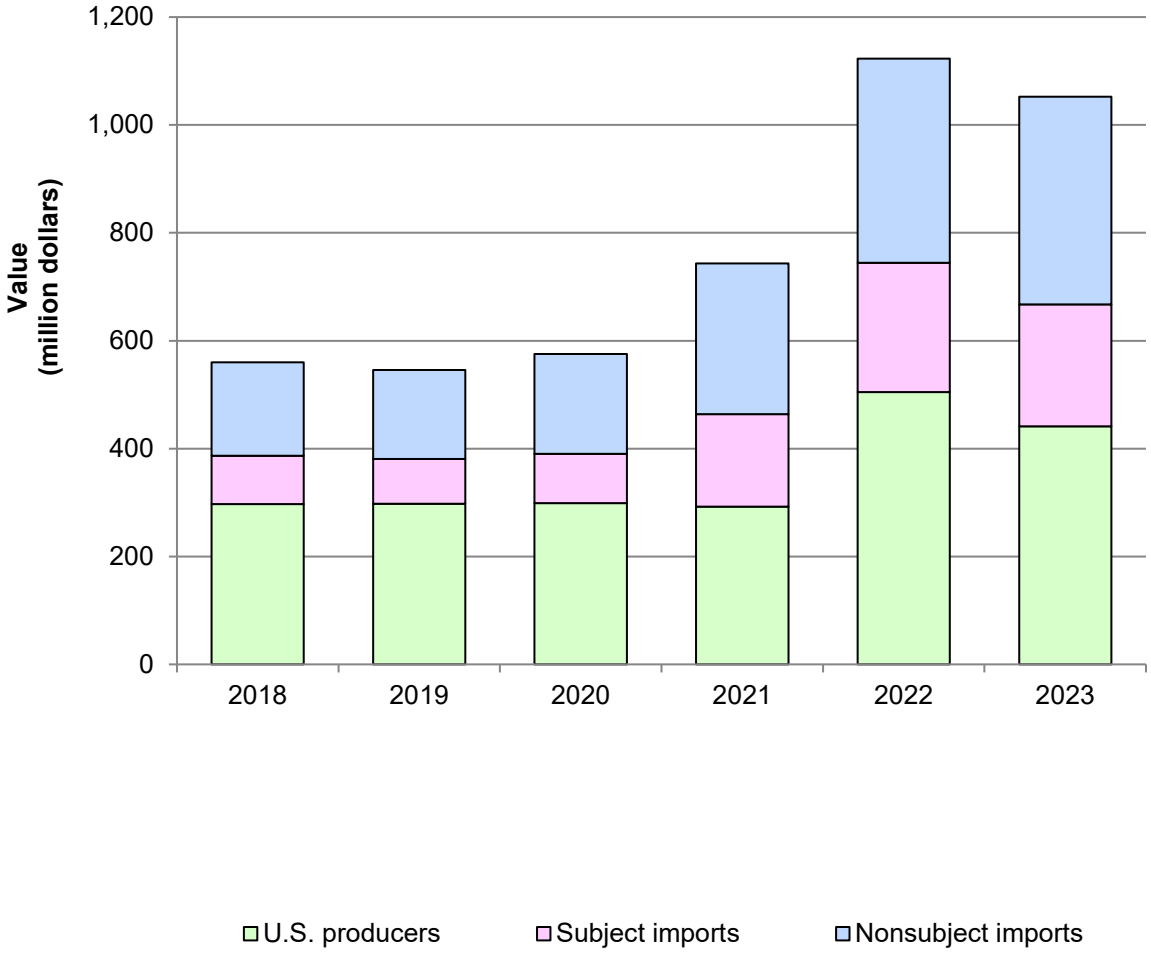
Table I-15 Continued
CACCS: Apparent U.S. consumption and market shares based on value, by source and period

Value in 1,000 dollars; shares in percent

Source	Measure	2021	2022	2023
U.S. producers	Value	292,565	504,554	441,271
Belgium	Value	9,269	16,163	6,836
Colombia	Value	8,300	20,164	37,077
Thailand	Value	153,671	203,458	182,452
Subject sources	Value	171,240	239,785	226,365
Nonsubject sources	Value	279,339	378,653	384,510
All import sources	Value	450,579	618,438	610,876
All sources	Value	743,144	1,122,992	1,052,147
U.S. producers	Share of value	39.4	44.9	41.9
Belgium	Share of value	1.2	1.4	0.6
Colombia	Share of value	1.1	1.8	3.5
Thailand	Share of value	20.7	18.1	17.3
Subject sources	Share of value	23.0	21.4	21.5
Nonsubject sources	Share of value	37.6	33.7	36.5
All import sources	Share of value	60.6	55.1	58.1
All sources	Share of value	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires and from official U.S. imports statistics of the U.S. Department of Commerce using HTS statistical reporting numbers 2918.14.0000, 2918.15.1000, and 2918.15.5000, accessed March 26, 2024.

Figure I-3
CACCS: Apparent U.S. consumption based on value, by source and period



Source: Compiled from data submitted in response to Commission questionnaires and from official U.S. imports statistics of the U.S. Department of Commerce using HTS statistical reporting numbers 2918.14.0000, 2918.15.1000, and 2918.15.5000, accessed March 26, 2024.

Part II: Conditions of competition in the U.S. market

U.S. market characteristics

CACCS are used in a wide variety of foods, beverages, pharmaceuticals, and cosmetics, as well as in commercial and household products including detergents and metal cleaners, and in textile finishing treatments and other industrial applications. CACCS are available in both dry form (granular, fine, and powder) and in aqueous solutions. CACCS in dry form are storable for multiple years and can be shipped relatively inexpensively. CACCS in aqueous solutions are shipped generally only to nearby customers. Both domestic and imported CACCS are generally produced to the same FCC and USP standards. In the original investigations, petitioners stated that all subject producers produce to these standard specifications and CACCS only vary in size and moisture level. The U.S. market is supplied with genetically modified organism ("GMO") CACCS and non-genetically modified organism ("non-GMO") CACCS, with the latter mostly used in the food, beverage, and pharmaceutical sectors.[1]

All three U.S. producers, all nine responding importers, and both responding foreign producers indicated that there had been no changes in the product mix, range, or marketing of CACCS since January 1, 2018, nor did they anticipate any.

U.S. producers, importers, and purchasers were asked if the CACCS market were subject to conditions of competition distinctive to CACCS other than the business cycles described below in the U.S. demand section. Two U.S. producers, 8 importers, and 13 purchasers responded that the U.S. market was not subject to distinctive conditions of competition, while 1 U.S. producer, 1 importer, and 2 purchasers stated that it was. U.S. producer *** stated that increased imports in the U.S. market over 2023 and 2024 have caused prices to fall up to 40 percent. (U.S. producer ***, which indicated there were not distinctive conditions, described the antidumping duty orders as having had a positive impact, but also described increased imports in the past year.) Importer *** cited the antidumping duty orders on CACCS as a distinctive condition. Purchaser *** stated that logistical constraints are another condition, and purchaser *** indicated that differing raw material harvest times in different countries meant that price negotiation timing could be different across markets.

[1] *CACCS from Belgium, Colombia, and Thailand, Inv. Nos. 731-TA-1374-1376 (Final)*, USITC Publication 4799, July 2018, p. V-1.

Apparent U.S. consumption of CACCS increased 2.4 percent during January 2018-December 2023. While U.S. producers described CACCS demand as usually increasing steadily, one importer described demand increasing dramatically in 2020 and 2021 due to "panic" buying during the COVID-19 pandemic, and then adjusting afterwards. (See "Demand trends" below.) Apparent consumption increased moderately each year from 2018 through 2020, increased sharply in 2021, and then decreased in 2022 and 2023.

Channels of distribution

Over 2018-2023, U.S. producers sold a plurality (or majority in ***) of their citric acid to food and beverage end users, with shares of *** percent sold to distributors, shares of *** percent to industrial end users, and most of the rest to pharmaceutical end users. Importers of product from *** sold mainly to distributors, while importers from *** sold to industrial and food and beverage end users, as shown in table II-1.

Table II-1
CACCS: Share of U.S. shipments by source, channel of distribution, and period

Shares in percent

Source	Channel	2018	2019	2020	2021	2022	2023
United States	Distributor	***	***	***	***	***	***
United States	Food and beverage	***	***	***	***	***	***
United States	Industrial	***	***	***	***	***	***
United States	Pharmaceutical	***	***	***	***	***	***
United States	All other	***	***	***	***	***	***
Belgium	Distributor	***	***	***	***	***	***
Belgium	Food and beverage	***	***	***	***	***	***
Belgium	Industrial	***	***	***	***	***	***
Belgium	Pharmaceutical	***	***	***	***	***	***
Belgium	All other	***	***	***	***	***	***
Colombia	Distributor	***	***	***	***	***	***
Colombia	Food and beverage	***	***	***	***	***	***
Colombia	Industrial	***	***	***	***	***	***
Colombia	Pharmaceutical	***	***	***	***	***	***
Colombia	All other	***	***	***	***	***	***
Thailand	Distributor	***	***	***	***	***	***
Thailand	Food and beverage	***	***	***	***	***	***
Thailand	Industrial	***	***	***	***	***	***
Thailand	Pharmaceutical	***	***	***	***	***	***
Thailand	All other	***	***	***	***	***	***
Subject sources	Distributor	***	***	***	***	***	***
Subject sources	Food and beverage	***	***	***	***	***	***
Subject sources	Industrial	***	***	***	***	***	***
Subject sources	Pharmaceutical	***	***	***	***	***	***
Subject sources	All other	***	***	***	***	***	***
Nonsubject sources	Distributor	***	***	***	***	***	***
Nonsubject sources	Food and beverage	***	***	***	***	***	***
Nonsubject sources	Industrial	***	***	***	***	***	***
Nonsubject sources	Pharmaceutical	***	***	***	***	***	***
Nonsubject sources	All other	***	***	***	***	***	***
All import sources	Distributor	***	***	***	***	***	***
All import sources	Food and beverage	***	***	***	***	***	***
All import sources	Industrial	***	***	***	***	***	***
All import sources	Pharmaceutical	***	***	***	***	***	***
All import sources	All other	***	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Geographic distribution

U.S. producers and importers of Belgian and Colombian CACCS reported selling product to all regions in the United States (table II-2). Importers of Thai product reported selling to the

Pacific Coast. For U.S. producers, 9.0 percent of sales were within 100 miles of their production facility, 62.3 percent were between 101 and 1,000 miles, and 28.6 percent were over 1,000 miles. Importers sold 94.1 percent within 100 miles of their U.S. point of shipment, 0.0 percent between 101 and 1,000 miles, and 5.9 percent over 1,000 miles.

Table II-2
CACCS: Count of U.S. producers' and U.S. importers' geographic markets

Region	U.S. producers	Belgium	Colombia	Thailand	Subject sources
Northeast	3	1	1	0	2
Midwest	3	2	1	0	3
Southeast	3	1	1	0	2
Central Southwest	3	1	1	0	2
Mountain	3	1	1	0	2
Pacific Coast	3	1	1	1	3
Other	3	0	2	1	2
All regions (except Other)	3	1	1	0	2
Reporting firms	3	2	2	2	5

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Other U.S. markets include AK, HI, PR, and VI.

Supply and demand considerations

U.S. supply

Table II-3 provides a summary of the supply factors regarding CACCS from U.S. producers and from subject countries.

Table II-3
CACCS: Supply factors that affect the ability to increase shipments to the U.S. market, by country

Quantity in 1,000 pounds dry weight; ratio and share in percent

Factor	Measure	United States	Belgium	Colombia	Thailand
Capacity 2018	Quantity	504,503	***	***	***
Capacity 2023	Quantity	487,978	***	***	***
Capacity utilization 2018	Ratio	92.0	***	***	***
Capacity utilization 2023	Ratio	76.7	***	***	***
Inventories to total shipments 2018	Ratio	13.6	***	***	***
Inventories to total shipments 2023	Ratio	16.9	***	***	***
Home market shipments 2023	Share	95.2	***	***	***
Non-US export market shipments 2023	Share	***	***	***	***
Ability to shift production (firms reporting “yes”)	Count	0 of 3	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Responding U.S. producers accounted for all U.S. production of CACCS in 2023. Responding foreign producer/exporter firms accounted for all U.S. imports of CACCS from Belgium and Colombia during 2023. (***.) No data were received from any Thai producers. For additional data on the number of responding firms and their share of U.S. production and of U.S. imports from each subject country, please refer to Part I, “Summary Data and Data Sources.”

Domestic production

Based on available information, U.S. producers of CACCS have the ability to respond to changes in demand with moderate to large changes in the quantity of shipments of U.S.-produced CACCS to the U.S. market. The main contributing factors to this degree of responsiveness of supply are the availability of unused capacity and some inventories. U.S. producers do not export much CACCS and cannot produce other products with the same equipment used to produce CACCS. U.S. capacity utilization was higher earlier in the period, and some purchasers described U.S. producers as unable to supply particular products.

All three U.S. producers stated that their exports of CACCS were not subject to any tariff or non-tariff barriers in other countries. They also stated that shifting sales to foreign markets would be difficult because the main focus of their U.S. operations is sales within the United States.

Three U.S. producers and eight importers stated that the availability of U.S. CACCS had not changed since January 1, 2018. One of these importers (***) stated that there had been supply disruptions during the COVID-19 pandemic, but that now there was enough

supply. One importer (***) stated that there was not adequate U.S. supply. Three U.S. producers and eight importers stated that they did not anticipate any changes in the availability of U.S. CACCS.

Ten purchasers indicated that the availability of U.S.-produced CACCS had not changed since January 1, 2018. Five stated that it had, with *** describing limited domestic production. *** stated that domestic product was limited in availability during the COVID-19 pandemic, but that supply shortages had eased since 2022. *** stated that there had been an improvement in domestic distribution. Thirteen U.S. purchasers indicated that they did not anticipate any changes in the availability of U.S. produced CACCS, with *** indicating they were aware of no plans to increase U.S. production.[2] In its briefs, Coca Cola described U.S. producers as reducing their capacity since 2018 and as being unable to meet the demand for non-GMO CACCS that it requires.[3]

Subject imports from Belgium

Based on available information, Citribel, the producer of CACCS from Belgium, has the ability to respond to changes in demand with moderate to large changes in the quantity of shipments of CACCS to the U.S. market. The main contributing factor to this degree of responsiveness of supply is the ability to shift shipments from alternate markets, but is mitigated by limited availability of unused capacity, a limited ability to use on-hand inventories, and *** ability to shift production from alternate products. ***.

***. In response to a separate question, *** indicated that the CACCS produced for the U.S. market is ***.

*** indicated that it faced ***

[2] One firm, *** indicated it did anticipate changes, but did not specify what those would be.

[3] Coca Cola's prehearing brief, pp. 3 and 7, posthearing brief, p. 4. Petitioners stated that they can and do supply non-GMO CACCS. Petitioners' posthearing brief, exhibit 1, pp. 3-4.

***. It stated that it expects ***.

Domestic producers alleged that ***.[4] Citribel stated that in January 2023, it shifted its production to 70 percent of installed capacity. It added that shifting back to higher capacity would require substantial time and effort, and it has no plans to do so through at least 2025.[5]

Subject imports from Colombia

Based on available information, Sucroal, the sole responding producer of CACCS in Colombia, has the ability to respond to changes in demand with moderate-to-large changes in the quantity of shipments of CACCS to the U.S. market. The main contributing factors to this degree of responsiveness of supply are the availability of inventories and some ability to shift shipments from alternate markets. This responsiveness is mitigated by the inability to shift large amounts of production from alternate products and limited availability capacity.

***. In response to a separate question, *** indicated that the CACCS produced for the U.S. market is ***. However, it also stated that ***.

*** indicated that there were ***.

Domestic producers alleged ***.[6] Domestic producers also noted that in August 2022, Brazil imposed antidumping duties on imports of CACCS from Colombia.[7]

[4] Domestic producers' prehearing brief, p. 14.
[5] Citribel's posthearing brief, p. 4.
[6] Domestic producers' prehearing brief, pp. 17-19.
[7] Domestic producers' prehearing brief, p. 21.

Subject imports from Thailand

Based on available information, producers of CACCS from Thailand have the ability to respond to changes in demand with large changes in the quantity of shipments of CACCS to the U.S. market. No Thai producers submitted questionnaires in these reviews. However, Thai producers have demonstrated an ability to ship large amounts of CACCS to the United States and the world. Additionally, domestic producers noted that, in August 2022, Brazil imposed antidumping duties on imports of CACCS from Thailand.[8]

Availability of subject imports

Three U.S. producers stated that, while the antidumping duties in these investigations had initially restrained subject imports and allowed prices to rise, the presence of subject imports in the U.S. market had been increasing in recent years. Six importers stated that the availability of subject imports had not changed since January 1, 2018. Three (including ***) stated that the availability of subject imports had changed, with importer *** elaborating that Belgian imports had decreased while imports from Colombia and Thailand had increased.

Three U.S. producers anticipated that if the orders were revoked, there would be an influx of low-priced subject imports. Six importers did not anticipate changes in the availability of subject imports. Two did, with *** expecting imports to grow to meet growing U.S. demand.

Eight purchasers indicated that the availability of subject imports had not changed since January 1, 2018, but *** described increased capacity in Colombia, *** stated that it became aware of the availability of Colombian supply in 2023, and *** specified that supply of Thai CACCS had remained constant. Twelve purchasers indicated that they did not anticipate changes in the availability of subject imports.

Imports from nonsubject sources

Nonsubject imports accounted for 36.5 percent of total U.S. consumption in 2023, up from 30.9 percent in 2018. Sources of nonsubject imports during January 2018-December 2023 were Austria, Brazil, Canada, China, Germany, India, and Israel. Chinese CACCS is subject to separate antidumping and countervailing duties.

[8] Domestic producers' prehearing brief, p. 25.

Three U.S. producers, 7 importers, and 10 purchasers indicated that the availability of nonsubject imports had not changed since January 1, 2018. However, importer *** stated that imports from China (despite antidumping and countervailing duties), Israel (sodium citrate possibly made from Chinese citric acid), and India (also possibly sodium citrate made from Chinese citric acid) had increased. Purchaser *** described increased capacity in Canada, while *** stated that supply from Canada had been subject to the same reductions due to the COVID-19 pandemic as supply from other countries.

Three U.S. producers, 7 importers, and 13 purchasers indicated that they did not anticipate changes in the availability of nonsubject imports. Importer *** stated that it anticipated that importers would increase imports from countries like India and Malaysia that have no local CACCS production but would assist with circumvention of duties on Chinese product.

Supply constraints

Two of 3 U.S. producers and 8 of 10 responding importers reported that they had not experienced supply constraints since January 1, 2018. However, U.S. producer *** stated that in 2023, ***. Importer *** stated that during the COVID-19 pandemic, there were supply disruptions for Asian CACCS, and demand increased for *** CACCS to the point that ***.

Nine responding purchasers reported that no firm had refused to supply or been unable to supply CACCS since January 1, 2018. Six did report such issues. Three of these (***) indicated that supply was constrained during the COVID-19 pandemic, with *** adding that domestic suppliers had also experienced supply shortfalls due to ***. *** stated that two suppliers restricted shipments in 2021 by as much as 25 to 50 percent, and then capped available supply in 2022 as well. It continued that such issues were mostly resolved by 2023.

New suppliers

Thirteen of 16 purchasers indicated that no new suppliers had entered the U.S. market since January 1, 2018. Three did, naming Tezkim in Turkey (two purchasers) and JBL (one purchaser). Fifteen purchasers did not expect additional entrants.

U.S. demand

Based on available information, the overall demand for CACCS is likely to experience small changes in response to changes in price. The main contributing factors are the small cost share of CACCS in most of its end-use products, and the lack of substitute products.

End uses and cost share

U.S. demand for CACCS depends on the demand for U.S.-produced downstream products. In the original investigations, reported end uses included acidulants, baby care wipes, beverages, candy, cosmetics, dairy formulas, detergents and cleaners, citrate salts, and pharmaceuticals. In these reviews, purchasers reported a subset of these end uses as well as ***. In the original investigations, petitioners estimated that nearly 50 percent of CACCS consumption is for beverages, 19 percent for food, 15 percent for detergents, and 8 percent each for industrial and pharmaceutical uses.[9]

CACCS accounts for a small share of the cost of the end-use products in which it is used. In the original investigations, reported cost shares for some end uses were as follows:

- Food and Beverages (<1 to 3 percent);
- Detergents and cleaners (1 to 7 percent);
- Pharmaceuticals (1 to 5 percent);
- Industrial applications (1 to 50 percent).[10]

Purchaser responses in these reviews were consistent with these estimates.[11]

Five purchasers indicated that there had been no change in demand for their end use products, four reported such demand had fluctuated up, two reported it had steadily increased, and one reported it had steadily declined. Those purchasers describing changes described increasing demand from consumers for their products.

Two responding U.S. producers, 10 importers, and 12 purchasers reported no changes in end uses. However, some firms reported a change in end uses. U.S. producer *** indicated that CACCS are increasingly used as a catalyst in biodiesel fuel. Purchaser *** reported now

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[9] *CACCS from Belgium, Colombia, and Thailand, Inv. Nos. 731-TA-1374-1376 (Final)*, USITC Publication 4799, July 2018, pp. II-12-13.

[10] *CACCS from Belgium, Colombia, and Thailand, Inv. Nos. 731-TA-1374-1376 (Final)*, USITC Publication 4799, July 2018, p. II-13.

[11] Additionally, *** indicated that CACCS end uses in *** were the same as in the United States. They *** continued that there had not been any changes in end uses since January 1, 2018.

blending CACCS to 50 percent liquid, and purchaser *** reported some changes in CACCS product mix as *** updates its own end-use products.

Business cycles

Two of three U.S. producers, 7 of 9 importers, and 11 of 15 responding purchasers indicated that the CACCS market was not subject to business cycles. One U.S. producer, two importers, and four purchasers indicated that it was, describing different business cycles for different end uses. Importer *** described different business cycles for different end uses. For example, it stated that the beverage end use has higher demand in spring and summer, the dairy end use in winter, and agricultural end uses in the early planting season. It added that cleaning end uses are steadier but with some seasonality during periods of industrial cleaning. Both *** and importer *** described seasonality in the canning market, with *** describing such seasonality as entirely in summer. Purchasers *** indicated that beverage purchases are seasonal, with *** adding that this season ran from late February to early July. Purchaser *** stated that agricultural demand is seasonal. Purchaser *** indicated that CACCS is used in manufacturing products sold during winter. U.S. producer *** described an increase in spot sales and a decrease in its annual contracts over the last 18 months, a change that it ascribed to an increase in imports. (See Part V for more on contracts.)

Demand trends

Majorities or pluralities of firms reported an increase in U.S. demand and (except for purchasers) foreign demand for CACCS since January 1, 2018 (table II-4). All three U.S. producers described demand as increasing moderately ***.[12] Importer *** described panic buying in 2021 due to the COVID-19 pandemic, followed by lower demand in 2022 and 2023 as inventories were drawn down, for a net increase overall since 2018. *** indicated that these trends were also true in global CACCS markets. Importers *** also described the COVID-19 pandemic as impacting demand either in the United States (***) or both the United States and overseas (***). Purchasers reported increased demand for end use products as driving demand. Purchaser *** indicated that new applications, such as passivating stainless steel, had led to increased demand for CACCS. Internationally, purchaser *** described increased demand in certain countries, such as India. ***

[12] Domestic producers' prehearing brief, p. 35.

*** described demand as generally growing in its home market with fluctuations due to the COVID-19 pandemic and the Russia-Ukraine war. It also described demand in Asia and Europe as strong.

Firms had widely variant expectations of demand in the future (table II-5). Most producers expected an increase in U.S. and foreign demand, while importers had a wide range of responses. U.S. producers described expecting continued moderate growth in demand, both domestically and internationally. Importer *** indicated that it expects continued strong demand because CACCS remains an important ingredient that is low cost and not easily replaceable. It added that demand for "green" products may drive more CACCS demand. A majority of purchasers anticipated unchanged U.S. and foreign demand. Purchaser *** anticipated a decrease in demand as consumers move away from carbonated beverages. Purchaser *** anticipated an increase in demand but added that imported CACCS will be required due to the level of U.S. production capacity. *** described U.S. demand as growing due to increased food safety requirements. It added that demand in Asia and Europe is expected to be strong. Additionally, in its prehearing brief, Coca Cola submitted demand forecasts that predicted annual global demand growth of CACCS of 3.7 percent.[13]

[13] Coca Cola's prehearing brief, p. 4.

Table II-4
CACCS: Count of firms' responses regarding overall domestic and foreign demand since January 1, 2018, by firm type

Market	Firm type	Steadily increase	Fluctuated up	No change	Fluctuated down	Steadily decreased
U.S. demand	U.S. producers	1	2	0	0	0
U.S. demand	Importers	1	4	4	1	0
U.S. demand	Purchasers	2	5	6	0	1
U.S. demand	Foreign producers	***	***	***	***	***
Foreign demand	U.S. producers	0	2	0	0	0
Foreign demand	Importers	1	4	3	1	0
Foreign demand	Purchasers	3	1	5	0	0
Demand in subject country	Foreign producers	***	***	***	***	***
Demand in other export markets	Foreign producers	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Importer *** answered both fluctuated up and fluctuated down to characterize how demand rose during the COVID-19 pandemic and then returned to old levels afterward.

Table II-5
CACCS: Count of firms' responses regarding anticipated overall domestic and foreign demand, by firm type

Market	Firm type	Steadily increase	Fluctuate up	No change	Fluctuate down	Steadily decrease
U.S. demand	U.S. producers	1	2	0	0	0
U.S. demand	Importers	2	2	4	2	0
U.S. demand	Purchasers	1	4	7	1	1
U.S. demand	Foreign producers	0	1	1	0	0
Foreign demand	U.S. producers	0	2	0	0	0
Foreign demand	Importers	2	2	3	2	0
Foreign demand	Purchasers	2	1	6	0	0
Demand in subject country	Foreign producers	***	***	***	***	***
Demand in other export markets	Foreign producers	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Importer *** answered both fluctuated up and fluctuated down.

Substitute products

In the original investigations, most firms indicated that there were no substitutes for CACCS.[14] In these reviews, 3 U.S. producers, 9 importers, 2 foreign producers, and 15 purchasers reported that there had been no changes in substitutes and that they did not anticipate any future changes in substitutes. One purchaser (***) and one importer (***) stated that there were substitutes, but did not specify.

Substitutability issues

This section assesses the degree to which U.S.-produced CACCS and imports of CACCS from subject countries can be substituted for one another by examining the importance of certain purchasing factors and the comparability of CACCS from domestic and imported sources based on those factors. Based on available data, staff believes that there is a moderate to high degree of substitutability between domestically produced CACCS and CACCS imported from subject sources.[15] Purchasers generally described CACCS from different sources as comparable in most factors, and CACCS from different sources generally meeting specifications. However, non-GMO certification and some reports of differences among CACCS from different countries may limit substitutability somewhat.

Factors affecting purchasing decisions[16]

GMO vs. non-GMO

As described in Part I, CACCS are produced with either GMO or non-GMO feedstocks. U.S. producer *** described GMO and non-GMO CACCS as chemically identical and

[14] *CACCS from Belgium, Colombia, and Thailand, Inv. Nos. 731-TA-1374-1376 (Final)*, USITC Publication 4799, July 2018, p. II-15.

[15] The degree of substitution between domestic and imported CACCS depends upon the extent of product differentiation between the domestic and imported products and reflects how easily purchasers can switch from domestically produced CACCS to the CACCS imported from subject countries (or vice versa) when prices change. The degree of substitution may include such factors as relative prices (discounts/rebates), quality differences (e.g., grade standards, defect rates, etc.), and differences in sales conditions (e.g., lead times between order and delivery dates, reliability of supply, product services, etc.).

[16] Fifteen purchasers indicated they had marketing/pricing knowledge of domestic product, 3 of Belgium product, 6 of Colombian product, 9 of Thai product, and 10 of product from nonsubject countries (including Austria, Brazil, Canada, China, Israel, and Turkey).

useable in the same applications.[17] Other firms described some consumers as preferring product certified as non-GMO.[18] Petitioners estimated that less than three percent of U.S. consumption requires non-GMO certification.[19]

U.S. producers, importers, and purchasers were asked how often their firm (if they are an end user) or their customers (if they are a supplier or distributor) prefers to purchase non-GMO CACCS. As shown in table II-6, firms generally indicated that non-GMO status was more important in the food and beverage end use than in the pharmaceutical or industrial end uses.

Table II-6
CACCS: Count of customer preference for non-GMO product, by firm type and end use

End use	Firm type	Always	Frequently	Sometimes	Never
Food and beverage	Producer	0	0	3	0
Food and beverage	Importer	3	1	4	2
Food and beverage	Purchaser	3	2	5	5
Pharmaceutical	Producer	0	0	2	1
Pharmaceutical	Importer	2	2	2	2
Pharmaceutical	Purchaser	3	1	1	5
Industrial	Producer	0	0	0	3
Industrial	Importer	2	1	0	5
Industrial	Purchaser	0	0	4	7
Other	Producer	0	0	1	0
Other	Importer	0	0	0	2
Other	Purchaser	1	0	1	5

Source: Compiled from data submitted in response to Commission questionnaires.

Additionally, U.S. producers, importers, and purchasers were asked if, outside of customer or market preferences, there were any physical limitations to being able to use GMO and non-GMO CACCS interchangeably in any specific end use application. Most firms responded that there were not. Specifically, in the food and beverage end use, three U.S. producers, five importers, and seven purchasers stated that there were not such limitations.[20] In the pharmaceutical end use, three U.S. producers, three importers, and four purchasers stated that there were not. In the industrial end use, three U.S. producers, two importers, and four

[17] Petitioners also described U.S. demand for non-GMO CACCS as very limited. Petitioners' posthearing brief, p. 9.

[18] See also posthearing brief of Coca Cola, pp. 3-4.

[19] Petitioners' posthearing brief, exhibit 1, p. 11 and exhibits 3 and 4.

[20] Two purchasers cited their customers' requirements as reasons why there were differences.

purchasers stated that there were not. In other end uses (including cleaning and beauty applications), one U.S. producer and two purchasers stated that there were not.

Purchaser decisions based on source

Purchasers were asked if they or their customers preferred to order CACCS produced in a specific country over other sources of supply. Ten indicated they did not, but five stated that they did. Among those five, *** stated that "high quality" Belgian product is preferred for some pharmaceutical applications. Two purchasers stated that purchasers with preference for non-GMO product prefer to purchase from countries (like Thailand) that produce non-GMO CACCS. Purchaser *** described Mexico as a dependable supply source.

Purchasers were asked if certain grades/types/certifications of CACCS were only available from certain country sources. Eight stated that there were not such grades, while four stated that there were. Three of these four described non-GMO as a type of CACCS only available from some sources, with *** specifying that non-GMO was mostly available from Brazil and Thailand. *** stated that Belgian CACCS is higher quality and that fine granular CACCS is not available from import sources as it hardens and clumps too much when imported.

As shown in table II-7, most purchasers reported that they and their customers never make purchasing decisions based on the producer, country of origin, or having non-GMO certification. Purchasers indicated that their bases for decisions included whether the supplier was approved, local and/or domestic purchasing strategies, customer requirements (especially for non-GMO requirements), label claims (for non-GMO certification) availability, and/or price. Regarding non-GMO certification, *** indicated that having non-GMO certification was important for about *** percent of its purchases.

Table II-7
CACCS: Count of purchasers' responses regarding frequency of purchasing decisions based on producer, country of origin, and having non-GMO certification

Firm making decision	Decision based on	Always	Usually	Sometimes	Never
Purchaser	Producer	1	3	4	8
Customer	Producer	0	0	4	7
Purchaser	Country	0	2	5	9
Customer	Country	0	0	3	8
Purchaser	Having non-GMO certification	2	1	4	9
Customer	Having non-GMO certification	0	2	3	6

Source: Compiled from data submitted in response to Commission questionnaires.

Importance of purchasing domestic product

Fourteen of 16 responding purchasers reported that none of their purchases required purchasing U.S.-produced product. Two purchasers (***) reported it was required by their customers (for *** to *** percent of their purchases).

Most important purchase factors

The most often cited top three factors firms consider in their purchasing decisions for CACCS were price (15 firms), availability/capacity (13 firms), and quality/specifications/ certifications (11 firms) as shown in table II-8. Quality[21] was the most frequently cited first-most important factor (cited by 8 firms), while price and availability were (7 firms each) the most frequently reported second-most important factor.

Table II-8
CACCS: Count of ranking of factors used in purchasing decisions as reported by purchasers, by factor

Factor	First	Second	Third	Total
Price/cost	3	7	5	15
Availability/capacity	3	7	3	13
Quality/specifications/certifications	8	1	2	11
Traditional supplier	2	0	0	2
Packaging	0	0	2	2
Lead times	0	1	0	1
Contracts	0	0	1	1
Credit	0	0	1	1

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Other factors include payment terms, distance from customer, delivery, and availability of raw materials.

Nine purchasers indicated that they sometimes purchase the lowest-priced product, five stated that they usually do, and two stated that they always do.

Importance of specified purchase factors

Purchasers were asked to rate the importance of 19 factors in their purchasing decisions (table II-9). The factors rated as very important by at least 10 responding purchasers were availability (16 purchasers), product consistency (16), reliability of supply (16), price (15), quality meets industry standards (13), and delivery time (10).

[21] Firms defined quality as meeting industry standards, clarity, odor, granularity, color, consistency, traceability, and manufacturing capability.

Table II-9
CACCS: Count of purchasers' responses regarding importance of purchase factors, by factor

Factor	Very important	Somewhat important	Not important
Availability	16	0	0
Being Halal certified	4	5	6
Being Kosher certified	6	4	6
Being "Non-GMO Project" certified	2	7	7
Being Non-GMO whether or not specifically being "Non-GMO Project" verified	4	7	4
Delivery terms	8	8	0
Delivery time	10	6	0
Discounts offered	2	6	7
Minimum quantity requirements	3	6	7
Packaging	9	5	2
Payment terms	9	5	2
Price	15	1	0
Product consistency	16	0	0
Product range	4	7	5
Quality meets industry standards	13	3	0
Quality exceeds industry standards	6	7	3
Reliability of supply	16	0	0
Technical support/service	7	5	4
U.S. transportation costs	7	6	3

Source: Compiled from data submitted in response to Commission questionnaires.

Lead times

CACCS are primarily sold from inventory. U.S. producers reported that 80.7 percent of their commercial shipments came from inventories, with lead times averaging 17.9 days. The remaining 19.3 percent of their commercial shipments were produced-to-order, with lead times averaging 7.5 days.[22] Importers reported that 43.7 percent of their commercial shipments were produced-to-order, with lead times averaging 45 days. Another 19.2 percent of importers' commercial shipments came from foreign inventories, with lead times averaging 55.9 days. The remaining 37.1 percent of their commercial shipments came from domestic inventories, with lead times averaging 35.4 days.

[22] ***. Email from Neal Reynolds, counsel for petitioners, April 12, 2024.

Supplier certification

Twelve responding purchasers require their suppliers to become certified or qualified to sell CACCS to their firm, while four stated that they did not. Five purchasers reported that the time to qualify a new supplier ranged from 10 to 30 days, while four purchasers (*** purchasers reported that no domestic or foreign supplier had failed in its attempt to qualify CACCS or had lost its approved status since 2018.

Minimum quality specifications

As can be seen from table II-10, a majority of purchasers (among those familiar with respective products) reported that domestically produced product and imported product from all sources always met minimum quality specifications.

Table II-10
CACCS: Count of purchasers' responses regarding suppliers' ability to meet minimum quality specifications, by source

Source of purchases	Always	Usually	Sometimes	Rarely or never	Don't know
United States	11	3	0	0	2
Belgium	3	1	0	0	9
Colombia	5	1	0	0	8
Thailand	8	2	0	0	5
Nonsubject sources	6	2	0	0	4

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Purchasers were asked how often domestically produced or imported CACCS meets minimum quality specifications for their own or their customers' uses.

Changes in purchasing patterns

Nine purchasers indicate that they had changed suppliers since January 1, 2018, citing increased demand, business continuity, lower prices, and supplier diversity. One purchaser (***) indicated that it added suppliers from ***, while another (***) indicated that it had reduced and eliminated supply from *** and added supply from ***.

Eight purchasers indicated that they had purchased CACCS from subject countries before January 1, 2018, and eight indicated that they had not. Four purchasers indicated that their purchases of Belgian CACCS were unchanged since January 1, 2018. One of these purchasers, ***, indicated that it did not purchase Belgian CACCS before then, and the others

did not elaborate. Three purchasers indicated that they changed their purchases of Belgian CACCS since January 1, 2018, for reasons other than the orders. These reasons included Belgian CACCS not being price competitive and a supplier no longer offering Belgian CACCS.

Six purchasers indicated that their purchases of Colombian CACCS were unchanged since January 1, 2018. One of these purchasers described needing non-GMO CACCS, another indicated it needed a specific product, and the others did not elaborate. Two purchasers indicated that they changed their purchases from Colombia since January 1, 2018, for reasons other than the orders. One purchaser, ***, indicated that it did so because there was renewed availability of Colombian product in 2023, and the other stated that delivery was not consistent.

Three purchasers indicated that their purchases of Thai CACCS were unchanged since January 1, 2018. *** elaborated that its purchases have fluctuated only because of demand and supply chain changes. Four purchasers indicated that they changed their pattern of purchasing Thai CACCS for reasons other than the orders since January 1, 2018. Reasons cited included business continuity, non-GMO requirements, and disruptions due to the COVID-19 pandemic.

Six purchasers indicated that their purchases of CACCS from nonsubject countries had not changed since January 1, 2018. Four purchasers indicated that they changed their purchases of CACCS from nonsubject countries for reasons other than the order, citing variations in demand (for purchases of Canadian product) and a lack of domestic supply. Three purchasers indicated that they changed their purchases of CACCS because of the order, and two indicated that they did not purchase CACCS either before or after January 1, 2018.

Purchasers were also asked about changes in their purchasing patterns from different countries since January 1, 2018 (table II-11). A plurality of purchasers reported unchanged purchases of U.S.-produced product, with four purchasers reporting an increase and three reporting a decrease. Purchasers cited demand, consistent supply, non-GMO status, and the COVID-19 pandemic as reasons for changes. Purchasers reported both increased and decreased purchases of product from subject countries because of non-GMO status, price, demand, availability, and the COVID-19 pandemic. Purchasers reported increased purchases of product from nonsubject countries because of limited domestic supply, availability, competitive pricing, and the COVID-19 pandemic.

Table II-11
CACCS: Count of purchasers' responses regarding changes in purchase patterns from U.S., subject, and nonsubject countries

Source of purchases	Steadily increased	Fluctuated up	No change	Fluctuated down	Steadily decreased	Did not purchase
United States	2	2	6	3	0	3
Belgium	1	1	1	0	1	6
Colombia	0	2	3	1	1	4
Thailand	1	4	3	2	0	2
Nonsubject sources	4	4	2	1	0	1
Sources unknown	0	0	1	0	0	6

Source: Compiled from data submitted in response to Commission questionnaires.

Purchase factor comparisons of domestic products, subject imports, and nonsubject imports

Purchasers were asked a number of questions comparing CACCS produced in the United States, subject countries, and nonsubject countries. First, purchasers were asked for a country-by-country comparison on the same 19 factors (table II-12) for which they were asked to rate the importance.

Most purchasers reported that U.S., subject, and nonsubject CACCS were comparable on all factors. There were some exceptions. For example, purchasers were evenly split on whether U.S. product was superior or comparable to Belgian product on delivery time and price and on whether U.S. product is superior or comparable to Colombian product on U.S. transportation costs. Equal pluralities of purchasers indicated that U.S. product was inferior and comparable to nonsubject-country product in terms of being "non-GMO" project verified. Additionally, a majority of purchasers indicated that U.S. product was superior to Colombian and Thai product on delivery time.

Table II-12
CACCS: Count of purchasers' responses comparing U.S.-produced and imported product, by factor and country pair

Factor	Country pair	Superior	Comparable	Inferior
Availability	United States v. Belgium	1	2	1
Being Halal certified	United States v. Belgium	0	3	1
Being Kosher certified	United States v. Belgium	0	4	0
Being "Non-GMO Project" certified	United States v. Belgium	0	2	2
Being Non-GMO whether or not specifically being "Non-GMO Project" verified	United States v. Belgium	0	3	1
Delivery terms	United States v. Belgium	1	3	0
Delivery time	United States v. Belgium	2	2	0
Discounts offered	United States v. Belgium	1	3	0
Minimum quantity requirements	United States v. Belgium	1	3	0
Packaging	United States v. Belgium	0	4	0
Payment terms	United States v. Belgium	0	4	0
Price	United States v. Belgium	2	2	0
Product consistency	United States v. Belgium	0	4	0
Product range	United States v. Belgium	1	3	0
Quality meets industry standards	United States v. Belgium	0	4	0
Quality exceeds industry standards	United States v. Belgium	0	4	0
Reliability of supply	United States v. Belgium	1	1	2
Technical support/service	United States v. Belgium	0	3	1
U.S. transportation costs	United States v. Belgium	0	4	0

Table continued.

Table II-12 Continued
CACCS: Count of purchasers' responses comparing U.S.-produced and imported product, by factor and country pair

Factor	Country pair	Superior	Comparable	Inferior
Availability	United States v. Colombia	0	5	1
Being Halal certified	United States v. Colombia	0	5	1
Being Kosher certified	United States v. Colombia	0	6	0
Being "Non-GMO Project" certified	United States v. Colombia	0	1	5
Being Non-GMO whether or not specifically being "Non-GMO Project" verified	United States v. Colombia	0	2	4
Delivery terms	United States v. Colombia	1	4	0
Delivery time	United States v. Colombia	3	2	0
Discounts offered	United States v. Colombia	0	5	0
Minimum quantity requirements	United States v. Colombia	1	4	0
Packaging	United States v. Colombia	0	6	0
Payment terms	United States v. Colombia	0	5	0
Price	United States v. Colombia	1	4	1
Product consistency	United States v. Colombia	0	6	0
Product range	United States v. Colombia	0	6	0
Quality meets industry standards	United States v. Colombia	0	6	0
Quality exceeds industry standards	United States v. Colombia	0	5	0
Reliability of supply	United States v. Colombia	0	5	1
Technical support/service	United States v. Colombia	1	5	0
U.S. transportation costs	United States v. Colombia	3	3	0

Table continued.

Table II-12 Continued
CACCS: Count of purchasers' responses comparing U.S.-produced and imported product, by factor and country pair

Factor	Country pair	Superior	Comparable	Inferior
Availability	United States v. Thailand	0	8	1
Being Halal certified	United States v. Thailand	0	8	1
Being Kosher certified	United States v. Thailand	0	9	0
Being "Non-GMO Project" certified	United States v. Thailand	1	4	4
Being Non-GMO whether or not specifically being "Non-GMO Project" verified	United States v. Thailand	1	4	4
Delivery terms	United States v. Thailand	2	7	0
Delivery time	United States v. Thailand	5	4	0
Discounts offered	United States v. Thailand	0	9	0
Minimum quantity requirements	United States v. Thailand	2	7	0
Packaging	United States v. Thailand	0	9	0
Payment terms	United States v. Thailand	0	9	0
Price	United States v. Thailand	1	6	2
Product consistency	United States v. Thailand	0	9	0
Product range	United States v. Thailand	2	7	0
Quality meets industry standards	United States v. Thailand	0	8	1
Quality exceeds industry standards	United States v. Thailand	0	8	1
Reliability of supply	United States v. Thailand	0	6	3
Technical support/service	United States v. Thailand	1	8	0
U.S. transportation costs	United States v. Thailand	3	6	0

Table continued.

Table II-12 Continued
CACCS: Count of purchasers' responses comparing U.S.-produced and imported product, by factor and country pair

Factor	Country pair	Superior	Comparable	Inferior
Availability	United States v. Nonsubject	1	7	1
Being Halal certified	United States v. Nonsubject	1	7	1
Being Kosher certified	United States v. Nonsubject	1	8	0
Being "Non-GMO Project" certified	United States v. Nonsubject	1	4	4
Being Non-GMO whether or not specifically being "Non-GMO Project" verified	United States v. Nonsubject	1	6	2
Delivery terms	United States v. Nonsubject	1	8	0
Delivery time	United States v. Nonsubject	2	7	0
Discounts offered	United States v. Nonsubject	2	7	0
Minimum quantity requirements	United States v. Nonsubject	1	7	1
Packaging	United States v. Nonsubject	0	9	0
Payment terms	United States v. Nonsubject	0	9	0
Price	United States v. Nonsubject	1	7	1
Product consistency	United States v. Nonsubject	0	9	0
Product range	United States v. Nonsubject	1	8	0
Quality meets industry standards	United States v. Nonsubject	0	9	0
Quality exceeds industry standards	United States v. Nonsubject	0	9	0
Reliability of supply	United States v. Nonsubject	0	8	1
Technical support/service	United States v. Nonsubject	0	8	1
U.S. transportation costs	United States v. Nonsubject	0	9	0

Table continued.

Table II-12 Continued
CACCS: Count of purchasers' responses comparing U.S.-produced and imported product, by factor and country pair

Factor	Country pair	Superior	Comparable	Inferior
Availability	Belgium v. Colombia	0	0	1
Being Halal certified	Belgium v. Colombia	0	1	0
Being Kosher certified	Belgium v. Colombia	0	1	0
Being "Non-GMO Project" certified	Belgium v. Colombia	0	1	0
Being Non-GMO whether or not specifically being "Non-GMO Project" verified	Belgium v. Colombia	0	1	0
Delivery terms	Belgium v. Colombia	0	1	0
Delivery time	Belgium v. Colombia	0	1	0
Discounts offered	Belgium v. Colombia	0	0	1
Minimum quantity requirements	Belgium v. Colombia	0	1	0
Packaging	Belgium v. Colombia	0	1	0
Payment terms	Belgium v. Colombia	0	1	0
Price	Belgium v. Colombia	0	0	1
Product consistency	Belgium v. Colombia	0	1	0
Product range	Belgium v. Colombia	0	0	1
Quality meets industry standards	Belgium v. Colombia	0	1	0
Quality exceeds industry standards	Belgium v. Colombia	0	1	0
Reliability of supply	Belgium v. Colombia	0	1	0
Technical support/service	Belgium v. Colombia	0	1	0
U.S. transportation costs	Belgium v. Colombia	0	1	0

Table continued.

Table II-12 Continued
CACCS: Count of purchasers' responses comparing U.S.-produced and imported product, by factor and country pair

Factor	Country pair	Superior	Comparable	Inferior
Availability	Belgium v. Thailand	0	3	1
Being Halal certified	Belgium v. Thailand	0	4	0
Being Kosher certified	Belgium v. Thailand	0	4	0
Being "Non-GMO Project" certified	Belgium v. Thailand	1	3	0
Being Non-GMO whether or not specifically being "Non-GMO Project" verified	Belgium v. Thailand	1	3	0
Delivery terms	Belgium v. Thailand	0	4	0
Delivery time	Belgium v. Thailand	0	4	0
Discounts offered	Belgium v. Thailand	0	3	1
Minimum quantity requirements	Belgium v. Thailand	0	4	0
Packaging	Belgium v. Thailand	0	4	0
Payment terms	Belgium v. Thailand	0	4	0
Price	Belgium v. Thailand	0	2	2
Product consistency	Belgium v. Thailand	0	4	0
Product range	Belgium v. Thailand	1	2	1
Quality meets industry standards	Belgium v. Thailand	0	4	0
Quality exceeds industry standards	Belgium v. Thailand	0	4	0
Reliability of supply	Belgium v. Thailand	0	3	1
Technical support/service	Belgium v. Thailand	0	4	0
U.S. transportation costs	Belgium v. Thailand	0	4	0

Table continued.

Table II-12 Continued
CACCS: Count of purchasers' responses comparing U.S.-produced and imported product, by factor and country pair

Factor	Country pair	Superior	Comparable	Inferior
Availability	Colombia v. Thailand	0	5	1
Being Halal certified	Colombia v. Thailand	0	6	0
Being Kosher certified	Colombia v. Thailand	0	6	0
Being "Non-GMO Project" certified	Colombia v. Thailand	1	5	0
Being Non-GMO whether or not specifically being "Non-GMO Project" verified	Colombia v. Thailand	1	5	0
Delivery terms	Colombia v. Thailand	0	5	0
Delivery time	Colombia v. Thailand	0	5	0
Discounts offered	Colombia v. Thailand	0	5	0
Minimum quantity requirements	Colombia v. Thailand	0	5	0
Packaging	Colombia v. Thailand	0	6	0
Payment terms	Colombia v. Thailand	0	5	0
Price	Colombia v. Thailand	1	5	0
Product consistency	Colombia v. Thailand	0	6	0
Product range	Colombia v. Thailand	0	6	0
Quality meets industry standards	Colombia v. Thailand	0	6	0
Quality exceeds industry standards	Colombia v. Thailand	0	6	0
Reliability of supply	Colombia v. Thailand	1	5	0
Technical support/service	Colombia v. Thailand	0	6	0
U.S. transportation costs	Colombia v. Thailand	0	6	0

Table continued.

Table II-12 Continued
CACCS: Count of purchasers' responses comparing U.S.-produced and imported product, by factor and country pair

Factor	Country pair	Superior	Comparable	Inferior
Availability	Belgium v. Nonsubject	1	1	1
Being Halal certified	Belgium v. Nonsubject	0	3	0
Being Kosher certified	Belgium v. Nonsubject	0	3	0
Being "Non-GMO Project" certified	Belgium v. Nonsubject	0	3	0
Being Non-GMO whether or not specifically being "Non-GMO Project" verified	Belgium v. Nonsubject	1	2	0
Delivery terms	Belgium v. Nonsubject	0	3	0
Delivery time	Belgium v. Nonsubject	0	3	0
Discounts offered	Belgium v. Nonsubject	0	3	0
Minimum quantity requirements	Belgium v. Nonsubject	0	3	0
Packaging	Belgium v. Nonsubject	0	3	0
Payment terms	Belgium v. Nonsubject	0	3	0
Price	Belgium v. Nonsubject	0	1	2
Product consistency	Belgium v. Nonsubject	0	3	0
Product range	Belgium v. Nonsubject	1	1	1
Quality meets industry standards	Belgium v. Nonsubject	0	3	0
Quality exceeds industry standards	Belgium v. Nonsubject	0	3	0
Reliability of supply	Belgium v. Nonsubject	0	3	0
Technical support/service	Belgium v. Nonsubject	0	3	0
U.S. transportation costs	Belgium v. Nonsubject	0	3	0

Table continued.

Table II-12 Continued
CACCS: Count of purchasers' responses comparing U.S.-produced and imported product, by factor and country pair

Factor	Country pair	Superior	Comparable	Inferior
Availability	Colombia v. Nonsubject	0	5	0
Being Halal certified	Colombia v. Nonsubject	0	5	0
Being Kosher certified	Colombia v. Nonsubject	0	5	0
Being "Non-GMO Project" certified	Colombia v. Nonsubject	0	5	0
Being Non-GMO whether or not specifically being "Non-GMO Project" verified	Colombia v. Nonsubject	0	5	0
Delivery terms	Colombia v. Nonsubject	0	4	0
Delivery time	Colombia v. Nonsubject	0	4	0
Discounts offered	Colombia v. Nonsubject	0	4	0
Minimum quantity requirements	Colombia v. Nonsubject	0	5	0
Packaging	Colombia v. Nonsubject	0	5	0
Payment terms	Colombia v. Nonsubject	0	4	0
Price	Colombia v. Nonsubject	0	5	0
Product consistency	Colombia v. Nonsubject	0	5	0
Product range	Colombia v. Nonsubject	0	5	0
Quality meets industry standards	Colombia v. Nonsubject	0	5	0
Quality exceeds industry standards	Colombia v. Nonsubject	0	5	0
Reliability of supply	Colombia v. Nonsubject	0	5	0
Technical support/service	Colombia v. Nonsubject	0	4	0
U.S. transportation costs	Colombia v. Nonsubject	0	4	0

Table continued.

Table II-12 Continued
CACCS: Count of purchasers' responses comparing U.S.-produced and imported product, by factor and country pair

Factor	Country pair	Superior	Comparable	Inferior
Availability	Thailand v. Nonsubject	1	7	0
Being Halal certified	Thailand v. Nonsubject	1	7	0
Being Kosher certified	Thailand v. Nonsubject	1	7	0
Being "Non-GMO Project" certified	Thailand v. Nonsubject	1	7	0
Being Non-GMO whether or not specifically being "Non-GMO Project" verified	Thailand v. Nonsubject	1	7	0
Delivery terms	Thailand v. Nonsubject	0	8	0
Delivery time	Thailand v. Nonsubject	1	5	2
Discounts offered	Thailand v. Nonsubject	0	8	0
Minimum quantity requirements	Thailand v. Nonsubject	0	8	0
Packaging	Thailand v. Nonsubject	0	8	0
Payment terms	Thailand v. Nonsubject	1	7	0
Price	Thailand v. Nonsubject	0	8	0
Product consistency	Thailand v. Nonsubject	0	7	0
Product range	Thailand v. Nonsubject	0	8	0
Quality meets industry standards	Thailand v. Nonsubject	0	7	0
Quality exceeds industry standards	Thailand v. Nonsubject	0	6	1
Reliability of supply	Thailand v. Nonsubject	0	7	1
Technical support/service	Thailand v. Nonsubject	0	7	0
U.S. transportation costs	Thailand v. Nonsubject	0	7	0

Source: Compiled from data submitted in response to Commission questionnaires.

Note: With respect to cost/price factors, a rating of superior means that cost/price for the first source in the country pair is generally lower. For example, if a firm reported "U.S. superior," it meant that the U.S. product was generally priced lower than the imported product.

Comparison of U.S.-produced and imported CACCS

In order to determine whether U.S.-produced CACCS can generally be used in the same applications as imports from Belgium, Colombia, and Thailand. U.S. producers, importers, and purchasers were asked whether the products can always, frequently, sometimes, or never be used interchangeably. As shown in tables II-13 to II-15, U.S. producers described CACCS from all sources as always interchangeable. Majorities or pluralities of importers and purchasers described CACCS from different sources as always or frequently interchangeable, but some such firms also described interchangeability as only sometimes interchangeable for some comparisons.

Table II-13
CACCS: Count of U.S. producers reporting the interchangeability between product produced in the United States and in other countries, by country pair

Country pair	Always	Frequently	Sometimes	Never
U.S. vs. Belgium	3	0	0	0
U.S. vs. Colombia	3	0	0	0
U.S. vs. Thailand	3	0	0	0
U.S. vs. other	3	0	0	0
Belgium vs. Colombia	3	0	0	0
Belgium vs. Thailand	3	0	0	0
Colombia vs. Thailand	3	0	0	0
Belgium vs. Other	3	0	0	0
Colombia vs. Other	3	0	0	0
Thailand vs. Other	3	0	0	0

Source: Compiled from data submitted in response to Commission questionnaires.

Table II-14
CACCS: Count of importers reporting the interchangeability between product produced in the United States and in other countries, by country pair

Country pair	Always	Frequently	Sometimes	Never
U.S. vs. Belgium	2	1	1	0
U.S. vs. Colombia	2	1	2	0
U.S. vs. Thailand	3	1	3	0
U.S. vs. other	2	1	1	0
Belgium vs. Colombia	2	1	1	0
Belgium vs. Thailand	2	2	0	0
Colombia vs. Thailand	2	2	1	0
Belgium vs. Other	1	2	0	0
Colombia vs. Other	1	2	0	0
Thailand vs. Other	1	3	0	0

Source: Compiled from data submitted in response to Commission questionnaires.

Table II-15
CACCS: Count of purchasers reporting the interchangeability between product produced in the United States and in other countries, by country pair

Country pair	Always	Frequently	Sometimes	Never
U.S. vs. Belgium	4	1	0	0
U.S. vs. Colombia	2	1	3	0
U.S. vs. Thailand	6	2	2	0
U.S. vs. other	2	1	0	0
Belgium vs. Colombia	3	1	1	0
Belgium vs. Thailand	3	1	2	0
Colombia vs. Thailand	5	1	3	0
Belgium vs. Other	3	1	1	0
Colombia vs. Other	3	1	1	0
Thailand vs. Other	5	2	1	0

Source: Compiled from data submitted in response to Commission questionnaires.

In additional comments, importer *** stated that certified CACCS products (e.g., non-GMO, kosher, halal, etc.) are not interchangeable with non-certified products. Importer *** stated that product from Thailand is better suited for some applications than product from the United States and nonsubject countries. Importer *** stated that there is no non-GMO CACCS produced in the United States. Importer *** stated that because product from China and Thailand has a longer supply chain, it is more likely product from those countries may cake or compact. It added that suppliers of product from those countries are farther from U.S. customers in terms of service than U.S. producers are.

Among purchasers, *** described Colombian product as non-GMO, limiting interchangeability with U.S. and Thai product. Similarly, purchaser *** stated that Colombian product is non-GMO, while U.S. product that is non-GMO is not available in sufficient quantity. ***. Purchaser *** indicated that ***, and so a lack of qualification limits interchangeability. Purchaser *** described utilizing Belgian material in high-quality applications.

In addition, U.S. producers, importers, and purchasers were asked to assess how often differences other than price were significant in sales of CACCS from the United States, subject, or nonsubject countries. As seen in tables II-16 to II-18, U.S. producers described non-price differences as sometimes or never significant, while a majority of importers described such differences as frequently or sometimes significant. U.S. purchasers' responses varied.

Table II-16
CACCS: Count of U.S. producers reporting the significance of differences other than price between product produced in the United States and in other countries, by country pair

Country pair	Always	Frequently	Sometimes	Never
U.S. vs. Belgium	0	0	1	2
U.S. vs. Colombia	0	0	1	2
U.S. vs. Thailand	0	0	1	2
U.S. vs. other	0	0	1	2
Belgium vs. Colombia	0	0	1	2
Belgium vs. Thailand	0	0	1	2
Colombia vs. Thailand	0	0	1	2
Belgium vs. Other	0	0	1	2
Colombia vs. Other	0	0	1	2
Thailand vs. Other	0	0	1	2

Source: Compiled from data submitted in response to Commission questionnaires.

Table II-17
CACCS: Count of importers reporting the significance of differences between product produced in the United States and in other countries, by country pair

Country pair	Always	Frequently	Sometimes	Never
U.S. vs. Belgium	0	2	2	0
U.S. vs. Colombia	1	2	2	0
U.S. vs. Thailand	1	2	3	1
U.S. vs. other	0	2	2	0
Belgium vs. Colombia	0	2	2	0
Belgium vs. Thailand	0	2	2	0
Colombia vs. Thailand	0	2	2	1
Belgium vs. Other	0	1	2	0
Colombia vs. Other	0	1	2	0
Thailand vs. Other	0	1	2	1

Source: Compiled from data submitted in response to Commission questionnaires.

In additional comments, importer *** stated that certifications such as non-GMO, kosher, halal, etc. are frequently a relevant factor in sales of CACCS. Importer *** cited quality (non-clumping, consistency) and year-round availability as important non-price factors. Purchaser *** stated that it did not have access to domestic supply and instead purchased "expensive" Belgian product. Purchaser *** stated that U.S. product is GMO while Colombian product is non-GMO. Similarly, purchaser *** described important non-price factors as including whether or not CACCS is GMO or not, as well as its own specifications and its suppliers' ability to ***.

Purchaser *** indicated that relevant non-price factors include ***. It stated that, ***, these factors are comparable. It continued that ***

***. It added that *** CACCS are comparable in these factors.

Table II-18
CACCS: Count of purchasers reporting the significance of differences between product produced in the United States and in other countries, by country pair

Country pair	Always	Frequently	Sometimes	Never
U.S. vs. Belgium	2	0	1	1
U.S. vs. Colombia	1	1	2	2
U.S. vs. Thailand	2	1	5	2
U.S. vs. Other	0	0	1	1
Belgium vs. Colombia	1	0	2	1
Belgium vs. Thailand	1	1	2	1
Colombia vs. Thailand	1	1	3	2
Belgium vs. Other	1	0	1	1
Colombia vs. Other	1	1	1	1
Thailand vs. Other	1	1	2	2

Source: Compiled from data submitted in response to Commission questionnaires.

Elasticity estimates

This section discusses elasticity estimates; parties were encouraged to comment on these estimates as attachments to their prehearing or posthearing briefs. None did so.

U.S. supply elasticity

The domestic supply elasticity for CACCS measures the sensitivity of the quantity supplied by U.S. producers to changes in the U.S. market price of CACCS. The elasticity of domestic supply depends on several factors including the level of excess capacity, the ease with which producers can alter capacity, producers' ability to shift to production of other products, the existence of inventories, and the availability of alternate markets for U.S.-produced CACCS. Analysis of these factors above indicates that the U.S. industry has the ability to somewhat increase or decrease shipments to the U.S. market; an estimate in the range of 3 to 6 is suggested.

U.S. demand elasticity

The U.S. demand elasticity for CACCS measures the sensitivity of the overall quantity demanded to a change in the U.S. market price of CACCS. This estimate depends on factors discussed above such as the existence, availability, and commercial viability of substitute products, as well as the component share of the CACCS in the production of any downstream

products. Based on the available information, the aggregate demand for CACCS is likely to be moderately to very inelastic; a range of -0.2 to -0.7 is suggested.

Substitution elasticity

The elasticity of substitution depends upon the extent of product differentiation between the domestic and imported products.[23] Product differentiation, in turn, depends upon such factors as quality (e.g., chemistry, appearance, etc.) and conditions of sale (e.g., availability, sales terms/discounts/promotions, etc.). Based on available information, the elasticity of substitution between U.S.-produced CACCS and imported CACCS is likely to be in the range of 4 to 8. As noted above, purchasers generally described U.S.-produced and imported CACCS as comparable in most factors, but cited some quality differences, non-GMO certifications, and some possible U.S. supply limitations as limiting substitutability.

[23] The substitution elasticity measures the responsiveness of the relative U.S. consumption levels of the subject imports and the domestic like products to changes in their relative prices. This reflects how easily purchasers switch from the U.S. product to the subject products (or vice versa) when prices change.

Part III: Condition of the U.S. industry

Overview

The information in this section of the report was compiled from responses to the Commission's questionnaires. Three firms, which accounted for the 100 percent of U.S. production of CACCS during 2023, supplied information on their operations in these reviews and other proceedings on CACCS.

Table III-1 presents events in the U.S. industry since January 1, 2018.

Table III-1
CACCS: Developments in the U.S. industry since 2018

Item	Firm	Event
Acquisition	Primient	Acquired from Tate & Lyle in April 2022.

Source: Mitchell, "Tate & Lyle's 'Primient' Launches as a Leading Producer," NowDecatur.com, April 5, 2022.

Changes experienced by the industry

Producers in the United States were asked to report any change in the character of their operations or organization relating to the production of CACCS since 2018. *** producers indicated in their questionnaires that they had experienced such changes. One U.S. producer reported production curtailments, two reported weather related or force majeure events, and two reported other events such as investments in new operating process and the establishment of a new entity. Table III-2 presents the changes identified by these producers.

Table III-2
CACCS: Reported changes in operations since January 1, 2018

Type of change	Firm name and narrative on changes in operations
Production curtailments	***
Weather related or force majeure events	***
Weather related or force majeure events	***
Other	***
Other	***

Source: Compiled from data submitted in response to Commission questionnaires.

Anticipated changes in operations

*** U.S. domestic producer reported anticipated changes in the character of their operations relating to the production of CACCS.

U.S. production, capacity, and capacity utilization

The Commission asked U.S. firms to report their installed overall, practical overall, and practical CACCS capacities. Installed or "theorical" overall capacity measures the level of production firms could have attained based solely on existing capital investments and not considering other constraints such as availability of material inputs, labor force, and normal downtime. The two practical capacity measures take into consideration both existing capital investment as well as non-capital investment constraints. Practical overall capacity measures the firm's capacity to produce CACCS as well as other products using the same machinery, whereas CACCS capacity measures only the practical capacity of firms to produce CACCS.

Table III-3 presents U.S. producers' installed and practical capacity and production on the same equipment.

From 2018 to 2023 ,U.S. producers' combined installed overall, practical overall, and practical CACCS capacity declined by 3.6 percent, 3.3 percent, and 3.3 percent, respectively.[1] U.S. producers' reported installed, practical overall, and practical CACCS production are the same since there are no other products being produced on the same machinery. Reported production decreased by 19.4 percent between 2018 and 2023.[2]

Table III-3
CACCS: U.S. producers' installed and practical capacity, production, and utilization on the same equipment as in-scope production, by measure and period

Capacity and production in 1,000 pounds dry weight; utilization in percent

Item	Measure	2018	2019	2020
Installed overall	Capacity	552,323	552,323	532,323
Installed overall	Production	463,966	477,667	455,848
Installed overall	Utilization	84.0	86.5	85.6
Practical overall	Capacity	504,503	504,503	494,603
Practical overall	Production	463,966	477,667	455,848
Practical overall	Utilization	92.0	94.7	92.2
CACCS	Capacity	504,503	504,503	494,603
CACCS	Production	463,966	477,667	455,848
CACCS	Utilization	92.0	94.7	92.2

Table continued.

Table III-3 Continued
CACCS: U.S. producers' installed and practical capacity, production, and utilization on the same equipment as in-scope production, by measure and period

Capacity and production in 1,000 pounds dry weight; utilization in percent

Item	Measure	2021	2022	2023
Installed overall	Capacity	532,323	532,323	532,323
Installed overall	Production	455,683	436,952	374,150
Installed overall	Utilization	85.6	82.1	70.3
Practical overall	Capacity	494,404	492,991	487,978
Practical overall	Production	455,683	436,952	374,150
Practical overall	Utilization	92.2	88.6	76.7
CACCS	Capacity	494,404	492,991	487,978
CACCS	Production	455,683	436,952	374,150
CACCS	Utilization	92.2	88.6	76.7

Source: Compiled from data submitted in response to Commission questionnaires.

[1] ***'s decline in 2020 installed capacity accounted for most of the aggregate downturn in installed capacity.

[2] *** responding U.S. producers reported decreases in production during 2018-23 ranging from 15.8 to 21.3 percent.

Table III-4 presents U.S. producers' reported narratives regarding practical capacity constraints. All responding U.S. producers reported constraints in the manufacturing process. One firm reported constraints regarding supply of material inputs and logistical challenges. One firm reported energy curtailments and other constraints such as machinery maintenance, while another firm reported maintenance activities and capital projects.

Table III-4
CACCS: U.S. producers' reported capacity constraints since January 1, 2018

Type of change	Firm name and narrative on constraints to practical overall capacity
Supply of material inputs	***
Fuel or energy	***
Logistics/transportation	***
Other constraints	***
Other constraints	***

Source: Compiled from data submitted in response to Commission questionnaires.

Table III-5 and figure III-1 present U.S. producers' production, capacity, and capacity utilization.[3] U.S. producers' aggregate practical CACCS capacity was 3.3 percent lower in 2023 than in 2018, while production declined 19.4 percent during the same period. The U.S. producers' practical capacity utilization rate for CACCS decreased by 15.3 percentage points from 92.0 percent in 2018 to 76.7 percent in 2023.[4] [5]

Table III-5
CACCS: U.S. producers' output, by firm and period

Practical capacity

Capacity in 1,000 pounds dry weight

Firm	2018	2019	2020	2021	2022	2023
ADM	***	***	***	***	***	***
Cargill	***	***	***	***	***	***
Primient	***	***	***	***	***	***
All firms	504,503	504,503	494,603	494,404	492,991	487,978

Table continued.

Table III-5 Continued
CACCS: U.S. producers' output, by firm and period

Production

Production in 1,000 pounds dry weight

Firm	2018	2019	2020	2021	2022	2023
ADM	***	***	***	***	***	***
Cargill	***	***	***	***	***	***
Primient	***	***	***	***	***	***
All firms	463,966	477,667	455,848	455,683	436,952	374,150

Table continued.

[3] ***. U.S. producers' questionnaires, section II-3d.

[4] While all responding U.S. producers reported declining capacity utilization rates, *** reported the highest decrease in capacity utilization rate of 18.4 percentage points between 2018 and 2023.

[5] ***.

Table III-5 Continued
CACCS: U.S. producers' output, by firm and period

Capacity utilization

Capacity utilization ratios in percent

Firm	2018	2019	2020	2021	2022	2023
ADM	***	***	***	***	***	***
Cargill	***	***	***	***	***	***
Primient	***	***	***	***	***	***
All firms	92.0	94.7	92.2	92.2	88.6	76.7

Table continued.

Note: Capacity utilization ratio represents the ratio of the U.S. producer's production to its production capacity

Table III-5 Continued
CACCS: U.S. producers' output, by firm and period

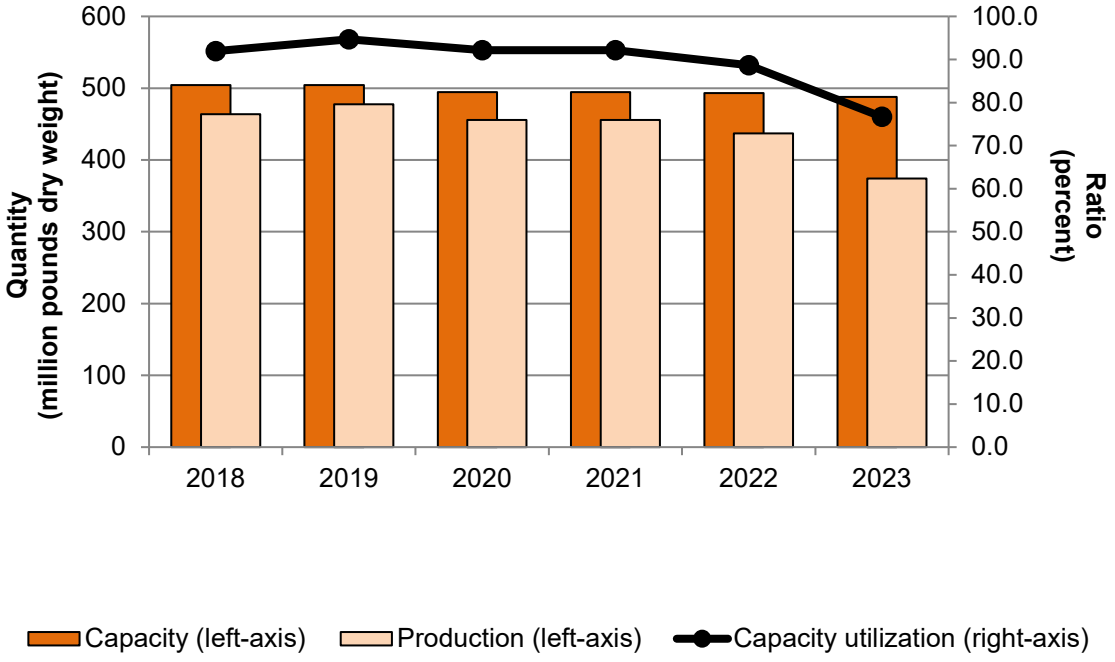
Share of production

Share of production in percent

Firm	2018	2019	2020	2021	2022	2023
ADM	***	***	***	***	***	***
Cargill	***	***	***	***	***	***
Primient	***	***	***	***	***	***
All firms	100.0	100.0	100.0	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

Figure III-1
CACCS: U.S. producers' output, by period



Source: Compiled from data submitted in response to Commission questionnaires.

Alternative products

***. This suggests *** ability to shift production from subject CACCS.

U.S. producers' U.S. shipments and exports

Tables III-6 presents U.S. producers' U.S. shipments, export shipments, and total shipments by destination and period. The U.S. producers' aggregate U.S. shipments consistently accounted for more than *** percent of combined total shipments by quantity. U.S. shipment quantities increased moderately during 2018-20 but starting in 2021, declined yearly, ending 24.2 percent below U.S. shipments reported in 2018. The average unit values of U.S. shipments increased overall from a low of $0.67 per pound dry weight in 2018 to $1.31 per pound dry weight in 2023.[6] U.S. producers' export shipments, which were primarily destined for Australia, Canada, Japan, Mexico, and Switzerland, accounted for *** percent or less of total shipments by quantity. Export shipment quantities increased irregularly by *** percent from 2018 to 2023.

[6] The largest increase in unit values occurred in 2022 when average unit values went from $0.65 to $1.21 per pound dry weight, a surge of 86.2 percent. U.S. shipments by value also followed this trend increasing by 72.5 percent between 2021 and 2022.

According to domestic producers, the increase in AUVs is the result of a change in ***. Email from ***, April 18, 2024.

Table III-6
CACCS: U.S. producers' total shipments, by destination and period

Quantity in 1,000 pounds dry weight; value in 1,000 dollars; unit value in dollars per pound dry weight; shares in percent

Item	Measure	2018	2019	2020
U.S. shipments	Quantity	445,614	457,986	461,399
Export shipments	Quantity	***	***	***
Total shipments	Quantity	***	***	***
U.S. shipments	Value	297,431	297,855	298,991
Export shipments	Value	***	***	***
Total shipments	Value	***	***	***
U.S. shipments	Unit value	0.67	0.65	0.65
Export shipments	Unit value	***	***	***
Total shipments	Unit value	***	***	***
U.S. shipments	Share of quantity	***	***	***
Export shipments	Share of quantity	***	***	***
Total shipments	Share of quantity	100.0	100.0	100.0
U.S. shipments	Share of value	***	***	***
Export shipments	Share of value	***	***	***
Total shipments	Share of value	100.0	100.0	100.0

Table continued.

Table III-6 Continued
CACCS: U.S. producers' total shipments, by destination and period

Quantity in 1,000 pounds dry weight; value in 1,000 dollars; unit value in dollars per pound dry weight; shares in percent

Item	Measure	2021	2022	2023
U.S. shipments	Quantity	448,359	417,647	337,823
Export shipments	Quantity	***	***	***
Total shipments	Quantity	***	***	***
U.S. shipments	Value	292,565	504,554	441,271
Export shipments	Value	***	***	***
Total shipments	Value	***	***	***
U.S. shipments	Unit value	0.65	1.21	1.31
Export shipments	Unit value	***	***	***
Total shipments	Unit value	***	***	***
U.S. shipments	Share of quantity	***	***	***
Export shipments	Share of quantity	***	***	***
Total shipments	Share of quantity	100.0	100.0	100.0
U.S. shipments	Share of value	***	***	***
Export shipments	Share of value	***	***	***
Total shipments	Share of value	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

Table III-7 presents U.S. producers' commercial U.S. shipments, internal consumption, and U.S. shipments by period. Commercial U.S. shipments accounted for the vast majority of U.S. shipments during 2018-23, by quantity and value. Although commercial U.S. shipment quantities experienced an increase during 2018-20, they declined overall by *** percent during 2018-23. The values of commercial U.S. shipments slightly increased between 2018 and 2020, declined in 2021, then increased by *** percent from 2021 to 2022, ending with an overall increase of *** percent during 2018-23. The average unit values of commercial U.S. shipments ranged from a low of $*** per pound dry weight in 2019 to a high of $*** per pound dry weight in 2023. U.S. producers' internal consumption of CACCS increased overall by both quantity and value during 2018-23.[7] Overall, U.S. shipment quantities and values experienced similar trends to those of commercial U.S. shipments.

[7] ***. According to the domestic interested parties' counsel, ***. Email from ***, April 18, 2024.

Table III-7
CACCS: U.S. producers' U.S. shipments, by type and period

Quantity in 1,000 pounds dry weight; value in 1,000 dollars; unit value in dollars per pound dry weight; shares in percent

Item	Measure	2018	2019	2020
Commercial U.S. shipments	Quantity	***	***	***
Internal consumption	Quantity	***	***	***
U.S. shipments	Quantity	445,614	457,986	461,399
Commercial U.S. shipments	Value	***	***	***
Internal consumption	Value	***	***	***
U.S. shipments	Value	297,431	297,855	298,991
Commercial U.S. shipments	Unit value	***	***	***
Internal consumption	Unit value	***	***	***
U.S. shipments	Unit value	0.67	0.65	0.65
Commercial U.S. shipments	Share of quantity	***	***	***
Internal consumption	Share of quantity	***	***	***
U.S. shipments	Share of quantity	100.0	100.0	100.0
Commercial U.S. shipments	Share of value	***	***	***
Internal consumption	Share of value	***	***	***
U.S. shipments	Share of value	100.0	100.0	100.0

Table continued.

Table III-7 Continued
CACCS: U.S. producers' U.S. shipments, by type and period

Quantity in 1,000 pounds dry weight; value in 1,000 dollars; unit value in dollars per pound dry weight; shares in percent

Item	Measure	2021	2022	2023
Commercial U.S. shipments	Quantity	***	***	***
Internal consumption	Quantity	***	***	***
U.S. shipments	Quantity	448,359	417,647	337,823
Commercial U.S. shipments	Value	***	***	***
Internal consumption	Value	***	***	***
U.S. shipments	Value	292,565	504,554	441,271
Commercial U.S. shipments	Unit value	***	***	***
Internal consumption	Unit value	***	***	***
U.S. shipments	Unit value	0.65	1.21	1.31
Commercial U.S. shipments	Share of quantity	***	***	***
Internal consumption	Share of quantity	***	***	***
U.S. shipments	Share of quantity	100.0	100.0	100.0
Commercial U.S. shipments	Share of value	***	***	***
Internal consumption	Share of value	***	***	***
U.S. shipments	Share of value	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

U.S. producers' inventories

Table III-8 presents U.S. producers' end-of-period inventories and the ratio of these inventories to U.S. producers' production, U.S. shipments, and total shipments. *** held the largest quantity of ending inventories throughout the period, accounting for between *** and *** percent of the total during each period. U.S. producers' inventories declined irregularly throughout the period, ending 4.4 percent lower in 2023 than in 2018, and at its lowest in 2021. The ratio of U.S. producers' inventories to U.S. production ranged between 8.7 and 16.0 percent, while the ratio of U.S. producers' inventories to U.S. shipments ranged between 8.8 and 17.7 percent. In 2023, ending inventories peaked both in volume, *** pounds dry weight and in ratio to total shipments, *** percent.

Table III-8
CACCS: U.S. producers' inventories and their ratio to select items, by period

Quantity in 1,000 pounds dry weight; ratio are inventories to production in percent; shipments in percent

Item	Measure	2018	2019	2020
End-of-period inventory	Quantity	62,653	66,837	46,482
Inventory to U.S. production	Ratio	13.5	14.0	10.2
Inventory to U.S. shipments	Ratio	14.1	14.6	10.1
Inventory to total shipments	Ratio	***	***	***

Table continued.

Table III-8 Continued
CACCS: U.S. producers' inventories and their ratio to select items, by period

Quantity in 1,000 pounds dry weight; ratio are inventories to production in percent; shipments in percent

Item	Measure	2021	2022	2023
End-of-period inventory	Quantity	39,671	40,586	59,923
Inventory to U.S. production	Ratio	8.7	9.3	16.0
Inventory to U.S. shipments	Ratio	8.8	9.7	17.7
Inventory to total shipments	Ratio	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

U.S. producers' imports from subject sources

No responding U.S. producer reported imports of CACCS from subject sources during 2018-23.

U.S. producers' purchases of imports from subject sources

No responding U.S. producer reported purchases of CACCS imported from subject sources during 2018-23.[8]

U.S. employment, wages, and productivity

Table III-9 shows U.S. producers' employment-related data. All employment indicators increased between 2018 and 2023, except for productivity (in pounds dry weight per hour). From 2018 to 2023, the average number of PRWs increased by 50, total hours worked and hours worked by PRWs increased irregularly, and wages paid steadily increased by 29.7 percent. Productivity declined by 34.4 percent, from 878.7 pounds dry weight per hour in 2018 to 576.5 pounds dry weight per hour in 2023. Unit labor costs were higher in 2023, $0.08 dollars per pound dry weight, compared to $0.05 dollars per pound dry weight in 2018.

Table III-9
CACCS: U.S. producers' employment related information, by period

Item	2018	2019	2020	2021	2022	2023
Production and related workers (PRWs) (number)	280	289	298	316	319	330
Total hours worked (1,000 hours)	528	592	559	617	587	649
Hours worked per PRW (hours)	1,886	2,048	1,876	1,953	1,840	1,967
Wages paid ($1,000)	22,195	21,425	21,952	23,456	26,161	28,797
Hourly wages (dollars per hour)	$42.04	$36.19	$39.27	$38.02	$44.57	$44.37
Productivity (pounds dry weight per hour)	878.7	806.9	815.5	738.5	744.4	576.5
Unit labor costs (dollars per pound dry weight)	$0.05	$0.04	$0.05	$0.05	$0.06	$0.08

Source: Compiled from data submitted in response to Commission questionnaires.

[8] One U.S. producer (***) reported purchases of CACCS imported from nonsubject sources. The firm stated that in 2023 it ***. U.S. producer questionnaire response, section II-10.

Financial experience of U.S. producers

Background[9]

U.S. producers ADM, Cargill, and Primient provided financial results on their CACCS operations.[10] All firms reported financial data on a GAAP basis. ***'s fiscal year ends on December 31, while ***. However, all firms provided financial results for their CACCS operations on a calendar-year basis. CACCS revenue mainly reflects commercial sales, but a small amount of internal consumption was also reported by ***.[11]

Figure III-2 presents each responding firm's share of the total reported net sales quantity in 2023.

[9] The following abbreviations are used in the tables and/or text of this section: generally accepted accounting principles ("GAAP"), fiscal year ("FY"), net sales ("NS"), cost of goods sold ("COGS"), selling, general, and administrative expenses ("SG&A expenses"), average unit values ("AUVs"), research and development ("R&D"), and return on assets ("ROA").

[10] The U.S. producers in the final phase of these investigations were ADM, Cargill, and Tate & Lyle. Primient was established when Tate & Lyle PLC sold a controlling stake in its Primary Products business in North America and Latin America to KPS Capital Partners, LP. The new privately held company is majority-owned and controlled by KPS, while Tate & Lyle retains a minority stake. Primient website, https://www.primient.com/news/article/2022/04/primient-launches-as-a-leading-producer-of-food-and-industrial-products-made-from-plant-based-renewable-sources#:~:text=Over%20the%20past%20several%20months,both%20food%20and%20industrial%20markets, retrieved April 11, 2024.

[11] Internal consumption of CACCS accounted for *** percent of the total net sales quantity between 2018 and 2023.

Figure III-2
CACCS: U.S. producers' share of net sales quantity in 2023, by firm

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

Operations on CACCS

Table III-10 presents aggregated data on U.S. producers' operations in relation to CACCS, while table III-11 presents changes in corresponding AUVs. Table III-12 presents selected company-specific financial data.

Table III-10
CACCS: U.S. producers' results of operations, by item and period

Quantity in 1,000 pounds dry weight; value in 1,000 dollars; ratios in percent

Item	Measure	2018	2019	2020	2021	2022	2023
Commercial sales	Quantity	***	***	***	***	***	***
Internal consumption	Quantity	***	***	***	***	***	***
Total net sales	Quantity	461,486	473,483	476,202	462,496	436,037	354,813
Commercial sales	Value	***	***	***	***	***	***
Internal consumption	Value	***	***	***	***	***	***
Total net sales	Value	309,937	309,770	310,129	304,165	535,375	466,368
COGS: Raw materials	Value	60,719	64,086	65,851	77,551	88,906	91,917
COGS: Direct labor	Value	21,684	20,442	27,686	28,899	29,461	28,445
COGS: Other factory	Value	167,299	174,735	166,445	175,319	235,261	254,455
COGS: Total	Value	249,702	259,263	259,982	281,769	353,628	374,817
Gross profit or (loss)	Value	60,235	50,507	50,147	22,396	181,747	91,551
SG&A expenses	Value	***	***	***	***	***	***
Operating income or (loss)	Value	***	***	***	***	***	***
Interest expense	Value	***	***	***	***	***	***
All other expenses	Value	***	***	***	***	***	***
All other income	Value	***	***	***	***	***	***
Net income or (loss)	Value	***	***	***	***	***	***
Depreciation/amortization	Value	9,906	8,829	11,714	14,895	15,864	22,564
Cash flow	Value	***	***	***	***	***	***
COGS: Raw materials	Ratio to NS	19.6	20.7	21.2	25.5	16.6	19.7
COGS: Direct labor	Ratio to NS	7.0	6.6	8.9	9.5	5.5	6.1
COGS: Other factory	Ratio to NS	54.0	56.4	53.7	57.6	43.9	54.6
COGS: Total	Ratio to NS	80.6	83.7	83.8	92.6	66.1	80.4
Gross profit	Ratio to NS	19.4	16.3	16.2	7.4	33.9	19.6
SG&A expense	Ratio to NS	***	***	***	***	***	***
Operating income or (loss)	Ratio to NS	***	***	***	***	***	***
Net income or (loss)	Ratio to NS	***	***	***	***	***	***

Table continued.

Table III-10 Continued
CACCS: U.S. producers' results of operations, by item and period

Shares in percent; unit values in dollars per pound dry weight; count in number of firms reporting

Item	Measure	2018	2019	2020	2021	2022	2023
COGS: Raw materials	Share of COGS	24.3	24.7	25.3	27.5	25.1	24.5
COGS: Direct labor	Share of COGS	8.7	7.9	10.6	10.3	8.3	7.6
COGS: Other factory	Share of COGS	67.0	67.4	64.0	62.2	66.5	67.9
COGS: Total	Share of COGS	100.0	100.0	100.0	100.0	100.0	100.0
Commercial sales	Unit value	***	***	***	***	***	***
Internal consumption	Unit value	***	***	***	***	***	***
Total net sales	Unit value	0.67	0.65	0.65	0.66	1.23	1.31
COGS: Raw materials	Unit value	0.13	0.14	0.14	0.17	0.20	0.26
COGS: Direct labor	Unit value	0.05	0.04	0.06	0.06	0.07	0.08
COGS: Other factory	Unit value	0.36	0.37	0.35	0.38	0.54	0.72
COGS: Total	Unit value	0.54	0.55	0.55	0.61	0.81	1.06
Gross profit or (loss)	Unit value	0.13	0.11	0.11	0.05	0.42	0.26
SG&A expenses	Unit value	***	***	***	***	***	***
Operating income or (loss)	Unit value	***	***	***	***	***	***
Net income or (loss)	Unit value	***	***	***	***	***	***
Operating losses	Count	***	***	***	***	***	***
Net losses	Count	***	***	***	***	***	***
Data	Count	3	3	3	3	3	3

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "---".

Table III-11
CACCS: Changes in AUVs between comparison periods

Changes in percent

Item	2018-23	2018-19	2019-20	2020-21	2021-22	2022-23
Commercial sales	▲***	▼***	▼***	▲***	▲***	▲***
Internal consumption	▲***	▼***	▼***	▲***	▲***	▼***
Total net sales	▲95.7	▼(2.6)	▼(0.5)	▲1.0	▲86.7	▲7.1
COGS: Raw materials	▲96.9	▲2.9	▲2.2	▲21.3	▲21.6	▲27.1
COGS: Direct labor	▲70.6	▼(8.1)	▲34.7	▲7.5	▲8.1	▲18.7
COGS: Other factory	▲97.8	▲1.8	▼(5.3)	▲8.5	▲42.3	▲32.9
COGS: Total	▲95.2	▲1.2	▼(0.3)	▲11.6	▲33.1	▲30.3

Table continued.

Table III-11 Continued
CACCS: Changes in AUVs between comparison periods

Changes in dollars per pound dry weight

Item	2018-23	2018-19	2019-20	2020-21	2021-22	2022-23
Commercial sales	▲***	▼***	▼***	▲***	▲***	▲***
Internal consumption	▲***	▼***	▼***	▲***	▲***	▼***
Total net sales	▲0.64	▼(0.02)	▼(0.00)	▲0.01	▲0.57	▲0.09
COGS: Raw materials	▲0.13	▲0.00	▲0.00	▲0.03	▲0.04	▲0.06
COGS: Direct labor	▲0.03	▼(0.00)	▲0.01	▲0.00	▲0.01	▲0.01
COGS: Other factory	▲0.35	▲0.01	▼(0.02)	▲0.03	▲0.16	▲0.18
COGS: Total	▲0.52	▲0.01	▼(0.00)	▲0.06	▲0.20	▲0.25
Gross profit or (loss)	▲0.13	▼(0.02)	▼(0.00)	▼(0.06)	▲0.37	▼(0.16)
SG&A expense	▼***	▼***	▲***	▼***	▲***	▼***
Operating income or (loss)	▲***	▼***	▼***	▼***	▲***	▼***
Net income or (loss)	▲***	▼***	▼***	▼***	▲***	▼***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Percentages and unit values shown as “0.0” or “0.00” represent values greater than zero, but less than “0.05” or “0.005,” respectively. Zeroes, null values, and undefined calculations are suppressed and shown as “---”. Period changes preceded by a “▲” represent an increase, while period changes preceded by a “▼” represent a decrease.

Table III-12
CACCS: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Net sales quantity

Quantity in 1,000 pounds dry weight

Firm	2018	2019	2020	2021	2022	2023
ADM	***	***	***	***	***	***
Cargill	***	***	***	***	***	***
Primient	***	***	***	***	***	***
All firms	461,486	473,483	476,202	462,496	436,037	354,813

Table continued.

Table III-12 Continued
CACCS: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Net sales value

Value in 1,000 dollars

Firm	2018	2019	2020	2021	2022	2023
ADM	***	***	***	***	***	***
Cargill	***	***	***	***	***	***
Primient	***	***	***	***	***	***
All firms	309,937	309,770	310,129	304,165	535,375	466,368

Table continued.

Table III-12 Continued
CACCS: U.S. producers' sales, costs/expenses, and profitability, by firm and period

COGS

Value in 1,000 dollars

Firm	2018	2019	2020	2021	2022	2023
ADM	***	***	***	***	***	***
Cargill	***	***	***	***	***	***
Primient	***	***	***	***	***	***
All firms	249,702	259,263	259,982	281,769	353,628	374,817

Table continued.

Table III-12 Continued
CACCS: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Gross profit or (loss)

Value in 1,000 dollars

Firm	2018	2019	2020	2021	2022	2023
ADM	***	***	***	***	***	***
Cargill	***	***	***	***	***	***
Primient	***	***	***	***	***	***
All firms	60,235	50,507	50,147	22,396	181,747	91,551

Table continued.

Table III-12 Continued
CACCS: U.S. producers' sales, costs/expenses, and profitability, by firm and period

SG&A expenses

Value in 1,000 dollars

Firm	2018	2019	2020	2021	2022	2023
ADM	***	***	***	***	***	***
Cargill	***	***	***	***	***	***
Primient	***	***	***	***	***	***
All firms	***	***	***	***	***	***

Table continued.

Table III-12 Continued
CACCS: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Operating income or (loss)

Value in 1,000 dollars

Firm	2018	2019	2020	2021	2022	2023
ADM	***	***	***	***	***	***
Cargill	***	***	***	***	***	***
Primient	***	***	***	***	***	***
All firms	***	***	***	***	***	***

Table continued.

Table III-12 Continued
CACCS: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Net income or (loss)

Value in 1,000 dollars

Firm	2018	2019	2020	2021	2022	2023
ADM	***	***	***	***	***	***
Cargill	***	***	***	***	***	***
Primient	***	***	***	***	***	***
All firms	***	***	***	***	***	***

Table continued.

Table III-12 Continued
CACCS: U.S. producers' sales, costs/expenses, and profitability, by firm and period

COGS to net sales ratio

Ratios in percent

Firm	2018	2019	2020	2021	2022	2023
ADM	***	***	***	***	***	***
Cargill	***	***	***	***	***	***
Primient	***	***	***	***	***	***
All firms	80.6	83.7	83.8	92.6	66.1	80.4

Table continued.

Table III-12 Continued
CACCS: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Gross profit or (loss) to net sales ratio

Ratios in percent

Firm	2018	2019	2020	2021	2022	2023
ADM	***	***	***	***	***	***
Cargill	***	***	***	***	***	***
Primient	***	***	***	***	***	***
All firms	19.4	16.3	16.2	7.4	33.9	19.6

Table continued.

Table III-12 Continued
CACCS: U.S. producers' sales, costs/expenses, and profitability, by firm and period

SG&A expenses to net sales ratio

Ratios in percent

Firm	2018	2019	2020	2021	2022	2023
ADM	***	***	***	***	***	***
Cargill	***	***	***	***	***	***
Primient	***	***	***	***	***	***
All firms	***	***	***	***	***	***

Table continued.

Table III-12 Continued
CACCS: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Operating income or (loss) to net sales ratio

Ratios in percent

Firm	2018	2019	2020	2021	2022	2023
ADM	***	***	***	***	***	***
Cargill	***	***	***	***	***	***
Primient	***	***	***	***	***	***
All firms	***	***	***	***	***	***

Table continued.

Table III-12 Continued
CACCS: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Net income or (loss) to net sales ratio

Ratios in percent

Firm	2018	2019	2020	2021	2022	2023
ADM	***	***	***	***	***	***
Cargill	***	***	***	***	***	***
Primient	***	***	***	***	***	***
All firms	***	***	***	***	***	***

Table continued.

Table III-12 Continued
CACCS: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Unit net sales value

Unit values in dollars per pound dry weight

Firm	2018	2019	2020	2021	2022	2023
ADM	***	***	***	***	***	***
Cargill	***	***	***	***	***	***
Primient	***	***	***	***	***	***
All firms	0.67	0.65	0.65	0.66	1.23	1.31

Table continued.

Table III-12 Continued
CACCS: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Unit raw material

Unit values in dollars per pound dry weight

Firm	2018	2019	2020	2021	2022	2023
ADM	***	***	***	***	***	***
Cargill	***	***	***	***	***	***
Primient	***	***	***	***	***	***
All firms	0.13	0.14	0.14	0.17	0.20	0.26

Table continued.

Table III-12 Continued
CACCS: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Unit direct labor

Unit values in dollars per pound dry weight

Firm	2018	2019	2020	2021	2022	2023
ADM	***	***	***	***	***	***
Cargill	***	***	***	***	***	***
Primient	***	***	***	***	***	***
All firms	0.05	0.04	0.06	0.06	0.07	0.08

Table continued.

Table III-12 Continued
CACCS: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Unit other factory costs

Unit values in dollars per pound dry weight

Firm	2018	2019	2020	2021	2022	2023
ADM	***	***	***	***	***	***
Cargill	***	***	***	***	***	***
Primient	***	***	***	***	***	***
All firms	0.36	0.37	0.35	0.38	0.54	0.72

Table continued.

Table III-12 Continued
CACCS: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Unit COGS

Unit values in dollars per pound dry weight

Firm	2018	2019	2020	2021	2022	2023
ADM	***	***	***	***	***	***
Cargill	***	***	***	***	***	***
Primient	***	***	***	***	***	***
All firms	0.54	0.55	0.55	0.61	0.81	1.06

Table continued.

Table III-12 Continued
CACCS: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Unit gross profit or (loss)

Unit values in dollars per pound dry weight

Firm	2018	2019	2020	2021	2022	2023
ADM	***	***	***	***	***	***
Cargill	***	***	***	***	***	***
Primient	***	***	***	***	***	***
All firms	0.13	0.11	0.11	0.05	0.42	0.26

Table continued.

Table III-12 Continued
CACCS: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Unit SG&A expenses

Unit values in dollars per pound dry weight

Firm	2018	2019	2020	2021	2022	2023
ADM	***	***	***	***	***	***
Cargill	***	***	***	***	***	***
Primient	***	***	***	***	***	***
All firms	***	***	***	***	***	***

Table continued.

Table III-12 Continued
CACCS: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Unit operating income or (loss)

Unit values in dollars per pound dry weight

Firm	2018	2019	2020	2021	2022	2023
ADM	***	***	***	***	***	***
Cargill	***	***	***	***	***	***
Primient	***	***	***	***	***	***
All firms	***	***	***	***	***	***

Table continued.

Table III-12 Continued
CACCS: U.S. producers' sales, costs/expenses, and profitability, by firm and period

Unit net income or (loss)

Unit values in dollars per pound dry weight

Firm	2018	2019	2020	2021	2022	2023
ADM	***	***	***	***	***	***
Cargill	***	***	***	***	***	***
Primient	***	***	***	***	***	***
All firms	***	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "---".

Net sales

Aggregate net sales quantity increased from 2018 to 2020 and decreased from 2020 to 2023, for an overall decrease of 23.1 percent between 2018 and 2023. Net sales value fluctuated year-to-year but increased overall, with net sales revenue 50.5 percent higher in 2023 than in 2018. The decrease in the industry's net sales volume coupled with the increase in net sales revenue resulted in the net sales AUV increasing by 95.7 percent overall, from $0.67 per pound dry weight in 2018 to $1.31 per pound dry weight in 2023.[12] [13]

On a company-specific basis, *** reported an overall decrease in net sales volume between 2018 and 2023 and an overall increase in net sales revenue and net sales AUVs during the same period.[14]

[12] As shown in table III-10, the industry's net sales AUVs fluctuated within a relatively narrow range from 2018 to 2021, (between $0.65 and $0.67 per pound dry weight) before increasing to $1.23 per pound dry weight in 2022 and $1.31 per pound dry weight in 2023.

[13] ***. Email from ***.

[14] The magnitude of the firms' increases in net sales AUVs varied. ***.

Cost of goods sold and gross profit or loss

Raw material costs accounted for between 24.3 percent (in 2018) and 27.5 percent (in 2021) of aggregate COGS during the period examined. On a per-pound dry weight basis, raw material costs increased from $0.13 in 2018 to $0.26 in 2023. *** reported an overall increase in their raw material cost AUVs from 2018 to 2023.

Table III-13 presents raw materials, by type. Corn starch substrate accounted for the majority of the raw material costs in 2023. ***.[15] ***.[16]

Table III-13
CACCS: U.S. producers' raw material costs in 2023

Value in 1,000 dollars; share of value in percent

Item	Value	Share of value
Corn starch substrate	***	***
Other substrate(s)	***	***
Other material inputs	***	***
All raw materials	91,917	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

Other factory costs accounted for between 62.2 percent (in 2021) and 67.9 percent (in 2023) of aggregate COGS during the reporting period. Other factory costs fluctuated between 2018 and 2021 but were noticeably higher in 2022 and 2023, increasing overall from $167.3 million in 2018 to $254.5 million in 2023. Similarly, other factory cost AUVs fluctuated in a relatively narrow window between 2018 and 2021 but increased in 2022 and 2023. The increase in other factory costs coupled with the decrease in CACCS net sales volumes, resulted in other factory cost AUVs doubling over the period examined, from $0.36 per pound dry weight in 2018 to $0.72 per pound dry weight in 2023. Conversely, other factory costs as a ratio to net sales values did not reflect the same noticeable increases in 2022 and 2023 because of the increase in CACCS net sales values. The other factory cost ratio fluctuated throughout the

[15] ***'s U.S. producer questionnaire response, section III-9c.
[16] ***'s U.S. producer questionnaire responses, section III-9c. ***. Email from ***.

period examined but increased overall by 0.6 percentage points, from 54.0 percent in 2018 to 54.6 percent in 2023.

*** reported increases in their other factory costs between 2018 and 2023. *** had the largest company-specific increase in other factory costs during this time. ***.[17] *** had the second and third largest company-specific increases in other factory costs, respectively, during the period examined.[18] [19]

Direct labor accounted for between 7.6 percent (in 2023) and 10.6 percent (in 2020) of total COGS during the period examined. Table III-10 shows that direct labor increased irregularly during the period examined, from $21.7 million in 2018 to $28.4 million in 2023. On a per-pound dry weight basis, direct labor increased overall from $0.05 in 2018 to $0.08 in 2023. On a company-specific basis the direct labor directional trends were similar, with ***.

The industry's total COGS increased between 2018 and 2023, with the most pronounced increases occurring in 2022 and 2023. The industry's COGS on a per-pound dry weight basis increased from $0.54 in 2018 to $0.61 in 2021, before increasing to $0.81 in 2022 and $1.06 in 2023, for an overall increase of $0.52. Table III-12 shows that *** of the U.S. producers reported increases in their COGS AUVs from 2018 to 2023 but like with the companies' ***

[17] The company reported ***. ***'s U.S. producer questionnaire response, sections III-10-11; Email from ***.

[18] ***. Email from ***.

[19] ***. Email from ***.

***.

The industry's COGS to net sales ratio fluctuated but decreased slightly overall from 80.6 percent in 2018 to 80.4 percent in 2023. Gross profit decreased from $60.2 million in 2018 to $22.4 million in 2021 but increased to a period high $181.7 million in 2022 before decreasing to $91.6 million in 2023, for an overall increase of 52.0 percent between 2018 and 2023.

SG&A expenses and operating income or loss

The industry's SG&A expenses decreased from $*** in 2018 to $*** in 2023. The ***. ***.[20] ***.[21] The SG&A expense ratio (SG&A expenses divided by net sales revenue) fluctuated but decreased overall from *** percent in 2018 to *** percent in 2023.

Operating income decreased from $*** in 2018 to *** 2021, increased to $*** in 2022, and decreased to $*** in 2023, for an overall increase of *** percent between 2018 and 2023.

[20] ***. ***'s U.S. producer questionnaire response, sections III-10 and III-11. Emails from ***.
[21] Email from ***.

All other expenses and net income or loss

Classified below the operating income level are interest expense, other expense, and other income. Interest expense, which accounted for the large majority of these expenses in each year examined, increased from *** in 2018 to *** in 2023. ***.[22] The industry's all other expenses increased irregularly from $*** in 2018 to $*** in 2023. ***.[23]

Net income followed similar directional trends as gross profit and operating income, but the increase in the industry's interest expense and other expenses during the period examined resulted in the overall increase in net income between 2018 and 2023 being lower than the increases in the other levels of profitability.[24] Net income decreased from $*** in 2018 to $*** in 2021, increased to $*** in 2022, and decreased to $*** in 2023.[25]

[22] Email from ***.

[23] ***. ***'s U.S. producer questionnaire response, section III-10.

[24] In addition, ***.

[25] The questionnaire asked the companies to describe any effects of the COVID-19 pandemic on their CACCS financial results. The companies each indicated that ***. U.S. producers' questionnaire responses, section III-15.

Variance analysis

A variance analysis for the operations of U.S. producers of CACCS is presented in table III-14.[26] The analysis shows that the $*** increase in operating income from 2018 to 2023 is attributable to a favorable price variance, despite an unfavorable net cost/expense variance and an unfavorable volume variance (that is, the positive effect from the increase in net sales AUVs was higher than the combined negative effects from the increase in the operating expenses and the decrease in net sales volume).

Table III-14
CACCS: Variance analysis on the operations of U.S. producers between comparison periods

Value in 1,000 dollars

Item	2018-23	2018-19	2019-20	2020-21	2021-22	2022-23
Net sales price variance	228,073	(8,224)	(1,420)	2,962	248,611	30,721
Net sales volume variance	(71,642)	8,057	1,779	(8,926)	(17,401)	(99,728)
Net sales total variance	156,431	(167)	359	(5,964)	231,210	(69,007)
COGS cost variance	(182,834)	(3,070)	770	(29,270)	(87,979)	(87,062)
COGS volume variance	57,719	(6,491)	(1,489)	7,483	16,120	65,873
COGS total variance	(125,115)	(9,561)	(719)	(21,787)	(71,859)	(21,189)
Gross profit variance	31,316	(9,728)	(360)	(27,751)	159,351	(90,196)
SG&A cost variance	***	***	***	***	***	***
SG&A volume variance	***	***	***	***	***	***
SG&A total variance	***	***	***	***	***	***
Operating income price variance	***	***	***	***	***	***
Operating income cost variance	***	***	***	***	***	***
Operating income volume variance	***	***	***	***	***	***
Operating income total variance	***	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: These data are derived from the data in table III-10. Unfavorable variances (which are negative) are shown in parentheses, all others are favorable (positive).

[26] The Commission's variance analysis is calculated in three parts: Sales variance, cost of sales variance (COGS variance), and SG&A expense variance. Each part consists of a price variance (in the case of the sales variance) or a cost or expense variance (in the case of the COGS and SG&A expense variance), and a volume variance. The sales or cost/expense variance is calculated as the change in unit price or per-unit cost/expense times the new volume, while the volume variance is calculated as the change in volume times the old unit price or per-unit cost/expense. Summarized at the bottom of the table, the price variance is from sales; the cost/expense variance is the sum of those items from COGS and SG&A variances, respectively, and the volume variance is the sum of the volume components of the net sales, COGS, and SG&A expense variances. The overall volume component of the variance analysis is generally small.

Capital expenditures and research and development expenses

Table III-15 presents capital expenditures, by firm, and table III-17 presents R&D expenses, by firm. Tables III-16 and III-18 present the firms' narrative explanations of the nature, focus, and significance of their capital expenditures and R&D expenses, respectively.

Aggregate capital expenditures increased irregularly from 2018 to 2023. As is shown in table III-15, *** accounted for the largest company-specific amounts of capital expenditures in 2018 through 2020, and *** accounted for the largest company-specific amounts in 2021 through 2023. The industry's R&D expenses, which were reported by ***, increased irregularly from 2018 to 2023.

Table III-15
CACCS: U.S. producers' capital expenditures, by firm and period

Value in 1,000 dollars

Firm	2018	2019	2020	2021	2022	2023
ADM	***	***	***	***	***	***
Cargill	***	***	***	***	***	***
Primient	***	***	***	***	***	***
All firms	***	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Table III-16
CACCS: U.S. producers' narrative descriptions of their capital expenditures, by firm

Firm	Narrative on capital expenditures
ADM	***
Cargill	***
Primient	***

Source: Compiled from data submitted in response to Commission questionnaires.

Table III-17
CACCS: U.S. producers' R&D expenses, by firm and period

Value in 1,000 dollars

Firm	2018	2019	2020	2021	2022	2023
ADM	***	***	***	***	***	***
Cargill	***	***	***	***	***	***
Primient	***	***	***	***	***	***
All firms	***	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Table III-18
CACCS: U.S. producers' narrative descriptions of their R&D expenses, by firm

Firm	Narrative on R&D expenses
ADM	***
Cargill	***
Primient	***

Source: Compiled from data submitted in response to Commission questionnaires.

Assets and return on assets

Table III-19 presents data on the U.S. producers' total net assets, while table III-20 presents their operating ROA.[27] Table III-21 presents U.S. producers' narrative responses describing their assets. Total assets increased from $247.7 million in 2018 to $292.4 million in 2023. *** accounted for the majority of the increase in total assets during the period examined. The company indicated this increase was the result of ***.[28] The industry's operating ROA fluctuated but increased overall from *** percent in 2018 to *** percent in 2023.

[27] The operating ROA is calculated as operating income divided by total assets. With respect to a firm's overall operations, the total asset value reflects an aggregation of a number of assets which are generally not product specific. Thus, high-level allocations are generally required in order to report a total asset value on a product-specific basis.

[28] Email from ***.

Table III-19
CACCS: U.S. producers' total net assets, by firm and period

Value in 1,000 dollars

Firm	2018	2019	2020	2021	2022	2023
ADM	***	***	***	***	***	***
Cargill	***	***	***	***	***	***
Primient	***	***	***	***	***	***
All firms	247,724	252,231	257,923	262,012	275,704	292,382

Source: Compiled from data submitted in response to Commission questionnaires.

Table III-20
CACCS: U.S. producers' ROA, by firm and period

Ratio in percent

Firm	2018	2019	2020	2021	2022	2023
ADM	***	***	***	***	***	***
Cargill	***	***	***	***	***	***
Primient	***	***	***	***	***	***
All firms	***	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Table III-21
CACCS: U.S. producers' narrative descriptions of their total net assets, by firm

Firm	Narrative on assets
ADM	***
Cargill	***
Primient	***

Source: Compiled from data submitted in response to Commission questionnaires.

Part IV: U.S. imports and the foreign industries

U.S. imports

Overview

The Commission issued questionnaires to 44 potential importers of CACCS between 2018 to 2023. Eleven firms provided data and information in response to the questionnaires, while 14 firms indicated that they had not imported CACCS during the period for which data were collected.[1] Based on adjusted official Commerce statistics for imports of CACCS, importers' questionnaire data accounted for 45.5 percent of total U.S. imports during 2023 and 18.1 percent of total subject imports during 2023. Firms responding to the Commission's questionnaire accounted for the following shares of individual subject country's subject imports (as a share of official import statistics, by quantity) during 2023.

- *** percent of the subject imports from Belgium
- *** percent of the subject imports from Colombia
- *** percent of the subject imports from Thailand

[1] *** certified no imports of CACCS since January 1, 2018.

Many of the above firms noted that *** is the non-resident importer of record for their CACCS purchase transactions. See emails from ***, March 26, 2024; ***, April 4, 2024; and *** U.S. importer questionnaire response to section II-7a. However, despite several attempts via emails and phone calls to obtain questionnaire responses, the Commission did not receive responses from the main firms importing CACCS from Thailand. As noted, ***, certified not importing CACCS from Thailand. Based on the responses to the notice of institution, the final phase investigations, and additional research, there are at least two other firms believed to be large importers from Thailand (***). Domestic interested party response to the notice of institution, July 3, 2023, Exh. 1, and memorandum INV-QQ-064. These firms were contacted by emails and phone calls, confirmed receipt of the U.S. importer questionnaires, but did not provide a response.

In light of the data coverage by the Commission's questionnaires, import data in this report are based on official Commerce statistics that have been adjusted with proprietary, Census-edited Customs records for CACCS (to include quantity data from Canada which were suppressed in official U.S. import statistics).[2]

Imports from subject and nonsubject countries

Table IV-1 and figure IV-1 present information on U.S. imports of CACCS from Belgium, Colombia, and Thailand and all other sources over the period examined.

From 2018 to 2022, the quantity of CACCS imports from subject countries accounted for a declining share of all CACCS imports, ranging from *** percent to *** percent. However, in 2023 subject countries' share of total CACCS imports increased to *** percent, surpassing 2018 levels.[3]

CACCS imports from Belgium declined by nearly half during the period, from 8.6 million pounds in 2018 to 4.7 million pounds in 2023. Unit values for CACCS from Belgium increased between 2018 and 2023, from $0.74 to $1.46 per pound dry weight, respectively, and terminal year unit values were higher than those of domestically produced CACCS in 2023.[4] Unit values for Belgium declined from 2022 to 2023, but were still nearly double 2018 levels. Imports of CACCS from Belgium accounted for *** percent of all imports by quantity, had the smallest share of imports from subject countries, and were equivalent to 1.3 percent of U.S. domestic production of CACCS in 2023.

[2] Import data are based on official U.S. imports statistics of the U.S. Department of Commerce using HTS statistical reporting numbers 2918.14.0000, 2918.15.1000, and 2918.15.5000, adjusted with proprietary, Census-edited Customs data for the same HTS statistical reporting numbers to report the quantities from Canada which are redacted and not available in official U.S. import statistics.

[3] In 2023, the share of import quantities from Colombia *** and from Thailand increased ***, while Belgium's share of quantity declined by about ***.

[4] Unit values for U.S. producers' U.S. shipments were $1.31 dollars per pound dry weight in 2023. See part III of this report for more information. Average unit values for all subject sources followed similar irregular trends between 2018 and 2023, but in 2023 ended up lower than U.S. domestic sources, with the exception of imports from Belgium.

***. Email from ***, April 17, 2024.

Subject imports of CACCS from Colombia increased irregularly by 66.3 percent from 20.6 million pounds in 2018 to 34.2 million pounds in 2023. Unit values also rose from 2018 from $0.63 per pound to $1.08 per pound in 2023, a level lower than domestically produced CACCS in that year.[5] CACCS from Colombia accounted for *** percent of all imports by quantity and were equivalent to 9.1 percent of U.S. domestic production of CACCS in 2023.

Subject imports of CACCS from Thailand increased by 55.9 percent, from 113.3 million pounds in 2018 to 176.6 million pounds in 2023. The unit value of CACCS from Thailand also increased from 2018 to 2023 from $0.62 per pound to $1.03 per pound. Terminal year unit values were below those of domestically produced CACCS in 2023. CACCS from Thailand accounted for *** percent of all imports by quantity in 2023 and was by far the largest of subject imports in all periods. Imports of CACCS from Thailand were equivalent to 47.2 percent of U.S. domestic production in 2023.

Nonsubject imports of CACCS also increased from 2018 to 2023 by *** percent.[6] Nonsubject sources accounted for the largest and increasing share of all imports between 2018 and 2022, between *** percent in 2018 and *** percent in 2022, before declining to *** percent in 2023, due to increased subject imports from Thailand. The unit value of nonsubject imports of CACCS increased from $*** in 2018 to $*** in 2023. Imports of CACCS from nonsubject sources were equivalent to *** percent of U.S. domestic production in 2023.

[5] ***. Email from ***, April 17, 2024.

[6] The higher levels of nonsubject CACCS imports are largely due to increase in imports from Canada, but also Israel, India, and China during 2018 and 2023.

Table IV-1
CACCS: U.S. imports by source and period

Quantity in 1,000 pounds dry weight; value in 1,000 dollars; unit value in dollars per pound dry weight

Source	Measure	2018	2019	2020
Belgium	Quantity	8,568	8,797	9,682
Colombia	Quantity	20,576	13,563	16,658
Thailand	Quantity	113,292	123,233	128,893
Subject sources	Quantity	142,436	145,594	155,233
Nonsubject sources	Quantity	***	***	***
All import sources	Quantity	***	***	***
Belgium	Value	6,319	5,837	6,638
Colombia	Value	12,954	7,135	8,914
Thailand	Value	69,973	70,278	75,913
Subject sources	Value	89,246	83,250	91,466
Nonsubject sources	Value	173,119	164,604	185,009
All import sources	Value	262,365	247,854	276,475
Belgium	Unit value	0.74	0.66	0.69
Colombia	Unit value	0.63	0.53	0.54
Thailand	Unit value	0.62	0.57	0.59
Subject sources	Unit value	0.63	0.57	0.59
Nonsubject sources	Unit value	***	***	***
All import sources	Unit value	***	***	***

Table continued.

Table IV-1 Continued
CACCS: U.S. imports by source and period

Quantity in 1,000 pounds dry weight; value in 1,000 dollars; unit value in dollars per pound dry weight

Source	Measure	2021	2022	2023
Belgium	Quantity	10,988	9,205	4,698
Colombia	Quantity	12,638	18,351	34,224
Thailand	Quantity	162,975	133,589	176,644
Subject sources	Quantity	186,601	161,144	215,566
Nonsubject sources	Quantity	***	***	***
All import sources	Quantity	***	***	***
Belgium	Value	9,269	16,163	6,836
Colombia	Value	8,300	20,164	37,077
Thailand	Value	153,671	203,458	182,452
Subject sources	Value	171,240	239,785	226,365
Nonsubject sources	Value	279,339	378,653	384,510
All import sources	Value	450,579	618,438	610,876
Belgium	Unit value	0.84	1.76	1.46
Colombia	Unit value	0.66	1.10	1.08
Thailand	Unit value	0.94	1.52	1.03
Subject sources	Unit value	0.92	1.49	1.05
Nonsubject sources	Unit value	***	***	***
All import sources	Unit value	***	***	***

Table continued.

Table IV-1 Continued
CACCS: U.S. imports by source and period

Shares and ratios in percent; ratios represent the ratio to U.S. production

Source	Measure	2018	2019	2020
Belgium	Share of quantity	***	***	***
Colombia	Share of quantity	***	***	***
Thailand	Share of quantity	***	***	***
Subject sources	Share of quantity	***	***	***
Nonsubject sources	Share of quantity	***	***	***
All import sources	Share of quantity	***	***	***
Belgium	Share of value	2.4	2.4	2.4
Colombia	Share of value	4.9	2.9	3.2
Thailand	Share of value	26.7	28.4	27.5
Subject sources	Share of value	34.0	33.6	33.1
Nonsubject sources	Share of value	66.0	66.4	66.9
All import sources	Share of value	100.0	100.0	100.0
Belgium	Ratio	1.8	1.8	2.1
Colombia	Ratio	4.4	2.8	3.7
Thailand	Ratio	24.4	25.8	28.3
Subject sources	Ratio	30.7	30.5	34.1
Nonsubject sources	Ratio	***	***	***
All import sources	Ratio	***	***	***

Table continued.

Table IV-1 Continued
CACCS: U.S. imports by source and period

Shares and ratios in percent; ratios represent the ratio to U.S. production

Source	Measure	2021	2022	2023
Belgium	Share of quantity	***	***	***
Colombia	Share of quantity	***	***	***
Thailand	Share of quantity	***	***	***
Subject sources	Share of quantity	***	***	***
Nonsubject sources	Share of quantity	***	***	***
All import sources	Share of quantity	***	***	***
Belgium	Share of value	2.1	2.6	1.1
Colombia	Share of value	1.8	3.3	6.1
Thailand	Share of value	34.1	32.9	29.9
Subject sources	Share of value	38.0	38.8	37.1
Nonsubject sources	Share of value	62.0	61.2	62.9
All import sources	Share of value	100.0	100.0	100.0
Belgium	Ratio	2.4	2.1	1.3
Colombia	Ratio	2.8	4.2	9.1
Thailand	Ratio	35.8	30.6	47.2
Subject sources	Ratio	40.9	36.9	57.6
Nonsubject sources	Ratio	***	***	***
All import sources	Ratio	***	***	***

Source: Compiled from official U.S. imports statistics of the U.S. Department of Commerce using HTS statistical reporting numbers 2918.14.0000, 2918.15.1000, and 2918.15.5000, accessed March 26, 2024, and adjusted using proprietary, Census-edited Customs data for the same HTS statistical reporting numbers accessed March 26, 2024 to report the quantities from Canada suppressed in official U.S. import statistics.

Figure IV-1
CACCS: U.S. import quantities and average unit values, by source and by period

* * * * * * *

Source: Compiled from official U.S. imports statistics of the U.S. Department of Commerce using HTS statistical reporting numbers 2918.14.0000, 2918.15.1000, and 2918.15.5000, accessed March 26, 2024, and adjusted using proprietary, Census-edited Customs data for the same HTS statistical reporting numbers accessed March 26, 2024 to report the quantities from Canada suppressed in official U.S. import statistics.

Cumulation considerations

In assessing whether U.S. imports from the subject countries are likely to compete with each other and with the domestic like product, the Commission has generally considered four factors: (1) fungibility, (2) presence of sales or offers to sell in the same geographical markets, (3) common or similar channels of distribution, and (4) simultaneous presence in the market. Information regarding channels of distribution, market areas, and interchangeability appear in Part II. Additional information concerning fungibility, geographical markets, and simultaneous presence in the market is presented below.

Fungibility

Tables IV-2 through IV-5 and figures IV-2 through IV-5 present U.S. shipments by GMO status, halal, kosher and other certifications in 2023.[7] [8]

In table IV-2 and figure IV-2 domestic U.S. producers reported U.S. shipments of only ***[9] CACCS, while subject sources reported U.S. shipments of only *** CACCS. Nonsubject sources reported a mixture of *** in 2023.

[7] Non-GMO Project Verified additionally means that a product is compliant with the Non-GMO Project Standard, which includes stringent provisions for testing, traceability, and segregation. Only Non-GMO Project Verified products are allowed to use the verification mark. https://www.nongmoproject.org/gmo-faq/#:~:text=Non%2DGMO%20means%20a%20product,testing%2C%20traceability%2C%20and%20segregation. Retrieved April 18, 2024.

Aside from the Non-GMO Project Verified certification, there are other non-GMO certifications available provided by entities such as SGS (Societe Generale de Surveillance SA) and NSF (National Sanitation Foundation). Unlike the Non-GMO Project, SGS and NSF allow the use of GMO substrates and certify products as non-GMO when the end product has no trace of the non-GMO ingredients. Domestic interested parties' posthearing briefs, Exh. 1, pp. 11-16.

Halal is an Arabic word that means permissible. Halal certification means that a product is certified to company with the precepts of Islamic Law and does not include forbidden components. https://halalfoundation.org/. Retrieved April 18, 2024. According to the Orthodox Union Kosher ("OU"), one of the five largest kosher certification agencies in the United States, Kosher Certification is the stamp of kosher approval by a rabbinic Agency verifying they have checked the products ingredients, production facility, and actual production to ensure all ingredients, derivatives, tools and machinery have no trace of non-kosher substances. For a food to be kosher or permitted to be eaten, all units and subunits must be kosher as well. https://oukosher.org/what-is-kosher/#:~:text=Kosher%20Certification%20is%20the%20stamp,trace%20of%20non%20kosher%20substances. Retrieved April 17, 2024.

[8] ***.

[9] ***. U.S. producers' questionnaire response, section II-7b.

Table IV-2
CACCS: U.S. producers' and U.S. importers' U.S. shipments by GMO certification, 2023

Quantity in 1,000 pounds dry weight

Source	"Non-GMO Project" verified	Other non-GMO certified	GMO	All products
U.S. producers	***	***	***	***
Belgium	***	***	***	***
Colombia	***	***	***	***
Thailand	***	***	***	***
Subject sources	***	***	***	***
Nonsubject sources	***	***	***	***
All import sources	***	***	***	***
All sources	***	***	***	***

Table continued.

Table IV-2 Continued
CACCS: U.S. producers' and U.S. importers' U.S. shipments by GMO certification, 2023

Shares across in percent

Source	"Non-GMO Project" verified	Other non-GMO certified	GMO	All products
U.S. producers	***	***	***	100.0
Belgium	***	***	***	100.0
Colombia	***	***	***	100.0
Thailand	***	***	***	100.0
Subject sources	***	***	***	100.0
Nonsubject sources	***	***	***	100.0
All import sources	***	***	***	100.0
All sources	***	***	***	100.0

Table continued.

Table IV-2 Continued
CACCS: U.S. producers' and U.S. importers' U.S. shipments by GMO certification, 2023

Shares down in percent

Source	"Non-GMO Project" verified	Other non-GMO certified	GMO	All products
U.S. producers	***	***	***	***
Belgium	***	***	***	***
Colombia	***	***	***	***
Thailand	***	***	***	***
Subject sources	***	***	***	***
Nonsubject sources	***	***	***	***
All import sources	***	***	***	***
All sources	100.0	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "---".

Figure IV-2
CACCS: U.S. producers' and U.S. importers' U.S. shipments by GMO certification, 2023

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

Table IV-3 and figure IV-3 present U.S. producers' and U.S. importers' U.S. shipments by halal certification in 2023.[10] U.S. producers reported a mixture of halal and not halal, whereas U.S. importers from subject and nonsubject sources reported all U.S. shipments of imports as halal.

Table IV-3
CACCS: U.S. producers' and U.S. importers' U.S. shipments by halal certification, 2023

Quantity in 1,000 pounds dry weight

Source	Halal	Not Halal	Total U.S. shipments
U.S. producers	***	***	***
Belgium	***	***	***
Colombia	***	***	***
Thailand	***	***	***
Subject sources	***	***	***
Nonsubject sources	***	***	***
All import sources	***	***	***
All sources	***	***	***

Table continued.

Table IV-3 Continued
CACCS: U.S. producers' and U.S. importers' U.S. shipments by halal certification, 2023

Shares across in percent

Source	Halal	Not Halal	Total U.S. shipments
U.S. producers	***	***	100.0
Belgium	***	***	100.0
Colombia	***	***	100.0
Thailand	***	***	100.0
Subject sources	***	***	100.0
Nonsubject sources	***	***	100.0
All import sources	***	***	100.0
All sources	***	***	100.0

Table continued.

[10] The American Halal Foundation states that Kosher and halal certifications share many commonalities, including certain prohibitions. However, not all kosher products are halal and vice-versa. https://halalfoundation.org/faq/?gad_source=1&gclid=EAIaIQobChMI89rg7PC4hgMVn5eDBx19FBwtEAAYASABEgJK2_D_BwE#, retrieved April 18, 2024. In addition, CACCS can have more than one certification.

Table IV-3 Continued
CACCS: U.S. producers' and U.S. importers' U.S. shipments by halal certification, 2023

Shares down in percent

Source	Halal	Not Halal	Total U.S. shipments
U.S. producers	***	***	***
Belgium	***	***	***
Colombia	***	***	***
Thailand	***	***	***
Subject sources	***	***	***
Nonsubject sources	***	***	***
All import sources	***	***	***
All sources	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "---". Same merchandise can be reported in multiple columns for any of the certifications it qualifies.

Figure IV-3
CACCS: U.S. producers' and U.S. importers' U.S. shipments by halal certification, 2023

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

Table IV-4 and figure IV-4 present U.S. producers' and U.S. importers' U.S. shipments by kosher certification in 2023. U.S. producers reported a mixture of kosher and not kosher certifications, whereas U.S. importers from subject and nonsubject sources reported all U.S. shipments of imports as kosher.

Table IV-4
CACCS: U.S. producers' and U.S. importers' U.S. shipments by kosher certification, 2023

Quantity in 1,000 pounds dry weight

Source	Kosher	Not Kosher	Total U.S. shipments
U.S. producers	***	***	***
Belgium	***	***	***
Colombia	***	***	***
Thailand	***	***	***
Subject sources	***	***	***
Nonsubject sources	***	***	***
All import sources	***	***	***
All sources	***	***	***

Table continued.

Table IV-4 Continued
CACCS: U.S. producers' and U.S. importers' U.S. shipments by kosher certification, 2023

Shares across in percent

Source	Kosher	Not Kosher	Total U.S. shipments
U.S. producers	***	***	100.0
Belgium	***	***	100.0
Colombia	***	***	100.0
Thailand	***	***	100.0
Subject sources	***	***	100.0
Nonsubject sources	***	***	100.0
All import sources	***	***	100.0
All sources	***	***	100.0

Table continued.

Table IV-4 Continued
CACCS: U.S. producers' and U.S. importers' U.S. shipments by kosher certification, 2023

Shares down in percent

Source	Kosher	Not Kosher	Total U.S. shipments
U.S. producers	***	***	***
Belgium	***	***	***
Colombia	***	***	***
Thailand	***	***	***
Subject sources	***	***	***
Nonsubject sources	***	***	***
All import sources	***	***	***
All sources	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "---". Same merchandise can be reported in multiple columns for any of the certifications for which it qualifies.

Figure IV-4
CACCS: U.S. producers' and U.S. importers' U.S. shipments by certification type, 2023

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

Table IV-5 and figure IV-5 present U.S. producers' and U.S. importers' U.S. shipments by other specialty certification in 2023. U.S. producers, subject sources, and nonsubject sources reported U.S. shipments of both other specialty certification and no specialty certification during 2023. Most of U.S. producers' and nonsubject sources' U.S. shipments of CACCS had *** while the majority of U.S. shipments from subject sources had ***.

Table IV-5
CACCS: U.S. producers' and U.S. importers' U.S. shipments by other specialty certification, 2023

Quantity in 1,000 pounds dry weight

Source	Other specialty certification	Not other specialty certification	Total U.S. shipments
U.S. producers	***	***	***
Belgium	***	***	***
Colombia	***	***	***
Thailand	***	***	***
Subject sources	***	***	***
Nonsubject sources	***	***	***
All import sources	***	***	***
All sources	***	***	***

Table continued.

Table IV-5 Continued
CACCS: U.S. producers' and U.S. importers' U.S. shipments by other specialty certification, 2023

Shares across in percent

Source	Other specialty certification	Not other specialty certification	Total U.S. shipments
U.S. producers	***	***	100.0
Belgium	***	***	100.0
Colombia	***	***	100.0
Thailand	***	***	100.0
Subject sources	***	***	100.0
Nonsubject sources	***	***	100.0
All import sources	***	***	100.0
All sources	***	***	100.0

Table continued.

Table IV-5 Continued
CACCS: U.S. producers' and U.S. importers' U.S. shipments by other specialty certification, 2023

Shares down in percent

Source	Other specialty certification	Not other specialty certification	Total U.S. shipments
U.S. producers	***	***	***
Belgium	***	***	***
Colombia	***	***	***
Thailand	***	***	***
Subject sources	***	***	***
Nonsubject sources	***	***	***
All import sources	***	***	***
All sources	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "---". Same merchandise can be reported in multiple columns for any of the certifications it qualifies. Other certifications include Food Safety System Certification (FSSC), ISO certification, and EcoVadis certification.

Figure IV-5
CACCS: U.S. producers' and U.S. importers' U.S. shipments by other specialty certification, 2023

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

Geographical markets

CACCS are shipped nationwide and enter through multiple U.S. ports of entry. Table IV-6 presents data on U.S. imports of CACCS by source and by border of entry in 2023, based on official statistics adjusted by Census-edited Customs data. During 2023, the largest share of imports of CACCS from Belgium entered via the East and South borders, imports of CACCS from Colombia entered mostly from the East and West borders, while the largest share of CACCS imports from Thailand entered via the East border.

Table IV-6
CACCS: U.S. imports by source and border of entry, 2023

Quantity in 1,000 pounds dry weight

Source	East	North	South	West	All borders
Belgium	2,129	126	1,885	559	4,698
Colombia	9,694	5,521	9,286	9,723	34,224
Thailand	80,492	9,563	18,811	67,778	176,644
Subject sources	92,315	15,210	29,982	78,060	215,566
Nonsubject sources	***	***	***	***	***
All import sources	***	***	***	***	***

Table continued.

Table IV-6 Continued
CACCS: U.S. imports by source and border of entry, 2023

Share across in percent

Source	East	North	South	West	All borders
Belgium	45.3	2.7	40.1	11.9	100.0
Colombia	28.3	16.1	27.1	28.4	100.0
Thailand	45.6	5.4	10.6	38.4	100.0
Subject sources	42.8	7.1	13.9	36.2	100.0
Nonsubject sources	***	***	***	***	100.0
All import sources	***	***	***	***	100.0

Table continued.

Table IV-6 Continued
CACCS: U.S. imports by source and border of entry, 2023

Share down in percent

Source	East	North	South	West	All borders
Belgium	***	***	***	***	***
Colombia	***	***	***	***	***
Thailand	***	***	***	***	***
Subject sources	***	***	***	***	***
Nonsubject sources	***	***	***	***	***
All import sources	100.0	100.0	100.0	100.0	100.0

Source: Compiled from official U.S. imports statistics of the U.S. Department of Commerce using HTS statistical reporting numbers 2918.14.0000, 2918.15.1000, and 2918.15.5000, accessed March 26, 2024, and adjusted using proprietary, Census-edited Customs data for the same HTS statistical reporting numbers accessed March 26, 2024 to report the quantities from Canada suppressed in official U.S. import statistics.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "---".

Presence in the market

Table IV-7 and figures IV-6 and IV-7 present monthly data for U.S. imports of CACCS from subject and nonsubject sources during January 2018 and December 2023. Based on official import statistics, U.S. imports of CACCS from Belgium, Colombia, and Thailand were present in every month during January 2018 through December 2023.

Table IV-7
CACCS: Quantity of U.S. imports, by source and month

Quantity in 1,000 pounds dry weight

Year	Month	Belgium	Colombia	Thailand
2018	January	251	1,987	7,995
2018	February	1,003	1,822	6,922
2018	March	1,013	1,342	10,833
2018	April	639	2,035	8,723
2018	May	985	3,353	8,430
2018	June	507	2,752	7,990
2018	July	678	1,471	12,056
2018	August	912	2,083	8,797
2018	September	611	1,078	7,761
2018	October	1,059	1,213	10,234
2018	November	331	853	12,869
2018	December	578	587	10,682
2019	January	1,265	395	12,051
2019	February	383	680	9,263
2019	March	573	1,171	8,948
2019	April	719	1,060	10,202
2019	May	902	1,313	7,770
2019	June	1,094	2,079	11,461
2019	July	683	1,232	13,289
2019	August	637	2,000	7,539
2019	September	280	1,413	11,686
2019	October	768	845	10,540
2019	November	893	718	11,010
2019	December	600	656	9,475

Table continued.

Table IV-7 Continued
CACCS: Quantity of U.S. imports, by source and month

Quantity in 1,000 pounds dry weight

Year	Month	Belgium	Colombia	Thailand
2020	January	423	795	7,938
2020	February	930	528	9,014
2020	March	336	1,339	12,881
2020	April	1,027	1,406	13,163
2020	May	1,191	1,401	13,343
2020	June	790	2,306	12,802
2020	July	756	2,367	10,030
2020	August	1,175	2,033	7,060
2020	September	758	935	8,527
2020	October	613	1,084	12,127
2020	November	1,219	1,189	12,314
2020	December	464	1,273	9,695
2021	January	377	723	8,306
2021	February	700	644	8,106
2021	March	642	1,316	17,760
2021	April	441	691	9,232
2021	May	1,005	1,098	19,224
2021	June	1,297	718	15,557
2021	July	1,732	930	17,059
2021	August	827	1,233	14,997
2021	September	924	1,631	11,489
2021	October	1,162	901	14,298
2021	November	862	1,336	11,756
2021	December	1,019	1,418	15,191

Table continued.

Table IV-7 Continued
CACCS: Quantity of U.S. imports, by source and month

Quantity in 1,000 pounds dry weight

Year	Month	Belgium	Colombia	Thailand
2022	January	1,023	1,060	14,263
2022	February	765	597	14,658
2022	March	565	1,866	14,740
2022	April	759	2,816	16,811
2022	May	1,118	1,073	13,381
2022	June	1,671	2,561	13,028
2022	July	978	758	6,096
2022	August	402	2,431	7,877
2022	September	437	767	6,164
2022	October	1,087	1,324	9,820
2022	November	165	732	6,744
2022	December	234	2,365	10,007
2023	January	306	2,247	10,115
2023	February	250	1,238	8,369
2023	March	126	2,327	15,811
2023	April	233	2,302	18,906
2023	May	406	2,595	15,336
2023	June	168	2,740	17,211
2023	July	606	5,313	14,534
2023	August	379	4,096	17,437
2023	September	315	3,759	15,777
2023	October	472	3,103	16,634
2023	November	738	2,292	11,062
2023	December	700	2,212	15,450

Table continued.

Table IV-7 Continued
CACCS: Quantity of U.S. imports, by source and month

Quantity in 1,000 pounds dry weight

Year	Month	Subject sources	Nonsubject sources	All import sources
2018	January	10,234	***	***
2018	February	9,748	***	***
2018	March	13,187	***	***
2018	April	11,398	***	***
2018	May	12,768	***	***
2018	June	11,249	***	***
2018	July	14,205	***	***
2018	August	11,792	***	***
2018	September	9,450	***	***
2018	October	12,506	***	***
2018	November	14,052	***	***
2018	December	11,847	***	***
2019	January	13,711	***	***
2019	February	10,325	***	***
2019	March	10,693	***	***
2019	April	11,981	***	***
2019	May	9,984	***	***
2019	June	14,634	***	***
2019	July	15,205	***	***
2019	August	10,176	***	***
2019	September	13,379	***	***
2019	October	12,153	***	***
2019	November	12,621	***	***
2019	December	10,732	***	***

Table continued.

Table IV-7 Continued
CACCS: Quantity of U.S. imports, by source and month

Quantity in 1,000 pounds dry weight

Year	Month	Subject sources	Nonsubject sources	All import sources
2020	January	9,156	***	***
2020	February	10,472	***	***
2020	March	14,555	***	***
2020	April	15,596	***	***
2020	May	15,936	***	***
2020	June	15,899	***	***
2020	July	13,154	***	***
2020	August	10,268	***	***
2020	September	10,220	***	***
2020	October	13,825	***	***
2020	November	14,722	***	***
2020	December	11,432	***	***
2021	January	9,405	***	***
2021	February	9,450	***	***
2021	March	19,718	***	***
2021	April	10,364	***	***
2021	May	21,327	***	***
2021	June	17,572	***	***
2021	July	19,722	***	***
2021	August	17,057	***	***
2021	September	14,043	***	***
2021	October	16,361	***	***
2021	November	13,954	***	***
2021	December	17,628	***	***

Table continued.

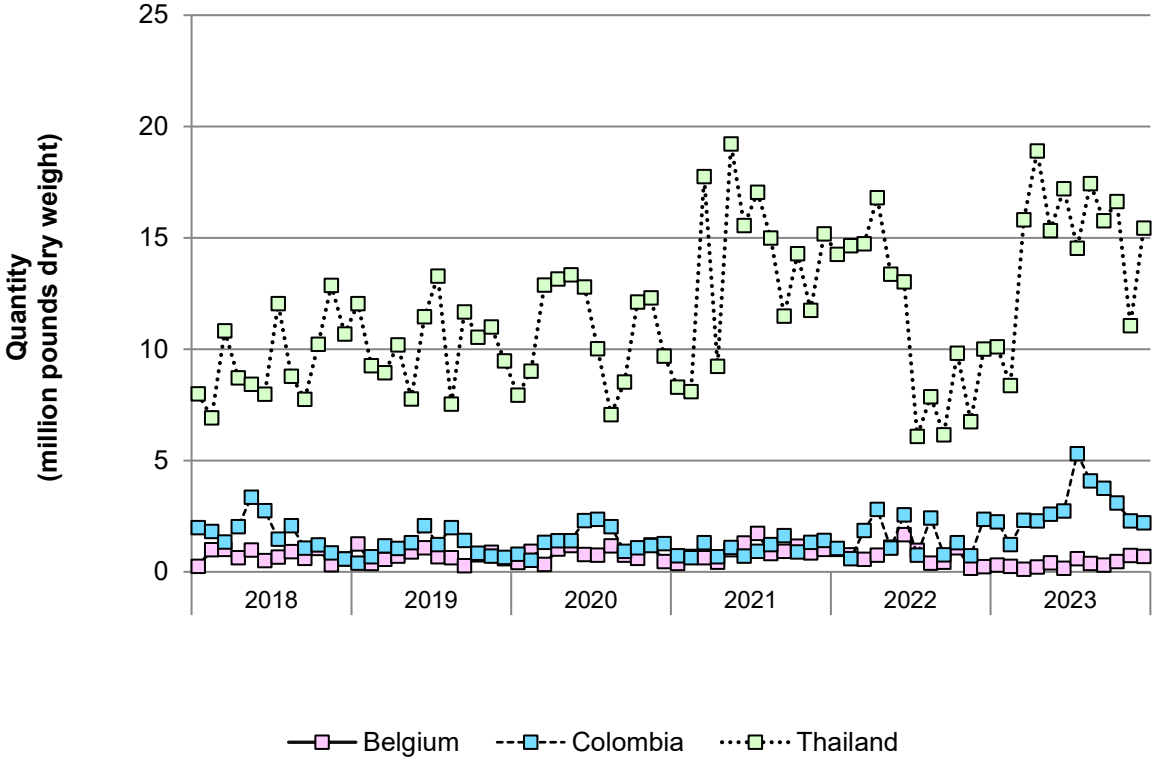
Table IV-7 Continued
CACCS: Quantity of U.S. imports, by source and month

Quantity in 1,000 pounds dry weight

Year	Month	Subject sources	Nonsubject sources	All import sources
2022	January	16,347	***	***
2022	February	16,020	***	***
2022	March	17,171	***	***
2022	April	20,386	***	***
2022	May	15,572	***	***
2022	June	17,261	***	***
2022	July	7,833	***	***
2022	August	10,710	***	***
2022	September	7,367	***	***
2022	October	12,230	***	***
2022	November	7,641	***	***
2022	December	12,606	***	***
2023	January	12,669	***	***
2023	February	9,856	***	***
2023	March	18,264	***	***
2023	April	21,440	***	***
2023	May	18,337	***	***
2023	June	20,119	***	***
2023	July	20,454	***	***
2023	August	21,912	***	***
2023	September	19,851	***	***
2023	October	20,209	***	***
2023	November	14,092	***	***
2023	December	18,362	***	***

Source: Compiled from official U.S. imports statistics of the U.S. Department of Commerce using HTS statistical reporting numbers 2918.14.0000, 2918.15.1000, and 2918.15.5000, accessed March 26, 2024, and adjusted using proprietary, Census-edited Customs data for the same HTS statistical reporting numbers accessed March 26, 2024 to report the quantities from Canada suppressed in official U.S. import statistics.

Figure IV-6
CACCS: U.S. imports from individual subject sources, by month, January 2018 through December 2023



Source: Compiled from official U.S. imports statistics of the U.S. Department of Commerce using HTS statistical reporting numbers 2918.14.0000, 2918.15.1000, and 2918.15.5000, accessed March 26, 2024.

Figure IV-7
CACCS: U.S. imports from individual subject and nonsubject sources, by month, January 2018 through December 2023

* * * * * * *

Source: Compiled from official U.S. imports statistics of the U.S. Department of Commerce using HTS statistical reporting numbers 2918.14.0000, 2918.15.1000, and 2918.15.5000, accessed March 26, 2024, and adjusted using proprietary, Census-edited Customs data for the same HTS statistical reporting numbers accessed March 26, 2024 to report the quantities from Canada suppressed in official U.S. import statistics.

U.S. inventories of imported merchandise

Table IV-8 presents data for inventories of U.S. imports of CACCS from Belgium, Colombia, and Thailand and all other sources held in the United States. Imports from nonsubject sources accounted for *** of responding U.S. importers' end-of-period inventories during 2018-23 and *** percent in 2023. Overall end-of-period inventories from subject sources increased irregularly by *** percent during 2018-23.[11] As ratio to total shipments of imports, ending inventories from subject sources remained below *** percent during 2018-23.

[11] Since no other firm reported ending inventories from subject sources, these data represent 2018-23 inventories of two firms, ***. ***. In addition, ***, the largest importer from Colombia, noted that as a non-resident U.S. importer of record, the firm has not had any inventories in the United States. See appendix D for more information.

Table IV-8
CACCS: U.S. importers' end-of-period inventories and their ratio to select items, by source and period

Quantity in 1,000 pounds dry weight; ratio in percent

Measure	Source	2018	2019	2020
Inventories quantity	Belgium	***	***	***
Ratio to imports	Belgium	***	***	***
Ratio to U.S. shipments of imports	Belgium	***	***	***
Ratio to total shipments of imports	Belgium	***	***	***
Inventories quantity	Colombia	***	***	***
Ratio to imports	Colombia	***	***	***
Ratio to U.S. shipments of imports	Colombia	***	***	***
Ratio to total shipments of imports	Colombia	***	***	***
Inventories quantity	Thailand	***	***	***
Ratio to imports	Thailand	***	***	***
Ratio to U.S. shipments of imports	Thailand	***	***	***
Ratio to total shipments of imports	Thailand	***	***	***
Inventories quantity	Subject sources	***	***	***
Ratio to imports	Subject sources	***	***	***
Ratio to U.S. shipments of imports	Subject sources	***	***	***
Ratio to total shipments of imports	Subject sources	***	***	***
Inventories quantity	Nonsubject sources	***	***	***
Ratio to imports	Nonsubject sources	***	***	***
Ratio to U.S. shipments of imports	Nonsubject sources	***	***	***
Ratio to total shipments of imports	Nonsubject sources	***	***	***
Inventories quantity	All import sources	***	***	***
Ratio to imports	All import sources	***	***	***
Ratio to U.S. shipments of imports	All import sources	***	***	***
Ratio to total shipments of imports	All import sources	***	***	***

Table continued

Table IV-8 Continued
CACCS: U.S. importers' inventories and their ratio to select items, by source and period

Quantity in 1,000 pounds dry weight; ratio in percent

Measure	Source	2021	2022	2023
Inventories quantity	Belgium	***	***	***
Ratio to imports	Belgium	***	***	***
Ratio to U.S. shipments of imports	Belgium	***	***	***
Ratio to total shipments of imports	Belgium	***	***	***
Inventories quantity	Colombia	***	***	***
Ratio to imports	Colombia	***	***	***
Ratio to U.S. shipments of imports	Colombia	***	***	***
Ratio to total shipments of imports	Colombia	***	***	***
Inventories quantity	Thailand	***	***	***
Ratio to imports	Thailand	***	***	***
Ratio to U.S. shipments of imports	Thailand	***	***	***
Ratio to total shipments of imports	Thailand	***	***	***
Inventories quantity	Subject sources	***	***	***
Ratio to imports	Subject sources	***	***	***
Ratio to U.S. shipments of imports	Subject sources	***	***	***
Ratio to total shipments of imports	Subject sources	***	***	***
Inventories quantity	Nonsubject sources	***	***	***
Ratio to imports	Nonsubject sources	***	***	***
Ratio to U.S. shipments of imports	Nonsubject sources	***	***	***
Ratio to total shipments of imports	Nonsubject sources	***	***	***
Inventories quantity	All import sources	***	***	***
Ratio to imports	All import sources	***	***	***
Ratio to U.S. shipments of imports	All import sources	***	***	***
Ratio to total shipments of imports	All import sources	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "---".

U.S. importers' imports subsequent to December 31, 2023

The Commission requested importers to indicate whether they had imported or arranged for the importation of CACCS from Belgium, Colombia, and Thailand for delivery after December 31, 2023. Table IV-9 presents U.S. importers' arranged imports after December 2023. *** reported arranged U.S. imports from ***, and most arranged imports from subject sources are from ***, but *** are arranged beyond the first quarter of 2024. The vast majority of arranged CACCS imports are from ***, covering every quarter of 2024.

Table IV-9
CACCS: U.S. importers' arranged imports, by source and period

Quantity in 1,000 pounds dry weight

Source	Jan-Mar 2024	Apr-Jun 2024	Jul-Sept 2024	Oct-Dec 2024	Total
Belgium	***	***	***	***	***
Colombia	***	***	***	***	***
Thailand	***	***	***	***	***
Subject sources	***	***	***	***	***
Nonsubject sources	***	***	***	***	***
All import sources	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

The industry in Belgium

Overview

In its response to the questionnaire during the current investigation, Citribel reported that it produces *** percent of CACCS in Belgium. Citribel reported ***.

Table IV-10 presents information on the CACCS operations of the responding producers and exporters in Belgium.

Table IV-10
CACCS: Summary data for producer * in Belgium, 2023**

Quantity in 1,000 pounds dry weight

Firm	Production (quantity)	Share of reported production (percent)	Exports to the United States (quantity)	Share of reported exports to the United States (percent)	Total shipments (quantity)	Share of firm's total shipments exported to the United States (percent)
Citribel	***	***	***	***	***	***
All firms	***	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Changes in operations

Producers in Belgium were asked to report any change in the character of their operations or organization relating to the production of CACCS since 2018. One producer indicated in their questionnaire that it had experienced such changes. Table IV-11 presents the changes identified by the producers.

Table IV-11
CACCS: Reported changes in operations for * in Belgium, since January 1, 2018**

Item	Firm name and narrative on changes in operations
***	***
***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Operations on CACCS

Table IV-12 presents data on Belgium producers' installed capacity, practical capacity, and production on the same equipment. Production and capacity changes in *** reflect ***.

Table IV-12
CACCS: Belgium producer's overall capacity and production on the same equipment as in-scope production, by period

Capacity and production in 1,000 pounds dry weight; utilization in percent

Item	Measure	2018	2019	2020	2021	2022	2023
Installed overall	Capacity	***	***	***	***	***	***
Installed overall	Production	***	***	***	***	***	***
Installed overall	Utilization	***	***	***	***	***	***
Practical overall	Capacity	***	***	***	***	***	***
Practical overall	Production	***	***	***	***	***	***
Practical overall	Utilization	***	***	***	***	***	***
CACCS	Capacity	***	***	***	***	***	***
CACCS	Production	***	***	***	***	***	***
CACCS	Utilization	***	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Table IV-13 presents Belgium producers' reported narratives regarding practical capacity constraints.

Table IV-13
CACCS: Producer's in Belgium reported capacity constraints since January 1, 2018

Item	Firm name and narrative on constraints to practical overall capacity
***	***
***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Table IV-14 presents data on the industry in Belgium. From 2018 to 2023, production in Belgium decreased by *** percent. In their response, Citribel reported a voluntary reduction to *** percent capacity, starting in *** and to continue through ***. The capacity utilization ratio, *** percent in 2018, has decreased to *** percent in 2023. The share of home shipments in Belgium was *** percent in 2018 and *** percent in 2023, indicating a strong focus on exports. There was *** internal consumption within the period of investigation. Export share in Belgium demonstrates an ability to generate exports. The primary destination market for Belgium exports is *** with a share of quantity of *** percent in 2018 and *** percent in 2023. The share of quantity to the United States is *** percent in 2018 and *** percent in 2023.[12] The inventory to production ratio in Belgium has increased, from *** 2018 to *** percent in 2023.[13]

Table IV-14
CACCS: Data on industry in Belgium, by period

Quantity in 1,000 pounds dry weight; value in 1,000 dollars

Item	Measure	2018	2019	2020
Capacity	Quantity	***	***	***
Production	Quantity	***	***	***
End-of-period inventories	Quantity	***	***	***
Internal consumption and transfers	Quantity	***	***	***
Commercial home market shipments	Quantity	***	***	***
Home market shipments	Quantity	***	***	***
Export shipments	Quantity	***	***	***
Total shipments	Quantity	***	***	***
Internal consumption and transfers	Value	***	***	***
Commercial home market shipments	Value	***	***	***
Home market shipments	Value	***	***	***
Export shipments	Value	***	***	***
Total shipments	Value	***	***	***

Table continued.

[12] The export market in the United States has decreased in share of quantity in 2023 when compared to previous years, while the share of quantity of exports to *** increased over the same period. In its response regarding other export markets, Citribel reported increased sales to the *** market in recent years.

[13] Given the nature of CACCS and Belgium's export model, inventories produced for the home market and third country markets can be exported to the United States. There are no significant product differences (e.g., national product specifications) or contractual obligations to obstruct increased exports to the United States.

Table IV-14 Continued
CACCS: Data on industry for Belgium, by item and period

Quantity in 1,000 pounds dry weight; Value in 1,000 dollars

Item	Measure	2021	2022	2023
Capacity	Quantity	***	***	***
Production	Quantity	***	***	***
End-of-period inventories	Quantity	***	***	***
Internal consumption and transfers	Quantity	***	***	***
Commercial home market shipments	Quantity	***	***	***
Home market shipments	Quantity	***	***	***
Export shipments	Quantity	***	***	***
Total shipments	Quantity	***	***	***
Internal consumption and transfers	Value	***	***	***
Commercial home market shipments	Value	***	***	***
Home market shipments	Value	***	***	***
Export shipments	Value	***	***	***
Total shipments	Value	***	***	***

Table continued.

Table IV-14 Continued
CACCS: Data on industry for Belgium, by item and period

Unit values in dollars per pound dry weight; Shares and ratios in percent

Item	Measure	2018	2019	2020
Internal consumption and transfers	Unit value	***	***	***
Commercial home market shipments	Unit value	***	***	***
Home market shipments	Unit value	***	***	***
Export shipments	Unit value	***	***	***
Total shipments	Unit value	***	***	***
Capacity utilization ratio	Ratio	***	***	***
Inventory ratio to production	Ratio	***	***	***
Inventory ratio to total shipments	Ratio	***	***	***
Internal consumption and transfers	Share	***	***	***
Commercial home market shipments	Share	***	***	***
Home market shipments	Share	***	***	***
Export shipments	Share	***	***	***
Total shipments	Share	***	***	***

Table continued.

Table IV-14 Continued
CACCS: Data on industry for Belgium, by item and period

Unit values in dollars per pound dry weight; Shares and ratios in percent

Item	Measure	2021	2022	2023
Internal consumption and transfers	Unit value	***	***	***
Commercial home market shipments	Unit value	***	***	***
Home market shipments	Unit value	***	***	***
Export shipments	Unit value	***	***	***
Total shipments	Unit value	***	***	***
Capacity utilization ratio	Ratio	***	***	***
Inventory ratio to production	Ratio	***	***	***
Inventory ratio to total shipments	Ratio	***	***	***
Internal consumption and transfers	Share	***	***	***
Commercial home market shipments	Share	***	***	***
Home market shipments	Share	***	***	***
Export shipments	Share	***	***	***
Total shipments	Share	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "---".

Alternative products

The producer in Belgium *** report producing other products on the same equipment and machinery used to produce CACCS.

Exports

According to Citribel's response to the Commission questionnaire, the leading export markets for CACCS from Belgium are ***. During 2023, the United States was the *** export market for CACCS from Belgium, accounting for *** percent, *** by ***, accounting for *** percent, respectively. Unit values for CACCS in the United States have remained consistently higher than unit values in the European Union.

Table IV-15 presents data on exports from Belgium to the United States compared to other destination markets by region.

Table IV-15
CACCS: Exports from Belgium, by period

Quantity in 1,000 pounds dry weight; value in 1,000 dollars, unit value in dollars per pound dry weight; share and ratio in percent

Destination market	Measure	2018	2019	2020
United States	Quantity	***	***	***
Other USMCA countries	Quantity	***	***	***
European Union	Quantity	***	***	***
Asia	Quantity	***	***	***
All other destination markets	Quantity	***	***	***
Non-U.S. destination markets	Quantity	***	***	***
All destination markets	Quantity	***	***	***
United States	Value	***	***	***
Other USMCA countries	Value	***	***	***
European Union	Value	***	***	***
Asia	Value	***	***	***
All other destination markets	Value	***	***	***
Non-U.S. destination markets	Value	***	***	***
All destination markets	Value	***	***	***
United States	Unit value	***	***	***
Other USMCA countries	Unit value	***	***	***
European Union	Unit value	***	***	***
Asia	Unit value	***	***	***
All other destination markets	Unit value	***	***	***
Non-U.S. destination markets	Unit value	***	***	***
All destination markets	Unit value	***	***	***
United States	Share of quantity	***	***	***
Other USMCA countries	Share of quantity	***	***	***
European Union	Share of quantity	***	***	***
Asia	Share of quantity	***	***	***
All other destination markets	Share of quantity	***	***	***
Non-U.S. destination markets	Share of quantity	***	***	***
All destination markets	Share of quantity	***	***	***
United States	Ratio	***	***	***
Other USMCA countries	Ratio	***	***	***
European Union	Ratio	***	***	***
Asia	Ratio	***	***	***
All other destination markets	Ratio	***	***	***
Non-U.S. destination markets	Ratio	***	***	***
All destination markets	Ratio	***	***	***

Table continued.

Table IV-15 Continued
CACCS: Exports from Belgium, by period

Quantity in 1,000 pounds dry weight; value in 1,000 dollars, unit value in dollars per pound dry weight; share and ratio in percent

Destination market	Measure	2021	2022	2023
United States	Quantity	***	***	***
Other USMCA countries	Quantity	***	***	***
European Union	Quantity	***	***	***
Asia	Quantity	***	***	***
All other destination markets	Quantity	***	***	***
Non-U.S. destination markets	Quantity	***	***	***
All destination markets	Quantity	***	***	***
United States	Value	***	***	***
Other USMCA countries	Value	***	***	***
European Union	Value	***	***	***
Asia	Value	***	***	***
All other destination markets	Value	***	***	***
Non-U.S. destination markets	Value	***	***	***
All destination markets	Value	***	***	***
United States	Unit value	***	***	***
Other USMCA countries	Unit value	***	***	***
European Union	Unit value	***	***	***
Asia	Unit value	***	***	***
All other destination markets	Unit value	***	***	***
Non-U.S. destination markets	Unit value	***	***	***
All destination markets	Unit value	***	***	***
United States	Share of quantity	***	***	***
Other USMCA countries	Share of quantity	***	***	***
European Union	Share of quantity	***	***	***
Asia	Share of quantity	***	***	***
All other destination markets	Share of quantity	***	***	***
Non-U.S. destination markets	Share of quantity	***	***	***
All destination markets	Share of quantity	***	***	***
United States	Ratio	***	***	***
Other USMCA countries	Ratio	***	***	***
European Union	Ratio	***	***	***
Asia	Ratio	***	***	***
All other destination markets	Ratio	***	***	***
Non-U.S. destination markets	Ratio	***	***	***
All destination markets	Ratio	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as “---“. Ratios represent the portion of the producers' total shipments that are exported by producers and resellers.

Figure IV-8

CACCS: Average unit values of exports from * to the United States and all non-U.S. destination markets, by year**

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

Table IV-16 presents data on exports from Belgium to the United States compared to other destination markets by country.

Table IV-16
CACCS: Exports from Belgium, by destination market and by period

Quantity in 1,000 pounds dry weight; Value in 1,000 dollars

Destination market	Measure	2018	2019	2020	2021	2022	2023
United States	Quantity	8,607	7,227	7,975	10,329	7,119	4,448
Germany	Quantity	86,235	78,982	82,854	87,497	72,915	33,935
Netherlands	Quantity	45,677	47,889	59,989	53,032	40,069	29,947
France	Quantity	29,875	31,609	27,104	30,665	26,268	22,737
Denmark	Quantity	3,169	11,650	10,580	9,650	12,128	11,843
Luxembourg	Quantity	13,677	14,785	16,677	11,352	7,166	11,150
Italy	Quantity	28,592	27,679	30,513	36,083	24,894	10,691
Spain	Quantity	8,436	10,379	10,963	13,368	8,580	7,254
United Kingdom	Quantity	24,645	22,804	21,134	16,466	8,350	6,379
All other destination markets	Quantity	40,776	42,817	46,356	53,139	50,407	26,704
Non-U.S. destination markets	Quantity	281,081	288,595	306,172	311,253	250,777	160,638
All destination markets	Quantity	289,688	295,821	314,146	321,581	257,896	165,087
United States	Value	5,962	4,288	4,933	7,252	12,124	5,775
Germany	Value	47,315	41,320	44,158	51,965	71,053	28,536
Netherlands	Value	27,035	25,767	28,715	32,883	47,749	26,148
France	Value	16,895	16,619	14,196	19,173	27,967	19,572
Denmark	Value	2,144	6,388	6,081	5,879	14,689	10,085
Luxembourg	Value	7,338	7,444	8,172	5,969	9,317	7,896
Italy	Value	16,476	14,795	16,356	22,631	29,905	9,636
Spain	Value	5,223	5,752	6,255	9,601	10,748	6,782
United Kingdom	Value	14,998	13,851	13,647	11,722	11,071	6,987
All other destination markets	Value	42,464	26,670	27,188	38,465	63,161	29,642
Non-U.S. destination markets	Value	179,889	158,605	164,768	198,289	285,661	145,285
All destination markets	Value	185,851	162,893	169,701	205,541	297,785	151,060

Table continued.

Table IV-16 Continued
CACCS: Exports from Belgium, by destination market and by period

Unit values in dollars per pound dry weight; Shares in percent

Destination market	Measure	2018	2019	2020	2021	2022	2023
United States	Unit value	0.69	0.59	0.62	0.70	1.70	1.30
Germany	Unit value	0.55	0.52	0.53	0.59	0.97	0.84
Netherlands	Unit value	0.59	0.54	0.48	0.62	1.19	0.87
France	Unit value	0.57	0.53	0.52	0.63	1.06	0.86
Denmark	Unit value	0.68	0.55	0.57	0.61	1.21	0.85
Luxembourg	Unit value	0.54	0.50	0.49	0.53	1.30	0.71
Italy	Unit value	0.58	0.53	0.54	0.63	1.20	0.90
Spain	Unit value	0.62	0.55	0.57	0.72	1.25	0.94
United Kingdom	Unit value	0.61	0.61	0.65	0.71	1.33	1.10
All other destination markets	Unit value	1.04	0.62	0.59	0.72	1.25	1.11
Non-U.S. destination markets	Unit value	0.64	0.55	0.54	0.64	1.14	0.90
All destination markets	Unit value	0.64	0.55	0.54	0.64	1.15	0.92
United States	Share of quantity	3.0	2.4	2.5	3.2	2.8	2.7
Germany	Share of quantity	29.8	26.7	26.4	27.2	28.3	20.6
Netherlands	Share of quantity	15.8	16.2	19.1	16.5	15.5	18.1
France	Share of quantity	10.3	10.7	8.6	9.5	10.2	13.8
Denmark	Share of quantity	1.1	3.9	3.4	3.0	4.7	7.2
Luxembourg	Share of quantity	4.7	5.0	5.3	3.5	2.8	6.8
Italy	Share of quantity	9.9	9.4	9.7	11.2	9.7	6.5
Spain	Share of quantity	2.9	3.5	3.5	4.2	3.3	4.4
United Kingdom	Share of quantity	8.5	7.7	6.7	5.1	3.2	3.9
All other destination markets	Share of quantity	14.1	14.5	14.8	16.5	19.5	16.2
Non-U.S. destination markets	Share of quantity	97.0	97.6	97.5	96.8	97.2	97.3
All destination markets	Share of quantity	100.0	100.0	100.0	100.0	100.0	100.0

Source: Official exports statistics under HS subheading 2918.14 and 2918.15 as reported by Eurostat in the Global Trade Atlas Suite database, accessed February 29, 2024.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "---". United States is shown at the top followed by the top exporting countries in descending order of 2023 data.

The industry in Colombia

Overview

In its response to the questionnaire during the current investigation, Sucroal reported that it produces *** percent of CACCS in Colombia. Sucroal reported ***.

Table IV-17 presents information on the CACCS operations of the responding producers and exporters in Colombia.

Table IV-17
CACCS: Summary data for producer in Colombia, 2023

Quantity in 1,000 pounds dry weight

Firm	Production (quantity)	Share of reported production (percent)	Exports to the United States (quantity)	Share of reported exports to the United States (percent)	Total shipments (quantity)	Share of firm's total shipments exported to the United States (percent)
Sucroal	***	***	***	***	***	***
All firms	***	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Changes in operations

Producers in Colombia were asked to report any change in the character of their operations or organization relating to the production of CACCS since 2018. One producer indicated in their questionnaire that it had experienced such changes. Table IV-18 presents the changes identified by the producers.

Table IV-18
CACCS: Reported changes in operations in Colombia, since January 1, 2018

Item	Firm name and narrative on changes in operations
***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Operations on CACCS

Table IV-19 presents data on Colombia producers' installed capacity, practical capacity, and production on the same equipment. CACCS capacity utilization in Colombia ***.

Table IV-19
CACCS: Colombia producer's overall capacity and production on the same equipment as in-scope production, by period

Capacity and production in 1,000 pounds dry weight; utilization in percent

Item	Measure	2018	2019	2020	2021	2022	2023
Installed overall	Capacity	***	***	***	***	***	***
Installed overall	Production	***	***	***	***	***	***
Installed overall	Utilization	***	***	***	***	***	***
Practical overall	Capacity	***	***	***	***	***	***
Practical overall	Production	***	***	***	***	***	***
Practical overall	Utilization	***	***	***	***	***	***
CACCS	Capacity	***	***	***	***	***	***
CACCS	Production	***	***	***	***	***	***
CACCS	Utilization	***	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "---".

Colombia producers reported *** narratives regarding practical capacity constraints in their response to Commission questionnaires.

Table IV-20 presents data on the industry in Colombia. From 2018 to 2023, production in Colombia increased by *** percent. Capacity in Colombia *** between 2018 and 2023. The capacity utilization ratio, *** percent in 2018, has increased to *** percent in 2023. The share of home shipments in Colombia was *** percent in 2018 and *** percent in 2023, indicating *** focus on exports. There was no internal consumption within the period of review. The primary destination market for Colombia exports is *** with a share of quantity of *** percent in 2018 and *** percent in 2023.[14] The inventory to production ratio in Colombia has decreased, from *** percent 2018 to *** percent in 2023.[15]

Table IV-20
CACCS: Data on industry in Colombia, by period

Quantity in 1,000 pounds dry weight; value in 1,000 dollars

Item	Measure	2018	2019	2020
Capacity	Quantity	***	***	***
Production	Quantity	***	***	***
End-of-period inventories	Quantity	***	***	***
Internal consumption and transfers	Quantity	***	***	***
Commercial home market shipments	Quantity	***	***	***
Home market shipments	Quantity	***	***	***
Export shipments	Quantity	***	***	***
Total shipments	Quantity	***	***	***
Internal consumption and transfers	Value	***	***	***
Commercial home market shipments	Value	***	***	***
Home market shipments	Value	***	***	***
Export shipments	Value	***	***	***
Total shipments	Value	***	***	***

Table Continued.

[14] The export market in the United States has increased in share of quantity in 2023 when compared to previous years, while the share of quantity of exports to *** increased over the same period. In its response, Sucroal reported significant barriers to shifting sales between the U.S. market and alternative third-country markets, including customer relationship building and product qualification requirements.

[15] Given the nature of CACCS and Citribel's export model, inventories produced for the home market and third country markets can be exported to the United States. There are no significant product differences (e.g., national product specifications) or contractual obligations to obstruct increased exports to the United States.

Table IV-20, Continued
CACCS: Data on industry in Colombia, by period

Quantity in 1,000 pounds dry weight; value in 1,000 dollars

Item	Measure	2021	2022	2023
Capacity	Quantity	***	***	***
Production	Quantity	***	***	***
End-of-period inventories	Quantity	***	***	***
Internal consumption and transfers	Quantity	***	***	***
Commercial home market shipments	Quantity	***	***	***
Home market shipments	Quantity	***	***	***
Export shipments	Quantity	***	***	***
Total shipments	Quantity	***	***	***
Internal consumption and transfers	Value	***	***	***
Commercial home market shipments	Value	***	***	***
Home market shipments	Value	***	***	***
Export shipments	Value	***	***	***
Total shipments	Value	***	***	***

Table continued.

Table IV-20 Continued
CACCS: Data on industry for Colombia, by item and period

Unit values in dollars per pound dry weight; Shares in percent

Item	Measure	2018	2019	2020
Internal consumption and transfers	Unit value	***	***	***
Commercial home market shipments	Unit value	***	***	***
Home market shipments	Unit value	***	***	***
Export shipments	Unit value	***	***	***
Total shipments	Unit value	***	***	***
Capacity utilization ratio	Ratio	***	***	***
Inventory ratio to production	Ratio	***	***	***
Inventory ratio to total shipments	Ratio	***	***	***
Internal consumption and transfers	Share	***	***	***
Commercial home market shipments	Share	***	***	***
Home market shipments	Share	***	***	***
Export shipments	Share	***	***	***
Total shipments	Share	***	***	***

Table continued.

Table IV-20 Continued
CACCS: Data on industry for Colombia, by item and period

Unit values in dollars per pound dry weight; Shares in percent

Item	Measure	2021	2022	2023
Internal consumption and transfers	Unit value	***	***	***
Commercial home market shipments	Unit value	***	***	***
Home market shipments	Unit value	***	***	***
Export shipments	Unit value	***	***	***
Total shipments	Unit value	***	***	***
Capacity utilization ratio	Ratio	***	***	***
Inventory ratio to production	Ratio	***	***	***
Inventory ratio to total shipments	Ratio	***	***	***
Internal consumption and transfers	Share	***	***	***
Commercial home market shipments	Share	***	***	***
Home market shipments	Share	***	***	***
Export shipments	Share	***	***	***
Total shipments	Share	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as “---“.

Exports

According to Sucroal's response to the Commission questionnaire, the leading export markets for CACCS from Colombia are *** (table IV-21). During 2023, the United States was the *** export market for CACCS from Colombia, accounting for *** percent, followed by ***, accounting for *** percent.

Table IV-21 presents data on exports from Belgium to the United States compared to other destination markets by region.

Table IV-21
CACCS: Exports from Colombia, period
Quantity in 1,000 pounds dry weight; Value in 1,000 dollars; Unit values in dollars per pound dry weight; Shares and ratios in percent

Destination market	Measure	2018	2019	2020
United States	Quantity	***	***	***
Other USMCA countries	Quantity	***	***	***
European Union	Quantity	***	***	***
Asia	Quantity	***	***	***
All other destination markets	Quantity	***	***	***
Non-U.S. destination markets	Quantity	***	***	***
All destination markets	Quantity	***	***	***
United States	Value	***	***	***
Other USMCA countries	Value	***	***	***
European Union	Value	***	***	***
Asia	Value	***	***	***
All other destination markets	Value	***	***	***
Non-U.S. destination markets	Value	***	***	***
All destination markets	Value	***	***	***
United States	Unit value	***	***	***
Other USMCA countries	Unit value	***	***	***
European Union	Unit value	***	***	***
Asia	Unit value	***	***	***
All other destination markets	Unit value	***	***	***
Non-U.S. destination markets	Unit value	***	***	***
All destination markets	Unit value	***	***	***
United States	Share of quantity	***	***	***
Other USMCA countries	Share of quantity	***	***	***
European Union	Share of quantity	***	***	***
Asia	Share of quantity	***	***	***
All other destination markets	Share of quantity	***	***	***
Non-U.S. destination markets	Share of quantity	***	***	***
All destination markets	Share of quantity	***	***	***
United States	Ratio	***	***	***
Other USMCA countries	Ratio	***	***	***
European Union	Ratio	***	***	***
Asia	Ratio	***	***	***
All other destination markets	Ratio	***	***	***
Non-U.S. destination markets	Ratio	***	***	***
All destination markets	Ratio	***	***	***

Table continued.

Table IV-21, Continued
CACCS: Exports from Colombia, period
Quantity in 1,000 pounds dry weight; Value in 1,000 dollars; Unit values in dollars per pound dry weight; Shares and ratios in percent

Destination market	Measure	2021	2022	2023
United States	Quantity	***	***	***
Other USMCA countries	Quantity	***	***	***
European Union	Quantity	***	***	***
Asia	Quantity	***	***	***
All other destination markets	Quantity	***	***	***
Non-U.S. destination markets	Quantity	***	***	***
All destination markets	Quantity	***	***	***
United States	Value	***	***	***
Other USMCA countries	Value	***	***	***
European Union	Value	***	***	***
Asia	Value	***	***	***
All other destination markets	Value	***	***	***
Non-U.S. destination markets	Value	***	***	***
All destination markets	Value	***	***	***
United States	Unit value	***	***	***
Other USMCA countries	Unit value	***	***	***
European Union	Unit value	***	***	***
Asia	Unit value	***	***	***
All other destination markets	Unit value	***	***	***
Non-U.S. destination markets	Unit value	***	***	***
All destination markets	Unit value	***	***	***
United States	Share of quantity	***	***	***
Other USMCA countries	Share of quantity	***	***	***
European Union	Share of quantity	***	***	***
Asia	Share of quantity	***	***	***
All other destination markets	Share of quantity	***	***	***
Non-U.S. destination markets	Share of quantity	***	***	***
All destination markets	Share of quantity	***	***	***
United States	Ratio	***	***	***
Other USMCA countries	Ratio	***	***	***
European Union	Ratio	***	***	***
Asia	Ratio	***	***	***
All other destination markets	Ratio	***	***	***
Non-U.S. destination markets	Ratio	***	***	***
All destination markets	Ratio	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as “---“. Ratios represent the portion of the producers' total shipments that are exported by producers and resellers.

Figure IV-9

CACCS: Average unit values of exports from * to the United States and all non-U.S. destination markets, by year, January 2018 through December 2023**

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

Table IV-22 presents data on exports from Colombia to the United States compared to other destination markets by country.

Table IV-22
CACCS: Exports from Colombia, by destination market and by period

Quantity in 1,000 pounds dry weight; Value in 1,000 dollars

Destination market	Measure	2018	2019	2020	2021	2022	2023
United States	Quantity	19,320	12,904	16,565	13,068	17,766	32,810
Brazil	Quantity	13,193	18,572	11,161	10,681	10,860	7,277
Costa Rica	Quantity	708	4,804	4,700	2,291	2,411	7,121
Mexico	Quantity	3,433	9,068	12,722	11,172	10,931	6,137
Chile	Quantity	56	2,918	3,241	1,770	1,093	3,139
Indonesia	Quantity	1,260	1,394	3,234	2,844	2,892	2,529
Argentina	Quantity	2,103	3,908	2,236	693	50	1,840
Germany	Quantity	1	333	2,811	13	177	1,709
Uruguay	Quantity	1,874	1,929	606	1,578	2,258	1,265
All other destination markets	Quantity	9,953	10,048	13,415	14,961	11,491	3,344
Non-U.S. destination markets	Quantity	32,581	52,974	54,128	46,004	42,164	34,363
All destination markets	Quantity	51,901	65,878	70,693	59,072	59,930	67,173
United States	Value	10,986	6,724	8,863	8,718	20,132	34,099
Brazil	Value	8,013	9,913	5,800	6,169	10,765	6,141
Costa Rica	Value	526	1,775	1,404	742	1,827	6,094
Mexico	Value	2,462	4,961	6,204	6,087	10,559	6,615
Chile	Value	37	1,009	996	594	1,055	2,764
Indonesia	Value	916	994	2,098	1,701	2,669	2,159
Argentina	Value	967	1,416	874	405	69	1,594
Germany	Value	2	126	1,064	46	181	1,102
Uruguay	Value	1,078	1,108	352	925	2,192	1,338
All other destination markets	Value	5,717	5,867	6,817	7,316	11,114	4,086
Non-U.S. destination markets	Value	19,718	27,168	25,608	23,986	40,432	31,893
All destination markets	Value	30,704	33,892	34,471	32,704	60,564	65,993

Table continued.

Table IV-22 Continued
CACCS: Exports from Colombia, by destination market and by period

Unit values in dollars per pound dry weight; Shares in percent

Destination market	Measure	2018	2019	2020	2021	2022	2023
United States	Unit value	0.57	0.52	0.54	0.67	1.13	1.04
Brazil	Unit value	0.61	0.53	0.52	0.58	0.99	0.84
Costa Rica	Unit value	0.74	0.37	0.30	0.32	0.76	0.86
Mexico	Unit value	0.72	0.55	0.49	0.54	0.97	1.08
Chile	Unit value	0.66	0.35	0.31	0.34	0.96	0.88
Indonesia	Unit value	0.73	0.71	0.65	0.60	0.92	0.85
Argentina	Unit value	0.46	0.36	0.39	0.58	1.37	0.87
Germany	Unit value	3.14	0.38	0.38	3.46	1.02	0.64
Uruguay	Unit value	0.58	0.57	0.58	0.59	0.97	1.06
All other destination markets	Unit value	0.57	0.58	0.51	0.49	0.97	1.22
Non-U.S. destination markets	Unit value	0.61	0.51	0.47	0.52	0.96	0.93
All destination markets	Unit value	0.59	0.51	0.49	0.55	1.01	0.98
United States	Share of quantity	37.2	19.6	23.4	22.1	29.6	48.8
Brazil	Share of quantity	25.4	28.2	15.8	18.1	18.1	10.8
Costa Rica	Share of quantity	1.4	7.3	6.6	3.9	4.0	10.6
Mexico	Share of quantity	6.6	13.8	18.0	18.9	18.2	9.1
Chile	Share of quantity	0.1	4.4	4.6	3.0	1.8	4.7
Indonesia	Share of quantity	2.4	2.1	4.6	4.8	4.8	3.8
Argentina	Share of quantity	4.1	5.9	3.2	1.2	0.1	2.7
Germany	Share of quantity	0.0	0.5	4.0	0.0	0.3	2.5
Uruguay	Share of quantity	3.6	2.9	0.9	2.7	3.8	1.9
All other destination markets	Share of quantity	19.2	15.3	19.0	25.3	19.2	5.0
Non-U.S. destination markets	Share of quantity	62.8	80.4	76.6	77.9	70.4	51.2
All destination markets	Share of quantity	100.0	100.0	100.0	100.0	100.0	100.0

Source: Official exports statistics under HS subheading 2918.14 and 2918.15 as reported by Direccion de Impuestos y Aduanas Nacionales de Colombia in the Global Trade Atlas Suite database, accessed February 29, 2024.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "---". United States is shown at the top followed by the top exporting countries in descending order of 2023 data.

The industry in Thailand

Overview

During the final phase of the original investigation, the Commission received usable responses from three producers of CACCS in Thailand: COFCO, Niran, and Sunshine. These firms' exports to the United States accounted for approximately 92.8 percent of U.S. imports of CACCS from Thailand in 2017.[16]

In these reviews, the domestic interested parties provided a list of three firms that are believed to be producers of CACCS in Thailand.[17] In these first five-year reviews, the Commission issued a foreign producer questionnaire to the three firms and received responses from no firms. For producers of CACCS in Thailand, the United States remains the largest market. In 2023, the share of quantity of Thai exports to the United States destination market was 74.5 percent.[18]

There were no major developments in the Thai industry since the imposition of the orders identified by interested parties in the proceeding and no relevant information from outside sources was found.

[16] Original publication, p. VII-16.

[17] Domestic interested parties' response to the notice of institution, July 3, 2023, Exh. 1.

[18] Official exports statistics under HS subheading 2918.14 and 2918.15 as reported by the Thai Customs Department in the Global Trade Atlas Suite database, accessed February 29, 2024.

Exports

According to GTA, the leading export markets for CACCS from Thailand are the United States, Brazil, and Israel (table IV-23). During 2023, the United States was the top export market for CACCS from Thailand, accounting for 74.5 percent, followed by Brazil, accounting for 5.0 percent.

Table IV-23
CACCS: Exports from Thailand, 2018-2023
Quantity in 1,000 pounds dry weight; value in 1,000 dollars

Destination market	Measure	2018	2019	2020	2021	2022	2023
United States	Quantity	116,775	122,538	133,915	177,165	114,174	184,864
Brazil	Quantity	16,928	20,536	10,046	4,301	9,011	12,487
Israel	Quantity	13,334	9,789	10,808	8,629	6,526	10,199
Belgium	Quantity	19,577	11,292	15,785	6,971	15,754	8,025
Spain	Quantity	2,601	4,277	8,236	5,575	4,510	6,429
Japan	Quantity	176	276	309	619	4,410	5,816
United Kingdom	Quantity	441	705	7,694	2,857	582	3,752
Vietnam	Quantity	2,503	2,581	3,222	2,722	3,941	2,679
Italy	Quantity	2,954	1,204	1,898	1,230	1,521	1,962
All other destination markets	Quantity	17,755	13,483	24,166	23,804	17,405	11,993
Non-U.S. destination markets	Quantity	76,270	64,142	82,165	56,709	63,659	63,342
All destination markets	Quantity	193,045	186,680	216,080	233,874	177,833	248,206
United States	Value	65,252	64,203	72,080	168,828	140,798	172,113
Brazil	Value	7,226	8,459	4,047	2,190	6,429	6,207
Israel	Value	6,215	4,282	4,199	4,942	8,863	5,901
Belgium	Value	7,664	4,157	5,260	4,190	11,367	3,563
Spain	Value	1,095	1,552	2,756	3,053	3,831	2,950
Japan	Value	84	134	152	402	5,757	3,574
United Kingdom	Value	184	251	2,689	1,243	377	1,751
Vietnam	Value	1,302	1,220	1,434	1,320	3,958	1,600
Italy	Value	1,249	436	625	831	1,356	893
All other destination markets	Value	8,717	5,674	9,526	13,411	17,350	7,149
Non-U.S. destination markets	Value	33,734	26,164	30,688	31,582	59,288	33,586
All destination markets	Value	98,986	90,367	102,768	200,410	200,086	205,698

Table continued.

Table IV-23, Continued
CACCS: Exports from Thailand, 2018-2023

Quantity in 1,000 pounds dry weight; value in 1,000 dollars, unit value in dollars per pounds dry weight; share in percent

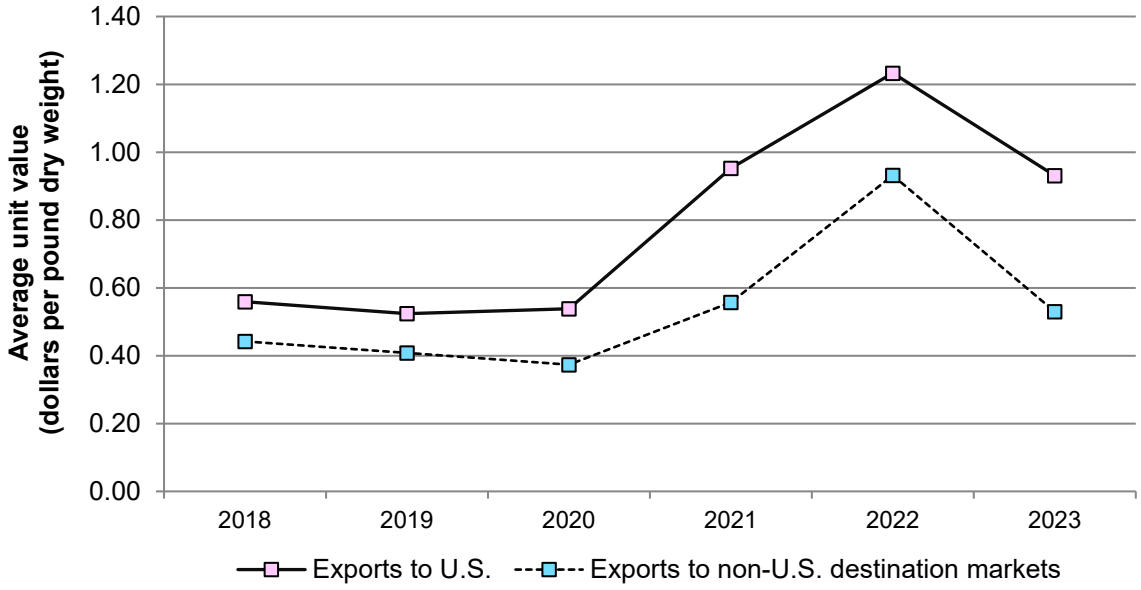
Destination market	Measure	2018	2019	2020	2021	2022	2023
United States	Unit value	0.56	0.52	0.54	0.95	1.23	0.93
Brazil	Unit value	0.43	0.41	0.40	0.51	0.71	0.50
Israel	Unit value	0.47	0.44	0.39	0.57	1.36	0.58
Belgium	Unit value	0.39	0.37	0.33	0.60	0.72	0.44
Spain	Unit value	0.42	0.36	0.33	0.55	0.85	0.46
Japan	Unit value	0.47	0.49	0.49	0.65	1.31	0.61
United Kingdom	Unit value	0.42	0.36	0.35	0.43	0.65	0.47
Vietnam	Unit value	0.52	0.47	0.45	0.48	1.00	0.60
Italy	Unit value	0.42	0.36	0.33	0.68	0.89	0.45
All other destination markets	Unit value	0.49	0.42	0.39	0.56	1.00	0.60
Non-U.S. destination markets	Unit value	0.44	0.41	0.37	0.56	0.93	0.53
All destination markets	Unit value	0.51	0.48	0.48	0.86	1.13	0.83
United States	Share of quantity	60.5	65.6	62.0	75.8	64.2	74.5
Brazil	Share of quantity	8.8	11.0	4.6	1.8	5.1	5.0
Israel	Share of quantity	6.9	5.2	5.0	3.7	3.7	4.1
Belgium	Share of quantity	10.1	6.0	7.3	3.0	8.9	3.2
Spain	Share of quantity	1.3	2.3	3.8	2.4	2.5	2.6
Japan	Share of quantity	0.1	0.1	0.1	0.3	2.5	2.3
United Kingdom	Share of quantity	0.2	0.4	3.6	1.2	0.3	1.5
Vietnam	Share of quantity	1.3	1.4	1.5	1.2	2.2	1.1
Italy	Share of quantity	1.5	0.6	0.9	0.5	0.9	0.8
All other destination markets	Share of quantity	9.2	7.2	11.2	10.2	9.8	4.8
Non-U.S. destination markets	Share of quantity	39.5	34.4	38.0	24.2	35.8	25.5
All destination markets	Share of quantity	100.0	100.0	100.0	100.0	100.0	100.0

Source: Official exports statistics under HS subheading 2918.14 and 2918.15 as reported by the Thai Customs Department in the Global Trade Atlas Suite database, accessed February 29, 2024.

Note: United States is shown at the top. All remaining top export destinations are shown in descending order of 2023 data.

Figure IV-10

CACCS: Average unit values of exports from Thailand to the United States and all non-U.S. destination markets, by year, January 2018 through December 2023



Source: Official exports statistics under HS subheading 2918.14 and 2918.15 as reported by the Thai Customs Department in the Global Trade Atlas Suite database, accessed February 29, 2024.

Subject countries combined

Table IV-24 presents summary data on CACCS operations of the reporting subject producers in the subject countries. Subject countries' combined capacity quantity has decreased by *** percent from 2018 to 2023. Subject countries' combined share of export shipments has decreased by *** percentage points from *** percent in 2018 to *** percent in 2023.

Table IV-24
CACCS: Data on the industry in subject countries, by period

Quantity in 1,000 pounds dry weight; value in 1,000 dollars

Item	Measure	2018	2019	2020
Capacity	Quantity	***	***	***
Production	Quantity	***	***	***
End-of-period inventories	Quantity	***	***	***
Internal consumption and transfers	Quantity	***	***	***
Commercial home market shipments	Quantity	***	***	***
Home market shipments	Quantity	***	***	***
Export shipments	Quantity	***	***	***
Total shipments	Quantity	***	***	***
Internal consumption and transfers	Value	***	***	***
Commercial home market shipments	Value	***	***	***
Home market shipments	Value	***	***	***
Export shipments	Value	***	***	***
Total shipments	Value	***	***	***

Table continued.

Table IV-24 Continued
CACCS: Data on the industry in subject countries, by period

Quantity in 1,000 pounds dry weight; value in 1,000 dollars

Item	Measure	2021	2022	2023
Capacity	Quantity	***	***	***
Production	Quantity	***	***	***
End-of-period inventories	Quantity	***	***	***
Internal consumption and transfers	Quantity	***	***	***
Commercial home market shipments	Quantity	***	***	***
Home market shipments	Quantity	***	***	***
Export shipments	Quantity	***	***	***
Total shipments	Quantity	***	***	***
Internal consumption and transfers	Value	***	***	***
Commercial home market shipments	Value	***	***	***
Home market shipments	Value	***	***	***
Export shipments	Value	***	***	***
Total shipments	Value	***	***	***

Table continued.

Table IV-24 Continued
CACCS: Data on the industry in subject countries, by period

Unit values in dollars per pound dry weight; shares in percent

Item	Measure	2018	2019	2020
Internal consumption and transfers	Unit value	***	***	***
Commercial home market shipments	Unit value	***	***	***
Home market shipments	Unit value	***	***	***
Export shipments	Unit value	***	***	***
Total shipments	Unit value	***	***	***
Capacity utilization ratio	Ratio	***	***	***
Inventory ratio to production	Ratio	***	***	***
Inventory ratio to total shipments	Ratio	***	***	***
Internal consumption and transfers	Share	***	***	***
Commercial home market shipments	Share	***	***	***
Home market shipments	Share	***	***	***
Export shipments	Share	***	***	***
Total shipments	Share	***	***	***

Table continued.

Table IV-24 Continued
CACCS: Data on the industry in subject countries, by period

Unit values in dollars per pound dry weight; shares in percent

Item	Measure	2021	2022	2023
Internal consumption and transfers	Unit value	***	***	***
Commercial home market shipments	Unit value	***	***	***
Home market shipments	Unit value	***	***	***
Export shipments	Unit value	***	***	***
Total shipments	Unit value	***	***	***
Capacity utilization ratio	Ratio	***	***	***
Inventory ratio to production	Ratio	***	***	***
Inventory ratio to total shipments	Ratio	***	***	***
Internal consumption and transfers	Share	***	***	***
Commercial home market shipments	Share	***	***	***
Home market shipments	Share	***	***	***
Export shipments	Share	***	***	***
Total shipments	Share	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Third-country trade actions

Brazil imposed antidumping duties on CACCS from Colombia and Thailand in August 2022. Brazil imposed specific duties on CACCS from Colombia at rates of $257.13/mt for Sucroal and $446.83/mt for all other companies. For CACCS originating in Thailand, Brazil imposed specific rates ranging from zero for Sunshine Biotech up to $244.54/mt for participating companies and $510.18/mt for all other companies.[19]

Global market

The global market has not experienced major changes since the original investigations. China continues to dominate both production and consumption of CACCS. However, new plants have begun operations in Brazil, Hungary, and Turkey.[20] A small company with a capacity of *** mt, dry weight, began producing citric acid in late 2020 in Brazil.[21] In Hungary, construction began in 2020 on a plant with a capacity of *** mt and it is now selling citric acid.[22] Tezkim Tarımsal Kimya started operations in 2020 at a new plant in Turkey with a capacity of 54,000 mt.[23]

Table IV-25 presents global export data for HS subheadings 2918.14 and 2918.15, a category that includes citric acid and certain citrate salts and may contain out-of-scope products (by source in descending order of quantity for 2023). China accounted for between 69.2 and 74.6 percent global export quantities in each year. Belgium and Thailand were the second and third largest global exporters; they were the only sources besides China to account for more than 5 percent of global export quantities in any year. The unit values of U.S. exports were the highest in every year, usually more than twice as high as those from the subject countries. Conversely, China's unit values were the lowest in every year.

[19] Official Diary of the Union, GECEX Resolution No. 384, of August 19, 2022 (English translation), https://www.in.gov.br/en/web/dou/-/resolucao-gecex-n-384-de-19-de-agosto-de-2022-423822482
[20] Chemical Economics Handbook, "Citric Acid," November 2020, p. 9.
[21] Chemical Economics Handbook, "Citric Acid," November 2020, p. 57.
[22] Chemical Economics Handbook, "Citric Acid," November 2020, p. 83; Szolnok, "Citric Acid," July 28, 2023.
[23] Chemical Economics Handbook, "Citric Acid," November 2020, 88; RaillyNews, "Citric Acid Exports from Turkey to 90 Countries," July 19, 2022.

Table IV-25
CACCS: Global exports by exporter and period

Quantity in 1,000 pounds dry weight; value in 1,000 dollars

Exporting country	Measure	2018	2019	2020	2021	2022	2023
United States	Quantity	46,666	41,367	40,359	41,925	52,674	46,898
Belgium	Quantity	289,688	295,821	314,146	321,581	257,896	165,087
Colombia	Quantity	51,901	65,878	70,693	59,072	59,930	67,173
Thailand	Quantity	193,045	186,680	216,080	233,874	177,833	248,206
Subject exporters	Quantity	534,635	548,379	600,919	614,528	495,659	480,466
China	Quantity	2,547,901	2,566,596	2,573,855	2,924,773	3,288,469	3,200,405
Germany	Quantity	149,294	156,024	154,851	175,839	189,461	152,841
Netherlands	Quantity	87,320	118,745	107,837	125,087	104,621	103,989
India	Quantity	15,780	17,241	20,255	31,972	34,968	48,835
Poland	Quantity	36,801	32,915	42,200	48,493	49,709	46,957
Turkey	Quantity	6,761	8,891	13,454	46,532	29,497	35,843
Ireland	Quantity	23,234	19,699	9,310	13,621	16,119	27,599
Brazil	Quantity	27,035	19,200	18,313	26,066	26,964	22,062
All other exporters	Quantity	104,480	149,254	137,243	164,768	131,755	123,384
All reporting exporters	Quantity	3,579,906	3,678,311	3,718,595	4,213,603	4,419,894	4,289,280
United States	Value	65,097	65,429	60,875	65,388	92,283	98,312
Belgium	Value	185,851	162,893	169,701	205,541	297,785	151,060
Colombia	Value	30,704	33,892	34,471	32,704	60,564	65,993
Thailand	Value	98,986	90,367	102,768	200,410	200,086	205,698
Subject exporters	Value	315,542	287,152	306,941	438,655	558,436	422,751
China	Value	887,555	774,269	742,044	1,370,917	2,472,625	1,266,143
Germany	Value	163,365	164,676	169,703	215,377	298,347	251,079
Netherlands	Value	53,568	101,061	84,810	114,672	141,119	87,028
India	Value	15,752	16,767	19,913	37,865	58,566	48,876
Poland	Value	21,072	16,678	19,259	39,778	67,021	36,988
Turkey	Value	3,385	4,048	5,544	28,220	34,337	26,187
Ireland	Value	25,455	21,087	9,878	15,618	20,837	43,011
Brazil	Value	18,866	13,031	11,759	17,256	23,652	24,889
All other exporters	Value	123,455	112,644	114,370	228,614	191,289	144,313
All reporting exporters	Value	1,693,110	1,576,842	1,545,097	2,572,361	3,958,513	2,449,577

Table continued.

Table IV-25 Continued
CACCS: Global exports by exporter and period

Unit values in dollars per pound dry weight; shares in percent

Exporting country	Measure	2018	2019	2020	2021	2022	2023
United States	Unit value	1.39	1.58	1.51	1.56	1.75	2.10
Belgium	Unit value	0.64	0.55	0.54	0.64	1.15	0.92
Colombia	Unit value	0.59	0.51	0.49	0.55	1.01	0.98
Thailand	Unit value	0.51	0.48	0.48	0.86	1.13	0.83
Subject exporters	Unit value	0.59	0.52	0.51	0.71	1.13	0.88
China	Unit value	0.35	0.30	0.29	0.47	0.75	0.40
Germany	Unit value	1.09	1.06	1.10	1.22	1.57	1.64
Netherlands	Unit value	0.61	0.85	0.79	0.92	1.35	0.84
India	Unit value	1.00	0.97	0.98	1.18	1.67	1.00
Poland	Unit value	0.57	0.51	0.46	0.82	1.35	0.79
Turkey	Unit value	0.50	0.46	0.41	0.61	1.16	0.73
Ireland	Unit value	1.10	1.07	1.06	1.15	1.29	1.56
Brazil	Unit value	0.70	0.68	0.64	0.66	0.88	1.13
All other exporters	Unit value	1.18	0.75	0.83	1.39	1.45	1.17
All reporting exporters	Unit value	0.47	0.43	0.42	0.61	0.90	0.57
United States	Share of quantity	1.3	1.1	1.1	1.0	1.2	1.1
Belgium	Share of quantity	8.1	8.0	8.4	7.6	5.8	3.8
Colombia	Share of quantity	1.4	1.8	1.9	1.4	1.4	1.6
Thailand	Share of quantity	5.4	5.1	5.8	5.6	4.0	5.8
Subject exporters	Share of quantity	14.9	14.9	16.2	14.6	11.2	11.2
China	Share of quantity	71.2	69.8	69.2	69.4	74.4	74.6
Germany	Share of quantity	4.2	4.2	4.2	4.2	4.3	3.6
Netherlands	Share of quantity	2.4	3.2	2.9	3.0	2.4	2.4
India	Share of quantity	0.4	0.5	0.5	0.8	0.8	1.1
Poland	Share of quantity	1.0	0.9	1.1	1.2	1.1	1.1
Turkey	Share of quantity	0.2	0.2	0.4	1.1	0.7	0.8
Ireland	Share of quantity	0.6	0.5	0.3	0.3	0.4	0.6
Brazil	Share of quantity	0.8	0.5	0.5	0.6	0.6	0.5
All other exporters	Share of quantity	2.9	4.1	3.7	3.9	3.0	2.9
All reporting exporters	Share of quantity	100.0	100.0	100.0	100.0	100.0	100.0

Source: Official export statistics under HS subheadings 2918.14 and 2918.15, as reported by various national statistical authorities in the Global Trade Atlas database, accessed February 29, 2024.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "---". United States is shown at the top followed by the countries under order, all remaining top exporting countries in descending order of 2023 data.

Part V: Pricing data

Factors affecting prices

Raw material costs

The primary raw material for CACCS production is a starch ("substrate") that is fermented by yeast or mold. The substrate varies by producer depending on proximity to the production plant and cost, which varies by region.[1] Domestically produced CACCS typically begins with a corn starch substrate, Belgian CACCS with beet sugar molasses, Colombian CACCS with sugarcane, and Thai CACCS with tapioca.[2] During January 2018-December 2023, costs increased the most for EU sugar, followed by U.S. corn and then Thai tapioca; costs of Colombian sugar fell (table V-1 and figure V-1).[3]

Most U.S. producers and importers indicated that raw material costs had risen. U.S. producer *** and two importers indicated that raw material costs had risen steadily since January 1, 2018, while U.S. producer *** and five importers indicated that raw material costs had fluctuated up. U.S. producer *** and two importers indicated that raw material costs had remained unchanged, and one importer indicated that raw material costs had fluctuated down. In additional comments, a few firms described increasing raw material costs as pressuring CACCS prices upward, to varying degrees.

When asked how they anticipated raw material costs to change, firms had a somewhat wider range of answers. U.S. producer *** and one importer reported anticipating a steady increase; U.S. producer *** and two importers reported anticipating a fluctuating increase; and U.S. producer *** and two importers anticipated unchanged raw material costs. Two importers anticipated that raw material costs would fluctuate down while one anticipated a steady decrease.

Eight purchasers indicated that they were not familiar with the costs of raw materials used to produce CACCS, and seven indicated that they were. Of these seven purchasers, four

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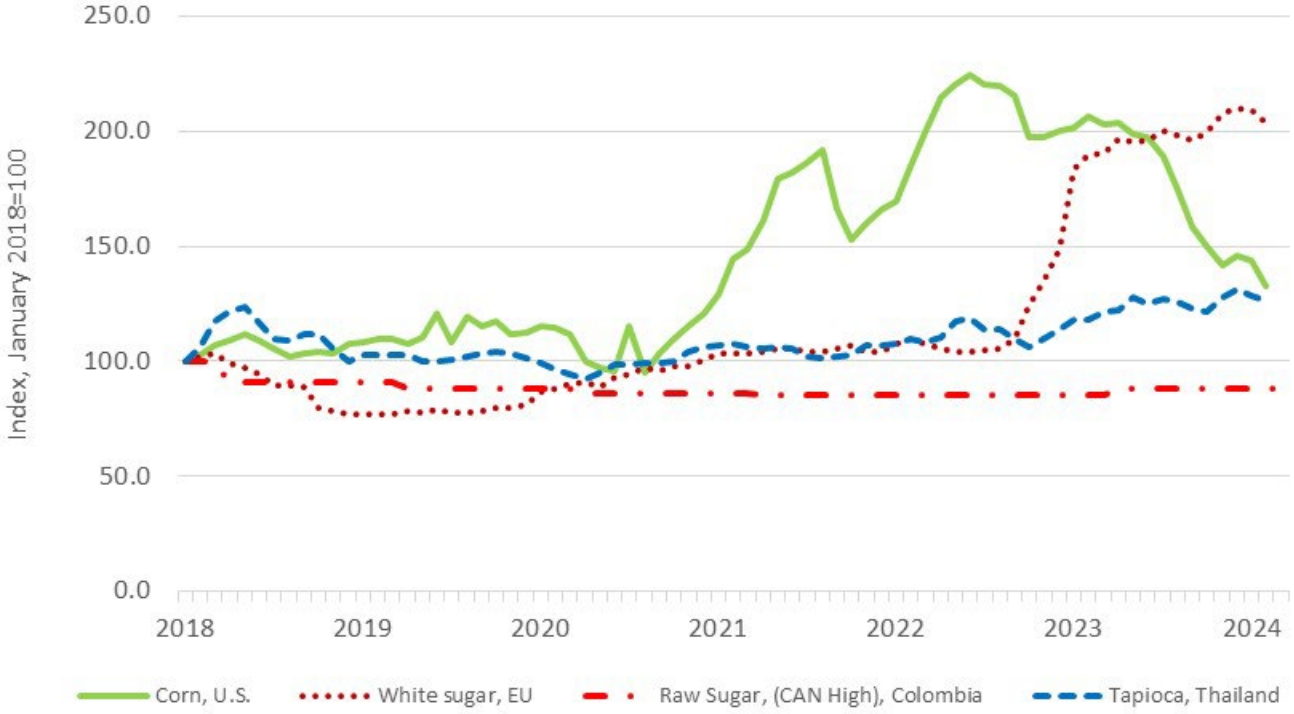
[1] Conference transcript, p. 68 (Erickson).

[2] Petition, p. 35. Producers usually choose substrates that are the lowest cost and most readily available; the substrates typically do not change. Each producer has its own in-house bred yeast or mold that is designed to achieve optimal yields based on specific plant conditions and specific substrates. It is generally not possible to switch between substrates in production. Conference transcript, pp. 35-36 (Anderson), 75 (Erickson), and 87 (Erickson).

[3] Petitioners described the costs of corn as a small part of the overall cost of citric acid. Petitioners' posthearing brief, exhibit 1, p. 22.

indicated that information on raw materials had affected their CACCS negotiations and/or purchases since January 1, 2018. *** described cost fluctuations following the corn market. *** also described corn futures prices as a factor to determine CACCS pricing ***. *** described corn costs as usually stable and only a fraction of CACCS costs. An additional purchaser (***), which did not indicate familiarity with the costs of raw materials, stated that suppliers often cite increased raw materials costs as reasons for proposed CACCS price increases.

Figure V-1
Substrate prices: Indexed regional prices of corn (United States), white sugar (EU), raw sugar (Colombia), and tapioca (Thailand), January 2018-March 2024



Sources: USDA, Prices Received: Corn Prices Received by Month, US. https://www.nass.usda.gov/Charts_and_Maps/Agricultural_Prices/pricecn.php . accessed March 20, 2024; European Commission White Sugar data for region 2, https://agriculture.ec.europa.eu/data-and-analysis/markets/price-data/price-monitoring-sector/sugar_en accessed March 20, 2024; USDA FAS GAIN Reports: Colombia, Sugar Annual 2018, 2019, 2020, 2021, 2022, and 2023. https://gain.fas.usda.gov/Pages/Default.aspx ; The Tapioca Starch Association, Weekly Tapioca Starch Price, http://www.thaitapiocastarch.org/en/information/statistics/weekly_tapioca_starch_price ; Federal Reserve Economic Data, Thai Baht to One U.S. dollar, and U.S. dollars to One Euro, monthly, not seasonally adjusted, https://fred.stlouisfed.org/, accessed March 20, 2024.
Note: The best price information for raw sugar in Colombia is the Andean Community's established price bands that are revised every April. Additionally, Colombia has a sugar price stabilization fund that provides incentives for sugar exports to avoid oversupply and low prices in the domestic market.
Note: Indexes were calculated after converting EU and Thai data to dollars.

Table V-1
Substrate prices: Indexed regional prices of corn (United States), white sugar (EU), raw sugar (Colombia), and tapioca (Thailand), January 2018-March 2024

Indexed prices in percent, January 2018=100.0

Year	Month	U.S. corn prices	White sugar price, Europe	Raw sugar (CAN High) Colombia	Thai tapioca starch price
2018	January	100.0	100.0	100.0	100.0
2018	February	102.7	101.7	100.0	106.5
2018	March	106.7	103.6	100.0	117.3
2018	April	108.8	99.5	90.6	121.7
2018	May	111.9	96.9	90.6	123.4
2018	June	108.8	94.2	90.6	116.9
2018	July	105.5	89.5	90.6	109.7
2018	August	102.1	89.5	90.6	108.8
2018	September	103.3	89.1	90.6	112.0
2018	October	104.0	79.7	90.6	112.0
2018	November	103.6	78.6	90.6	105.3
2018	December	107.6	76.7	90.6	100.2
2019	January	108.2	77.2	90.6	102.5
2019	February	109.4	77.2	90.6	102.5
2019	March	109.7	77.1	90.6	102.5
2019	April	107.3	78.5	88.4	102.6
2019	May	110.3	77.6	88.4	100.2
2019	June	121.0	78.9	88.4	100.2
2019	July	108.2	77.6	88.4	100.8
2019	August	119.5	77.5	88.4	101.9
2019	September	115.5	78.2	88.4	103.3
2019	October	117.0	79.5	88.4	104.1
2019	November	111.9	79.7	88.4	103.4
2019	December	112.8	81.4	88.4	101.6
2020	January	115.2	86.5	88.4	99.3
2020	February	114.9	87.7	88.4	96.3
2020	March	111.9	90.3	88.4	94.1
2020	April	100.0	90.6	85.7	92.4
2020	May	97.3	88.9	85.7	94.9
2020	June	96.0	92.8	85.7	98.6

Table continued.

Table V-1--Continued
Substrate prices: Indexed regional prices of corn (United States), white sugar (EU), raw sugar (Colombia), and tapioca (Thailand), January 2018-March 2024

Indexed prices in percent, January 2018=100.0

Year	Month	U.S. corn prices	White sugar price, Europe	Raw sugar (CAN High) Colombia	Thai tapioca starch price
2020	July	115.2	94.7	85.7	98.2
2020	August	94.8	97.0	85.7	99.5
2020	September	103.6	95.8	85.7	99.1
2020	October	109.7	98.1	85.7	99.7
2020	November	115.2	98.0	85.7	103.8
2020	December	120.7	100.3	85.7	106.5
2021	January	128.9	103.4	85.7	106.8
2021	February	144.4	103.2	85.7	107.6
2021	March	148.6	103.7	85.7	106.4
2021	April	161.4	104.0	85.5	105.4
2021	May	179.6	105.6	85.5	106.3
2021	June	182.4	105.3	85.5	105.7
2021	July	186.0	104.1	85.5	102.3
2021	August	192.1	103.9	85.5	101.1
2021	September	166.3	105.4	85.5	102.0
2021	October	152.6	107.1	85.5	102.6
2021	November	159.9	103.9	85.5	106.9
2021	December	166.3	104.3	85.5	106.8
2022	January	169.6	107.5	85.5	107.9
2022	February	185.1	109.5	85.5	109.8
2022	March	199.4	107.9	85.5	108.6
2022	April	214.9	105.7	85.3	110.4
2022	May	220.7	104.0	85.3	117.2
2022	June	224.3	104.0	85.3	118.8
2022	July	220.4	104.5	85.3	113.9
2022	August	220.1	105.2	85.3	114.1
2022	September	215.5	109.9	85.3	109.4
2022	October	197.3	124.0	85.3	106.1
2022	November	197.3	134.6	85.3	109.4
2022	December	200.0	148.5	85.3	113.5

Table continued.

Table V-1--Continued
Substrate prices: Indexed regional prices of corn (United States), white sugar (EU), raw sugar (Colombia), and tapioca (Thailand), January 2018-March 2024

Indexed prices in percent, January 2018=100.0

Year	Month	U.S. corn prices	White sugar price, Europe	Raw sugar (CAN High) Colombia	Thai tapioca starch price
2023	January	201.5	183.3	85.3	118.2
2023	February	206.7	189.4	85.3	118.2
2023	March	202.7	190.8	85.3	121.2
2023	April	203.6	197.0	87.8	122.1
2023	May	198.8	195.3	87.8	127.4
2023	June	197.3	196.3	87.8	125.3
2023	July	189.1	200.4	87.8	127.1
2023	August	174.2	198.0	87.8	125.4
2023	September	158.4	195.8	87.8	123.0
2023	October	149.8	199.6	87.8	121.8
2023	November	141.6	207.9	87.8	127.9
2023	December	145.9	209.8	87.8	131.0
2024	January	144.1	209.3	87.8	128.6
2024	February	132.5	203.6	87.8	126.2
2024	March	--	--	87.8	--

Sources: USDA, Prices Received: Corn Prices Received by Month, US. https://www.nass.usda.gov/Charts_and_Maps/Agricultural_Prices/pricecn.php . accessed March 20, 2024; European Commission White Sugar data for region 2, https://agriculture.ec.europa.eu/data-and-analysis/markets/price-data/price-monitoring-sector/sugar_en accessed March 20, 2024; USDA FAS GAIN Reports: Colombia, Sugar Annual 2018, 2019, 2020, 2021, 2022, and 2023. https://gain.fas.usda.gov/Pages/Default.aspx ; The Tapioca Starch Association, Weekly Tapioca Starch Price, http://www.thaitapiocastarch.org/en/information/statistics/weekly_tapioca_starch_price ; Federal Reserve Economic Data, Thai Baht to One U.S. dollar, and U.S. dollars to One Euro, monthly, not seasonally adjusted, https://fred.stlouisfed.org/, accessed March 20, 2024.
Note: The best price information for raw sugar in Colombia is the Andean Community's established price bands that are revised every April. Additionally, Colombia has a sugar price stabilization fund that provides incentives for sugar exports to avoid oversupply and low prices in the domestic market.
Note: Indexes were calculated after converting EU and Thai data to dollars.

Transportation costs to the U.S. market

Transportation costs for CACCS shipped from subject countries to the United States averaged 8.7 percent for Belgium, 3.2 percent for Colombia, and 7.1 percent for Thailand during 2023. These estimates were derived from official import data and represent the transportation and other charges on imports.[4]

U.S. inland transportation costs

Two responding U.S. producers and two responding importers reported that their purchasers typically arrange transportation to their customers, while one responding U.S. producer and eight importers stated that they themselves did.[5] U.S. producers reported that their U.S. inland transportation costs ranged from 6.0 to 13.0 percent, while two responding importers reported costs of 5.0 percent (and no others reported any U.S. inland transportation costs).

Pricing practices

Pricing methods

U.S. producers and importers reported setting prices mostly using transaction-by-transaction negotiations and contracts (table V-2). Petitioners indicated that ***.[6]

[4] The estimated transportation costs were obtained by subtracting the customs value from the c.i.f. value of the imports for 2023 and then dividing by the customs value based on the HTS statistical reporting numbers 2918.14.0000, 2918.15.1000, 2918.15.5000, accessed March 7, 2024.

[5] Three importers indicated that they shipped CACCS to U.S. customers from their point of importation, and two stated that they did so from a storage facility.

[6] Petitioners' posthearing brief, exhibit 1, p. 22.

Table V-2
CACCS: Count of U.S. producers' and importers' reported price setting methods

Method	U.S. producers	Importers
Transaction-by-transaction	2	7
Contract	3	5
Set price list	0	1
Other	0	0
Responding firms	3	11

Source: Compiled from data submitted in response to Commission questionnaires.

Note: The sum of responses down may not add up to the total number of responding firms as each firm was instructed to check all applicable price setting methods employed.

U.S. producers reported selling the majority of their CACCS under annual contracts, while importers and foreign producers sold most of their CACCS under short-term contracts (table V-3).

Table V-3
CACCS: U.S. producers' and importers' shares of commercial U.S. shipments by type of sale, 2023

Share in percent

Type of sale	U.S. producers	Importers	Foreign producers
Long-term contracts	***	***	***
Annual contracts	***	***	***
Short-term contracts	***	***	***
Spot sales	***	***	***
Total	100.0	100.0	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Because of rounding, figures may not add to the totals shown.

U.S. producer *** indicated that its short-term contracts are for *** days. *** indicated that their long-term contracts were for two years, while *** indicated its long-term contracts were for three years. U.S. importer *** short-term contracts were for *** days.

*** use *** that allow price renegotiation and fix price only, while ***. Importers *** used contracts that ***. No U.S. producer or importer reported that their contracts were linked to a raw material index.

Six purchasers reported that they purchase product monthly, three purchase weekly, and one each purchase daily, annually, and quarterly. Other purchasers reported bimonthly purchases or as-needed purchases. Nine purchasers contact 1 to 3 suppliers before making a

purchase. However, *** generally contacted more, and even as many as 10.

Thirteen purchasers indicated that their preferred sourcing strategy is to use multiple sources (i.e., both domestic and imported) for reasons including customer requirements, price, availability, and avoidance of supply disruptions from a single source. Two purchasers (***) indicated that they use a global (i.e., standard for all global operations) sourcing strategy. One purchaser (***) indicated it uses a single source strategy due to ***.

Twelve purchasers indicated that their purchases of CACCS generally involved negotiations with their suppliers, while four indicated that they did not. Those purchasers using negotiations described the negotiations as centered around volume, pricing, payment terms, and availability. Three purchasers reported sharing at least some information about competitor prices, and three indicated that they did not do so at all.

Sales terms and discounts

Three U.S. producers typically quote prices on an f.o.b. mill basis, while five importers typically quoted prices for subject CACCS on a delivered basis. U.S. producer *** offered annual and quantity discounts. No other U.S. producer or importer reported offering any discounts.

Price leadership

Six of 16 responding purchasers listed one or more CACCS producers as price leaders in the CACCS market.[7] Three purchasers named Cargill, three named Primient, and one named Chinese producer RZBC. Purchaser *** described *** as leading by "always" pushing prices higher. On the other hand, *** described *** as leading by providing competitive pricing. *** described *** as leading by setting the U.S. market price. *** indicated that *** leads through its ***.

[7] One additional purchaser named ***.

Price data

The Commission requested U.S. producers and importers to provide quarterly data for the total quantity and f.o.b. value of the following CACCS products shipped to unrelated U.S. customers during January 2018-December 2023.

Product 1.-- Citric acid, fine granular, in dry form in 25 kilogram and 50 pound bags, spot/short term sales.

Product 2.-- Citric acid, fine granular, in dry form in 25 kilogram and 50 pound bags, annual contract sales.

Product 3.-- Citric acid, granular, in dry form packed in bulk sacks ("supersacks"), spot/short term sales.

Product 4.-- Citric acid, granular, in dry form packed in bulk sacks ("supersacks"), annual contract sales.

Three U.S. producers and five importers provided usable pricing data for sales of the requested products, although not all firms reported pricing for all products for all quarters.[8] Pricing data reported by these firms accounted for approximately 61.5 percent of U.S. producers' U.S. shipments of CACCS, 100.0 percent of U.S. shipments of subject imports from Belgium, and 88.7 percent of U.S. shipments of subject imports from Colombia in 2023. No pricing data were received from Thailand in 2023.[9]

Price data for products 1-4 are presented in tables V-4 to V-7 and figures V-2 to V-5.

[8] Per-unit pricing data are calculated from total quantity and total value data provided by U.S. producers and importers. The precision and variation of these figures may be affected by rounding, limited quantities, and producer or importer estimates.

[9] Pricing coverage is based on U.S. shipments reported in questionnaires.

Table V-4
CACCS: Weighted-average f.o.b. prices and quantities of domestic and imported product 1 and margins of underselling/(overselling), by source and quarter

Price in dollars per pound dry weight, quantity in pounds dry weight, margin in percent.

Period	U.S. price	U.S. quantity	Belgium price	Belgium quantity	Belgium margin
2018 Q1	***	***	***	***	***
2018 Q2	***	***	***	***	***
2018 Q3	***	***	***	***	***
2018 Q4	***	***	***	***	***
2019 Q1	***	***	***	***	***
2019 Q2	***	***	***	***	***
2019 Q3	***	***	***	***	***
2019 Q4	***	***	***	***	***
2020 Q1	***	***	***	***	***
2020 Q2	***	***	***	***	***
2020 Q3	***	***	***	***	***
2020 Q4	***	***	***	***	***
2021 Q1	***	***	***	***	***
2021 Q2	***	***	***	***	***
2021 Q3	***	***	***	***	***
2021 Q4	***	***	***	***	***
2022 Q1	***	***	***	***	***
2022 Q2	***	***	***	***	***
2022 Q3	***	***	***	***	***
2022 Q4	***	***	***	***	***
2023 Q1	***	***	***	***	***
2023 Q2	***	***	***	***	***
2023 Q3	***	***	***	***	***
2023 Q4	***	***	***	***	***

Table continued.

Table V-4 Continued
CACCS: Weighted-average f.o.b. prices and quantities of domestic and imported product 1 and margins of underselling/(overselling), by source and quarter

Price in dollars per pound dry weight, quantity in pounds dry weight, margin in percent.

Period	Colombia price	Colombia quantity	Colombia margin	Thailand price	Thailand quantity	Thailand margin
2018 Q1	***	***	***	***	***	***
2018 Q2	***	***	***	***	***	***
2018 Q3	***	***	***	***	***	***
2018 Q4	***	***	***	***	***	***
2019 Q1	***	***	***	***	***	***
2019 Q2	***	***	***	***	***	***
2019 Q3	***	***	***	***	***	***
2019 Q4	***	***	***	***	***	***
2020 Q1	***	***	***	***	***	***
2020 Q2	***	***	***	***	***	***
2020 Q3	***	***	***	***	***	***
2020 Q4	***	***	***	***	***	***
2021 Q1	***	***	***	***	***	***
2021 Q2	***	***	***	***	***	***
2021 Q3	***	***	***	***	***	***
2021 Q4	***	***	***	***	***	***
2022 Q1	***	***	***	***	***	***
2022 Q2	***	***	***	***	***	***
2022 Q3	***	***	***	***	***	***
2022 Q4	***	***	***	***	***	***
2023 Q1	***	***	***	***	***	***
2023 Q2	***	***	***	***	***	***
2023 Q3	***	***	***	***	***	***
2023 Q4	***	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Product 1: Citric acid, fine granular, in dry form in 25 kilogram and 50 pound bags, spot/short term sales.

Figure V-2
CACCS: Weighted-average prices and quantities of domestic and imported product 1, by source and quarter

Price of product 1

* * * * * * *

Volume of product 1

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Product 1: Citric acid, fine granular, in dry form in 25 kilogram and 50 pound bags, spot/short term sales.

Table V-5
CACCS: Weighted-average f.o.b. prices and quantities of domestic and imported product 2 and margins of underselling/(overselling), by source and quarter

Price in dollars per pound dry weight, quantity in pounds dry weight, margin in percent.

Period	U.S. price	U.S. quantity	Belgium price	Belgium quantity	Belgium margin
2018 Q1	***	***	***	***	***
2018 Q2	***	***	***	***	***
2018 Q3	***	***	***	***	***
2018 Q4	***	***	***	***	***
2019 Q1	***	***	***	***	***
2019 Q2	***	***	***	***	***
2019 Q3	***	***	***	***	***
2019 Q4	***	***	***	***	***
2020 Q1	***	***	***	***	***
2020 Q2	***	***	***	***	***
2020 Q3	***	***	***	***	***
2020 Q4	***	***	***	***	***
2021 Q1	***	***	***	***	***
2021 Q2	***	***	***	***	***
2021 Q3	***	***	***	***	***
2021 Q4	***	***	***	***	***
2022 Q1	***	***	***	***	***
2022 Q2	***	***	***	***	***
2022 Q3	***	***	***	***	***
2022 Q4	***	***	***	***	***
2023 Q1	***	***	***	***	***
2023 Q2	***	***	***	***	***
2023 Q3	***	***	***	***	***
2023 Q4	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Product 2: Citric acid, fine granular, in dry form in 25 kilogram and 50 pound bags, annual contract sales.

Figure V-3
CACCS: Weighted-average prices and quantities of domestic and imported product 2, by source and quarter

Price of product 2

* * * * * * *

Volume of product 2

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Product 2: Citric acid, fine granular, in dry form in 25 kilogram and 50 pound bags, annual contract sales.

Table V-6
CACCS: Weighted-average f.o.b. prices and quantities of domestic and imported product 3 and margins of underselling/(overselling), by source and quarter

Price in dollars per pound dry weight, quantity in pounds dry weight, margin in percent.

Period	U.S. price	U.S. quantity	Belgium price	Belgium quantity	Belgium margin
2018 Q1	***	***	***	***	***
2018 Q2	***	***	***	***	***
2018 Q3	***	***	***	***	***
2018 Q4	***	***	***	***	***
2019 Q1	***	***	***	***	***
2019 Q2	***	***	***	***	***
2019 Q3	***	***	***	***	***
2019 Q4	***	***	***	***	***
2020 Q1	***	***	***	***	***
2020 Q2	***	***	***	***	***
2020 Q3	***	***	***	***	***
2020 Q4	***	***	***	***	***
2021 Q1	***	***	***	***	***
2021 Q2	***	***	***	***	***
2021 Q3	***	***	***	***	***
2021 Q4	***	***	***	***	***
2022 Q1	***	***	***	***	***
2022 Q2	***	***	***	***	***
2022 Q3	***	***	***	***	***
2022 Q4	***	***	***	***	***
2023 Q1	***	***	***	***	***
2023 Q2	***	***	***	***	***
2023 Q3	***	***	***	***	***
2023 Q4	***	***	***	***	***

Tabled continued.

Table V-6 Continued
CACCS: Weighted-average f.o.b. prices and quantities of domestic and imported product 3 and margins of underselling/(overselling), by source and quarter

Price in dollars per pound dry weight, quantity in pounds dry weight, margin in percent.

Period	Colombia price	Colombia quantity	Colombia margin
2018 Q1	***	***	***
2018 Q2	***	***	***
2018 Q3	***	***	***
2018 Q4	***	***	***
2019 Q1	***	***	***
2019 Q2	***	***	***
2019 Q3	***	***	***
2019 Q4	***	***	***
2020 Q1	***	***	***
2020 Q2	***	***	***
2020 Q3	***	***	***
2020 Q4	***	***	***
2021 Q1	***	***	***
2021 Q2	***	***	***
2021 Q3	***	***	***
2021 Q4	***	***	***
2022 Q1	***	***	***
2022 Q2	***	***	***
2022 Q3	***	***	***
2022 Q4	***	***	***
2023 Q1	***	***	***
2023 Q2	***	***	***
2023 Q3	***	***	***
2023 Q4	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Product 3: Citric acid, granular, in dry form packed in bulk sacks (“supersacks”), spot/short term sales.

Figure V-4
CACCS: Weighted-average prices and quantities of domestic and imported product 3, by source and quarter

Price of product 3

* * * * * * *

Volume of product 3

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Product 3: Citric acid, granular, in dry form packed in bulk sacks (“supersacks”), spot/short term sales.

Table V-7
CACCS: Weighted-average f.o.b. prices and quantities of domestic and imported product 4 and margins of underselling/(overselling), by source and quarter

Price in dollars per pound dry weight, quantity in pounds dry weight.

Period	U.S. price	U.S. quantity
2018 Q1	***	***
2018 Q2	***	***
2018 Q3	***	***
2018 Q4	***	***
2019 Q1	***	***
2019 Q2	***	***
2019 Q3	***	***
2019 Q4	***	***
2020 Q1	***	***
2020 Q2	***	***
2020 Q3	***	***
2020 Q4	***	***
2021 Q1	***	***
2021 Q2	***	***
2021 Q3	***	***
2021 Q4	***	***
2022 Q1	***	***
2022 Q2	***	***
2022 Q3	***	***
2022 Q4	***	***
2023 Q1	***	***
2023 Q2	***	***
2023 Q3	***	***
2023 Q4	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Product 4: Citric acid, granular, in dry form packed in bulk sacks (“supersacks”), annual contract sales.

Figure V-5
CACCS: Weighted-average prices and quantities of domestic and imported product 4, by source and quarter

Price of product 4

* * * * * * *

Volume of product 4

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Product 4: Citric acid, granular, in dry form packed in bulk sacks (“supersacks”), annual contract sales.

Price trends

In general, prices increased during January 2018-December 2023. Table V-8 summarizes the price trends, by country and by product. As shown in the table, domestic price increases ranged from *** to *** percent during 2018-23 while import price increases ranged from *** to *** percent.

Table V-8
CACCS: Summary of price data, by product and source, January 2018-December 2023

Quantity in 1,000 pounds dry weight, price in dollars per pound dry weight, change in percent

Product	Source	Number of quarters	Quantity	Low price	High price	First quarter price	Last quarter price	Percent change in price over period
Product 1	United States	***	***	***	***	***	***	***
Product 1	Belgium	***	***	***	***	***	***	***
Product 1	Colombia	***	***	***	***	***	***	***
Product 1	Thailand	***	***	***	***	***	***	***
Product 2	United States	***	***	***	***	***	***	***
Product 2	Belgium	***	***	***	***	***	***	***
Product 2	Colombia	***	***	***	***	***	***	***
Product 2	Thailand	***	***	***	***	***	***	***
Product 3	United States	***	***	***	***	***	***	***
Product 3	Belgium	***	***	***	***	***	***	***
Product 3	Colombia	***	***	***	***	***	***	***
Product 3	Thailand	***	***	***	***	***	***	***
Product 4	United States	***	***	***	***	***	***	***
Product 4	Belgium	***	***	***	***	***	***	***
Product 4	Colombia	***	***	***	***	***	***	***
Product 4	Thailand	***	***	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

Note: Percent change column is percentage change from the first quarter 2018 to the fourth quarter of 2023.

Price comparisons[10]

As shown in tables V-9 and V-10, prices for CACCS imported from subject countries were below those for U.S.-produced product in 31 of 110 instances; margins of underselling ranged from *** to *** percent. In the remaining 79 instances, prices for CACCS from subject countries were between *** and *** percent above prices for the domestic product.

Table V-9
CACCS: Instances of underselling and overselling and the range and average of margins, by product

Quantity in 1,000 pounds dry weight; margin in percent

Product	Type	Number of quarters	Quantity	Average margin	Min margin	Max margin
Product 1	Underselling	16	***	***	***	***
Product 2	Underselling	2	***	***	***	***
Product 3	Underselling	13	***	***	***	***
Product 4	Underselling	---	***	***	***	***
All products	Underselling	31	62,295	8.6	0.2	40.6
Product 1	Overselling	35	***	***	***	***
Product 2	Overselling	18	***	***	***	***
Product 3	Overselling	26	***	***	***	***
Product 4	Overselling	---	***	***	***	***
All products	Overselling	79	87,045	(19.3)	(0.1)	(174.7)

Source: Compiled from data submitted in response to Commission questionnaires.

Note: These data include only quarters in which there is a comparison between the U.S. and subject product.

[10] In the original investigations, subject imports from Belgium were priced lower than domestic product in *** of *** comparisons, with underselling margins ranging from *** to *** percent; subject imports from Colombia were priced lower than domestic product in *** of *** comparisons, with underselling margins ranging from *** to *** percent; and subject imports from Thailand were priced lower than domestic product in *** of *** comparisons, with underselling margins ranging from *** to *** percent. *CACCS from Belgium, Colombia, and Thailand, Inv. Nos. 731-TA-1374-1376 (Final)*, USITC Publication 4799, July 2018, p. V-11.

Table V-10
CACCS: Instances of underselling and overselling and the range and average of margins, by country

Quantity in 1,000 pounds dry weight; margin in percent

Source	Type	Number of quarters	Quantity	Average margin	Min margin	Max margin
Belgium	Underselling	14	***	***	***	***
Colombia	Underselling	17	***	***	***	***
Thailand	Underselling	---	***	***	***	***
All subject countries	Underselling	31	62,295	8.6	0.2	40.6
Belgium	Overselling	45	***	***	***	***
Colombia	Overselling	31	***	***	***	***
Thailand	Overselling	3	***	***	***	***
All subject countries	Overselling	79	87,045	(19.3)	(0.1)	(174.7)

Source: Compiled from data submitted in response to Commission questionnaires.

Note: These data include only quarters in which there is a comparison between the U.S. and subject product.

Other price comparison information

U.S. producers, importers, and foreign producers were asked to compare CACCS prices in U.S. and non-U.S. markets. Two U.S. producers and five importers were unaware of prices in non-U.S. markets. U.S. producer *** stated that CACCS prices in Brazil were decreasing due to imports of CACCS from third countries. Importer *** stated that U.S. and non-U.S. prices are generally comparable, but the U.S. market is characterized by demand for certified products (e.g., non-GMO, kosher, halal, etc.). Importer *** stated that price levels in different national markets are strongly influenced by the trade defense measures in place against imports from China. It also stated that the United States has the strongest measures and highest prices, followed by the EU, and then by countries that have no trade defense measures. However, *** stated that EU-origin CACCS has higher prices than that from other sources.

Among foreign producers, *** described U.S. CACCS prices as generally comparable to prices in other markets, with the exception of some demand for high-quality, certified CACCS (e.g,, non-GMO, kosher, and halal) that are priced higher than non-certified CACCS. *** described *** CACCS as generally higher than CACCS prices sold to the U.S. market.

APPENDIX A

FEDERAL REGISTER NOTICES

The Commission makes available notices relevant to its investigations and reviews on its website, www.usitc.gov. In addition, the following tabulation presents, in chronological order, *Federal Register* notices issued by the Commission and Commerce during the current proceeding.

Citation	Title	Link
88 FR 35832 June 1, 2023	*Initiation of Five-Year (Sunset) Reviews*	https://www.govinfo.gov/content/pkg/FR-2023-06-01/pdf/2023-11680.pdf
88 FR 35923 June 1, 2023	*Citric Acid and Certain Citrate Salts From Belgium, Colombia, and Thailand; Institution of Five-Year Reviews*	https://www.govinfo.gov/content/pkg/FR-2023-06-01/pdf/2023-11496.pdf
88 FR 66052 September 26, 2023	*Citric Acid and Certain Citrate Salts From Belgium, Colombia, and Thailand; Notice of Commission Determinations to Conduct Full Five-Year Reviews*	https://www.govinfo.gov/content/pkg/FR-2023-09-26/pdf/2023-20886.pdf
88 FR 67239 September 29, 2023	*Citric Acid and Certain Citrate Salts From Thailand and Colombia: Final Results of the Expedited First Sunset Reviews of the Antidumping Duty Orders*	https://www.govinfo.gov/content/pkg/FR-2023-09-29/pdf/2023-21383.pdf
88 FR 81099 November 21, 2023	*Citric Acid and Certain Citrate Salts From Belgium, Colombia, and Thailand; Scheduling of Full Five-Year Reviews*	https://www.govinfo.gov/content/pkg/FR-2023-11-21/pdf/2023-25679.pdf
88 FR 88361 December 21, 2023	*Citric Acid and Certain Citrate Salts From Belgium: Final Results of the Sunset Review of the Antidumping Duty Order*	https://www.govinfo.gov/content/pkg/FR-2023-12-21/pdf/2023-28138.pdf

APPENDIX B

HEARING CANCELLATION

The hearing scheduled for May 16, 2024
on Citric Acid and Certain Citrate Salts from Belgium,
Colombia, and Thailand (Review) was canceled. For more
information, see 89 FR 44707, May 21, 2024.

APPENDIX C

SUMMARY DATA

Table C-1
CACCS: Summary data concerning the U.S. market, by item and period
Quantity=1,000 pounds dry weight; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per pound dry weight

Item	Reported data					
	Calendar year					
	2018	2019	2020	2021	2022	2023
U.S. consumption quantity:						
Amount	***	***	***	***	***	***
Producers' share (fn1)	***	***	***	***	***	***
Importers' share (fn1):						
Belgium	***	***	***	***	***	***
Colombia	***	***	***	***	***	***
Thailand	***	***	***	***	***	***
Subject sources	***	***	***	***	***	***
Nonsubject sources	***	***	***	***	***	***
All import sources	***	***	***	***	***	***
U.S. consumption value:						
Amount	559,796	545,709	575,466	743,144	1,122,992	1,052,147
Producers' share (fn1)	53.1	54.6	52.0	39.4	44.9	41.9
Importers' share (fn1):						
Belgium	1.1	1.1	1.2	1.2	1.4	0.6
Colombia	2.3	1.3	1.5	1.1	1.8	3.5
Thailand	12.5	12.9	13.2	20.7	18.1	17.3
Subject sources	15.9	15.3	15.9	23.0	21.4	21.5
Nonsubject sources	30.9	30.2	32.1	37.6	33.7	36.5
All import sources	46.9	45.4	48.0	60.6	55.1	58.1
U.S. imports from:						
Belgium:						
Quantity	8,568	8,797	9,682	10,988	9,205	4,698
Value	6,319	5,837	6,638	9,269	16,163	6,836
Unit value	$0.74	$0.66	$0.69	$0.84	$1.76	$1.46
Ending inventory quantity	***	***	***	***	***	***
Colombia:						
Quantity	20,576	13,563	16,658	12,638	18,351	34,224
Value	12,954	7,135	8,914	8,300	20,164	37,077
Unit value	$0.63	$0.53	$0.54	$0.66	$1.10	$1.08
Ending inventory quantity	***	***	***	***	***	***
Thailand:						
Quantity	113,292	123,233	128,893	162,975	133,589	176,644
Value	69,973	70,278	75,913	153,671	203,458	182,452
Unit value	$0.62	$0.57	$0.59	$0.94	$1.52	$1.03
Ending inventory quantity	***	***	***	***	***	***
Subject sources:						
Quantity	142,436	145,594	155,233	186,601	161,144	215,566
Value	89,246	83,250	91,466	171,240	239,785	226,365
Unit value	$0.63	$0.57	$0.59	$0.92	$1.49	$1.05
Ending inventory quantity	***	***	***	***	***	***

Table continued.

Table C-1 Continued
CACCS: Summary data concerning the U.S. market, by item and period
Period changes=percent--exceptions noted

Item	Period changes					
		Calendar year				
	2018-23	2018-19	2019-20	2020-21	2021-22	2022-23
U.S. consumption quantity:						
Amount	▲***	▲***	▲***	▲***	▼***	▼***
Producers' share (fn1)	▼***	▲***	▼***	▼***	▼***	▼***
Importers' share (fn1):						
Belgium	▼***	▲***	▲***	▼***	▼***	▼***
Colombia	▲***	▼***	▲***	▼***	▲***	▲***
Thailand	▲***	▲***	▲***	▲***	▼***	▲***
Subject sources	▲***	▼***	▲***	▲***	▼***	▲***
Nonsubject sources	▲***	▼***	▲***	▲***	▲***	▼***
All import sources	▲***	▼***	▲***	▲***	▲***	▲***
U.S. consumption value:						
Amount	▲88.0	▼(2.5)	▲5.5	▲29.1	▲51.1	▼(6.3)
Producers' share (fn1)	▼(11.2)	▲1.4	▼(2.6)	▼(12.6)	▲5.6	▼(3.0)
Importers' share (fn1):						
Belgium	▼(0.5)	▼(0.1)	▲0.1	▲0.1	▲0.2	▼(0.8)
Colombia	▲1.2	▼(1.0)	▲0.2	▼(0.4)	▲0.7	▲1.7
Thailand	▲4.8	▲0.4	▲0.3	▲7.5	▼(2.6)	▼(0.8)
Subject sources	▲5.6	▼(0.7)	▲0.6	▲7.1	▼(1.7)	▲0.2
Nonsubject sources	▲5.6	▼(0.8)	▲2.0	▲5.4	▼(3.9)	▲2.8
All import sources	▲11.2	▼(1.4)	▲2.6	▲12.6	▼(5.6)	▲3.0
U.S. imports from:						
Belgium:						
Quantity	▼(45.2)	▲2.7	▲10.1	▲13.5	▼(16.2)	▼(49.0)
Value	▲8.2	▼(7.6)	▲13.7	▲39.6	▲74.4	▼(57.7)
Unit value	▲97.3	▼(10.0)	▲3.3	▲23.0	▲108.1	▼(17.1)
Ending inventory quantity	***	***	***	***	***	***
Colombia:						
Quantity	▲66.3	▼(34.1)	▲22.8	▼(24.1)	▲45.2	▲86.5
Value	▲186.2	▼(44.9)	▲24.9	▼(6.9)	▲143.0	▲83.9
Unit value	▲72.1	▼(16.4)	▲1.7	▲22.7	▲67.3	▼(1.4)
Ending inventory quantity	▼***	▲***	▼***	▲***	▲***	▼***
Thailand:						
Quantity	▲55.9	▲8.8	▲4.6	▲26.4	▼(18.0)	▲32.2
Value	▲160.7	▲0.4	▲8.0	▲102.4	▲32.4	▼(10.3)
Unit value	▲67.2	▼(7.7)	▲3.3	▲60.1	▲61.5	▼(32.2)
Ending inventory quantity	▲***	▲***	▼***	▼***	▲***	▼***
Subject sources:						
Quantity	▲51.3	▲2.2	▲6.6	▲20.2	▼(13.6)	▲33.8
Value	▲153.6	▼(6.7)	▲9.9	▲87.2	▲40.0	▼(5.6)
Unit value	▲67.6	▼(8.7)	▲3.0	▲55.7	▲62.1	▼(29.4)
Ending inventory quantity	▲***	▲***	▼***	▼***	▲***	▼***

Table continued.

Table C-1 Continued
CACCS: Summary data concerning the U.S. market, by item and period
Quantity=1,000 pounds dry weight; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per pound dry weight

Item	Reported data					
	Calendar year					
	2018	2019	2020	2021	2022	2023
U.S. imports from: Continued						
Nonsubject sources:						
Quantity	***	***	***	***	***	***
Value	173,119	164,604	185,009	279,339	378,653	384,510
Unit value	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***
All import sources:						
Quantity	***	***	***	***	***	***
Value	262,365	247,854	276,475	450,579	618,438	610,876
Unit value	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***
U.S. producers':						
Practical capacity quantity	504,503	504,503	494,603	494,404	492,991	487,978
Production quantity	463,966	477,667	455,848	455,683	436,952	374,150
Capacity utilization (fn1)	92.0	94.7	92.2	92.2	88.6	76.7
U.S. shipments:						
Quantity	445,614	457,986	461,399	448,359	417,647	337,823
Value	297,431	297,855	298,991	292,565	504,554	441,271
Unit value	$0.67	$0.65	$0.65	$0.65	$1.21	$1.31
Export shipments:						
Quantity	***	***	***	***	***	***
Value	***	***	***	***	***	***
Unit value	***	***	***	***	***	***
Ending inventory quantity	62,653	66,837	46,482	39,671	40,586	59,923
Inventories/total shipments (fn1)	***	***	***	***	***	***
Production workers	280	289	298	316	319	330
Hours worked (1,000s)	528	592	559	617	587	649
Wages paid ($1,000)	22,195	21,425	21,952	23,456	26,161	28,797
Hourly wages (dollars per hour)	$42.04	$36.19	$39.27	$38.02	$44.57	$44.37
Productivity (pounds dry weight per hour)	878.7	806.9	815.5	738.5	744.4	576.5
Unit labor costs	$0.05	$0.04	$0.05	$0.05	$0.06	$0.08

Table continued.

Table C-1 Continued
CACCS: Summary data concerning the U.S. market, by item and period
Period changes=percent--exceptions noted

Item	Period changes					
		Calendar year				
	2018-23	2018-19	2019-20	2020-21	2021-22	2022-23
U.S. imports from: Continued						
Nonsubject sources:						
Quantity	▲***	▲***	▲***	▲***	▲***	▼***
Value	▲122.1	▼(4.9)	▲12.4	▲51.0	▲35.6	▲1.5
Unit value	▲***	▼***	▲***	▲***	▲***	▲***
Ending inventory quantity	▲***	▼***	▲***	▲***	▲***	▼***
All import sources:						
Quantity	▲***	▲***	▲***	▲***	▼***	▼***
Value	▲132.8	▼(5.5)	▲11.5	▲63.0	▲37.3	▼(1.2)
Unit value	▲***	▼***	▲***	▲***	▲***	▲***
Ending inventory quantity	▲***	▼***	▲***	▲***	▲***	▼***
U.S. producers':						
Practical capacity quantity	▼(3.3)	---	▼(2.0)	▼(0.0)	▼(0.3)	▼(1.0)
Production quantity	▼(19.4)	▲3.0	▼(4.6)	▼(0.0)	▼(4.1)	▼(14.4)
Capacity utilization (fn1)	▼(15.3)	▲2.7	▼(2.5)	▲0.0	▼(3.5)	▼(12.0)
U.S. shipments:						
Quantity	▼(24.2)	▲2.8	▲0.7	▼(2.8)	▼(6.8)	▼(19.1)
Value	▲48.4	▲0.1	▲0.4	▼(2.1)	▲72.5	▼(12.5)
Unit value	▲95.7	▼(2.6)	▼(0.4)	▲0.7	▲85.1	▲8.1
Export shipments:						
Quantity	▲***	▼***	▼***	▼***	▲***	▼***
Value	▲***	▼***	▼***	▲***	▲***	▼***
Unit value	▲***	▼***	▼***	▲***	▲***	▼***
Ending inventory quantity	▼(4.4)	▲6.7	▼(30.5)	▼(14.7)	▲2.3	▲47.6
Inventories/total shipments (fn1)	▲***	▲***	▼***	▼***	▲***	▲***
Production workers	▲17.9	▲3.2	▲3.1	▲6.0	▲0.9	▲3.4
Hours worked (1,000s)	▲22.9	▲12.1	▼(5.6)	▲10.4	▼(4.9)	▲10.6
Wages paid ($1,000)	▲29.7	▼(3.5)	▲2.5	▲6.9	▲11.5	▲10.1
Hourly wages (dollars per hour)	▲5.6	▼(13.9)	▲8.5	▼(3.2)	▲17.2	▼(0.4)
Productivity (pounds dry weight per hour)	▼(34.4)	▼(8.2)	▲1.1	▼(9.4)	▲0.8	▼(22.6)
Unit labor costs	▲60.9	▼(6.2)	▲7.4	▲6.9	▲16.3	▲28.6

Table continued.

Table C-1 Continued
CACCS: Summary data concerning the U.S. market, by item and period
Quantity=1,000 pounds dry weight; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per pound dry weight

Item	Reported data					
	Calendar year					
	2018	2019	2020	2021	2022	2023
U.S. producers':						
Net sales:						
Quantity	461,486	473,483	476,202	462,496	436,037	354,813
Value	309,937	309,770	310,129	304,165	535,375	466,368
Unit value	$0.67	$0.65	$0.65	$0.66	$1.23	$1.31
Cost of goods sold (COGS)	249,702	259,263	259,982	281,769	353,628	374,817
Gross profit or (loss) (fn2)	60,235	50,507	50,147	22,396	181,747	91,551
SG&A expenses	***	***	***	***	***	***
Operating income or (loss) (fn2)	***	***	***	***	***	***
Net income or (loss) (fn2)	***	***	***	***	***	***
Unit COGS	$0.54	$0.55	$0.55	$0.61	$0.81	$1.06
Unit SG&A expenses	***	***	***	***	***	***
Unit operating income or (loss) (fn2)	***	***	***	***	***	***
Unit net income or (loss) (fn2)	***	***	***	***	***	***
COGS/sales (fn1)	80.6	83.7	83.8	92.6	66.1	80.4
Operating income or (loss)/sales (fn1)	***	***	***	***	***	***
Net income or (loss)/sales (fn1)	***	***	***	***	***	***
Capital expenditures	***	***	***	***	***	***
Research and development expenses	***	***	***	***	***	***
Total assets	247,724	252,231	257,923	262,012	275,704	292,382

Table continued.

Table C-1 Continued
CACCS: Summary data concerning the U.S. market, by item and period
Period changes=percent--exceptions noted

Item	Period changes					
	Calendar year					
	2018-23	2018-19	2019-20	2020-21	2021-22	2022-23
U.S. producers':						
Net sales:						
Quantity	▼(23.1)	▲2.6	▲0.6	▼(2.9)	▼(5.7)	▼(18.6)
Value	▲50.5	▼(0.1)	▲0.1	▼(1.9)	▲76.0	▼(12.9)
Unit value	▲95.7	▼(2.6)	▼(0.5)	▲1.0	▲86.7	▲7.1
Cost of goods sold (COGS)	▲50.1	▲3.8	▲0.3	▲8.4	▲25.5	▲6.0
Gross profit or (loss) (fn2)	▲52.0	▼(16.2)	▼(0.7)	▼(55.3)	▲711.5	▼(49.6)
SG&A expenses	▼***	▼***	▲***	▼***	▲***	▼***
Operating income or (loss) (fn2)	▲***	▼***	▼***	▼***	▲***	▼***
Net income or (loss) (fn2)	▲***	▼***	▼***	▼***	▲***	▼***
Unit COGS	▲95.2	▲1.2	▼(0.3)	▲11.6	▲33.1	▲30.3
Unit SG&A expenses	▼***	▼***	▲***	▼***	▲***	▼***
Unit operating income or (loss) (fn2)	▲***	▼***	▼***	▼***	▲***	▼***
Unit net income or (loss) (fn2)	▲***	▼***	▼***	▼***	▲***	▼***
COGS/sales (fn1)	▼(0.2)	▲3.1	▲0.1	▲8.8	▼(26.6)	▲14.3
Operating income or (loss)/sales (fn1)	▲***	▼***	▼***	▼***	▲***	▼***
Net income or (loss)/sales (fn1)	▼***	▼***	▼***	▼***	▲***	▼***
Capital expenditures	▲***	▼***	▲***	▼***	▲***	▲***
Research and development expenses	▲***	▲***	▼***	▲***	▼***	▲***
Total assets	▲18.0	▲1.8	▲2.3	▲1.6	▲5.2	▲6.0

Source: Compiled from data submitted in response to Commission questionnaires and from official U.S. imports statistics of the U.S. Department of Commerce using HTS statistical reporting numbers 2918.14.0000, 2918.15.1000, and 2918.15.5000, accessed March 26, 2024, adjusted using proprietary, Census-edited Customs data for the same HTS statistical reporting numbers accessed March 26, 2024 to report the quantities from Canada suppressed in official U.S. import statistics.

Note.--Shares and ratios shown as "0.0" percent represent non-zero values less than "0.05" percent (if positive) and greater than "(0.05)" percent (if negative). Zeroes, null values, and undefined calculations are suppressed and shown as "---". Period changes preceded by a "▲" represent an increase, while period changes preceded by a "▼" represent a decrease.

fn1.--Reported data are in percent and period changes are in percentage points.
fn2.--Percent changes only calculated when both comparison values represent profits; The directional change in profitability provided when one or both comparison values represent a loss.

SUMMARY DATA COMPILED IN THE PREVIOUS PROCEEDING

Table C-1
CACCS: Summary data concerning the U.S. market, 2015-17
(Quantity=1,000 pounds dry weight; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per pound dry weight; Period changes=percent--exceptions noted)

	Reported data			Period changes		
	Calendar year				Calendar year	
	2015	2016	2017	2015-17	2015-16	2016-17
U.S. consumption quantity:						
Amount	***	***	***	***	***	***
Producers' share (fn1)	***	***	***	***	***	***
Importers' share (fn1):						
Belgium	***	***	***	***	***	***
Colombia	***	***	***	***	***	***
Thailand	***	***	***	***	***	***
Subject sources	***	***	***	***	***	***
Canada	***	***	***	***	***	***
All other sources	***	***	***	***	***	***
Nonsubject sources	***	***	***	***	***	***
All import sources	***	***	***	***	***	***
U.S. consumption value:						
Amount	***	***	***	***	***	***
Producers' share (fn1)	***	***	***	***	***	***
Importers' share (fn1):						
Belgium	***	***	***	***	***	***
Colombia	***	***	***	***	***	***
Thailand	***	***	***	***	***	***
Subject sources	***	***	***	***	***	***
Canada	***	***	***	***	***	***
All other sources	***	***	***	***	***	***
Nonsubject sources	***	***	***	***	***	***
All import sources	***	***	***	***	***	***
U.S. imports from:						
Belgium:						
Quantity	25,339	19,607	19,333	(23.7)	(22.6)	(1.4)
Value	18,205	12,985	12,923	(29.0)	(28.7)	(0.5)
Unit value	$0.72	$0.66	$0.67	(7.0)	(7.8)	0.9
Ending inventory quantity	***	***	***	***	***	***
Colombia:						
Quantity	45,239	48,961	32,729	(27.7)	8.2	(33.2)
Value	28,020	29,727	19,993	(28.6)	6.1	(32.7)
Unit value	$0.62	$0.61	$0.61	(1.4)	(2.0)	0.6
Ending inventory quantity	***	***	***	***	***	***
Thailand:						
Quantity	89,356	106,905	149,506	67.3	19.6	39.8
Value	51,689	54,741	80,678	56.1	5.9	47.4
Unit value	$0.58	$0.51	$0.54	(6.7)	(11.5)	5.4
Ending inventory quantity	***	***	***	***	***	***
Subject sources:						
Quantity	159,934	175,473	201,568	26.0	9.7	14.9
Value	97,913	97,453	113,595	16.0	(0.5)	16.6
Unit value	$0.61	$0.56	$0.56	(7.9)	(9.3)	1.5
Ending inventory quantity	***	***	***	***	***	***
Canada:						
Quantity	***	***	***	***	***	***
Value	***	***	***	***	***	***
Unit value	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***
All other sources						
Quantity	76,257	55,454	53,214	(30.2)	(27.3)	(4.0)
Value	70,247	45,867	48,590	(30.8)	(34.7)	5.9
Unit value	$0.92	$0.83	$0.91	(0.9)	(10.2)	10.4
Ending inventory quantity	***	***	***	***	***	***
Nonsubject sources:						
Quantity	***	***	***	***	***	***
Value	***	***	***	***	***	***
Unit value	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***
All import sources:						
Quantity	***	***	***	***	***	***
Value	***	***	***	***	***	***
Unit value	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***

Table continued next page.

Table C-1
CACCS: Summary data concerning the U.S. market, 2015-17
(Quantity=1,000 pounds dry weight; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per pound dry weight; Period changes=percent--exceptions noted)

	Reported data			Period changes		
	Calendar year			Calendar year		
	2015	2016	2017	2015-17	2015-16	2016-17
U.S. producers':						
Average capacity quantity	551,710	551,710	551,710	---	---	---
Production quantity	508,482	475,066	465,038	(8.5)	(6.6)	(2.1)
Capacity utilization (fn1)	92.2	86.1	84.3	(7.9)	(6.1)	(1.8)
U.S. shipments:						
Quantity	470,152	452,062	459,114	(2.3)	(3.8)	1.6
Value	312,318	278,884	275,933	(11.6)	(10.7)	(1.1)
Unit value	$0.66	$0.62	$0.60	(9.5)	(7.1)	(2.6)
Export shipments:						
Quantity	19,858	25,216	21,396	7.7	27.0	(15.1)
Value	16,310	17,794	15,709	(3.7)	9.1	(11.7)
Unit value	$0.82	$0.71	$0.73	(10.6)	(14.1)	4.0
Ending inventory quantity	***	***	***	***	***	***
Inventories/total shipments (fn1)	***	***	***	***	***	***
Production workers	320	322	319	(0.3)	0.6	(0.9)
Hours worked (1,000s)	744	744	744	---	---	---
Wages paid ($1,000)	26,833	25,844	26,671	(0.6)	(3.7)	3.2
Hourly wages (dollars per hour)	$36.07	$34.74	$35.85	(0.6)	(3.7)	3.2
Productivity (pounds per hour)	683.4	638.5	625.1	(8.5)	(6.6)	(2.1)
Unit labor costs (dollars per 1,000 pounds)	$52.77	$54.40	$57.35	8.7	3.1	5.4
Net sales:						
Quantity	490,011	477,277	480,508	(1.9)	(2.6)	0.7
Value	328,628	296,677	291,642	(11.3)	(9.7)	(1.7)
Unit value	$0.67	$0.62	$0.61	(9.5)	(7.3)	(2.4)
Cost of goods sold (COGS)	257,142	254,386	256,133	(0.4)	(1.1)	0.7
Gross profit or (loss)	71,486	42,291	35,509	(50.3)	(40.8)	(16.0)
SG&A expenses	16,229	19,255	21,494	32.4	18.6	11.6
Operating income or (loss)	55,257	23,036	14,015	(74.6)	(58.3)	(39.2)
Net income or (loss)	50,652	19,581	9,459	(81.3)	(61.3)	(51.7)
Capital expenditures	***	***	***	***	***	***
Unit COGS	$0.52	$0.53	$0.53	1.6	1.6	0.0
Unit SG&A expenses	$0.03	$0.04	$0.04	35.1	21.8	10.9
Unit operating income or (loss)	$0.11	$0.05	$0.03	(74.1)	(57.2)	(39.6)
Unit net income or (loss)	$0.10	$0.04	$0.02	(81.0)	(60.3)	(52.0)
COGS/sales (fn1)	78.2	85.7	87.8	9.6	7.5	2.1
Operating income or (loss)/sales (fn1)	16.8	7.8	4.8	(12.0)	(9.0)	(3.0)
Net income or (loss)/sales (fn1)	15.4	6.6	3.2	(12.2)	(8.8)	(3.4)

Notes:

fn1.--Reported data are in percent and period changes are in percentage points.
fn2.--Undefined.

Source: Compiled from data submitted in response to Commission questionnaires and official U.S. imports statistics numbers 2918.14.0000, 2918.15.1000, and 2918.15.5000, accessed April 5, 2018.

APPENDIX D

COMMENTS ON EFFECT OF ORDERS AND LIKELY IMPACT OF REVOCATION

Table D-1
CACCS: Firms' narratives on the effect of orders and the likely impact of revocation

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APPENDIX E

U.S. AND FOREIGN PRODUCERS' PRODUCTION AND SHIPMENTS BY CERTIFICATION STATUS

Table E-1
CACCS: Foreign producers' production and U.S. producers' U.S. shipments by source and GMO certification, 2023

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Table continued.

Table E-1 Continued
CACCS: Foreign producers' production and U.S. producers' U.S. shipments by source and GMO certification, 2023

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Figure E-1
CACCS: Foreign producers' production and U.S. producers' U.S. shipments by source and GMO certification, 2023

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Table E-2
CACCS: Foreign producers' production and U.S. producers' U.S. shipments by source and Halal certification, 2023

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Table continued.

Table E-2 Continued
CACCS: Foreign producers' production and U.S. producers' U.S. shipments by source and Halal certification, 2023

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Figure E-2
CACCS: Foreign producers' production and U.S. producers' U.S. shipments by source and Halal certification, 2023

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Table E-3
CACCS: Foreign producers' production and U.S. producers' U.S. shipments by source and Kosher certification, 2023

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Table continued.

Table E-3 Continued
CACCS: Foreign producers' production and U.S. producers' U.S. shipments by source and Kosher certification, 2023

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Figure E-3
CACCS: Foreign producers' production and U.S. producers' U.S. shipments by source and Kosher certification, 2023

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Table E-4
CACCS: Foreign producers' production and U.S. producers' U.S. shipments by source and other specialty certification, 2023

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Table continued.

Table E-4 Continued
CACCS: Foreign producers' production and U.S. producers' U.S. shipments by source and other specialty certification, 2023

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Figure E-4
CACCS: Foreign producers' production and U.S. producers' U.S. shipments by source and other specialty certification, 2023

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