

Baseline Update for International Dairy, Livestock and Biofuel Markets

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Summary

The current calendar year has been marked by one of the largest global shocks in recent history, the spread of the novel coronavirus SARS-CoV-2 and its associated disease COVID-19. This in combination with weather events, trade disputes, and the continued presence of African swine fever (ASF) have resulted in major disruptions to global agricultural markets. While some of these challenges are expected to be longer lived, we assume that the effects of COVID-19 will not be permanent. However, it is important to note that the path these markets take will be more volatile than what is projected here. Furthermore, the numbers presented in this report should not be interpreted as forecasts but as projections. They are estimates of the average values that would prevail under normal weather, current policy and macroeconomic parameters assumed herein.

This update was prepared the week of August 17, 2020 using data available at that time. Policies are assumed to remain in place. The update uses data for international dairy and livestock from USDA's Production, Supply and Disposition database, with updates from the latest USDA's GAIN reports and other sources. Biofuels data comes primarily from F.O. Licht supplemented by GAIN reports and some country sources. The economy is assumed to evolve as forecast by IHS Markit in July 2020, with a sharp decrease in economic output in 2020, recovery starting in 2021, and global GDP in ten years still below their pre-pandemic projections.

International Dairy Markets

- After showing some relative strength at the beginning of 2020, COVID-19 and the economic disruptions caused by it caused dairy prices to fall during the year.
- Production of milk was scaled back from what was planned in some major producers and this moderated the negative impact on prices. Nonetheless, changes in eating-out behavior had impacts in major markets on consumption of butter in particular.
- Recovery in the sector would be expected as the impact of COVID-19 fades, with the strength on international markets to a large extent depending on the situation in China.
- Absent COVID issues, a relatively low crop price outlook such as that in these projections results in major producing expanding production.

International Livestock Markets

- Production in Thailand and Turkey chicken meat is expected to experience slower growth in production from 2021 on due to the negative impacts of COVID-19. Likewise, pork production in the Philippines is also expected to see slower growth as the industry also has been impacted by ASF.
- While ASF resulted in major losses in sow numbers and total inventories in both 2019 and 2020, China is expected to see some growth in both numbers in 2021. Likewise, China's pork production follows a similar pattern. However, with China implementing newly improved migration practices and by shifting towards more efficient large-scale, bio-secure operations production levels are expected to reach 2017 levels by 2023.
- China's imports of pork are expected to remain above 2017 levels throughout the baseline period with imports peaking in 2020, but not enough to offset the decrease in production. With the announcement that China was removing its retaliatory tariffs on U.S. pork and pork products, the domestic industry may see its exports to China increase, providing additional competition to the EU and Brazil.

- Russia continues to work towards achieving self-sufficiency and is expected to become a net exporter of pork in 2020 and chicken meat in 2024.

International Biofuel Markets

- Data available at the start of August 2020 were limited, contributing to serious uncertainty about how the pandemic and associated economic shocks affect biofuel demand, prices, production, and feedstock use. The baseline assumptions include often serious negative shocks to ethanol demand in many countries or regions relating to lockdowns in 2020, but no shocks of this type after the current year.
- Lockdowns, lower income, and plummeting petroleum price shock biofuel markets in 2020, with falling use in many countries dragging down trade, production, and prices as well.
- The demand outlook after this year is driven by an assumed partial recovery in income and a petroleum price surge. Both these factors fade after a couple years, leading to a longer term outlook that has modest demand growth for fuels overall and similarly slow growth to biofuel demand whether as complement to or substitute for petroleum products.
- Slow demand growth tugs biofuel prices up and, with feedstock prices flat or only slowly increasing in nominal terms, there is some incentive to expand biofuel output in many countries. The projected pace of production growth is slower than before the pandemic under these conditions.
- Policies play a large role in driving biofuel use in many countries or regions, including Brazil, Indonesia, and the European Union. China's ethanol use is assumed to expand only modestly as past statements about a 10% target appear to have been overtaken by events in fuel and feedstock markets.

For more detail on related market events, see the FAPRI-MU baseline projections for United States crop and biofuel markets (www.fapri.missouri.edu), the United States livestock, poultry and dairy sectors and on consumer food prices, see a companion report by the MU Agricultural Markets and Policy team (amap.missouri.edu) and the Center for Economic Development at the University of Nevada, Reno for international crop markets (www.unr.edu/business/research-and-outreach/uced).

International dairy

World dairy prices

	2018	2019	2020	2021	2022	2023	2024	2025
Oceania								
								(U.S. dollars per tonne)
Cheese price	3,652	3,915	3,972	3,927	3,908	3,927	3,972	4,011
Butter price	4,898	4,520	3,812	4,104	4,424	4,530	4,589	4,654
SMP price	1,990	2,621	2,625	2,566	2,526	2,542	2,530	2,544
WMP price	3,005	3,133	2,896	3,038	3,201	3,277	3,323	3,375
Northern Europe								
								(U.S. dollars per tonne)
Butter price	6,034	4,408	3,990	4,481	4,802	4,907	4,967	5,031
SMP price	1,779	2,375	2,488	2,430	2,389	2,405	2,394	2,407
WMP price	3,238	3,288	3,051	3,193	3,356	3,433	3,479	3,530
								(U.S. dollars per CWT)
U.S. all milk price*	16.28	18.63	17.69	16.76	17.44	18.05	18.14	18.22

*Source: MU's Agricultural Markets and Policy (AMAP) projections

New Zealand

	2018	2019	2020	2021	2022	2023	2024	2025
				(Thousand head)				
Dairy cows	4,993	4,946	4,928	4,932	4,943	4,953	4,963	4,989
				(Kgs per head)				
Yield	4,430	4,426	4,447	4,497	4,542	4,588	4,641	4,697
				(Thousand tonnes)				
Milk production	22,017	21,852	21,922	22,203	22,476	22,749	23,095	23,530
Fluid use	515	520	517	521	528	535	541	545
Factory use	21,190	21,003	21,076	21,353	21,619	21,884	22,225	22,656
Cheese								
Production	370.0	365.0	365.2	367.7	364.9	357.0	357.2	363.2
Imports	12.0	13.0	12.0	13.0	12.0	13.0	12.0	13.0
Exports	322.0	335.0	346.7	342.0	337.3	330.0	329.2	336.1
Consumption	38.0	38.0	37.8	38.4	39.2	39.8	40.1	40.3
Stocks	68.0	73.0	65.7	66.0	66.4	66.7	66.6	66.4
Butter								
Production	550.0	525.0	532.4	549.3	563.2	570.3	581.9	597.5
Imports	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Exports	501.0	509.0	511.9	520.9	534.4	540.8	552.4	567.9
Consumption	29.0	29.0	29.9	29.9	30.0	30.4	30.6	30.8
Stocks	105.0	93.0	84.6	84.1	83.8	83.9	83.8	83.5
SMP								
Production	410.0	375.0	383.3	387.7	387.7	392.1	401.6	418.5
Imports	3.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Exports	358.0	373.0	420.6	384.2	384.0	388.6	398.2	415.4
Consumption	5.0	7.0	7.0	7.1	7.2	7.3	7.3	7.4
Stocks	117.0	116.0	75.7	76.2	76.7	77.0	77.0	76.7
WMP								
Production	1450.0	1500.0	1506.6	1525.5	1549.2	1581.4	1616.8	1657.0
Imports	2.0	4.0	2.7	2.9	3.2	2.9	3.0	3.0
Exports	1369.0	1536.0	1482.5	1508.9	1532.3	1563.5	1599.4	1639.9
Consumption	20.0	20.0	20.2	20.3	20.5	20.7	20.8	20.9
Stocks	212.0	160.0	166.6	165.8	165.4	165.6	165.1	164.3
				(New Zealand dollars per 100kg)				
Average milk price	50.9	51.8	53.4	55.7	57.3	58.0	60.1	63.9

Australia

	2018	2019	2020	2021	2022	2023	2024	2025
				(Thousand head)				
Dairy cows	1,525	1,440	1,435	1,436	1,429	1,413	1,392	1,363
				(Kgs per head)				
Yield	6,375	6,144	6,410	6,449	6,479	6,510	6,538	6,575
				(Thousand tonnes)				
Milk production	9,451	8,832	9,201	9,236	9,208	9,130	9,003	8,862
Fluid use	2,620	2,550	2,578	2,593	2,621	2,655	2,690	2,717
Factory use	6,609	6,034	6,364	6,375	6,309	6,197	6,035	5,868
Cheese								
Production	366.0	370.0	395.3	395.8	386.2	365.3	346.5	332.9
Imports	98.0	97.0	97.0	97.0	97.0	97.0	97.0	97.0
Exports	172.0	160.0	184.0	182.1	166.8	138.0	111.0	92.1
Consumption	293.0	297.0	302.2	310.7	315.9	323.2	331.3	337.1
Stocks	50.0	60.0	66.1	66.0	66.5	67.6	68.9	69.5
Butter								
Production	93.0	70.0	75.4	82.9	87.1	84.3	77.3	71.8
Imports	42.0	40.0	55.0	50.0	50.0	55.0	60.0	65.0
Exports	17.0	18.0	22.3	28.1	31.9	30.4	24.7	22.4
Consumption	117.0	104.0	106.6	105.8	105.9	108.4	111.7	114.0
Stocks	93.0	81.0	82.5	81.6	81.0	81.5	82.3	82.7
SMP								
Production	201.0	150.0	166.2	165.1	161.5	158.8	151.0	143.1
Imports	13.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Exports	155.0	128.0	136.7	132.4	127.1	122.6	112.5	103.8
Consumption	48.0	45.0	46.9	47.6	49.0	50.6	52.6	53.9
Stocks	63.0	55.0	52.5	52.7	53.1	53.7	54.6	55.1
WMP								
Production	63.0	40.0	44.8	46.6	47.9	49.3	47.1	43.9
Imports	28.0	37.0	31.0	32.0	33.3	32.1	32.5	32.6
Exports	55.0	42.0	36.7	45.5	47.6	46.4	43.3	39.8
Consumption	35.0	33.0	33.7	33.6	33.9	34.7	35.7	36.5
Stocks	25.0	27.0	32.3	31.9	31.6	31.9	32.5	32.8

China

	2018	2019	2020	2021	2022	2023	2024	2025
				(Thousand head)				
Dairy cows	6,200	6,100	6,150	6,119	6,074	6,030	5,987	5,940
				(Kgs per head)				
Yield	5,000	5,224	5,368	5,454	5,541	5,628	5,716	5,803
				(Thousand tonnes)				
Milk production	32,250	33,500	34,429	34,778	35,092	35,403	35,701	35,949
Fluid use	12,700	13,200	13,170	13,404	13,600	13,834	14,075	14,311
Factory use	20,196	21,165	22,122	22,253	22,385	22,477	22,551	22,578
Cheese*								
Production	276.0	282.0	295.7	301.8	304.5	301.9	303.5	307.2
Imports	108.3	109.3	103.6	118.7	135.7	158.3	176.5	192.6
Exports	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Consumption	384.3	391.3	399.3	420.5	440.2	460.2	480.0	499.8
Stocks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Butter*								
Production	108.0	110.0	106.7	114.3	123.0	125.7	127.2	128.9
Imports	113.3	114.3	144.1	144.4	143.0	149.2	156.8	164.3
Exports	1.9	1.9	1.8	1.9	1.9	1.8	1.9	1.8
Consumption	219.5	222.4	249.0	256.8	264.1	273.0	282.2	291.3
Stocks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SMP								
Production	20.0	15.0	20.8	20.0	19.5	19.1	18.5	18.1
Imports	280.0	344.0	355.4	371.3	385.9	400.2	415.0	429.4
Exports	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Consumption	299.0	358.0	375.2	390.3	404.5	418.4	432.6	446.5
Stocks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WMP								
Production	1300.0	1334.0	1400.5	1421.0	1458.0	1492.0	1519.0	1535.2
Imports	521.0	671.0	690.7	751.9	764.9	790.8	825.6	870.5
Exports	2.0	1.0	1.7	1.6	1.4	1.5	1.5	1.5
Consumption	1869.0	2004.0	2113.7	2171.6	2221.8	2281.1	2342.8	2404.0
Stocks	50.0	50.0	25.8	25.5	25.2	25.3	25.5	25.8

*From FAO

India

	2018	2019	2020	2021	2022	2023	2024	2025
				(Thousand head)				
Dairy cows	52,482	54,600	56,450	58,072	59,509	60,865	62,336	63,889
				(Kgs per head)				
Yield	1,677	1,657	1,661	1,683	1,705	1,729	1,754	1,779
				(Thousand tonnes)				
Milk production	187,700	191,000	196,710	201,876	206,954	212,439	218,187	224,124
Fluid use	77,000	79,000	81,191	83,770	86,313	89,161	92,265	95,537
Factory use	110,691	111,990	115,510	118,096	120,632	123,269	125,913	128,577
Cheese								
Production	4.4	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Imports	3.4	3.5	3.2	3.4	3.4	3.3	3.3	3.3
Exports	7.8	7.6	7.3	7.5	7.4	7.4	7.4	7.4
Consumption	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Stocks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Butter								
Production	5,600	5,850	6,077	6,247	6,413	6,588	6,765	6,945
Imports	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
Exports	33.0	47.0	27.0	27.0	27.0	27.0	27.0	27.0
Consumption	5,577	5,803	6,051	6,221	6,387	6,562	6,739	6,919
Stocks	0.0	0.0	0.2	0.3	0.4	0.4	0.5	0.6
SMP								
Production	600.0	630.0	656.7	671.9	683.2	698.4	714.1	732.8
Imports	0.0	1.0	0.7	0.6	0.7	0.7	0.7	0.7
Exports	43.0	8.0	4.5	13.1	10.7	12.9	15.0	21.0
Consumption	572.0	603.0	646.3	659.2	673.0	686.0	699.6	712.4
Stocks	15.0	35.0	41.6	41.8	42.1	42.3	42.5	42.6

European Union

	2018	2019	2020	2021	2022	2023	2024	2025
				(Thousand head)				
Dairy cows	23,311	22,908	22,628	22,521	22,287	22,000	21,776	21,635
				(Kgs per head)				
Yield	6,689	6,817	6,937	7,020	7,108	7,209	7,316	7,418
				(Thousand tonnes)				
Milk production	159,255	159,900	161,309	161,978	162,070	162,458	163,464	164,733
Fluid use	33,500	33,300	33,309	33,053	32,761	32,508	32,265	32,038
Factory use	124,981	125,680	127,082	127,991	128,361	128,986	130,217	131,697
Cheese								
Production	10,160	10,210	10,429	10,498	10,503	10,783	10,815	10,972
Imports	59	63	61	61	62	61	61	61
Exports	832	880	945	899	821	1,043	1,031	1,134
Consumption	9,387	9,393	9,545	9,660	9,744	9,800	9,846	9,900
Stocks	0	0	0	0	0	0	0	0
Butter								
Production	2,345	2,375	2,354	2,340	2,390	2,409	2,421	2,433
Imports	22	16	18	19	18	18	18	18
Exports	161	218	205	180	227	234	233	230
Consumption	2,206	2,173	2,167	2,178	2,180	2,192	2,206	2,221
Stocks	0	0	0	0	0	0	0	0
SMP								
Production	1,735	1,760	1,791	1,805	1,831	1,774	1,852	1,902
Imports	3	6	4	4	5	4	4	4
Exports	816	962	868	866	899	850	936	994
Consumption	1,127	979	927	943	937	928	921	912
Stocks	175	0	0	0	0	0	0	0
WMP								
Production	732	740	788	822	845	826	883	919
Imports	2	5	3	3	4	3	3	4
Exports	334	298	313	349	374	354	412	448
Consumption	400	447	477	477	475	475	475	475
Stocks	0	0	0	0	0	0	0	0
				(Euro per tonne)				
Prices								
Milk	340	347	341	339	343	345	348	349
Butter	5,110	3,920	3,695	3,917	4,193	4,277	4,314	4,340
Cheese	3,064	3,030	3,273	3,194	3,169	3,177	3,203	3,210
Skim milk powder	1,494	2,100	2,082	2,004	1,962	1,971	1,952	1,947
Whole milk powder	2,716	2,910	2,719	2,817	2,955	3,016	3,045	3,068

Canada

	2018	2019	2020	2021	2022	2023	2024	2025
				(Thousand head)				
Dairy cows	970	969	968	958	954	950	945	940
				(Kgs per head)				
Yield	10,257	10,320	10,450	10,531	10,616	10,720	10,827	10,932
				(Thousand tonnes)				
Milk production	9,944	9,995	10,006	10,044	10,083	10,128	10,172	10,217
Fluid use	2,832	2,800	2,799	2,786	2,774	2,768	2,761	2,753
Factory use	6,656	6,738	6,748	6,799	6,850	6,901	6,953	7,005
Cheese								
Production	510.0	519.0	524.7	521.6	521.1	520.1	519.1	518.4
Imports	32.0	36.0	38.2	47.9	56.0	64.6	73.1	81.1
Exports	10.0	12.0	12.1	12.2	12.3	12.4	12.5	12.6
Consumption	537.0	543.0	550.8	557.2	564.8	572.1	579.6	586.9
Stocks	85.0	85.0	85.0	84.9	85.0	85.1	85.2	85.3
Butter								
Production	116.0	112.0	114.6	118.3	121.1	123.6	126.1	128.7
Imports	22.0	25.0	22.2	18.6	17.6	17.2	16.7	16.1
Exports	2.0	2.0	1.7	0.0	0.0	0.0	0.0	0.0
Consumption	124.0	131.0	135.2	136.8	138.7	140.8	142.8	144.9
Stocks	33.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0
SMP								
Production	108.0	100.0	108.5	114.8	119.3	123.7	128.1	132.6
Imports	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Exports	66.0	47.0	65.9	61.3	64.7	67.9	71.3	74.7
Consumption	64.0	56.0	56.5	57.5	58.6	59.7	60.7	61.8
Stocks	29.0	30.0	20.1	20.1	20.2	20.3	20.4	20.5
Prices				(Canadian dollars per tonne)				
Milk	716	746	759	773	787	801	815	829
Butter	8,071	8,346	8,492	8,640	8,791	8,944	9,101	9,260
Cheese	8,177	8,457	8,601	8,747	8,896	9,047	9,201	9,358
SMP	6,210	7,024	7,047	7,070	7,093	7,116	7,139	7,162

Mexico

	2018	2019	2020	2021	2022	2023	2024	2025
	(Thousand head)							
Dairy cows	6,550	6,500	6,500	6,534	6,463	6,380	6,333	6,309
	(Kgs per head)							
Yield	1,895	1,946	1,983	1,989	2,004	2,024	2,045	2,066
	(Thousand tonnes)							
Milk production	12,537	12,820	13,100	13,101	13,041	13,042	13,104	13,199
Fluid use	4,183	4,190	4,303	4,335	4,330	4,308	4,289	4,267
Factory use	8,389	8,661	8,828	8,798	8,742	8,765	8,846	8,963
Cheese								
Production	419.0	437.0	446.2	447.4	443.6	439.6	444.6	455.5
Imports	123.0	126.0	115.1	135.5	153.5	167.0	171.5	170.1
Exports	16.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Consumption	526.0	556.0	554.3	575.9	590.0	599.6	609.1	618.6
Stocks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Butter								
Production	228.0	231.0	238.2	232.1	232.0	234.7	236.5	239.4
Imports	33.0	59.0	50.8	64.7	68.2	69.1	71.9	73.4
Exports	11.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0
Consumption	250.0	277.0	276.0	283.9	287.2	290.8	295.4	299.8
Stocks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SMP								
Production	43.0	44.0	45.4	48.3	49.8	50.2	50.9	51.4
Imports	360.0	361.0	355.8	364.6	370.8	375.0	379.6	383.9
Exports	56.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Consumption	347.0	405.0	401.2	412.9	420.6	425.2	430.5	435.3
Stocks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WMP								
Production	119.0	121.0	124.3	123.0	124.5	127.7	130.5	132.6
Imports	7.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Exports	23.0	17.0	19.4	14.2	14.1	16.4	17.7	18.5
Consumption	103.0	107.0	107.8	111.8	113.4	114.3	115.7	117.1
Stocks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

International livestock

World meat market

	2018	2019	2020	2021	2022	2023	2024	2025
Sum of production								
								(Thousand tonnes)
Beef	36,917	37,744	37,058	37,119	37,293	37,525	38,068	38,645
Pork	92,530	81,462	76,176	80,536	87,384	93,917	95,376	96,776
Chicken	58,773	61,964	62,605	63,360	64,064	64,872	66,017	67,262
Sum of domestic use								
Beef	34,147	35,154	34,886	35,315	35,531	35,670	36,070	36,454
Pork	92,485	81,426	77,152	81,641	87,951	93,747	95,118	96,684
Chicken	55,180	58,376	58,868	59,691	60,485	61,323	62,432	63,626
Sum of beef trade								
Imports	5,398	6,174	6,456	6,412	6,326	6,318	6,426	6,562
Exports	8,236	8,756	8,515	8,276	8,198	8,288	8,544	8,861
Rest of world net imports	2,838	2,582	2,059	1,864	1,872	1,971	2,118	2,300
Sum of pork trade								
Imports	5,746	6,641	8,412	7,882	7,159	6,509	6,420	6,477
Exports	7,925	9,004	10,402	9,844	9,580	9,588	9,570	9,508
Rest of world net imports	2,179	2,364	1,989	1,962	2,421	3,079	3,149	3,031
Sum of Chicken trade								
Imports	3,561	3,895	3,881	3,643	3,512	3,456	3,455	3,470
Exports	10,313	10,660	10,804	10,613	10,492	10,507	10,635	10,791
Rest of world net imports	6,752	6,765	6,923	6,970	6,980	7,051	7,180	7,321

World meat trade

	2018	2019	2020	2021	2022	2023	2024	2025
Beef net trade								
Exporters	(Thousand tonnes)							
Australia	1,568	1,723	1,394	1,395	1,325	1,306	1,330	1,391
Brazil	1,975	2,271	2,508	2,171	2,014	2,003	2,125	2,292
Canada	242	321	283	263	249	244	246	255
India	1,511	1,494	1,403	1,509	1,590	1,644	1,680	1,705
New Zealand	590	609	598	588	600	605	611	616
United States	73	-14	-112	63	112	118	121	111
Importers								
China	1,348	2,156	2,568	2,583	2,491	2,457	2,526	2,613
European Union	68	11	-55	-54	-62	-68	-69	-64
Japan	835	847	835	821	824	840	854	867
Korea	515	550	525	529	534	543	553	566
Mexico	-78	-126	-184	-71	-85	-125	-160	-203
Russia	433	384	325	317	317	301	292	293
Other countries	2,838	2,582	2,059	1,864	1,872	1,971	2,118	2,300
Pork net trade								
Exporters	(Thousand tonnes)							
Brazil	720	859	1,038	953	1,023	1,149	1,201	1,172
Canada	1,049	1,042	1,199	1,174	1,186	1,220	1,253	1,264
EU	2,824	3,533	4,041	3,483	3,148	3,000	2,886	2,780
United States	2,193	2,439	2,982	3,072	2,992	2,914	2,897	2,944
Importers								
China	1,255	2,316	4,256	3,619	2,803	2,073	1,904	1,858
Japan	1,476	1,490	1,495	1,543	1,553	1,549	1,554	1,564
Korea	752	692	598	590	652	708	758	802
Mexico	795	751	677	669	652	635	651	694
Philippines	282	221	250	309	282	257	241	236
Russia	47	39	-5	-10	-14	-18	-21	-25
Other countries	2,179	2,364	1,989	1,962	2,421	3,079	3,149	3,031
Chicken net trade								
Exporters	(Thousand tonnes)							
Brazil	3,684	3,825	4,029	3,558	3,109	2,971	3,034	3,158
Canada	-46	-48	-50	-52	-54	-56	-58	-60
China	105	-152	-524	-328	-196	-147	-182	-226
EU	723	824	923	1,047	1,134	1,148	1,111	1,036
India	3	3	3	3	3	3	3	3
Thailand	824	869	854	919	1,013	1,027	1,032	1,029
Turkey	418	408	361	297	246	214	206	215
United States	3,143	3,163	3,225	3,308	3,408	3,509	3,602	3,693
Importers								
Japan	1,067	1,069	1,041	956	922	939	955	969
Korea	130	128	100	101	105	113	116	114
Mexico	816	870	703	685	636	562	509	473
Russia	89	60	55	39	21	5	-12	-29
Other countries	6,752	6,765	6,923	6,970	6,980	7,051	7,180	7,321

Australia

	2018	2019	2020	2021	2022	2023	2024	2025
Animal inventories								
				(Thousand head)				
Cows	11,250	11,000	10,300	10,084	10,222	10,515	10,793	10,954
Cattle	25,734	23,690	23,283	23,103	23,016	23,210	23,523	23,834
Beef								
				(Thousand tonnes)				
Production	2,306	2,432	2,092	2,088	2,017	2,004	2,037	2,103
Imports	14	15	14	14	14	14	14	14
Exports	1,582	1,738	1,408	1,409	1,339	1,320	1,344	1,405
Domestic use	738	709	697	693	692	698	707	712
Ending stocks	0	0	0	0	0	0	0	0
Consumption per capita								
				(Kilograms per capita)				
Beef	29.6	28.1	27.3	26.9	26.6	26.5	26.6	26.5

Brazil

	2018	2019	2020	2021	2022	2023	2024	2025
Animal inventories								
				(Thousand head)				
Cows	58,080	57,200	58,096	58,218	59,951	62,742	64,021	64,588
Cattle	238,158	244,144	252,511	253,111	261,597	275,268	281,535	284,308
Sows	2,950	2,975	3,004	3,011	3,031	3,078	3,129	3,156
Hogs	38,427	37,850	38,294	38,406	38,774	39,433	40,104	40,524
Beef								
				(Thousand tonnes)				
Production	9,900	10,200	10,003	9,765	9,859	9,976	10,229	10,568
Imports	46	43	45	46	47	48	49	50
Exports	2,021	2,314	2,553	2,217	2,061	2,051	2,174	2,342
Domestic use	7,925	7,929	7,495	7,593	7,845	7,973	8,104	8,276
Ending stocks	0	0	0	0	0	0	0	0
Pork								
Production	3,763	3,975	4,030	4,052	4,125	4,247	4,369	4,449
Imports	2	2	2	2	2	2	2	2
Exports	722	861	1,040	955	1,025	1,151	1,203	1,174
Domestic use	3,043	3,116	2,992	3,099	3,102	3,099	3,168	3,277
Ending stocks	0	0	0	0	0	0	0	0
Chicken								
Production	13,355	13,690	13,831	13,517	13,295	13,368	13,624	13,924
Imports	3	5	2	2	2	2	2	2
Exports	3,687	3,830	4,031	3,560	3,111	2,973	3,036	3,160
Domestic use	9,671	9,865	9,802	9,960	10,185	10,396	10,590	10,766
Ending stocks	0	0	0	0	0	0	0	0
Consumption per capita								
				(Kilograms per capita)				
Beef	37.8	37.6	35.3	35.5	36.4	36.8	37.2	37.8
Pork	14.5	14.8	14.1	14.5	14.4	14.3	14.5	15.0
Chicken	46.2	46.7	46.1	46.5	47.3	48.0	48.6	49.2
Total	98.5	99.1	95.4	96.5	98.1	99.1	100.3	101.9

Canada

	2018	2019	2020	2021	2022	2023	2024	2025
Animal inventories								
				(Thousand head)				
Cows	3,674	3,656	3,561	3,481	3,425	3,402	3,393	3,411
Cattle	11,440	11,094	10,924	10,844	10,783	10,758	10,751	10,777
Sows	1,240	1,232	1,224	1,225	1,220	1,231	1,247	1,252
Hogs	13,960	13,875	13,597	13,628	13,613	13,740	13,911	13,971
Beef								
				(Thousand tonnes)				
Production	1,265	1,340	1,281	1,290	1,285	1,283	1,288	1,302
Imports	236	204	220	218	216	214	212	210
Exports	478	525	503	481	465	458	458	465
Domestic use	1,014	1,028	1,001	1,027	1,036	1,039	1,042	1,046
Ending stocks	42	33	30	31	31	32	32	33
Pork								
Production	1,955	2,020	2,114	2,125	2,131	2,164	2,203	2,220
Imports	228	242	250	258	266	274	282	290
Exports	1,277	1,284	1,449	1,432	1,452	1,494	1,535	1,554
Domestic use	913	967	926	950	944	942	948	954
Ending stocks	69	80	70	72	74	76	78	80
Chicken								
Production	1,300	1,328	1,315	1,329	1,355	1,383	1,411	1,439
Imports	170	172	175	178	181	184	187	190
Exports	124	124	125	126	127	128	129	130
Domestic use	1,338	1,372	1,365	1,380	1,408	1,438	1,468	1,498
Ending stocks	54	58	58	59	60	61	62	63
Consumption per capita								
				(Kilograms per capita)				
Beef	27.4	27.4	26.3	26.8	26.7	26.5	26.3	26.2
Pork	24.7	25.8	24.4	24.8	24.3	24.0	23.9	23.9
Chicken	36.2	36.6	35.9	36.0	36.3	36.7	37.1	37.5
Total	88.3	89.7	86.6	87.5	87.4	87.3	87.4	87.5

China

	2018	2019	2020	2021	2022	2023	2024	2025
Animal inventories								
				(Thousand head)				
Cows	52,000	52,500	52,750	53,013	53,800	54,016	53,513	52,581
Cattle	89,153	91,380	92,790	93,541	94,438	94,784	94,046	93,004
Sows	43,610	37,000	27,000	31,008	35,948	40,406	40,427	40,451
Hogs	428,070	310,410	339,846	370,049	424,809	474,811	478,165	481,473
Beef								
				(Thousand tonnes)				
Production	6,440	6,670	6,788	6,913	6,847	6,779	6,903	6,971
Imports	1,369	2,177	2,583	2,597	2,505	2,470	2,538	2,624
Exports	21	21	15	14	14	13	12	12
Domestic use	7,808	8,826	9,356	9,496	9,338	9,236	9,429	9,584
Ending stocks	0	0	0	0	0	0	0	0
Pork								
Production	54,040	42,550	37,008	41,487	48,293	54,607	55,801	56,982
Imports	1,457	2,451	4,355	3,719	2,945	2,257	2,092	2,043
Exports	202	135	100	100	142	183	188	184
Domestic use	55,295	44,866	41,264	45,106	51,096	56,681	57,706	58,841
Ending stocks	0	0	0	0	0	0	0	0
Chicken								
Production	11,700	13,750	14,862	15,339	15,368	15,189	15,186	15,268
Imports	342	580	916	766	699	676	694	717
Exports	447	428	392	437	503	530	513	490
Domestic use	11,595	13,902	15,386	15,667	15,564	15,336	15,368	15,494
Ending stocks	0	0	0	0	0	0	0	0
Consumption per capita								
				(Kilograms per capita)				
Beef	5.5	6.2	6.5	6.6	6.4	6.4	6.5	6.6
Pork	38.7	31.3	28.7	31.2	35.3	39.0	39.7	40.4
Chicken	8.1	9.7	10.7	10.8	10.7	10.6	10.6	10.6
Total	52.3	47.1	45.9	48.7	52.5	56.0	56.7	57.6

European Union

	2018	2019	2020	2021	2022	2023	2024	2025
Animal inventories								
				(Thousand head)				
Cows	12,307	12,222	12,210	12,204	12,202	12,192	12,177	12,165
Cattle	87,450	86,694	85,804	84,512	84,571	84,672	84,591	84,433
Sows	12,164	11,784	11,816	11,628	11,364	11,145	10,957	10,783
Hogs	148,167	147,830	149,999	148,271	146,187	144,657	143,447	142,378
Beef								
				(Thousand tonnes)				
Production	8,003	7,928	7,856	7,822	7,833	7,857	7,851	7,832
Imports	363	341	298	298	295	293	292	294
Exports	295	330	353	353	357	361	362	359
Domestic use	8,071	7,939	7,801	7,767	7,771	7,788	7,782	7,768
Ending stocks	0	0	0	0	0	0	0	0
Pork								
Production	24,082	23,960	24,129	23,911	23,699	23,575	23,498	23,440
Imports	14	16	18	18	17	17	16	16
Exports	2,838	3,549	4,059	3,501	3,165	3,017	2,902	2,796
Domestic use	21,258	20,427	20,088	20,428	20,551	20,575	20,612	20,660
Ending stocks	0	0	0	0	0	0	0	0
Chicken								
Production	12,260	12,460	12,413	12,671	12,948	13,169	13,344	13,490
Imports	704	724	600	615	630	646	662	679
Exports	1,427	1,548	1,523	1,662	1,765	1,794	1,773	1,715
Domestic use	11,537	11,636	11,490	11,623	11,814	12,021	12,234	12,453
Ending stocks	0	0	0	0	0	0	0	0
Consumption per capita								
				(Kilograms per capita)				
Beef	15.8	15.5	15.2	15.1	15.1	15.2	15.2	15.1
Pork	41.6	39.9	39.2	39.8	40.0	40.1	40.2	40.3
Chicken	22.6	22.7	22.4	22.6	23.0	23.4	23.8	24.3
Total	79.9	78.1	76.8	77.6	78.2	78.7	79.1	79.6

India

	2018	2019	2020	2021	2022	2023	2024	2025
Animal inventories								
				(Thousand head)				
Cattle	302,700	303,200	305,068	305,821	306,430	306,915	307,307	307,654
Beef				(Thousand tonnes)				
Production	4,240	4,305	4,152	4,291	4,403	4,493	4,565	4,629
Imports	0	0	0	0	0	0	0	0
Exports	1,511	1,494	1,403	1,509	1,590	1,644	1,680	1,705
Domestic use	2,729	2,811	2,749	2,781	2,813	2,848	2,885	2,924
Ending stocks	0	0	0	0	0	0	0	0
Chicken								
Production	4,062	4,350	4,002	4,060	4,208	4,406	4,616	4,831
Imports	0	0	0	0	0	0	0	0
Exports	3	3	3	3	3	3	3	3
Domestic use	4,059	4,347	3,999	4,057	4,205	4,403	4,613	4,828
Ending stocks	0	0	0	0	0	0	0	0
Consumption per capita				(Kilograms per capita)				
Beef	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0
Chicken	3.0	3.2	2.9	2.9	3.0	3.1	3.2	3.3
Total	5.0	5.2	4.9	4.9	5.0	5.1	5.2	5.4

Japan

	2018	2019	2020	2021	2022	2023	2024	2025
Animal inventories								
				(Thousand head)				
Cows	517	528	540	548	552	555	557	558
Cattle	3,835	3,870	3,889	3,932	3,966	3,986	4,000	4,006
Sows	824	853	840	829	824	823	820	817
Hogs	9,156	9,060	9,140	9,049	9,019	9,016	9,005	8,984
Beef								
				(Thousand tonnes)				
Production	475	471	475	481	490	495	498	499
Imports	840	853	841	827	830	847	861	874
Exports	5	6	6	6	7	7	7	7
Domestic use	1,298	1,319	1,307	1,301	1,313	1,334	1,351	1,365
Ending stocks	163	162	165	166	167	168	169	170
Pork								
Production	1,284	1,279	1,280	1,268	1,268	1,274	1,277	1,278
Imports	1,480	1,493	1,499	1,547	1,557	1,553	1,558	1,568
Exports	4	3	4	4	4	4	4	5
Domestic use	2,774	2,714	2,774	2,810	2,820	2,822	2,830	2,841
Ending stocks	208	263	265	266	267	268	269	270
Chicken								
Production	1,685	1,735	1,789	1,853	1,910	1,944	1,966	1,979
Imports	1,074	1,076	1,048	963	929	946	963	976
Exports	7	7	7	7	7	7	7	8
Domestic use	2,761	2,801	2,837	2,807	2,830	2,881	2,919	2,945
Ending stocks	159	162	155	157	159	161	163	165
Consumption per capita								
				(Kilograms per capita)				
Beef	10.2	10.4	10.3	10.3	10.5	10.7	10.8	11.0
Pork	21.8	21.4	21.9	22.3	22.5	22.6	22.7	22.9
Chicken	21.7	22.1	22.4	22.3	22.5	23.0	23.4	23.8
Total	53.7	53.9	54.7	54.9	55.4	56.3	57.0	57.7

South Korea

	2018	2019	2020	2021	2022	2023	2024	2025
Animal inventories	(Thousand head)							
Cows	1,380	1,434	1,489	1,537	1,587	1,634	1,673	1,704
Cattle	3,521	3,619	3,753	3,846	3,941	4,029	4,107	4,168
Sows	1,058	1,063	1,026	999	984	971	966	969
Hogs	11,333	11,280	11,152	10,781	10,552	10,380	10,330	10,400
Beef	(Thousand tonnes)							
Production	279	286	292	301	309	317	325	331
Imports	515	550	525	529	534	543	553	566
Exports	0	0	0	0	0	0	0	0
Domestic use	790	832	817	830	842	860	877	897
Ending stocks	11	15	15	16	16	17	17	18
Pork	(Thousand tonnes)							
Production	1,329	1,364	1,370	1,342	1,323	1,310	1,308	1,316
Imports	753	694	599	591	653	709	759	803
Exports	1	2	1	1	1	1	1	1
Domestic use	2,001	2,011	1,944	1,930	1,972	2,016	2,065	2,116
Ending stocks	180	225	250	252	254	256	258	260
Chicken	(Thousand tonnes)							
Production	915	942	955	977	998	1,021	1,047	1,076
Imports	163	178	150	152	157	166	170	169
Exports	33	50	50	51	52	53	54	55
Domestic use	1,040	1,060	1,060	1,076	1,102	1,133	1,162	1,189
Ending stocks	40	50	45	46	47	48	49	50
Consumption per capita	(Kilograms per capita)							
Beef	15.4	16.2	15.9	16.2	16.4	16.7	17.1	17.5
Pork	39.1	39.3	37.9	37.6	38.4	39.3	40.2	41.2
Chicken	20.3	20.7	20.7	21.0	21.5	22.1	22.6	23.2
Total	74.9	76.2	74.5	74.8	76.3	78.1	79.9	81.8

Mexico

	2018	2019	2020	2021	2022	2023	2024	2025
Animal inventories								
				(Thousand head)				
Cows	7,500	7,700	7,900	7,934	8,019	8,133	8,096	8,078
Cattle	16,699	16,900	17,220	17,282	17,438	17,645	17,577	17,545
Sows	1,190	1,230	1,245	1,276	1,291	1,309	1,331	1,348
Hogs	10,700	11,050	11,500	11,772	11,959	12,181	12,405	12,572
Beef								
				(Thousand tonnes)				
Production	1,980	2,030	2,065	2,083	2,134	2,173	2,202	2,235
Imports	194	189	155	156	157	158	159	160
Exports	272	315	339	227	242	283	319	363
Domestic use	1,902	1,904	1,881	2,012	2,049	2,048	2,042	2,032
Ending stocks	0	0	0	0	0	0	0	0
Pork								
Production	1,321	1,408	1,460	1,489	1,510	1,536	1,562	1,580
Imports	972	985	977	974	962	950	971	1,019
Exports	177	234	300	305	310	315	320	325
Domestic use	2,116	2,159	2,136	2,157	2,162	2,171	2,212	2,274
Ending stocks	0	0	0	0	0	0	0	0
Chicken								
Production	3,485	3,600	3,767	3,888	4,024	4,186	4,346	4,490
Imports	820	875	709	692	642	569	516	481
Exports	4	5	6	6	7	7	7	7
Domestic use	4,301	4,470	4,470	4,573	4,660	4,749	4,855	4,963
Ending stocks	0	0	0	0	0	0	0	0
Consumption per capita								
				(Kilograms per capita)				
Beef	15.1	14.9	14.6	15.4	15.6	15.4	15.2	15.0
Pork	16.8	16.9	16.6	16.6	16.4	16.3	16.5	16.8
Chicken	34.1	35.0	34.7	35.1	35.4	35.8	36.2	36.7
Total	65.9	66.9	65.8	67.1	67.4	67.5	67.9	68.5

New Zealand

	2018	2019	2020	2021	2022	2023	2024	2025
Animal inventories								
				(Thousand head)				
Cows	976	1,029	1,128	1,152	1,167	1,176	1,182	1,177
Cattle	10,107	10,151	10,089	10,117	10,167	10,189	10,213	10,226
Beef								
				(Thousand tonnes)				
Production	672	713	676	680	692	697	703	708
Imports	12	14	14	14	15	15	15	15
Exports	602	623	612	602	614	620	626	632
Domestic use	82	104	78	92	92	92	92	92
Ending stocks	0	0	0	0	0	0	0	0
Consumption per capita								
				(Kilograms per capita)				
Beef	17.3	21.7	16.3	19.0	18.8	18.7	18.5	18.3

Philippines

	2018	2019	2020	2021	2022	2023	2024	2025
Pork								
				(Thousand tonnes)				
Production	1,601	1,585	1,349	1,359	1,426	1,490	1,553	1,611
Imports	283	222	250	309	282	257	241	236
Exports	1	1	0	0	0	0	0	0
Domestic use	1,883	1,806	1,599	1,668	1,709	1,746	1,794	1,847
Ending stocks	0	0	0	0	0	0	0	0
Consumption per capita								
				(Kilograms per capita)				
Pork	17.7	16.7	14.6	15.0	15.2	15.3	15.5	15.8

Russia

	2018	2019	2020	2021	2022	2023	2024	2025
Animal inventories								
				(Thousand head)				
Cows	850	1,068	1,155	1,218	1,265	1,297	1,317	1,325
Cattle	18,050	18,044	17,997	17,891	18,269	18,947	19,265	19,249
Sows	3,050	3,110	3,150	3,164	3,241	3,327	3,391	3,457
Hogs	23,600	25,083	25,699	25,833	26,401	27,020	27,494	27,976
Beef								
				(Thousand tonnes)				
Production	1,357	1,369	1,378	1,405	1,423	1,453	1,467	1,466
Imports	449	401	343	335	336	321	312	313
Exports	16	17	18	19	19	20	20	21
Domestic use	1,790	1,753	1,703	1,722	1,739	1,754	1,758	1,759
Ending stocks	0	0	0	0	0	0	0	0
Pork								
Production	3,155	3,321	3,435	3,503	3,609	3,714	3,806	3,900
Imports	84	107	70	67	63	60	57	54
Exports	37	68	75	77	77	78	78	80
Domestic use	3,202	3,360	3,430	3,493	3,595	3,696	3,784	3,874
Ending stocks	0	0	0	0	0	0	0	0
Chicken								
Production	4,684	4,671	4,686	4,804	4,960	5,110	5,263	5,419
Imports	220	224	219	214	209	204	199	194
Exports	131	164	164	175	188	199	211	223
Domestic use	4,785	4,724	4,741	4,843	4,981	5,115	5,251	5,391
Ending stocks	13	20	20	20	20	20	20	20
Consumption per capita								
				(Kilograms per capita)				
Beef	12.3	12.0	11.7	11.8	11.9	12.0	12.1	12.1
Pork	22.0	23.0	23.5	23.9	24.7	25.4	26.0	26.7
Chicken	32.8	32.4	32.5	33.2	34.2	35.1	36.1	37.1
Total	67.1	67.4	67.7	68.9	70.8	72.5	74.2	76.0

Thailand

	2018	2019	2020	2021	2022	2023	2024	2025
Chicken								
				(Thousand tonnes)				
Production	3,170	3,300	2,910	2,897	2,995	3,086	3,174	3,255
Imports	2	2	2	2	2	2	2	2
Exports	826	871	856	921	1,015	1,029	1,034	1,031
Domestic use	2,354	2,469	2,005	1,976	1,979	2,056	2,139	2,223
Ending stocks	80	42	94	97	100	103	106	109
Consumption per capita								
				(Kilograms per capita)				
Chicken	33.9	35.5	28.7	28.2	28.2	29.3	30.4	31.6

Turkey

	2018	2019	2020	2021	2022	2023	2024	2025
Chicken								
				(Thousand tonnes)				
Production	2,157	2,138	2,076	2,025	2,003	2,009	2,040	2,091
Imports	0	0	0	0	0	0	0	0
Exports	418	408	361	297	246	214	206	215
Domestic use	1,739	1,730	1,715	1,728	1,757	1,795	1,834	1,876
Ending stocks	0	0	0	0	0	0	0	0
Consumption per capita								
				(Kilograms per capita)				
Chicken	21.1	20.7	20.3	20.3	20.5	20.9	21.2	21.6

International biofuels

World ethanol balances

Calendar year	2018	2019	2020	2021	2022	2023	2024	2025
World ethanol quantities								
				(Billion liters)				
Production	127.4	128.8	115.3	127.1	130.9	133.6	134.7	135.5
Use	123.4	126.9	113.9	124.1	128.2	131.5	132.8	133.6
Ending stocks	17.0	17.1	16.6	17.8	18.6	18.9	19.0	19.0
Ethanol net exports								
				(Billion liters)				
Argentina	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Brazil	0.0	0.6	0.5	1.6	1.7	1.4	0.9	0.6
Canada	-1.3	-1.2	-1.3	-1.1	-1.3	-1.4	-1.4	-1.4
China	-1.0	-0.1	-0.1	-0.2	-0.3	-0.3	-0.3	-0.3
EU	-0.3	-0.5	-0.3	-0.7	-0.6	-0.8	-0.8	-0.7
USA	6.3	4.7	5.1	5.0	5.6	6.1	6.5	6.9
ROW	-1.8	-1.7	-2.0	-2.7	-3.2	-3.2	-3.2	-3.2
Statistical error	-1.9	-1.9	-1.9	-1.9	-1.9	-1.9	-1.9	-1.9
U.S. Gulf price								
				(Dollars per liter)				
	0.39	0.40	0.34	0.40	0.40	0.41	0.41	0.42

World biodiesel balances

Calendar year	2018	2019	2020	2021	2022	2023	2024	2025
World biodiesel quantities								
				(Million tonnes)				
Production	39.7	44.6	41.0	48.3	51.1	50.7	52.8	54.1
Use	38.5	43.9	43.9	47.7	50.0	50.1	52.4	54.0
Ending stocks	11.1	12.5	9.5	10.1	11.2	11.8	12.2	12.2
Biodiesel net exports								
				(Million tonnes)				
Argentina	-0.9	-0.7	0.0	0.0	0.0	0.0	0.0	0.0
Brazil	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EU	-2.7	-2.6	-1.7	-2.0	-1.8	-1.6	-1.5	-1.5
Indonesia	1.5	1.1	0.3	1.5	1.7	1.5	1.8	2.0
Malaysia	0.6	0.9	0.6	0.8	0.8	0.8	0.8	0.9
USA	-0.2	-0.2	-0.3	-0.2	-0.4	-0.1	-0.3	-0.1
ROW	-1.4	-1.0	0.5	-1.3	-1.7	-2.0	-2.1	-2.2
Statistical error	3.1	2.5	0.7	1.2	1.4	1.4	1.2	0.9
Argentina border price								
				(Dollars per liter)				
	0.71	0.74	0.72	0.80	0.75	0.75	0.77	0.82

Ethanol quantities

Calendar year	2018	2019	2020	2021	2022	2023	2024	2025
Argentina	(Billion liters)							
Production	1.27	1.24	1.14	1.20	1.28	1.31	1.32	1.32
Imports	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Domestic use	1.24	1.24	1.14	1.23	1.22	1.24	1.28	1.30
Exports	0.01	0.01	0.01	0.03	0.03	0.03	0.03	0.03
Ending stocks	0.15	0.14	0.12	0.06	0.10	0.14	0.15	0.14
Brazil								
Production	33.09	35.17	29.53	34.93	36.53	38.03	38.08	37.97
Imports	1.78	1.46	1.16	0.67	0.71	0.81	1.04	1.19
Domestic use	31.53	34.15	29.89	32.51	34.48	36.43	37.23	37.44
Exports	1.78	2.03	1.66	2.27	2.36	2.23	1.95	1.77
Ending stocks	8.18	8.63	7.77	8.60	9.00	9.18	9.12	9.06
Canada								
Production	1.90	2.11	1.55	1.96	2.00	2.03	2.19	2.24
Imports	1.40	1.28	1.36	1.21	1.41	1.53	1.46	1.48
Domestic use	3.27	3.34	2.83	3.04	3.31	3.46	3.53	3.61
Exports	0.07	0.08	0.10	0.10	0.10	0.10	0.10	0.10
Ending stocks	0.14	0.11	0.09	0.13	0.14	0.14	0.16	0.17
China								
Production	9.52	9.80	9.68	10.69	10.77	10.90	11.14	11.36
Imports	1.03	0.10	0.33	0.43	0.45	0.48	0.50	0.53
Domestic use	10.20	10.10	9.91	10.89	11.03	11.17	11.42	11.67
Exports	0.08	0.02	0.20	0.20	0.20	0.20	0.20	0.20
Ending stocks	0.77	0.55	0.45	0.47	0.46	0.47	0.48	0.50
European Union								
Production	7.84	7.45	7.21	7.37	7.64	7.51	7.70	7.86
Imports	0.56	0.75	0.66	1.02	0.96	1.12	1.10	1.07
Domestic use	8.14	7.91	7.22	8.14	8.21	8.30	8.43	8.55
Exports	0.30	0.25	0.34	0.34	0.34	0.34	0.34	0.34
Ending stocks	2.43	2.47	2.78	2.69	2.74	2.72	2.76	2.79
United States	(Billion liters)							
Production	60.88	59.72	54.90	59.26	60.76	61.75	62.02	62.30
Imports	0.21	0.85	0.55	0.57	0.58	0.59	0.60	0.60
Domestic use	54.55	55.15	49.77	54.24	55.13	55.62	55.47	55.36
Exports	6.47	5.59	5.61	5.57	6.18	6.68	7.12	7.50
Ending stocks	3.72	3.55	3.62	3.65	3.69	3.73	3.77	3.81
Rest of world								
Production	12.89	13.32	11.31	11.65	11.89	12.10	12.29	12.47
Imports	4.22	4.42	4.53	5.32	5.87	5.86	5.87	5.96
Domestic use	14.50	14.97	13.14	14.02	14.82	15.30	15.46	15.68
Exports	2.45	2.74	2.54	2.58	2.62	2.66	2.70	2.74
Ending stocks	1.61	1.65	1.81	2.18	2.50	2.51	2.52	2.53

Biodiesel quantities

Calendar year	2018	2019	2020	2021	2022	2023	2024	2025
Argentina								
	(Million tonnes)							
Production	2.43	2.15	1.28	2.15	2.39	2.33	2.13	1.88
Imports	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Domestic use	1.10	1.07	0.72	0.96	0.93	0.94	0.98	1.01
Exports	1.39	1.02	0.71	1.19	1.42	1.38	1.16	0.89
Ending stocks	0.25	0.32	0.16	0.16	0.20	0.21	0.20	0.18
Brazil								
Production	4.71	5.19	5.43	5.54	6.19	6.82	7.29	7.85
Imports	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01
Domestic use	4.68	5.17	5.36	5.67	6.08	6.63	7.20	7.77
Exports	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
Ending stocks	1.25	1.27	1.34	1.21	1.32	1.52	1.61	1.69
European Union								
	(Million tonnes)							
Production	14.84	14.19	12.14	14.30	14.90	14.80	14.89	14.74
Imports	3.47	4.04	2.53	2.85	2.60	2.43	2.38	2.40
Domestic use	15.59	15.86	15.44	16.42	16.28	16.21	16.29	16.32
Exports	0.74	1.46	0.83	0.80	0.81	0.85	0.91	0.90
Ending stocks	4.39	5.30	3.71	3.63	4.03	4.20	4.28	4.20
Indonesia								
Production	3.55	7.36	6.98	8.67	8.98	9.12	9.87	10.28
Imports	0.03	0.00	0.00	0.03	0.03	0.03	0.03	0.03
Domestic use	2.90	5.85	6.95	7.03	7.15	7.48	7.90	8.21
Exports	1.52	1.12	0.25	1.52	1.69	1.55	1.86	2.05
Ending stocks	0.83	1.22	1.00	1.15	1.31	1.41	1.55	1.59
Malaysia								
Production	1.10	1.50	1.30	1.54	1.55	1.58	1.71	1.82
Imports	0.01	0.10	0.01	0.01	0.01	0.01	0.01	0.01
Domestic use	0.58	0.60	0.68	0.71	0.77	0.81	0.86	0.90
Exports	0.58	0.95	0.62	0.82	0.78	0.77	0.85	0.92
Ending stocks	0.01	0.06	0.07	0.08	0.10	0.11	0.12	0.13
United States								
Production	7.66	7.92	9.10	9.95	10.90	9.84	10.53	11.03
Imports	0.56	0.56	0.64	0.55	0.77	0.40	0.52	0.43
Domestic use	7.82	8.21	9.36	10.11	11.28	9.95	10.78	11.15
Exports	0.35	0.38	0.31	0.36	0.37	0.29	0.26	0.29
Ending stocks	0.65	0.55	0.63	0.67	0.70	0.71	0.72	0.72
Rest of world								
Production	5.41	6.26	4.73	6.11	6.15	6.23	6.34	6.47
Imports	3.58	3.97	2.52	4.08	4.35	4.53	4.51	4.49
Domestic use	5.88	7.14	5.45	6.75	7.52	8.06	8.37	8.65
Exports	2.19	3.00	2.97	2.83	2.68	2.55	2.42	2.30
Ending stocks	3.68	3.78	2.61	3.21	3.51	3.65	3.72	3.73

Macroeconomic assumptions

	2018	2019	2020	2021	2022	2023	2024	2025
Real GDP growth								
			(Percentage change year-over-year)					
United States	2.9	2.3	-6.1	3.7	3.6	3.3	2.9	2.7
China	6.7	6.1	0.5	7.8	5.7	5.4	5.3	5.1
European Union (excluding U.K.)	2.1	1.5	-8.2	4.1	3.3	2.1	1.6	1.5
Japan	0.3	0.7	-5.2	2.0	1.4	1.2	1.1	1.0
Brazil	1.3	1.1	-9.0	4.5	2.8	2.0	2.6	2.9
World	3.2	2.6	-5.5	4.4	3.8	3.4	3.2	3.1
GDP deflator								
			(Index, 2020 = 1.00)					
United States	0.97	0.99	1.00	1.01	1.02	1.04	1.06	1.08
China	0.97	0.99	1.00	1.02	1.04	1.06	1.08	1.11
European Union (excluding U.K.)	0.97	0.99	1.00	0.99	0.98	0.97	0.95	0.94
Japan	0.98	0.99	1.00	1.00	1.00	1.02	1.03	1.05
Brazil	0.90	0.94	1.00	1.03	1.06	1.09	1.14	1.18
World	0.96	0.98	1.00	1.02	1.05	1.07	1.10	1.13
Exchange rates								
			(National currency unit per U.S. dollar)					
United States	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
China	6.62	6.91	7.02	7.04	7.08	6.99	6.89	6.79
Eurozone	0.85	0.89	0.90	0.89	0.89	0.89	0.88	0.88
Japan	110.39	109.04	108.42	109.85	104.71	99.14	96.27	95.07
Brazil	3.65	3.94	5.12	4.61	4.34	4.37	4.45	4.53
Population								
			(Millions)					
United States	327	329	330	333	335	337	340	342
China	1,428	1,434	1,439	1,444	1,448	1,452	1,455	1,458
European Union (excluding U.K.)	444	445	445	445	445	445	444	444
Japan	127	127	126	126	126	125	125	124
Brazil	209	211	213	214	215	217	218	219
World	7,581	7,663	7,743	7,822	7,901	7,977	8,053	8,127

Source: IHS Markit, July 2020

Other baseline prices

	2018	2019	2020	2021	2022	2023	2024	2025
U.S. meat prices¹								
	(U.S. dollars per 100kg)							
Beef	471.92	491.32	514.41	487.43	508.82	529.71	543.87	556.60
Pork	167.75	170.06	161.12	166.14	180.79	188.93	188.86	187.35
Chicken	215.61	195.29	162.39	177.17	189.21	194.94	199.70	201.07
World product prices								
	(Euros per tonne)							
Soybean meal, Rotterdam ²	329.00	334.36	318.53	334.18	353.85	358.38	358.60	357.15
Soybean oil, Decatur ³	623.03	639.34	656.76	675.95	646.28	656.01	669.80	673.15
Rapeseed oil, Rotterdam ²	840.00	873.00	830.14	849.83	819.24	826.79	842.60	845.31
U.S. crop prices³								
	(U.S. dollars per tonne)							
Wheat, SRW, U.S. Gulf	209.00	200.50	197.01	203.95	205.37	207.94	210.48	212.86
Corn, No. 2 yellow, U.S. Gulf	168.89	167.73	150.79	158.00	163.43	165.99	166.79	167.51
Barley	212.20	215.87	204.75	209.60	214.11	216.50	217.37	217.75
EU crop producer prices²								
	(Euros per tonne)							
Wheat	166.90	166.36	165.81	171.00	171.85	173.61	174.83	175.24
Corn	153.32	162.00	157.03	157.03	157.03	158.04	157.98	157.64
Barley	161.18	155.82	158.27	163.21	164.02	165.69	166.86	167.25

Sources: 1 - MU Agricultural Markets and Policy

2 - Center for Economic Development at the University of Nevada, Reno

3 - FAPRI-MU