

Global Market for Starch and Starch Products



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Introduction

Starch, or amyllum, is a complex carbohydrate found in foods, such as grains, vegetables, and fruits. The principal sources of starch are maize, tapioca, wheat and potatoes. Once extracted and dried, it is a white, tasteless, and odorless powder that does not dissolve in cold water or alcohol. Starch is made of glucose molecules that occur in two forms: amylose and amylopectin. Foods that are rich in starch are good sources of energy and the primary source of carbohydrates for most people. Starch-rich foods are key for a nutritious, well-balanced diet, as they provide the body with glucose, which is the main energy source for every cell in the human body. These foods also provide a range of vitamins, minerals, fibre, and other nutrients. Apart from food uses, starches have other uses in the manufacturing processes of various industries, such as pharmaceuticals, paper, and feed.

Starches are traded as both naturally occurring starches (native starches) and modified starches. The latter are obtained by physical, enzymatic or chemical treatment of native starches in order to change their performance in different applications. Dextrins are a group of low-molecular-weight carbohydrates produced by hydrolysis of starch. They are produced from starch using enzymes like amylases, during malting and mashing, or by applying dry heat under acidic conditions (pyrolysis or roasting). Maltodextrins, used as food additives, are one of the most common known dextrins. Companies based in Manitoba commercialize and export products under these categories. This document provides an overview of the global starch market.

Global Starch Market

The global market of starch has been increasing over the years. It was estimated at 134.5 million tonnes in 2022, with a Compound Annual Growth Rate (CAGR) of 5.1 per cent for the following eight years, reaching 199.8 million tonnes by 2030.¹ The market increase stems from the increasing demand for on-the-go food products that use starch in their formulation and the increase use of starch in the bakery and confectionary sector. The food and beverage sector is, by far, the top market for starch, accounting for 55 per cent of its revenue share. Other important markets include feed, pharmaceuticals, and the retail and food service sectors. The latter accounts for 2.7 per cent in volume of the global starch market.

The global demand for both native starches and modified starches are shown in Tables 1 and 2. China has the largest starch market in the world and their market is expected to grow at 5.9 per cent since 2022, reaching 74.4 million tonnes by 2030. In 2022, the starch market in the United States (U.S.) was estimated at 30.6 million tonnes and will continue to grow, as well. Growth is also expected in Canada at 3.7 per cent (CAGR) and Germany at 3.3 per cent (CAGR) between 2022 and 2030.

In the retail and food service market, native starch and modified starch are expected to grow 16 and 10 per cent, respectively over the period of 2022 to 2027.² In 2022, China represented 23.8 per cent of the world's native starch retail and food service markets in tonnes, followed by the U.S. with 12.5 per cent. In the modified starch retail and food service markets, the U.S. was the largest market with 35.7 per cent of the total in volume in 2022. Canada represented 2.6 per cent in volume in the same year, ranking in 6th place as shown in Graph 1 below.

¹ [Global Starch Industry \(reportlinker.com\)](https://www.reportlinker.com)

² Euromonitor, May 2023

Table 1 – Top 10 Native Starch Retail and Food Service Markets in Tonnes in 2018-2027

| Country | 2018 (tonnes) | 2019 (tonnes) | 2020 (tonnes) | 2021 (tonnes) | 2022 (tonnes) | 2023 (tonnes) | 2024 (tonnes) | 2025 (tonnes) | 2026 (tonnes) | 2027 (tonnes) |
|----------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Total | 2,600,068 | 2,676,906 | 2,719,068 | 2,780,027 | 2,861,080 | 2,946,922 | 3,036,241 | 3,127,482 | 3,219,206 | 3,317,229 |
| China | 647,574 | 660,807 | 674,488 | 675,367 | 683,022 | 696,142 | 709,265 | 722,414 | 735,753 | 749,988 |
| USA | 334,034 | 344,234 | 345,159 | 348,085 | 358,837 | 366,690 | 373,935 | 380,734 | 387,080 | 393,653 |
| India | 203,811 | 229,457 | 251,990 | 281,377 | 311,866 | 343,278 | 376,795 | 411,424 | 445,517 | 482,581 |
| Japan | 245,937 | 246,441 | 245,906 | 244,658 | 244,647 | 244,952 | 245,355 | 245,776 | 246,210 | 246,671 |
| Indonesia | 159,134 | 163,163 | 160,336 | 163,121 | 163,477 | 166,205 | 169,155 | 172,318 | 175,573 | 178,912 |
| Russia | 77,182 | 76,936 | 74,640 | 74,806 | 75,491 | 76,724 | 78,413 | 80,500 | 83,084 | 85,774 |
| South Korea | 70,128 | 70,170 | 75,137 | 74,011 | 73,636 | 72,676 | 72,542 | 72,562 | 72,702 | 72,875 |
| Brazil | 62,787 | 63,086 | 63,911 | 65,843 | 68,004 | 70,149 | 72,048 | 73,738 | 75,292 | 76,916 |
| United Kingdom | 59,958 | 60,596 | 58,810 | 60,034 | 61,060 | 60,843 | 61,034 | 61,613 | 62,407 | 63,230 |
| Germany | 55,416 | 55,825 | 55,412 | 56,860 | 57,077 | 57,466 | 58,113 | 58,463 | 58,747 | 59,041 |

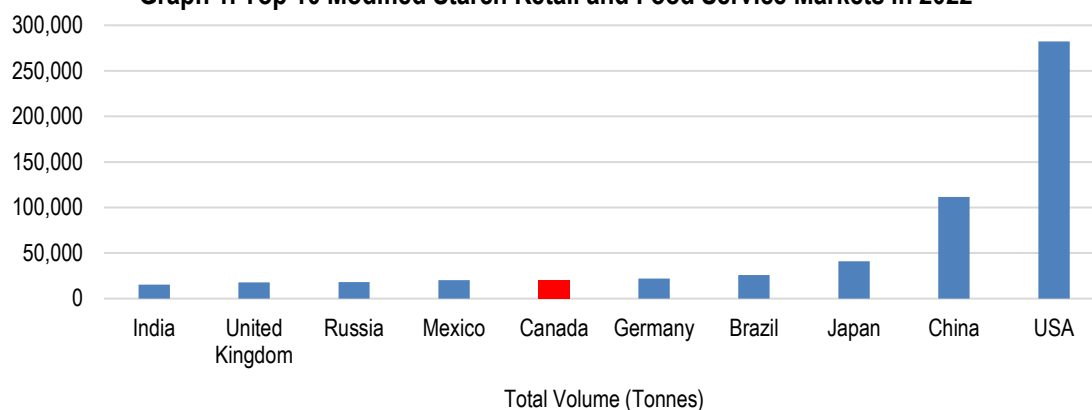
Euromonitor, May 2023 - Forecasted values are italicized.

Table 2 – Top 10 Modified Starch Retail and Food Service Markets in Tonnes in 2018-2027

| Country | 2018 (tonnes) | 2019 (tonnes) | 2020 (tonnes) | 2021 (tonnes) | 2022 (tonnes) | 2023 (tonnes) | 2024 (tonnes) | 2025 (tonnes) | 2026 (tonnes) | 2027 (tonnes) |
|----------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Total | 751,212 | 761,301 | 755,550 | 772,990 | 790,679 | 805,465 | 820,347 | 835,815 | 852,200 | 869,744 |
| USA | 273,947 | 275,684 | 270,276 | 275,903 | 282,157 | 286,247 | 290,047 | 294,087 | 298,576 | 303,388 |
| China | 100,706 | 104,094 | 104,934 | 108,333 | 111,538 | 114,786 | 117,976 | 121,031 | 124,053 | 127,226 |
| Japan | 41,125 | 41,234 | 41,429 | 41,004 | 40,849 | 40,715 | 40,621 | 40,550 | 40,498 | 40,450 |
| Brazil | 25,526 | 25,796 | 24,897 | 25,138 | 25,920 | 26,599 | 27,206 | 27,779 | 28,387 | 29,038 |
| Germany | 21,066 | 21,330 | 21,313 | 22,134 | 22,003 | 22,096 | 22,393 | 22,557 | 22,678 | 22,803 |
| Canada | 20,129 | 20,173 | 19,709 | 20,397 | 20,755 | 20,910 | 20,977 | 21,000 | 21,013 | 21,043 |
| Mexico | 19,114 | 19,457 | 20,400 | 20,564 | 20,203 | 20,076 | 20,169 | 20,410 | 20,737 | 21,070 |
| Russia | 17,971 | 17,925 | 17,915 | 18,003 | 17,996 | 18,065 | 18,146 | 18,231 | 18,311 | 18,399 |
| United Kingdom | 17,206 | 17,449 | 17,244 | 17,557 | 17,636 | 17,445 | 17,392 | 17,477 | 17,629 | 17,786 |
| India | 11,246 | 12,374 | 12,811 | 14,076 | 15,524 | 16,874 | 18,317 | 19,855 | 21,489 | 23,283 |

Euromonitor, May 2023 - Forecasted values are italicized.

Graph 1. Top 10 Modified Starch Retail and Food Service Markets in 2022



Starch Production by Region³

China is, by far, the largest main manufacturer of starch in the world and in the Asia-Pacific region, reaching a production value of \$37.1 billion in 2021. The Chinese starch industry grew by 10.9 per cent in 2021 and their production accounted for 59.4 per cent of the Asia-Pacific region total. Yishui Dadi Corns Development Co. Ltd. was the largest company in China, generating 1.6 per cent of the Chinese industry's total production value in 2021. India accounts for a small 3.5 per cent of the region's production, when compared to China. India's production value reached \$2.1 billion in 2021, with Anil Ltd. as its largest company with 11.5 per cent of the Indian total production value.

The U.S. has the largest industry for starch and starch products across North America. In 2021, the production of starch and starch products in the U.S. was valued at \$12.8 billion in 2021, accounting for 96.9 per cent of the total for North America. The starch industry in the U.S. is consolidated, where the top five starch processing companies generated 75.4 per cent of total production value in 2021. Archer Daniels Midland Co was the largest company with 27.9 per cent, followed by Ingredion Inc., Tate & Lyle Ingredients America LLC, Penford Corporation and MGP Ingredients Inc. with 24.4, 18.3, 3.8 and one per cent, respectively.

Canada's starch industry is relatively small, but has grown steadily in the last few years. In 2021, Canada's starch and starch products industry grew by 26.1 per cent and it was the 15th largest across the top 20 developed countries in terms of production value (\$585 million). That increase was driven by increased global demand for starch, as exports accounted for 50.1 per cent of the total production output in 2021. The top three starch processing companies in Canada generated 30.8 per cent of the total production value in 2021. Ingredion Canada Inc. was the largest company in Canada with 30.1 per cent of total production, followed by Manitoba Starch Products Ltd. and Permolex Ltd. with 0.4 and 0.3 per cent respectively.

France and Germany dominate the starch industry in Western Europe. In 2021, France's starches and starch products industry grew by 14.8 per cent with a production value of \$3.8 billion, accounting for 21 per cent of the Western Europe regional total. Almost 58 per cent of the industry is concentrated within the top four companies, with Cargill France SAS being the largest. France is followed by Germany, accounting for 13.8 per cent of the Western Europe production value. The top five German companies generated 32.6 per cent of the total production value. Ingredion Germany GmbH was the largest company, with 14 per cent of the German starch industry's production value. The UK accounted for 3.4 per cent of the Western Europe total, with Roquette UK Ltd being the largest company in the UK, generating 9.1 per cent of the industry's total production value in 2021.

In Latin America, Brazil accounted for 20.2 per cent of the total production value of the region, reaching \$1.8 billion in 2021. The top five companies generated 58.6 per cent of Brazil's total production value. Ingredion Brasil Ingredientes Industriais

³ Euromonitor – Starch and starch products 2022

Ltda. was the largest company with 28.4 per cent, followed by Cargill Agricola S.A., Indústria e Comércio de Fecula O'Linda Ltda., Gem Agroindustrial Comercial Ltda. and Hedler Industria de Alimentos Ltda, with 26.8, 2.3, 0.7 and 0.4 per cent, respectively.

Global Demand for Native Starch

Global imports of native starch have increased at 12.2 per cent (CAGR) in value between 2018 and 2022, reaching \$9.3 billion and 10.8 million tonnes in 2022. As shown in Table 3, Manioc starch is the most popular type of starch traded globally, as it accounts for more than 40 per cent of the total global imports of starch in value, followed by maize (corn) starch, potato starch, wheat starch, inulin and other starches with 23.4, 17.5, 8.4, 5.1 and 4.7 per cent, respectively. As shown in Table 4, manioc and maize (corn) starch represented almost three quarters of the total world imports for the 2018 to 2022 period in quantity.

Table 3 – World Native Starch Imports by Type in Canadian Dollars in 2018-2022

| Description | Total | | 2018 \$ | 2019 \$ | 2020 \$ | 2021 \$ | 2022 \$ | CAGR % |
|----------------|-----------------------|---------------|----------------------|----------------------|----------------------|----------------------|----------------------|--------------|
| | 2018-2022 | % | | | | | | |
| Total | 34,691,016,744 | 100.00 | 5,898,652,119 | 6,164,648,945 | 6,219,487,297 | 7,072,004,901 | 9,336,223,482 | 12.16 |
| Manioc starch | 14,195,501,227 | 40.92 | 2,282,151,261 | 2,354,420,998 | 2,340,444,139 | 2,999,324,569 | 4,219,160,260 | 16.61 |
| Maize starch | 8,118,186,127 | 23.40 | 1,396,884,243 | 1,507,478,161 | 1,530,170,992 | 1,566,395,873 | 2,117,256,858 | 10.96 |
| Potato starch | 6,057,336,841 | 17.46 | 1,154,981,468 | 1,155,568,797 | 1,179,467,914 | 1,197,360,414 | 1,369,958,248 | 4.36 |
| Wheat starch | 2,913,231,390 | 8.40 | 476,961,844 | 503,137,463 | 492,457,554 | 594,280,640 | 846,393,889 | 15.42 |
| Inulin | 1,780,431,493 | 5.13 | 288,354,255 | 317,799,830 | 371,579,969 | 394,831,320 | 407,866,119 | 9.06 |
| Other starches | 1,626,329,666 | 4.69 | 299,319,048 | 326,243,696 | 305,366,729 | 319,812,085 | 375,588,108 | 5.84 |

Source: Global Trade Tracker – May 2023

Table 4 – World Native Starch Imports by Type in Tonnes in 2018-2022

| Description | Total | | 2018 (tonnes) | 2019 (tonnes) | 2020 (tonnes) | 2021 (tonnes) | 2022 (tonnes) |
|----------------|-----------------------|---------------|------------------|------------------|------------------|------------------|-------------------|
| | 2018-2022 (tonnes) | % | | | | | |
| Total | 46,285,629 | 100.00 | 8,229,755 | 8,511,346 | 8,817,573 | 9,899,989 | 10,826,966 |
| Manioc starch | 22,266,875 | 48.11 | 3,594,034 | 3,883,741 | 4,017,712 | 4,776,140 | 5,995,248 |
| Maize starch | 11,883,545 | 25.67 | 2,321,660 | 2,447,842 | 2,468,539 | 2,376,293 | 2,269,211 |
| Potato starch | 5,780,357 | 12.49 | 1,149,250 | 986,030 | 1,065,055 | 1,328,105 | 1,251,917 |
| Wheat starch | 4,506,467 | 9.74 | 824,500 | 816,518 | 896,122 | 1,030,893 | 938,433 |
| Other starches | 1,354,264 | 2.93 | 261,882 | 287,986 | 266,241 | 275,482 | 262,673 |
| Inulin | 494,120 | 1.07 | 78,428 | 89,228 | 103,904 | 113,076 | 109,484 |

Source: Global Trade Tracker – May 2023

China is the top importer of starch, accounting for almost one third of global imports and a CAGR of 23 per cent between 2018 and 2022. It was followed by the U.S., Germany, Indonesia and France as top five global starch destinations (Table 5). Mexico has seen the second highest growth after China, with 22.7 per cent for the 2018 to 2022 period, or 32 per cent in 2022 (Graph 2).

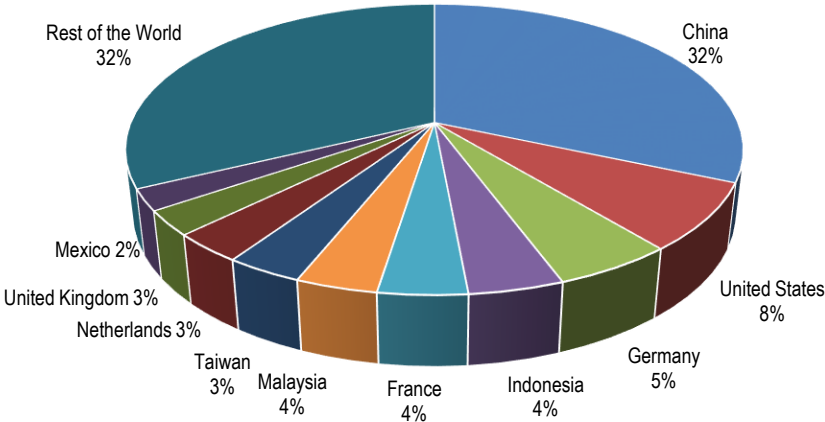
In 2022, Canadian starch exports were valued at \$65.2 million for 91.7 thousand tonnes, with 13.5 per cent share for Manitoba. The main destination for Canadian starch products was the U.S., with almost 99 per cent of the total volume. In 2022, Manitoba has seen an important increase in starch exports, tripling its volume compared to 2021. Under the category “Other starches,” Manitoba recorded exports for \$3.4 million in 2022, 10 times the amount in value exported in 2021. Global pea starch imports are reported under the “Other starches” category which grew 5.9 per cent annually during the 2018 to 2022 period.

Table 5 – World Native Starch Imports by Country in Canadian Dollars in 2018-2022

| Country | Total | | 2018 \$ | 2019 \$ | 2020 \$ | 2021 \$ | 2022 \$ | CAGR % |
|----------------|-----------------------|---------------|----------------------|----------------------|----------------------|----------------------|----------------------|--------------|
| | 2018-2022 \$ | % | | | | | | |
| Total | 34,691,016,747 | 100.00 | 5,898,652,118 | 6,164,648,949 | 6,219,487,301 | 7,072,004,898 | 9,336,223,481 | 12.16 |
| China | 9,503,324,246 | 27.39 | 1,286,649,005 | 1,439,258,425 | 1,613,905,523 | 2,221,392,012 | 2,942,119,281 | 22.97 |
| U.S. | 2,576,445,689 | 7.43 | 434,649,533 | 469,420,775 | 461,208,934 | 513,223,476 | 697,942,971 | 12.57 |
| Germany | 1,858,620,998 | 5.36 | 313,842,046 | 329,643,044 | 337,622,671 | 378,628,064 | 498,885,173 | 12.29 |
| Indonesia | 1,868,077,156 | 5.38 | 507,552,187 | 462,671,715 | 319,759,855 | 185,177,337 | 392,916,062 | -6.20 |
| France | 1,143,517,888 | 3.30 | 174,349,361 | 172,377,220 | 184,197,182 | 245,040,765 | 367,553,360 | 20.50 |
| Malaysia | 1,250,617,253 | 3.61 | 258,256,896 | 215,652,512 | 219,741,007 | 218,958,147 | 338,008,691 | 6.96 |
| Taiwan | 1,389,757,720 | 4.01 | 262,296,777 | 264,833,675 | 258,798,085 | 286,089,959 | 317,739,224 | 4.91 |
| Netherlands | 1,258,891,209 | 3.63 | 217,025,702 | 235,691,845 | 263,366,636 | 241,421,868 | 301,385,158 | 8.56 |
| United Kingdom | 1,077,979,454 | 3.11 | 198,394,420 | 218,049,614 | 218,084,647 | 187,329,734 | 256,121,039 | 6.59 |
| Mexico | 716,143,182 | 2.06 | 97,729,031 | 117,840,754 | 137,392,973 | 141,797,296 | 221,383,128 | 22.68 |

Source: Global Trade Tracker – May 2023

Graph 2 – Top 10 Countries Importing Native Starch in 2022 (in percentage)



Global Demand for Modified Starch

The world modified starch imports totaled \$6.7 billion in 2022, with a CAGR of 6.6 per cent for the 2018 to 2022 period, as shown in Table 6. Volume of modified starch imports increased almost five per cent, or 200,000 tonnes between 2018 and 2022 (Table 6).

Table 6 – World Modified Starch Imports (in Canadian dollars and tonnes) in 2018-2022

| Description | Total | | 2018 | 2019 | 2020 | 2021 | 2022 | CAGR % |
|----------------------------|----------------|-----|---------------|---------------|---------------|---------------|---------------|--------|
| | 2018-2022 \$ | % | | | | | | |
| Modified starches (\$) | 28,228,920,286 | 100 | 5,185,215,841 | 5,381,378,616 | 5,298,142,907 | 5,668,397,454 | 6,695,785,468 | 6.60 |
| Modified starches (tonnes) | 20,576,199 | 100 | 4,026,798 | 4,078,955 | 3,971,465 | 4,298,949 | 4,200,032 | 0.85 |

Source: Global Trade tracker – May 2023

China, Japan, Germany, U.S. and Indonesia are the top five importers of modified starches with 11, 8.9, 8.7, 5.4 and four per cent share in volume, respectively for the 2018 to 2022 period (Table 7). In 2022, China accounted for 11 per cent in volume as shown in Graph 3, followed by Germany, Japan, the U.S. and Indonesia with nine, eight, seven and four per cent in volume, respectively.

Canada is also a net importer of modified starch, importing \$210 million in 2022 and ranking ninth globally, as shown in Table 7. In terms of exports, Canada exported \$38.4 million in modified starch in 2022, almost double compared to the previous year. The main destination for Canadian modified starch was the U.S., accounting for 85 per cent of the total in value. Manitoba reported exports to all countries for \$50,872 in 2022. Quebec represented 79 per cent of all Canadian exports of modified starches.⁴

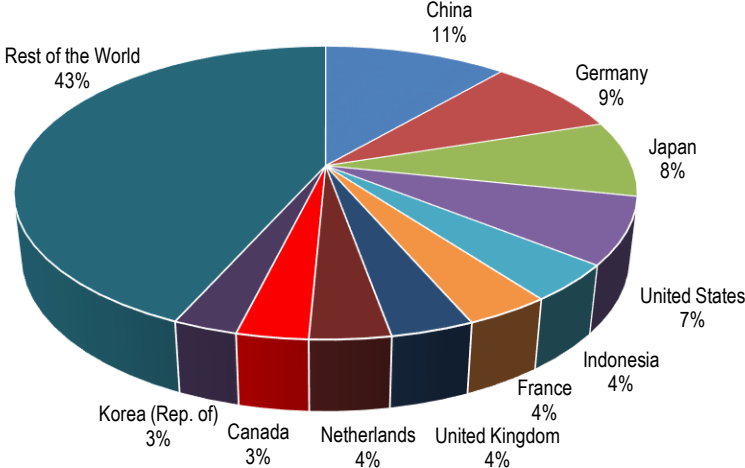
Table 7 – World Modified Starch Imports by Country in Canadian Dollars in 2018-2022

| Country | Total | | 2018 \$ | 2019 \$ | 2020 \$ | 2021 \$ | 2022 \$ | CAGR % |
|-----------------|-----------------------|---------------|----------------------|----------------------|----------------------|----------------------|----------------------|-------------|
| | 2018-2022 \$ | % | | | | | | |
| Total | 28,228,920,271 | 100.00 | 5,185,215,839 | 5,381,378,614 | 5,298,142,900 | 5,668,397,453 | 6,695,785,465 | 6.60 |
| China | 3,119,050,105 | 11.05 | 520,662,417 | 561,735,240 | 590,946,818 | 687,035,579 | 758,670,051 | 9.87 |
| Germany | 2,446,574,379 | 8.67 | 456,904,371 | 475,118,501 | 454,595,099 | 482,120,448 | 577,835,960 | 6.05 |
| Japan | 2,517,720,711 | 8.92 | 503,733,723 | 509,022,842 | 465,721,693 | 478,392,696 | 560,849,757 | 2.72 |
| U.S. | 1,532,098,431 | 5.43 | 227,285,974 | 230,224,619 | 263,092,555 | 319,790,730 | 491,704,553 | 21.28 |
| Indonesia | 1,135,894,628 | 4.02 | 199,402,353 | 221,412,384 | 219,788,215 | 220,408,420 | 274,883,256 | 8.36 |
| France | 992,527,595 | 3.52 | 192,144,666 | 176,940,581 | 172,052,101 | 200,616,401 | 250,773,846 | 6.88 |
| United Kingdom | 1,005,350,102 | 3.56 | 199,056,285 | 216,881,048 | 201,608,369 | 143,718,252 | 244,086,148 | 5.23 |
| Netherlands | 912,004,961 | 3.23 | 154,054,482 | 175,866,968 | 173,842,952 | 171,215,588 | 237,024,971 | 11.37 |
| Canada | 762,686,041 | 2.70 | 123,128,090 | 131,415,597 | 140,465,658 | 157,746,988 | 209,929,708 | 14.27 |
| Korea (Rep. of) | 768,227,467 | 2.72 | 136,056,249 | 136,800,178 | 150,649,693 | 155,241,305 | 189,480,042 | 8.63 |

Source: Global Trade tracker – May 2023

⁴ Global Trade Tracker – May 2023

Graph 3 -Top 10 Countries Importing Modified S tarch in 2022 (in percentage)



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