



Grain Market Article March 2022, Shanghai JC Intelligence Co. Ltd

"Maintenance Feeding"

- With <u>feed making up two-thirds of the cost of raising pigs</u>, the industry is <u>cutting back on</u>
 <u>protein-rich soymeal</u> and <u>replacing the best quality corn with cheaper</u>, and often lower
 <u>quality, substitutes</u>.
- "On some farms, pigs are hardly growing. It's <u>maintenance feeding</u>," said Jan Cortenbach, technical director at Wellhope-DeHeus, a joint venture between one of China's largest feed makers and a Dutch firm.
- Soymeal futures have rallied 15% this month to a record 4,428 yuan per tonne on smaller than expected shipments of the oilseed from top supplier Brazil. Cash prices for the widely used animal feed protein (i.e., <u>SBM</u>) are above 5,000 yuan. <u>Corn</u> is also at "eye-watering" levels.

Grain Market Article March 2022, Shanghai JC Intelligence Co. Ltd

"Maintenance Feeding" continued....

- "Our nutrition division is working on the best recipes with <u>as little soymeal and corn as possible</u>. We are buying rice, rice bran, coconut meal, <u>sunflower meal</u>, <u>broken rice</u>, basically <u>anything cheaper and available</u>," said a manager at a pig breeder with almost 100,000 sows in southern China.
 - o Though the company has <u>about six months of soymeal in stock</u>, it is <u>using as little as possible to</u> make supplies last, she added.

"More Pain"

• While <u>Beijing has urged farmers to get rid of some of their breeding sows</u>, the herd of **42.9 million** is <u>still 5% bigger than needed</u>, according to government data, indicating "abundant" supply this year Rosa Wang, analyst at JCI. <u>Though small farmers are likely to sell off their herds after sustained losses</u>, large producers are less flexible.

Grain Market Article March 2022, Shanghai JC Intelligence Co. Ltd

- After major expansion in the last two years, top producers own a much larger market
 share that they are unwilling to give up. Guangdong Wens Foodstuff is still expanding its
 herd, while New Hope Liuhe expects a "significant increase" in output after improving
 efficiency on its farms, a company representative said earlier this year.
- The government, <u>wary of any meat shortages</u> caused by <u>a potential exodus of pig farmers</u> <u>due to huge losses</u>, has called on banks to offer more credit. <u>With COVID-19 at its worst</u> <u>level in two years, weak consumption will continue to pressure prices</u>, said Pan Chenjun senior analyst at Rabobank.
- Wens estimates that <u>prices</u>, at <u>best</u>, <u>could start recovering in the fourth quarter</u>. But <u>many</u>
 expect profits may not return until 2023. "The negative margin could last longer than the
 historic record because demand is not normal," said Rabobank's Pan

Daily Soy News Update 3/24/2022, U.S. Soybean Export Council

"China's Crushing continues to drop on impact of COVID-19"

- China's <u>weekly soybean crush volume</u> <u>slumped further</u> in the week to March 20, as the spreading of Covid-19 disrupted <u>the supply chain and logistics of soybeans and products</u>, the National Grain and Oil Information Centre (CNGOIC) said on Thursday.
 - <u>Crushing rates</u> declined 140,000 mt from the previous week to only 1.30 million mt, posting <u>a fourth consecutive week of declines</u>, and were <u>down 270,000 mt from the</u> <u>year ago</u> level.
 - "Due to the recent outbreak of Covid-19 in many areas in China, the unloading pace at ports and operation of oil plants were delayed, <u>leading to crushing volumes continued</u> <u>to decline last week</u>," said CNGOIC.
 - "In the short term, the shortage in soybeans is hard to improve, and the spreading of Covid-19 affects logistics in some regions, so the operation rate of oil plants is expected to remain low," the agency added.

How "tight" were global grains prior to the Ukraine/Russia conflict?

Mktg Yr	World % S/U	Wrld-China S/U	U.S. % S/U	U.S. \$/bu
2013/14	22.8% S/U	25.1% S/U	2.7% S/U	\$13.00 /bu
2014/15	25.7% S/U	28.3% S/U	4.9% S/U	\$10.10 /bu
2015/16	24.8% S/U	28.0% S/U	5.0% S/U	\$8.95 /bu
2016/17	28.4% S/U	32.5% S/U	7.2% S/U	\$9.47 /bu
2017/18	29.2% S/U	32.7% S/U	10.2% S/U	\$9.33 /bu
2018/19	33.0% S/U	38.9% S/U	22.9% S/U	\$8.48 /bu
2019/20	27.1% S/U	28.2% S/U	13.3% S/U	\$8.57 /bu
2020/21 ^{USD}	The second second second second second	26.9% S/U	5.7% S/U	\$10.80 /bu
2021/22 ^{USD}		22.6% S/U	6.5% S/U	\$13.25 /bu
2022/23 ^{USD}	A na	na	5.9% S/U	\$12.75 /bu



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1) How "tight" were global grains prior to the Ukraine/Russia conflict?

World & U.S. Corn Supply-Demand Fundamentals

<u>N</u>	Mktg Yr	World S/U	Wld-China S/U	U.S. % S/U	U.S. \$/bu
2	2017/18	31.2% S/U	14.3% S/U	14.5% S/U	\$3.36 /bu
2	2018/19	28.1% S/U	12.7% S/U	15.5% S/U	\$3.61 /bu
2	2019/20	27.0% S/U	12.3% S/U	13.7% S/U	\$3.56 /bu =
2	2020/21 ^{USDA}	25.6% S/U	10.1% S/U	8.3% S/U	\$4.53 /bu 2
2	2021/22 ^{USDA}	25.2% S/U	10.1% S/U	9.6% S/U	\$5.65 /bu
2	2022/23 ^{USDA}	na	na	12.8% S/U	\$5.00 /bu



How "tight" were global grains prior to the Ukraine/Russia conflict?

World & U.S. Wheat S/D Fundamentals

	Mktg Yr	World % S/U	Wld-China S/U	U.S. % S/U	U.S. \$/bu
	2013/14	29.2% S/U	23.4% S/U	24.2% S/U	\$6.87 /bu
	2014/15	32.3% S/U	25.3% S/U	37.3% S/U	\$5.99 /bu
	2015/16	34.8% S/U	25.4% S/U	50.0% S/U	\$4.89 /bu
	2016/17	36.4% S/U	24.7% S/U	53.1% S/U	\$3.89 /bu
	2017/18	38.7% S/U	25.1% S/U	55.5% S/U	\$4.72 /bu
	2018/19	38.6% S/U	23.6% S/U	53.0% S/U	\$5.16 /bu
	2019/20	39.7% S/U	23.7% S/U	49.2% S/U	\$4.58 /bu
	2020/21	37.1% S/U	23.1% S/U	40.0% S/U	\$5.05 /bu
	2021/22 ^{USDA}	35.8% S/U	21.8% S/U	33.8% S/U	\$7.50 /bu
1	2022/23 ^{USDA}	na na	na	37.2% S/U	\$6.80 /bu



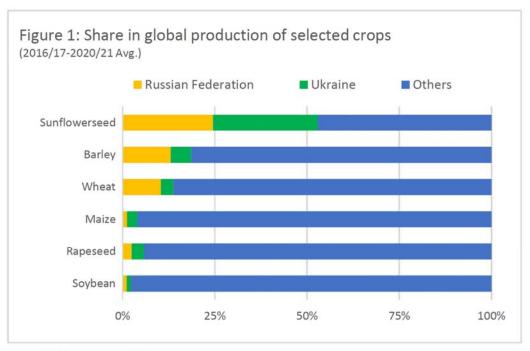


☐ Will disruption of Ukraine sunflower supply impact vegetable oil markets?

- In 2021, either the Russia Federation or Ukraine (or both) ranked amongst the top three global exporters of wheat, maize, rapeseed, sunflower seeds
 & sunflower oil FAO March 2022
 - Combined with "tight" Palm Oil supplies & strong soybean oil demand, the reduction in <u>Sunflower</u> & <u>Sunflower Oil</u> from the Ukraine *IS* having at least an indirect impact on Global oilseed markets KSU Commentary

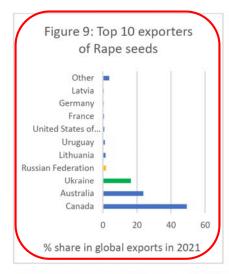


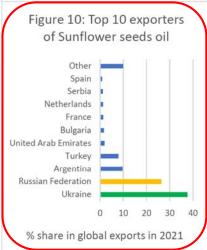
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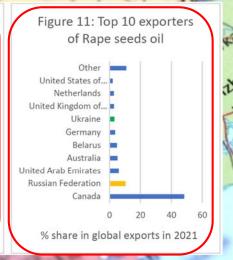


Source: FAO XCBS system

☐ Will disruption of Ukraine sunflower supply impact vegetable oil markets?



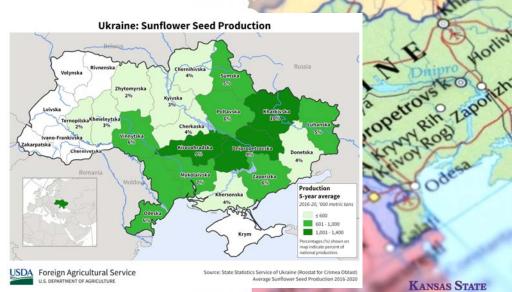




Source: Trade Data Monitor (TDM), FAO calculations









2020 Sunflower Summary

Country	Russia	Ukraine
Production (tonnes)	13,314,418	13,110,430
% of Global Production	26.5%	26.1%
Exports Seed (tonnes)	1,369,907	187,900
Seed % of Global Exports	19.7%	2.7%
Exports Oil (tonnes)	3,207,069	6,860,958
Oil % of Global Exports	20.5%	44.0%

Important Impacts of the Ukraine – Russia Federation Conflict

Total Production – 52.6% Total Exports of Seed – 22.4%

Total Exports of Oil – 64.5%

Major Importers of Oil Affected (2020 Exports)

India – 2.4 million metric tonnes China – 2.0 million metric tonnes



Ukraine – Destination of Sunflower Oil Exports

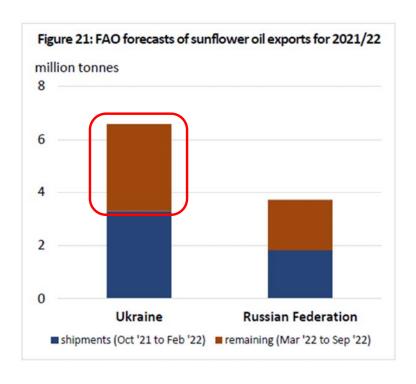
Country (2020 Rank)	2017	2018	2019	2020
India	2,155,573	2,458,120	2,065,808	1,924,803
China	616,376	466,638	865,720	1,254,626
Netherlands	463,239	331,510	612,837	627,795
Iraq	110,875	361,840	0	455,450
Spain	575,111	325,028	429,072	443,053
Italy	350,350	322,262	381,990	366,756
France	117,917	110,163	138,512	155,559
Poland	69,128	56,298	72,720	141,344
Egypt	123,225	101,723	13,548	135,025
U.K.	107,273	104,984	99,619	113,774
Rest of the World	1,077,042	946,551	797,928	1,100,771



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World Sunflower Less Ukraine in 2022/23 Supply-Demand $\pmb{Trends:} \ \, \text{MY 2007/08-"New" MY 2022/23 as of the March 9, 2022 USDA WASDE Report} \\$ Domestic 60 Crush Million Metric Tons Ending 40 Stocks 30 -Production 20 10 Exports 2011/12 Marketing Years (September 1 - August 31) KANSAS STATE AgManager AgManager





U.S. Soybean Oil Supply and Demand

	2020/2021	2021/2022	Change from	Change from
Item	estimate	forecast	February 9	2020/2021
	0=	Million	pounds	
Beginning stocks	1,853	2,131		279
Production	25,023	26,205		1,182
Imports	302	450		148
Total supply	27,177	28,786	-	1,609
Domestic disappearance	23,323	25,085	-200	1,762
Biofuel	8,850	10,700	-300	1,850
Food, feed, other	14,473	14,385	100	-88
Exports	1,723	1,625	200	-98
Total use	25,046	26,710	-	1,664
Ending stocks	2,131	2,076		-55
		Cents pe	er pound	-
Average market price	56.87	68.00	2.00	11.13



March 9, 2022 nomics



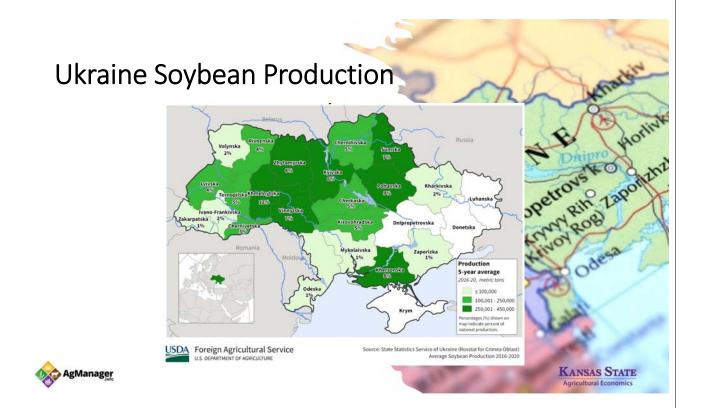
Soybean Markets

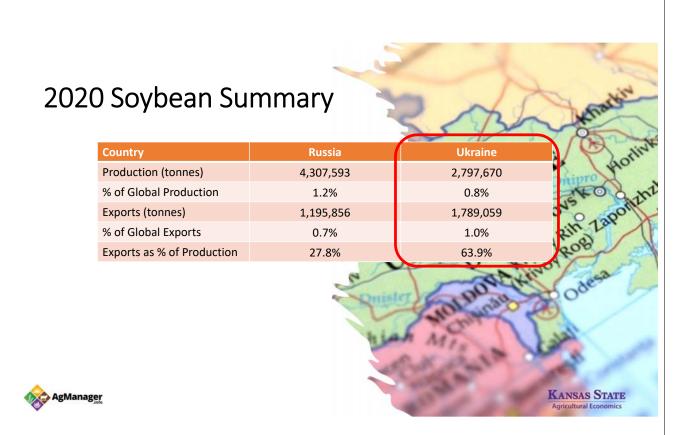




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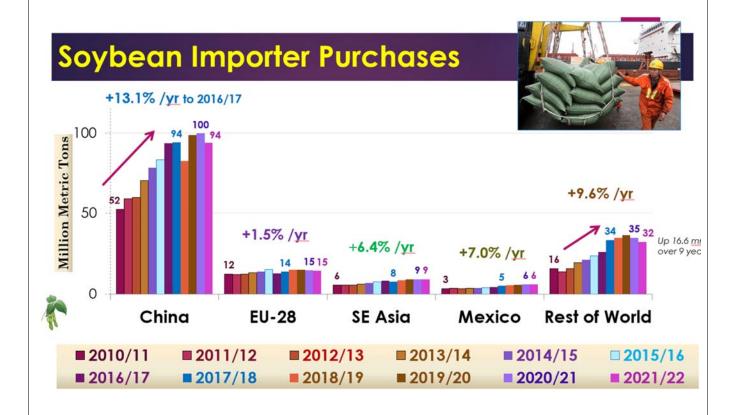


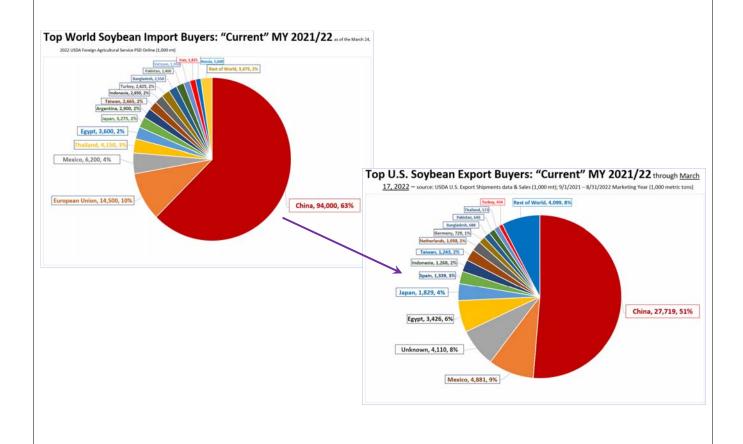
Item	2020/2021 estimate	2021/2022 forecast	Change from February 9	Change from 2020/2021	- N
Planted area (million acres)	83.4	87.2		3.8	
Harvested area (million acres)	82.6	86.3		3.7	2
Yield (bushels per acre)	51.0	51.4		0.3	
		Millior	bushels	-	14
Beginning stocks	525	257		-268	
Production	4,216	4,435		219	.00
Imports	20	15		-5	
Total supply	4,761	4,707		-53	120
Crush	2,141	2,215		74	3 3
Seed and Residual	103	117	**	14	5
Domestic use	2,243	2,332	**	89	62
Exports	2,261	2,090	40	-171	2
Total use	4,504	4,422	40	-82	
Ending stocks	257	285	-40	28	
		Pe	rcent	-	
Stocks to use ratio	5.7	6.5	-1.0	0.7	
		Dollars	per bushel		
Average market price	10.80	13.25	0.25	2.45	

U.S. Soybean Exports: for MY 2012/13 & MY 2016/17 - "New Crop" MY

2021/22 as of recent USDA FAS Weekly Export reports through the week of March 17, 2022

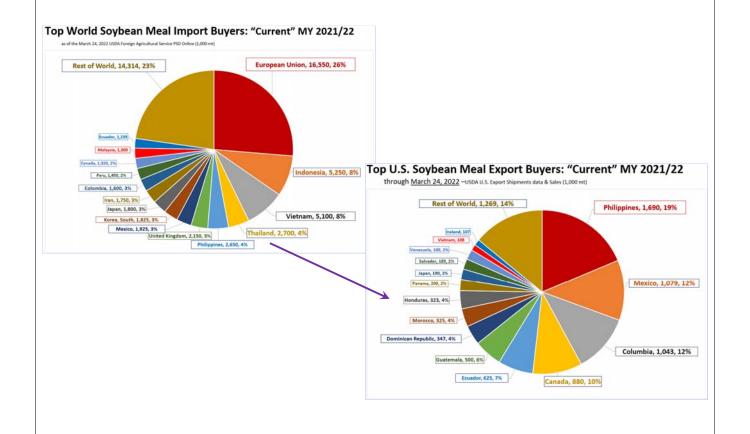






U.S. Soybean Meal Supply & Use

2019/20	2020/21 Est.	2021/22 Proj.	2021/22 Proj.	
SOYBEAN MEAL	* 1777-1400-150 777-141-0-150	Feb	Mar	
	Thousand Short To	ns		
eginning Stocks 402	341	341	341	
roduction 4/ 51,100	50,565	51,909	51,909	
mports 639	783	450	450	
Supply, Total 52,142	51,689	52,700	52,700	
Oomestic Disappearance 37,967	37,580	37,900	37,900	
xports 13,834	13,768	14,400	14,400	
Use, Total 51,801	51,348	52,300	52,300	
nding Stocks 341	341	400	400	
vg. Price (\$/s.t.) 2/ 299.50	392.31	410.00	420.00	





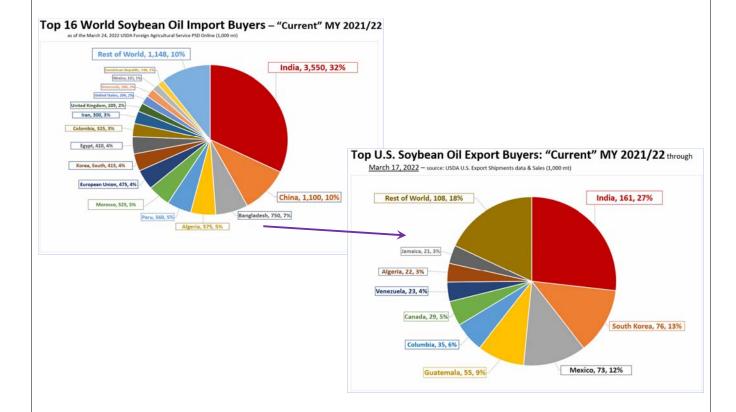
U.S. Soybean Oil Supply and Demand

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Item	estimate	forecast	February 9	2020/2021
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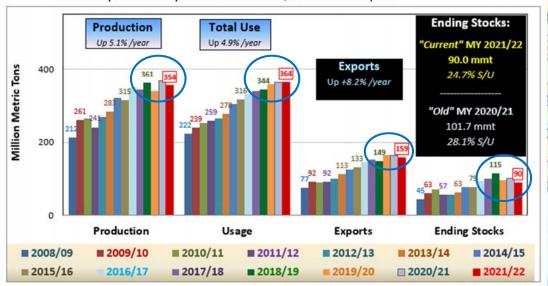


March 9, 2022 nomics



World Soybean Usage & Ending Stocks: MY 2008/09 through

"New Crop" MY 2021/22 as of the March 9, 2022 WASDE Report

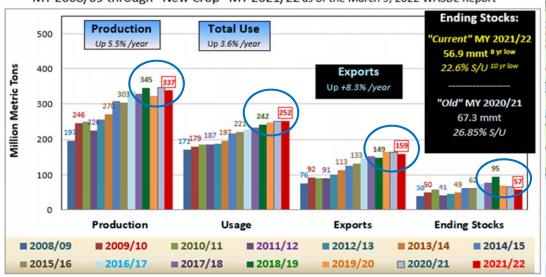




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"World Less-China" Soybean Usage & Ending Stocks:

MY 2008/09 through "New Crop" MY 2021/22 as of the March 9, 2022 WASDE Report





Brazil Soybean Supply-Demand Trends: MY 2007/08 - "New" MY

2021/22 as of the March 9, 2022 USDA WASDE Report





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Argentina Soybean Supply-Demand Trends: MY 2007/08-

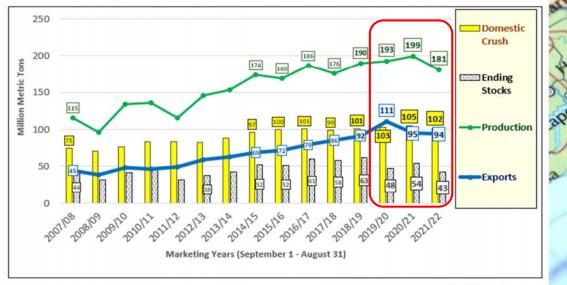
"New" MY 2021/22 as of the March 9, 2022 USDA WASDE Report





South America Soybean Supply-Demand Trends: MY

2007/08 - "New" MY 2021/22 as of the March 9, 2022 USDA WASDE Report

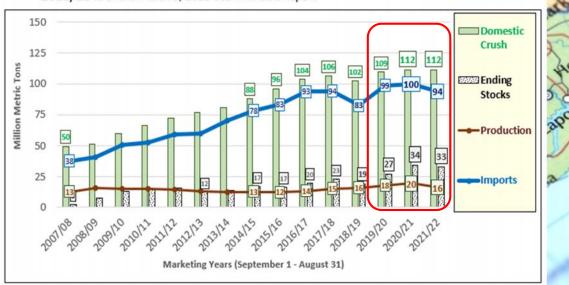




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China Soybean Supply-Demand Trends: MY 2007/08 - "New Crop" MY

2021/22 as of the March 9, 2022 USDA WASDE Report





China Soybean Meal Supply-Demand: MY 2007/08 - "New Crop"

MY 2021/22 as of the March 9, 2022 USDA WASDE Report



China Soybean Oil Supply-Demand: MY 2007/08 - "New Crop" MY

2021/22 as of the March 9, 2022 USDA WASDE Report



Japan Soybean Supply-Demand: MY 2007/08 - "New Crop" MY

2021/22 as of the March 9, 2022 USDA WASDE Report



Japan Soybean Meal Supply-Demand: MY 2007/08 - "New Crop"

MY 2021/22 as of the March 9, 2022 USDA WASDE Report



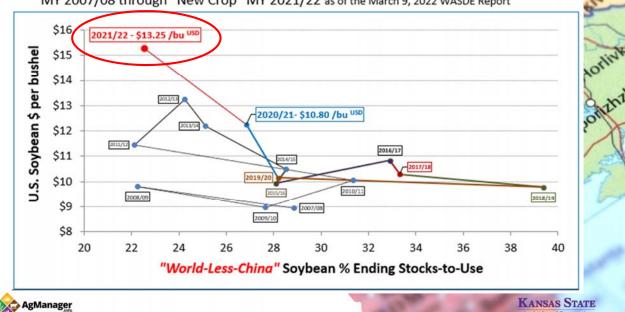
Japan Soybean Oil Supply-Demand: MY 2007/08 - "New Crop" MY

2021/22 as of the March 9, 2022 USDA WASDE Report



U.S. Soybean \$USD\$ Adj vs "World Less-China" % Stocks-to-Use:

MY 2007/08 through "New Crop" MY 2021/22 as of the March 9, 2022 WASDE Report



Risk analysis: Assessing risks from the Ukraine-Russia conflict FAO

☐ Price Risk

- FAO's simulations gauging the potential impacts of a sudden and steep reduction in <u>grain</u> and <u>sunflower seed</u> <u>exports</u> by the two countries indicate that these shortfalls could <u>only be partially compensated by alternative</u> <u>origins</u> during the 2022/23 marketing season.
 - The capacity of many of these origins to boost output and shipments may be limited by <u>high production input costs</u>.
-, the resulting global supply gap could *push up* international food & feed prices by **8% to 22% above their already elevated levels**.

Figure 23. World price responses to scenarios: Crops

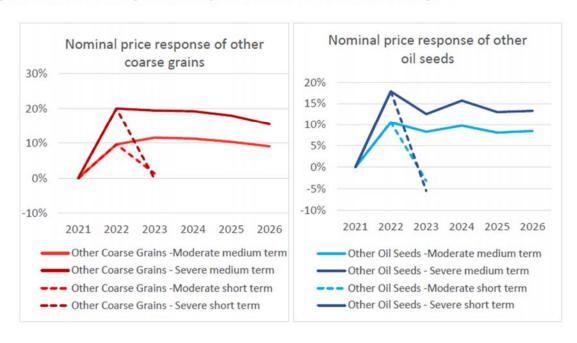
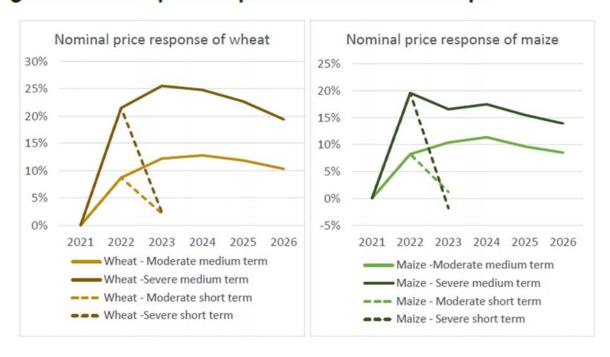


Figure 23. World price responses to scenarios: Crops





2022 U.S. Crop Planted Acreage USDA Ag Outlook, 2/24-25/2022

Table 1. Wheat, Corn, and Soybean Planted Acreage, 2015-2022

	2015	2016	2017	2018	2019	2020	2021	2022 1
				- Million	Acres -			
Wheat	55.0	50.1	46.1	47.8	45.5	44.5	46.7	48.0
Corn	88.0	94.0	90.2	88.9	89.7	90.7	93.4	92.0
Soybeans	82.7	83.5	90.2	89.2	76.1	83.4	87.2	88.0
Total	225.7	227.6	226.4	225.9	211.3	218.5	227.3	228.0

1/ Projection

Source: National Agricultural Statistics Service data 2015-2021



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U.S. Soybean Outlook

"New Crop" MY 2022/23

USDA Outlook Conference February 24-25, 2022

Table 6. Se	oybean Supply,	Demand, and Price,	2019/20-2022/23
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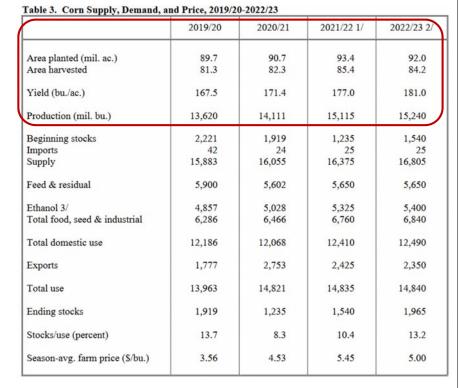
	2019/20	2020/21	2021/22 /1	2022/23 /2
Area planted (mil. ac.) Area harvested	76.1 74.9	83.4 82.6	87.2 86.3	88.0 87.2
Yield (bu./ac.)	47.4	51.0	51.4	51.5
Production (mil. bu.)	3,552	4,216	4,435	4,490
Beginning stocks	909	525	257	325
Imports	15	20	15	15
Supply	4,476	4,761	4,707	4,830
Crush	2,165	2,141	2,215	2,250
Seed and Residual	108	103	117	125
Total domestic use	2,273	2,243	2,332	2,375
Exports	1,679	2,261	2,050	2,150
Total use	3,952	4,504	4,382	4,525
Ending stocks	525	257	325	305
Stocks/use (percent)	13.3	5.7	7.4	6.7
Season-avg. farm price (\$/bu.)	8.57	10.80	13.00	12.75



U.S. Corn Outlook

"New Crop" MY 2022/23

USDA Outlook Conference February 24-25, 2022





POLL: U.S. Corn @ 92.0 ma, Soybeans @ 88.7 ma Reuters

All figures are in millions of acres:

	Corn	Soybeans	All Wheat	Winter Wheat	Other Spring	Durum
Mean	92.001	88.727	47.771	34.382	11.801	1.727
Highest	93.500	92.208	48.892	35.600	12.450	1.835
Lowest	89.700	86.000	45.900	33.650	10.800	1.500
USDA 2021 planted acreage	93.357	87.195	46.703	33.648	11.420	1.635
USDA outlook forum	92.000	88.000	48.000	34.400	N/A	N/A

Released Thursday, March 25, 2022, Reuters



2022 U.S. Crop Planted Acreage Outlook Farm Futures®

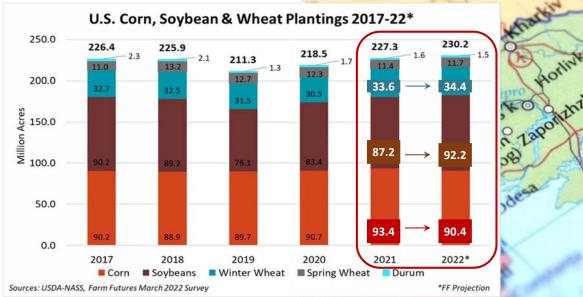
Farm Futur	USDA -		Farm			5	(8 10 %)
	2022	USDA	Futures -			Trendline	2022
	Outlook	2021	2022	Change -	Change -	Yields	Production
Сгор	(Acres)	(Acres)	(Acres)	Acreage	%	(bpa)	(Bushels)
Com	92,000,000	93,357,000	90,379,005	-2,977,995	-3.2%	181.0	14,971,675,095
Soybeans	88,000,000	87,195,000	92,208,007	5,013,007	5.7%	51.5	4,705,542,249
Winter Wheat	34,397,000	33,648,000	34,421,707	773,707	2.3%		
Spring Wheat		11,420,000	11,659,599	239,599	2.1%		
Durum		1,635,000	1,533,577	-101,423	-6.2%		
Total Wheat	48,000,000	46,703,000	47,614,883	911,883	2.0%	49.1	1,923,889,274
Sorghum	6,500,000	7,305,000	7,503,702	198,702	2.7%	69.2	463,336,310
Cotton (yield in bales/ac.)	12,700,000	11,219,500	11,901,993	682,493	6.1%	1.8	17,047,028
Rice (yield in cwt./ac.)	2,600,000	2,532,000	2,082,551	-449,449	-17.8%	77.1	157,456,463
Source: USDA-NASS, WAOE	, Farm Futu	res March 2	022 Survey			·	



https://www.farmprogress.com/planting/price-volatility-may-not-shake-2022-acres

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2022 U.S. Crop Planted Acreage Outlook Farm Futures©



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2022 U.S. Crop Planted Acreage & S-D Farm Futures®

	Corn	
	2021 - USDA	2022 - Farm Futures
Acres Planted	93,357,000	90,379,005
Acres Harvested	85,388,000	82,716,437
Yield (bushels/acre)	177.0	181.0
Beg. Stocks	1,234,564,460	1,439,760,900
Production	15,115,835,910	14,971,675,095
Imports	24,999,950	25,000,000
Total Supplies	16,375,400,320	16,436,435,995
Feed & Residual	5,650,264,290	5,650,000,000
Food, Seed & Industrial	6,785,262,020	6,840,000,000
Ethanol	5,350,000,000	5,400,000,000
Exports	2,500,113,110	2,500,000,000
Total Usage	14,935,639,420	14,990,000,000
Ending Stocks	1,439,760,900	1,446,435,995
Stocks-to-Use	9.64%	9.65%

	Soybeans	
	2021 - USDA	2022 - Farm Futures
Acres Planted	87,195,000	92,208,00
Acres Harvested	86,332,000	91,369,75
Yield (bushels/acre)	51.4	51.
Beg. Stocks	256,959,560	285,322,84
Production	4,434,775,180	4,705,542,24
Imports	14,989,920	15,000,00
Total Supplies	4,706,724,660	5,005,865,08
Crushings	2,214,760,680	2,250,000,00
Exports	2,089,771,200	2,193,000,00
Seed & Residual	116,869,940	125,000,00
Total Usage	4,421,401,820	4,568,000,00
Ending Stocks	285,322,840	437,865,08
Stocks-to-Use	6.5%	9.69

https://www.farmprogress.com/planting/price-volatility-may-not-shake-2022-acres

