

30,000 Foot View: Technology, Politics and Policy
Ethanol Exports and Domestic Production Rebound
Forecasting Pork Demand
More Demand but No More Chickens
China In-Country Analysis
EU Gets Nutrition Right



WORLD PERSPECTIVES: AG REVIEW

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CONTENTS

WPI POLLING	v
FROM THE WPI TEAM.....	1
WPI MARKET ANALYSIS	2
Ethanol Exports and Domestic Production Rebound	2
Forecasting Pork Demand.....	3
More Demand but No More Chickens	4
WPI INTERNATIONAL ANALYSIS	5
China In-Country Analysis	5
Mercosur Regional Analysis.....	8
WPI POLICY ANALYSIS.....	11
30,000 Foot View: Technology, Politics and Policy.....	11
EU Gets Nutrition Right.....	13
Anti-Meat Campaign.....	13

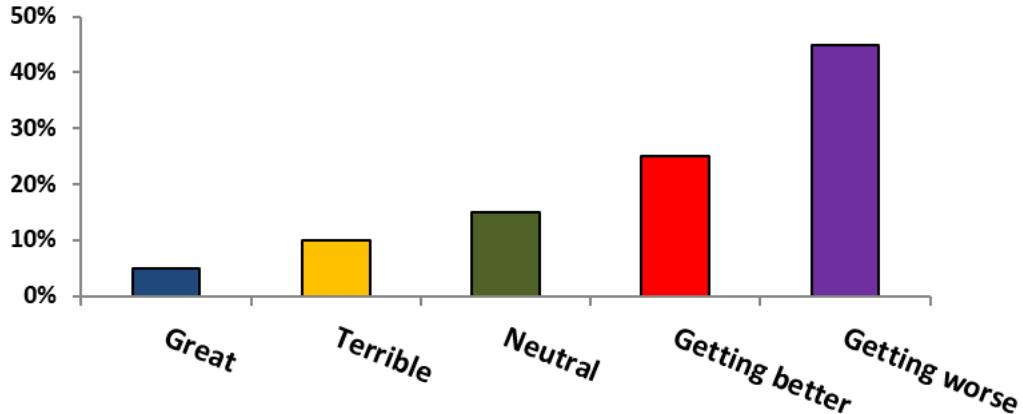
WPI POLLING

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Results: The state of the environment is?

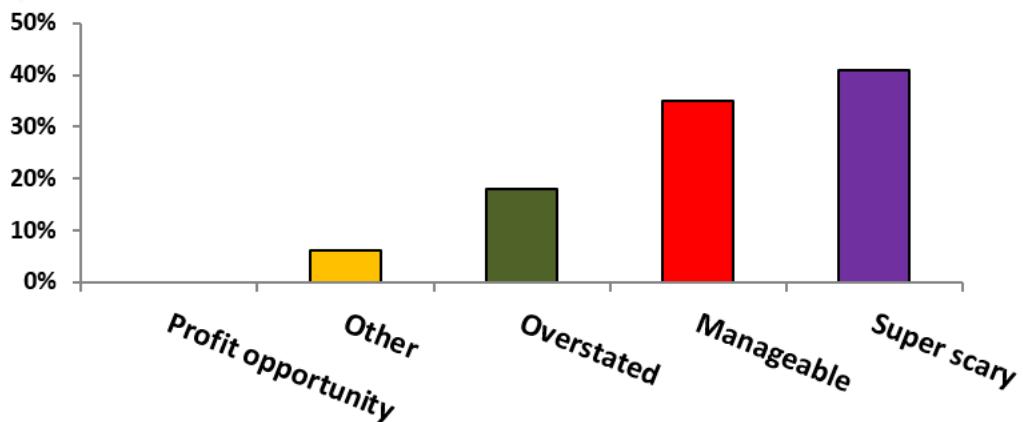


Source: WPI online poll: 4/20/2021 - 05/10/2021



WORLD
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Results: The inflation risk is?



Source: WPI online poll: 5/1/2021 - 05/25/2021

FROM THE WPI TEAM

The focus has now shifted to the Northern Hemisphere where new crops are being planted and demand is emerging from the COVID lockdown. That includes new demand for ethanol as automobile traffic increases, and changes in the types of animal proteins being purchased. This edition of *Ag Review* covers this and more.

Some people like it and some do not but the future of agriculture is technology, and we therefore keep it ever present in our focus. That includes GMO's and the intellectual property protection they need. On the policy front, we cover the politics that drives policy change, including fears about everything from climate change to meat and nutrition.

There are also healthy doses of China and Europe to consume in this edition. And it should be noted that reader input is always welcome.

We hope you enjoy this package of market and policy analysis and share it with your friends.

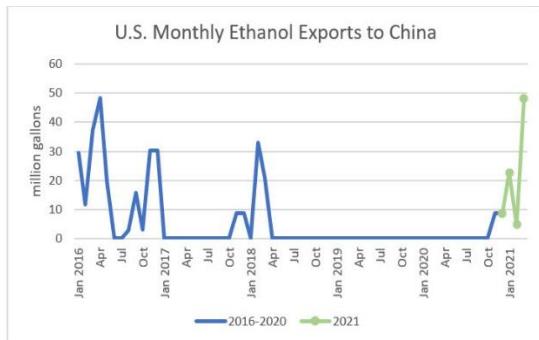
Gary Blumenthal

WPI MARKET ANALYSIS

Ethanol Exports and Domestic Production Rebound

By Dave Judy

Ethanol exports in March were 133 million gallons and more than a third of that went to China. The 48.3 million gallons exported to China is the second highest monthly total on record, just 8,278 gallons below April 2016.



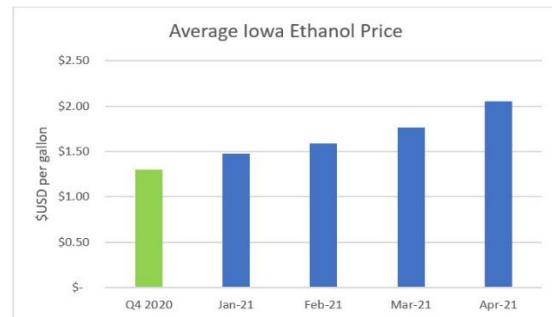
Source: U.S. Census Bureau, WPI

Recall that in 2016, China was the fastest growing market for U.S. fuel ethanol exports; at the time the tariff on imports was set at 5 percent. By December, however, China imported no ethanol as plans were in the works to push the tariff rate back up to 30 percent, which it did in January 2017. Subsequently, with the trade war retaliatory tariffs, the total duty increased to 45 percent – at least on paper, importers can apply for tariff relief.

According to a statement from the Chinese Ministry of Finance at the time, “In order to give full play to the protection of tariffs on domestic industries, in 2017 the modified ethanol import tariff rates will be adjusted accordingly.”

China’s goal was to double ethanol production by 2020 to eat away at growing corn stocks while setting a mandatory ethanol blending rate of 10 percent. Prior to that, the blending rate ranged from 7 to 20 percent set at the provincial level.

Last year, blending was around 3.4 percent on average, and now corn stocks are lower. That put China back into the import market as the government issued a regulation on 31 December 2020 for oil and gas companies to return to selling ethanol blended gasoline, timing the market well when U.S. ethanol production and prices were down. Iowa ethanol prices averaged \$1.30 per gallon in Q4 2020 and are now \$2.31 per gallon.

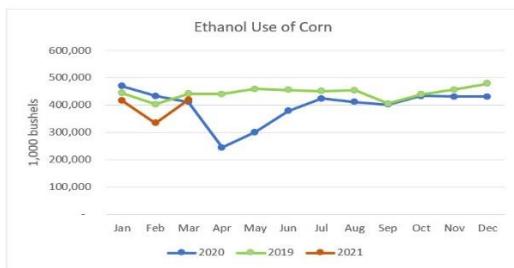


Source: USDA, WPI

Meanwhile, ethanol production is starting to rebound. USDA released the March Grain Crushings showing total corn use for fuel alcohol was up over March 2020, and way up over February.

	Biofuels Grain Crushings and Co-Production March			
	Wet Mill	Dry Mill	Total	Percent of Feb 2021
Corn Use (1,000 bu)	35,532	384,513	420,045	125.7%
Sorghum Use (1,000 cwt)		Withheld	NA	NA

Source: USDA, WPI



Source: USDA, WPI

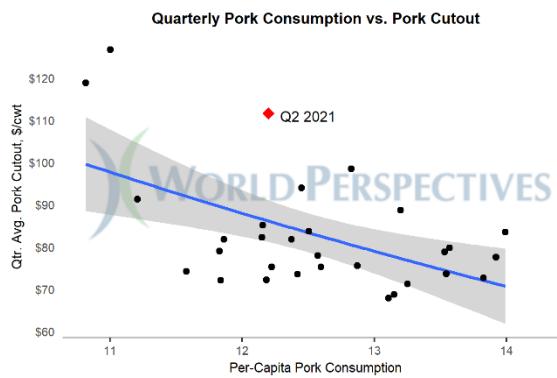
Forecasting Pork Demand

By Matt Herrington

U.S. hog and pork markets exploded this year with pork prices challenging the COVID-19 pandemic highs and hog values challenging record highs set during the 2013 PEDv outbreak. One key difference between today's market and those of these prior periods is that hog slaughter remains near or above five-year highs. Clearly, the market is not rallying due to shortages of hog supplies, so hog/pork demand must be primarily responsible for the price gains.

The year 2020 saw a huge pork export program that many (WPI included) thought was extremely unlikely to be repeated. Yet, despite the pork market's rally, U.S. exports are down just 3.3 percent from 2020's record breaking pace. That international buyers have yet to moderate pork purchases from the U.S. despite the rally suggests a positive shift in major importers' pork demand. WPI looks for the U.S. pork export program to remain strong, though likely to fall 5 percent from 2020. Note, however, that a 5 percent reduction from 2020 levels still constitutes an amazingly robust export program.

Similarly, domestic pork demand (true demand, which is a function of price, not just consumption) has also been record high. As shown below, pork demand in Q2 was above any level seen in the past decade, pulling the pork cutout \$20/cwt higher than what historic models would have predicted.

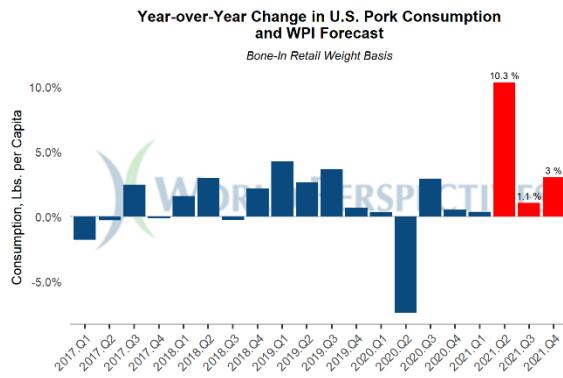


There are multiple theories as to why pork (and beef and poultry) demand has been so high. WPI

sees two primary factors as responsible: higher incomes and shifting consumer preferences. The first is obviously facilitated in part by the U.S. government's stimulus checks and other programs that have worked to encourage consumer spending. But WPI does not believe higher incomes account for all the demand difference. For example, typically higher incomes mean consumers spend more on high-end proteins/cuts. However, except for a few cuts/proteins (hamburger, for example) meat demand is near or above record highs for all meats, which violates the assumption that demand for less-demanded meats (chicken breasts) would fall.

Here's where WPI sees shifting consumer preferences coming into play. One of the time periods where meat demand is analogous to current conditions was in the early 2000's when the Atkins diet was gaining popularity. At the time, people would have rather eaten a stick of butter than a bagel, and that was when butter had not yet gained its "good fat" designation. The Atkins diet's focus on protein consumption meant demand expanded for all major products, which is a trend nearly identical to today's. The theory is that many Americans, having gained weight during the pandemic (the so-called "COVID-19") are adopting high protein, low-carb diets, which are again popular thanks to "keto" type diets.

Looking forward, WPI expects the strong consumer demand for pork to continue. Our current forecasts call for a 10 percent consumption increase from last year (which was depressed due to the pandemic) and 3 percent above 2019 levels. From there, we expect Q3 and Q4 U.S. consumption to increase 1 and 3 percent, respectively, from 2020. Those forecasts are based partly on a moderation in pork prices, which will spur 2021 Q4 consumption to record highs. In total, we look for 2021 U.S. per-capital pork consumption (on a retail weight basis) to total 53.8 pounds, up from USDA's 2020 estimate of 51.9 pounds and the agency's 2021 forecast of 52 pounds.



The expected increase in pork consumption/demand will keep U.S. pork supplies tight, especially with hog carcass weights declining quickly and the recent decline in sow slaughter (which WPI expects to continue, based on improving hog production margins). In total, WPI looks for some moderation in pork prices through the summer and into the fall, but prices will likely remain above recent history and support both packer and producer margins.

More Demand but No More Chickens

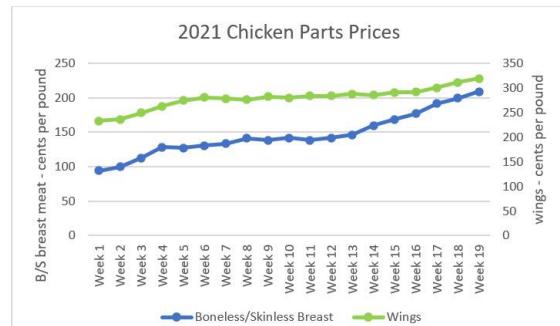
By Dave Judy

Packing capacity has been an issue not only for cattle and beef production, but for broilers also. Production is also slowed by various issues like labor availability and social distancing protocols. Pork, where the name plate capacity has expanded in the recent past, and the market hog herd contracting hasn't seen the same sort of impact; in fact, hog prices are quite bullish.

Broiler meat production was down 3 percent in the Q1 of the year compared to 2020 – a pre-pandemic comparison. It is catching up, with cumulative production now running only 1 percent below last year on slightly heavier birds, though slaughter is still 3 percent down. Additionally, as of April, cold storage inventories were at a seven-year low – and chicken wings were at a nine-year low.

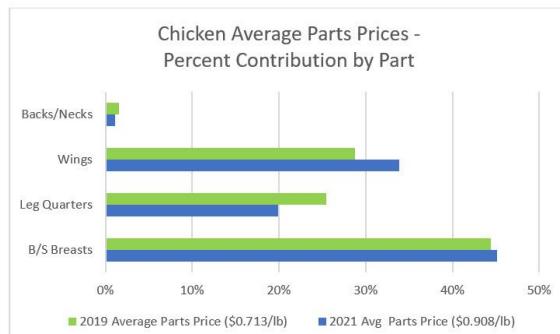
Carry-out restaurant sales are helping boost wing demand, and like ground beef (which helped boost imports in 2020 to record levels) fast food demand for small breast meat cuts has been a

lifeline. That fast food demand is rapidly expanding with several major chains now featuring chicken sandwiches.



Source: USDA, WPI

Once seated restaurants and bars fully open, the supply of chicken is only going to get tighter; especially for breast meat and wings. The average chicken parts price is up 27 percent over 2019 (a better comparison than 2020), and it is being driven by breast meat and wings.



Source: USDA, WPI

Despite higher prices, however, broiler production is not likely to increase. While the average part price is up 27 percent, so too are feed costs. Hatchery data indicate that production is likely to stay the same. Plus, aside from feed costs, bigger birds don't help as the chicken sandwich market puts demand on relatively smaller birds, and wings don't really change.

WPI INTERNATIONAL ANALYSIS

China In-Country Analysis

19 May 2021

By Global Agribusiness Partners

Livestock

Challenges Mount for China's Hog Producers

Ongoing problems with breeding sows, the cost of piglets, falling live hog prices, and the high cost of corn are impacting the viability of small producers and finishing operations. This reality stands in contrast to recent pronouncements from China's Ministry of Agriculture and Rural Affairs (MARA).

Last week, in an interview with China's Central TV, a senior official from the Animal Husbandry and Veterinary Bureau of MARA stated the country's hog supply had recovered enough to satisfy domestic consumption. He mentioned that the current sow inventory was able to supply about 690 million head of live hogs annually, and with the industry making major investments, live hog production efficiency has improved significantly.

According to MARA's statistics, the total number of scale hog farms, those with 500 or more hogs produced per year, increased to 180,000 from 161,000 a year ago. In addition, the number of newborn piglets for these scale farms has reportedly grown by 58 percent from last year. While MARA's numbers indicate substantial improvements over the past twelve months, the culling and replacing of low-quality sows has continued to speed up this spring. Through this past April, the total number of reported culled sows grew by 18 percent from March and was up 96 percent from April 2020. Thus, the authors of this column remain cautious about the recovery progress of China's live hog production capacity, as well as the country's stock of high-quality breeding sows.

The outlook for the next few months, based on recent surveys with producers in Jilin and Jiangxi

provinces suggest breeding sow inventories will remain tight and result in fewer piglets. These concerns are shared by large-scale producers like New Hope Group, which are anxious to replace their current breeding herds with higher quality sows.

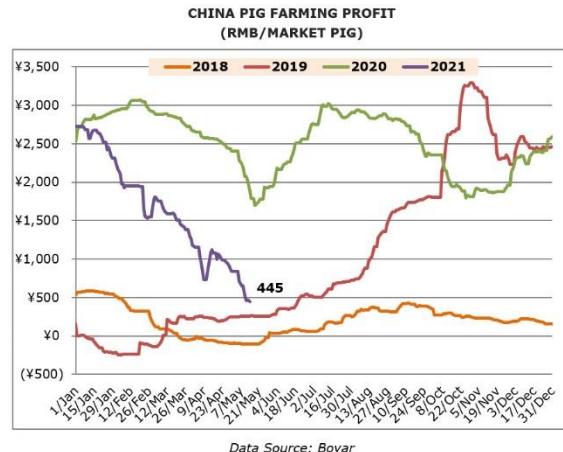
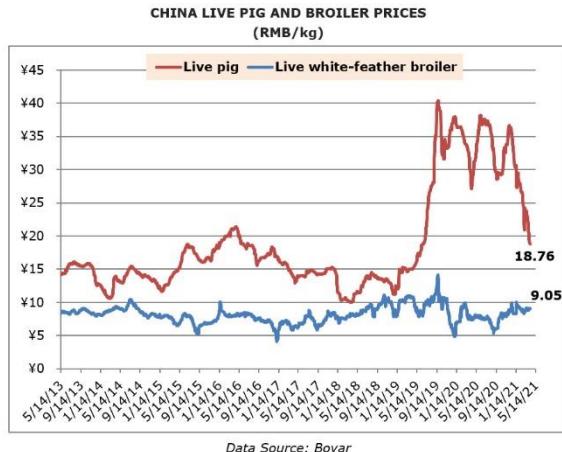
On the feed side, both livestock farms and feed mills continue to report higher costs that have been compounded by delays in clearing imported corn at a number of China's ports. The outlook for smaller scale farms, those with less than 1,000 head in output, and finishing operations is rather bleak, as many are facing a lack of working capital to keep their businesses running. As a consequence of the current situation, market uncertainties over price trends, demand for feed, and opportunities for imported meat will continue as China's hog sector has a ways to go to reach full recovery.

Live Hog Price Down More Than 9 Percent, Broilers Up Again

The national live hog price continued its downward trend last week, shedding 9.4 percent from the previous week. That translated into a week-on-week decrease of RMB 1.94/kg (\$.30/kg) or RMB .88/lb. (\$.14/lb.). This marks the lowest national average price since mid-June 2019. Similarly, the average profit per live pig took a major hit last week, falling by 35 percent or RMB 240/head (\$37.21/head), also the lowest level since mid-June 2019.

In contrast, the national average price for live white feather broilers continued to edge upward last week, gaining 1.9 percent. That equated to a weekly increase of RMB .17/kg (\$.03/kg) or RMB .08/lb. (\$.01/lb.). The gradual increases are a welcome development to producers who still face competition from imports and their own

excess capacity. Once again, the price trends show further evidence of how live pig and white feather broilers no longer move in concert.



Oilseeds

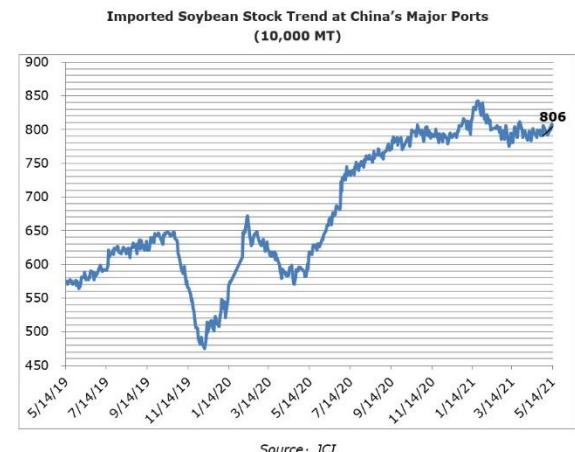
Imported Soybean Inventory Climbs Above 8 MMT

Data availability for soymeal inventories continues to be unavailable for May. However, an increase in the volume of imported soybean inventories last week and falling meal prices point to at best level volume from the end of April, as crush margins remain deep in the red. Through 14 May, the estimated imported soybean stocks at China's seaports ticked up by 100,100 MT or 1.3 percent. Regionally trends were mixed. Imported stocks at the five major ports in Shandong dropped by 137,500 MT or 4.6 percent, reducing the province's share to 35.4 percent from 37.6 percent for the week prior. By comparison, inventories at the major ports in Guangdong rose by 157,000 MT or 19.5 percent,

raising the province's share to 11.9 percent from 10.1 percent two weeks ago. The imported stocks at the three major ports in Jiangsu also increased last week, edging up by 45,500 MT or 2.1 percent, pushing up the province's share to 26.9 percent from 26.7 percent for the previous week.

	China's Imported Soybean Stocks (1,000MT)				
	Total	Other Ports	Shandong	Guangdong	Jiangsu
14 May 2021	8,059.9	2,073.6	2,854.7	960.2	2,171.4
Week-on-week	100.1	35.1	-137.5	157.0	45.5
Month-on-month	94.3	-114.3	-8.8	129.5	87.9
Year-on-year	1,877.3	-160.3	604.4	197.5	1,235.6

Source: JCI

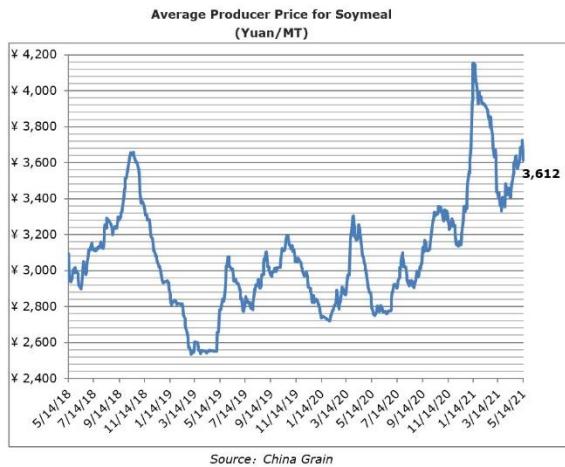


Crush Margins Remain in the Red

Even with the average CNF price for U.S. soybeans falling by \$8/MT or 1.3 percent last week, average crush margins remained deep in negative territory. Meanwhile, the average landed cost for Brazilian soybeans ticked up by \$3/MT or .5 percent.

On the product side, the average producers' prices for soymeal and oil reversed course and saw declines last week. The average wholesale price for soymeal shed RMB 72/MT (\$11.16/MT) or 2 percent, while the average wholesale price for soyoil contracted by RMB 22/MT (\$3.41/MT) or .2 percent. The net effect saw the average margin on U.S. soybeans, excluding the 25 percent retaliatory tariff, improve by RMB 11/MT (\$1.71/MT) but still remain in the red at an average loss of RMB 82/MT (\$12.71/MT). Meanwhile, the average loss on Brazilian soybeans worsened by RMB 72/MT (\$11.16/MT) to a negative RMB 232/MT (\$35.97/MT). Under these circumstances, crushers have no incentive to build up stocks and

will likely continue to maintain imported soybean inventories at domestic ports in the 8 MMT range for at least the next two to three months.



China's Imported Soybean Crush Margin on U.S. Soybeans with 28% Tariff						
	Imported Soybeans Cost & Freight (USD/MT)	Exchange Rate (USD/CNY)	Soymeal Prices (RMB/MT)	Soybean Oil Prices (RMB/MT)	Crush Margin (Tariff-28%) (RMB/MT)	Crush Margin (USD/MT)
14 May 2021	609	6.45	3,612	9,766	-1,192	-184.7
Week-on-week	-8	-0.02	-72	-22	28	3.9
Month-on-month	44	-0.08	140	489	-148	-24.8
Year-on-year	238	-0.64	823	4,177	-457	-81.2

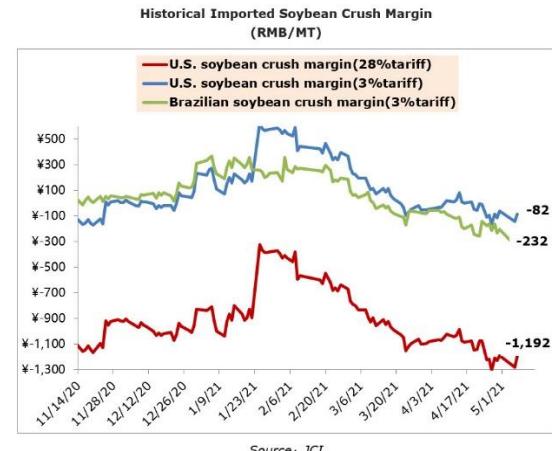
Source: JCI

China's Imported Soybean Crush Margin on U.S. Soybeans without 25% Tariff						
	Imported Soybeans Cost & Freight (USD/MT)	Exchange Rate (USD/CNY)	Soymeal Prices (RMB/MT)	Soybean Oil Prices (RMB/MT)	Crush Margin (Tariff-3%) (RMB/MT)	Crush Margin (USD/MT)
14 May 2021	609	6.45	3,612	9,766	-82	-12.7
Week-on-week	-8	-0.02	-72	-22	11	1.6
Month-on-month	44	-0.08	140	489	-80	-12.4
Year-on-year	238	-0.64	823	4,177	-91	-14.0

Source: JCI

China's Imported Soybean Crush Margin on Brazil Soybeans						
	Imported Soybeans Cost & Freight (USD/MT)	Exchange Rate (USD/CNY)	Soymeal Prices (RMB/MT)	Soybean Oil Prices (RMB/MT)	Crush Margin (Tariff-3%) (RMB/MT)	Crush Margin (USD/MT)
14 May 2021	629	6.45	3,612	9,766	-232	-36.0
Week-on-week	3	-0.02	-72	-22	-72	-11.2
Month-on-month	56	-0.08	140	489	-169	-26.4
Year-on-year	268	-0.64	823	4,177	-324	-48.9

Source: JCI



Grains

Guangdong Leads Uptick in Domestic Corn Price

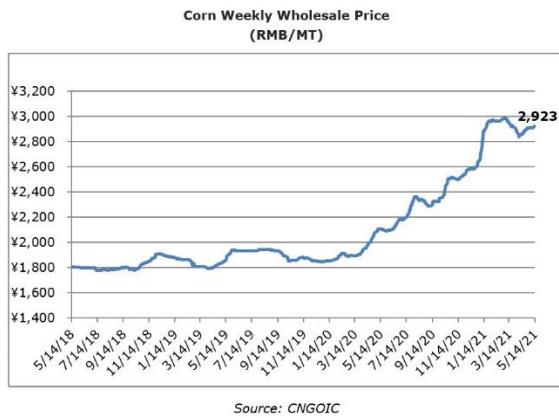
Clearance delays for imported corn and improved prices for corn gluten meal and DDGs pushed domestic corn prices in Guangdong above the RMB 3,000/MT (\$465.12/MT) mark. With the average price ticking up by RMB 40/MT (\$6.20/MT) or 1.3 percent, the national average price edged up last week by RMB 13/MT (\$2.06/MT) or .4 percent. The average prices in Liaoning and Shandong also saw gains of RMB 10/MT (\$1.55) or .4 percent and RMB 12/MT (\$1.86/MT) or .4 percent, respectively.

On the processing side, cornstarch prices in Shandong and Jilin headed in opposite directions last week. In Shandong, the average price increased by RMB 20/MT (\$3.10/MT) or .6 percent, while in Jilin, it fell by RMB 100/MT (\$15.50/MT) or 2.9 percent. In contrast, recent outbreaks of COVID-19 in the northern and central parts of China also led feed mills to stock up on corn, as corn gluten meal prices continued to see strong gains. In Shandong, the average corn gluten meal price improved by RMB 180/MT (27.91/MT) or 3.8 percent, and in Jilin, it jumped by RMB 300/MT (\$46.51/MT) or 6.4 percent.

For ethanol producers in Shandong, rising corn prices and no movement in ethanol or DDG prices resulted in the operating margin falling by RMB 190/MT (\$29.46/MT) to an average loss of RMB 288/MT (\$44.65/MT), which has pushed down utilization rates. In Jilin, however, the average ethanol and DDGS prices saw healthy upticks of RMB 100/MT (\$15.50/MT) or 1.6 percent and RMB 50/MT (\$7.75/MT) or 2.3 percent, respectively. That resulted in the average operating margin in Jilin increasing by RMB 21/MT (\$3.26/MT) or 8.8 percent to RMB 261/MT (\$40.47/MT).

	China Corn Wholesale Price (RMB/MT)					
	Nationwide	Heilongjiang	Jilin	Liaoning	Shandong	Guangdong
14 May 2021	2,923	2,710	2,767	2,838	2,944	3,030
Week-on-week	13	0	0	10	12	40
Month-on-month	46	-25	-43	5	-8	150
Year-on-year	818	795	777	789	740	900

Source: CNGOIC/JCI



China Cornstarch Processing Margin (RMB/MT)

(RMB/MT)	Shandong				Jilin			
	Corn Price	Starch Price	Corn Gluten Meal Price	Margin	Corn Price	Starch Price	Corn Gluten Meal Price	Margin
14 May 2021	2,960	3,470	4,980	3	2,740	3,350	4,980	70
Week-on-week	0	20	180	52	0	-100	300	-49
Month-on-month	-20	-40	390	61	90	-150	420	-214
Year-on-year	750	790	330	-28	930	900	380	-221

Source: JCCE

China Corn Ethanol Processing Margin (RMB/MT)

(RMB/MT)	Shandong				Jilin			
	Corn Price	Ethanol Price	DDGS Price	Margin	Corn Price	Ethanol Price	DDGS Price	Margin
14 May 2021	2,980	6,700	2,700	-288	2,530	6,550	2,250	261
Week-on-week	60	0	0	-190	0	100	50	21
Month-on-month	20	-200	150	-143	0	-100	20	-25
Year-on-year	730	1,180	550	-391	760	1,190	350	-258

Source: JCCE

European Market Analysis

3 May 2021

By Matt Herrington

Regional News

Black Sea weather patterns are trending cold and dry. Temperatures are too cold for crop growth and a large portion of the central wheat-growing region will need to be replanted. Conditions remain favorable in southern Russia, however. Overall, threats to the Russian crop are outweighing favorable conditions in the south, causing FOB prices to rise.

Europe is facing a similar weather trend with below-normal temperatures forecast for this week and most of the following week. Southern Europe will remain dry this week before rains return next week, though the forecast mid-April rains will miss the UK.

German winter crops were not as affected by recent cold weather as crops in other EU countries. Traders note German crops were more developmentally delayed than the French crop in particular, meaning recent frosts had a smaller impact on the crop.

Farmers in Belarus planted 752,000 hectares to grains and pulses, 2 percent more than was expected by the country's Ministry of Agriculture.

Milling Wheat

World wheat markets are focused on marginal growing conditions for several key Northern Hemisphere producers. In Europe, the wheat crop is facing cold, dry weather that is impacting winter wheat development and delaying spring wheat plantings. Russian farmers will need to reseed a large portion of the country's central wheat-growing region, which prompted consultancy IKAR to lower its forecast of Russia's 2021/22 production to 79.5 MMT. In North America, drought across the U.S. Plains and Canadian Prairies is causing concerns for wheat crops in those countries as well.

In short, while the 2020/21 world wheat balance sheet calls for ample supplies, the 2021/22 outlook is far less certain. In response, wheat markets are rallying in expectation of needing to ration demand for the coming marketing year.

In the UK, new crop futures rallied £10/MT last week while the new crop contracts were mostly lower. U.S. futures were sharply higher as well and U.S. wheat is now the most expensive on the world market. Black Sea offers remain the most competitive, but China reportedly booked 1 MMT of French wheat last week.

Milling Wheat FOB Prices for May/June Shipment					
Origin/Spec	This Week	Weekly	Monthly	Yearly	
		Change	Change	Change	\$/MT
Black Sea					
Bulgaria, 11% pro.	275.00	21.00	32.00	51.00	
Black Sea, 11.5% pro.	270.00	10.00	21.50	47.00	
Romania, 12% pro.	271.75	12.00	24.75	43.25	
Ukraine, 12% pro.	272.00	9.50	22.50	45.00	
Russia, 12.5% pro.	268.00	5.50	19.00	39.00	
Europe					
Rouen, France, 11% pro.	289.75	0.00	37.00	76.25	
Germany*, 12% pro.	313.25	18.75	53.75	100.50	
U.S.					
U.S. Gulf, SRW 10.5% pro.	317.00	-6.25	46.50	85.00	
U.S. Gulf, HRW 12% pro.	314.25	-5.50	48.75	76.25	
Futures Markets					
U.S. SRW, Jul 21 (\$/MT)	267.68	-4.04	43.17	77.90	
Paris Milling, Sep 21 (€/MT)	219.75	-6.50	23.25	35.25	
UK Feed Wheat, Nov 21 (£/MT)	183.75	-7.55	20.50	23.45	

Source: DTN, World Perspectives

*FOB Baltic ports

Consultancy SovEcon pegged the Ukrainian 2021 wheat crop at 28.6 MMT, up 0.8 MMT from prior estimate and 2020 production of 24.9 MMT. Ukraine's winter wheat conditions have improved significantly in April with above-average precipitation.

Romania's wheat crop is expected to recover from last year's drought-reduced production. Early expectations are that the country will produce 8.5-10 MMT, up from 6.4 MMT last year. Romania's domestic production is typically near 3 MMT, leaving 5.5-7 MMT for export this year.

Feed Grains

The world feed grain trade is almost exclusively focused on two factors: drought in Brazil and the rally in U.S. cash/CBOT prices. Brazil's drought is causing significant yield reductions in the safrinha corn crop and estimates for Brazil's total corn crop are falling to 100-105 MMT. With U.S. cash markets tightening rapidly, the marginal reduction in Brazilian supplies is having an outsized impact on world markets. U.S. FOB NOLA corn is the most expensive offer to start this week as that market looks to ration demand. Despite rising prices, however, export demand has been strong for U.S. corn.

Feed Grain FOB Prices for May/June Shipment					
Commodity/Origin	This Week	Weekly	Monthly	Yearly	
		Change	Change	Change	\$/MT
Corn					
Russia*	200.88	3.63	9.88	49.50	
Ukraine	285.00	11.00	24.50	112.50	
Romania	279.50	9.25	18.00	100.00	
Creil, France	284.25	13.50	40.50	104.00	
U.S. Gulf	326.75	21.25	73.50	180.75	
Santos Brazil**	297.75	13.00	53.50	149.25	
Feed Wheat					
Ukraine	264.43	20.01	-18.71	57.20	
Black Sea Ports	269.25	13.00	27.25	50.75	
Bulgaria	271.00	24.00	32.00	58.50	
Creil, France	272.58	2.17	36.19	81.00	
Barley					
Feed Barley, Bulgaria	254.00	8.00	13.00	79.00	
Feed Barley, Russia	250.00	5.00	15.00	68.00	
Feed Barley, Ukraine	247.00	0.00	-3.00	65.00	
Feed Barley, France	287.75	-4.00	33.00	93.75	
Spring Malting; Halle, Germany	284.96	7.30	26.81	96.67	
Spring Malting; Rouen, France	N/A	N/A	N/A	N/A	
Winter Malting; Creil, France	229.00	-4.00	15.50	66.25	
Winter Malting; Rouen, France	N/A	N/A	N/A	N/A	

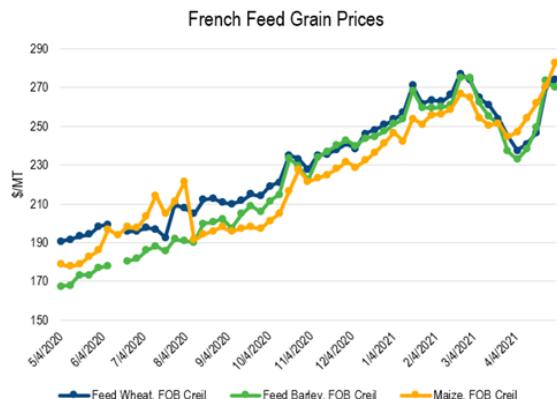
Source: DTN, World Perspectives

*Interior Prices

** July shipment

Despite volatility and sharp rallies in other feed grain markets, malting barley prices have remained relatively stable but are still trending higher. The outlook for improved economic activity/tourism in 2021 is boosting the malting/beer demand outlook. The UK spring barley crop is facing a concerning dry trend, which may curtail yield potential.

Old crop feed barley markets were thinly traded in the UK and EU last week with stocks dwindling. New crop markets are rallying along side corn and feed wheat markets. Forecasts for rains this week and next encouraged sellers, who are now more aggressive posting offers. Consequently, feed barley's discount to feed wheat/corn is growing.



Consultancy SovEcon pegged the Ukrainian 2021 corn crop 36.6 MMT, 30.3 MMT produced in 2020. SovEcon said it expects Ukrainian farmers planted 5.3 million hectares this year and yields should average 6.9 MT/ha.

The EU Commission lowered its estimate of the EU-28 barley crop to 56 MMT. The agency last month predicted the crop would total 56.3 MMT.

Oilseeds

World oilseed markets remain exceptionally volatile. Spot Canadian canola futures hit \$900/MT last week after news broke that the country would see two new crush facilities open. Stats Canada's canola acreage estimate was also below pre-report expectation, which put a bid under new crop futures. In contrast, Matif rapeseed futures sold off sharply at the end of last week, due to profit-taking and a technical correction. This week, however, the market is resuming its upward trend after gapping higher at the open.

Consultancy Strategie Grains announced it expects the 2021/22 EU rapeseed price to exceed that of 2020/21.

Oilseeds FOB Prices for May/June Shipment \$/MT				
Commodity/Origin	This Week	Weekly Change	Monthly Change	Yearly Change
Soybeans				
Russia, EXW	728.63	12.25	52.13	342.38
Ukraine, FOB Black Sea Ports	563.56	0.39	6.99	171.35
Brazil, FOB Paranagua	575.50	8.25	68.00	243.75
U.S. Gulf	611.75	10.75	71.25	274.25
Rapeseed				
Russia, EXW	704.13	4.50	28.63	318.63
Ukraine, FOB Black Sea Ports	543.64	0.41	22.06	153.89
France, FOB Rouen	691.25	-32.00	73.00	279.00
Germany, CIF Hamburg	618.20	-11.44	18.41	218.57
Sunflower Seeds				
Russia, EXW	755.50	5.63	25.50	445.50
Ukraine, FOB Black Sea Ports	872.96	17.94	64.13	458.24
France, FOB St. Nazaire	668.25	0.00	27.25	286.25
Futures Markets				
Matif Rapeseed , Aug 21 (€/MT)	512.25	11.75	67.00	149.00
ICE Canola , Nov 21 (CAD\$/MT)	712.90	14.50	95.00	234.80
CBOT Soybeans , Jul 21 (\$/MT)	566.22	0.64	53.00	251.79

Source: DTN, World Perspectives

Rising U.S. cash and CBOT soyoil prices have allowed Malaysian palm oil futures to rally as well. July palm oil futures hit an 11-month high on Monday as the CBOT rally and stronger April exports emboldened buyers. U.S., Brazilian, and Argentine soyoil prices are all higher to start the week while Dutch and German offers are slightly weaker. Ukrainian sunflower oil prices are down \$10/MT so far this week, which is likely pressuring European vegoil values. The COVID-19 pandemic's effects on India remain a headwind for palm oil and the broader world vegoil complex, but economic growth/recovery in other countries remains supportive.

WPI POLICY ANALYSIS

30,000 Foot View: Technology, Politics and Policy

By Dave Judyay

A good topic for consideration is the big picture outlook of what is on the horizon, the so-called “30,000-foot view” so named because that is the cruising altitude of airliners, and a particularly appropriate metaphor as much of the farm belt is often referred to as “fly over” country between the coasts. We’ve picked three broad categories to watch between now and the next farm bill.

Ag Technology

The building of vertical, indoor, urban and/or controlled environment grow facilities started as a coastal thing. These facilities are indoor, hydroponic, often automated with IT and robotics, and largely focused on lettuce and leafy greens (the only crops practical with the initial state of the technology). Think of the pioneering companies Plenty in San Francisco and AeroFarms in Newark, New Jersey outside of New York City. They’ve created something of a moon-shot in technology and the sector is expanding rapidly, but to some degree it has been under the radar. Other ag tech sectors have attracted much more attention.

But indoor vertical growing is on the march. Facilities in Singapore, Tokyo and Seoul have led the way to bigger and better technology. Then there’s the marketing; the industry has unveiled a key marketing factoid - a “locally grown” label actually trumps “organic.” In fact, even former USDA Secretary Sonny Perdue has invested in, and sits on the board of, vertical grower Kalera.

The technology path has gone from leafy greens to flowering specialty crops (which take more lighting and more climate control) like peppers, tomatoes and the “holy grail” of indoor produce, strawberries. Plenty is partnering with specialty crop giant Driscoll’s to produce strawberries in Wyoming, of all places. We’ve been told (by

folks who know more than we do), indoor production is the only path to kosher strawberries – an entirely new market.

The technology is moving beyond the specialty crop sector. The Canadian company CubicFarms has developed a system to grow barley and wheat for beef cattle and dairy feed. The system has a grow facility that is automated for seeding, irrigation, lighting, harvesting, and re-seeding. The units are 80 feet long, 10 feet wide, and 20-feet high. They come in sets of six units, at \$250,000 per – so, \$1.5 million total.

The six-unit systems are designed (projected) to produce 36 MT of feed per day; with a stacked vertical grow room and staggered production among the units. The system can produce all year, so that’s about \$114/MT in fixed costs for the unit. Energy, water, overhead, and the value of the land on which they are sited, not included. Operating costs are unknown, and disruptions could be significantly costly. However, the benefits are the same as lettuce – eliminating transportation and year-round production, advantages in cold climates. To date, the company reports that systems have been installed on six farms and the first commercial application on a 17,000 head operation in Wyoming.

Politics

The 2020 Census is done, and that means Congressional redistricting before the 2022 midterm elections. In all, seven states lost population and will lose a Congressional seat: California, Illinois, Michigan, Ohio, West Virginia, Pennsylvania, and New York. Six states gained population and Congressional seats – one each for Oregon, Montana, Colorado, North Carolina, and Florida; Texas will gain two seats.

Redistricting is done differently in each state in terms of time frames and process; Virginia, Michigan, California, Oregon, and Washington won't complete the process until this year; others are already done. Then there is the question of who oversees redrawing the maps? In states where there are Democrats (governors and legislatures) controlling the process (Illinois, Nevada, New Mexico, and others) the current party breakdown is 40 Democrat seats and 9 Republican seats. The projected outcome with new districts is that Democrats will pick up 1 to 3 seats. No seats are gained from the census reapportionment.

In states where Republicans control the process there are currently 132 Republican seats and 53 Democrat seats. A net two seats will be picked up by apportionment, and redistricting could add 8 to 12 seats in redrawn safe Republican districts. Then there are states with split control over the process – governors and legislative majorities of opposite parties. Just like the state level representation, the current Congressional breakdown is close to even with 24 Democrats and 23 Republicans. This is where the battle will be with up to three seats swinging one way or the other.

Finally, there are states where a commission draws the Congressional district lines (the most significant being California, Michigan, New York, New Jersey, and Virginia). These states will lose a net one seat from reapportionment, and the new districts will be +/- 5 for either party. In all, up to 20 seats could swing on the redistricting process alone; those are big stakes for the next Congress (which is when the farm bill is on the docket) with the closely divided current House party control. A majority in the House of Representatives is 218 seats – the Democrats came out of the 2020 election with a 221-seat majority.

Policy

One of the biggest policy issues in agriculture right now is climate with a focus on carbon capture and sustainability. As a farm policy issue, this has the potential to fade away (like cap-and-trade and the Climate Exchange), or to fundamentally change the future of U.S.

agriculture policy – or fall somewhere in between. There is wide-spread, producer to policymaker, bipartisan support for finding ways to make farmland and agriculture a solution to address these concerns. However, how to do it (government versus private, incentives versus regulations) and what the goal should be (e.g. balancing revenue and income for farmers, versus quantitative goals in GHG reduction) are not settled.

As we've written before, now retired House Agriculture Committee Chairman Collin Peterson (D-Minnesota) and current Senate Agriculture Committee Ranking Minority Member John Boozman (R-Arkansas) have expressed concern with the Biden Administration's carbon bank idea – as Boozman has said "There is so much confusion about what a carbon bank represents." Agriculture supports the Growing Climate Solutions Act, essentially technical support and certification/verification ala existing USDA AMS programs, sponsored by Agriculture Committee Chair Debbie Stabenow (D-Michigan) and Senator Mike Braun (R-Indiana), but many environmental groups oppose it as an "excuse" to "keep polluting."

The American Farm Bureau Federation did an insightful five-part series of articles on sustainability markets, exploring it from all sides. In short, our takeaway from the excellent series is there are both unanswered questions about potential costs and consequences, and unquestioned potential benefits. A recent poll by *Farm Futures* magazine of 1,000 farmers asked, "To what extent do you support a private or public program that would compensate your operation for engaging in climate friendly practices?" Forty-one percent of respondents "completely or mostly" supported, 30 percent "somewhat" supported, and 29 percent expressed "not much support or do not support at all."

And even among supporters, the devil is in the details. We note the hot topic among the lobbying crowd in Washington, D.C. is that Farmers Business Network, a company that has a carbon credit trading platform, is hiring for government affairs representation going into the next farm bill. Indeed, this issue will foster a lot of debate

and consume an outsized amount of time and intellectual energy between now and the 2023 farm bill.

EU Gets Nutrition Right; Sensing Weakness; Farming Future

By Gary Blumenthal

EU Gets Nutrition Right

It looks messy, with fights over food labeling, red light systems versus front of package, etc. But EU policymakers see the rise in obesity and poor eating habits and actively seeks ways to change public attitudes. By contrast, policymakers in Washington talk about more of the same food but free. Addressing nutritional shortcomings is not solved by Meatless Mondays, local and organic. It requires a long-term, saturated education campaign to improve public awareness. It also requires changing public policies that influence production, like the Farm Bill.

Sensing Weakness

In President Biden's analysis, Donald Trump was an international embarrassment. This is true in part but in seeking to compensate for the last four years, the Biden Administration risks the opposite problem, appearing weak and malleable. The open southern border, announcing a TRIPS waiver on vaccines that will not lead to increased production abroad but looks empathetic, taking pressure off NATO members for fair contributions, the list goes on. USDA Secretary Vilsack defended Mexico's ban on GMO's as only applying to food – wrong. Mexico's approval process is not delineated between food and feed, and a ban on GMO food is still wrong.

There are key issue points ahead, such as the Airbus/Boeing dispute. It had an imbalanced outcome – Europe cheated literally twice as much so where will be the compromise? The Administration plans to spend records amount of money borrowed from foreigners, and like a schoolhouse weakling declares that "we will out-compete China," as if improving America requires beating up someone else. It all looks feckless rather than inspiring.

Farming Future

The future of farming is no different than foreseen changes in the broader society. Autonomous farm equipment is ahead of autonomous automobiles. Efficiencies via biotechnology, AI and algorithms rather than extensive, small and local sweat back production practices. Investment capital over human capital. Human potential is far greater than the nostalgic clinging to the past embraced by foodies that are currently ascendant in politics.

Anti-Meat Campaign

By Gary Blumenthal

The number of media articles against consuming meat and poultry is beginning to spike. They cover the range of arguments served up by vegetarian campaigners – bad for the environment, bad for human health, unethical, etc. There are of course counter-arguments but there is no fair and balanced in the American media today. It is unclear how much impact this campaign will have on attitudes and actual meat consumption. While Venezuela, Russia, and China skew media messaging to the government's position, the media itself performs the censorship in the U.S., with contrarian messengers kicked off Facebook and Twitter.

There is unlikely to be an attack on meat from the White House. The progressive left has been demanding that President Biden make Israel stop killing Palestinians, but this would cause a fissure with Jewish Americans. Democratic Party leaders are trying to secure political control of 30-40 swing Congressional districts with largely rural constituencies. They are not going to hand Republicans the gift of being anti-meat.

