Global Market for Starch and Starch Products



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Introduction

Starch, or amylum, 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)

² Euromonitor, May 2023

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

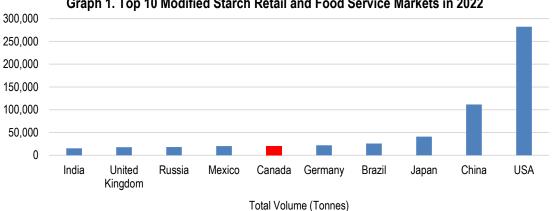
Table 1 – Top 10 Native Starch Retail and Food Service Markets in Tonnes in 2018-2027

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 Agroindustriale 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 guarters of the total world imports for the 2018 to 2022 period in guantity.

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

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

Source: Global Trade Tracker - May 2023

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

Description	Total						2022 (tonnes)	
	2018-2022 (tonnes)	%	2018 (tonnes)	2019 (tonnes)	2020 (tonnes)	2021 (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).

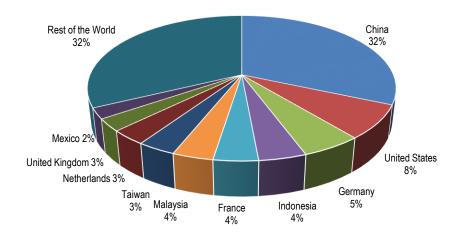
In 2022, Canadian starch exports were valued at \$65.2 million for 91.7 thousand tonnes, with 13.5 per cent share for Manitoba. The main destination for Canadian starch products was the U.S., with almost 99 per cent of the total volume. In 2022, Manitoba has seen an important increase in starch exports, 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.

	Το	tal						
Country	2018-2022 \$	%	2018 \$	2019 \$	2020 \$	2021 \$	2022 \$	CAGR %
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

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

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).

	Total							CAGR	
Description	2018-2022	%	2018	2019	2020	2021	2022	%	
	\$	70							
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.

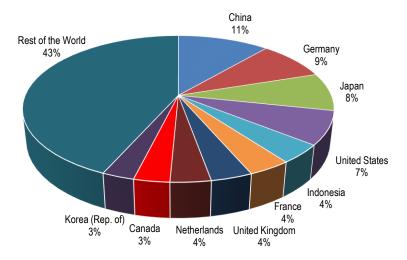
Canada is also a net importer of modified starch, importing \$210 million in 2022 and ranking ninth globally, as shown in Table 7. In terms of exports, Canada exported \$38.4 million in modified starch in 2022, almost double compared to the previous year. The main destination for Canadian modified starch 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

0.000	Total		2018	2019	2020	2021	2022	CAGR %
Country	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

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

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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