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2021 U.S. Corn Yield Lowered 2.0 bushels to 175.5 bu/ac

The 2021 U.S. corn yield was lowered 2.0 bu/ac this week to 175.5 bu/ac, and I have a neutral to lower bias going forward.

The nationwide corn yield was lowered based mainly on the ongoing problems in the northwestern Corn Belt – South Dakota, North Dakota, Minnesota, and northwestern Iowa. Even with a lowered corn yield, I continue to have a lower bias going forward. How much lower it goes will depend on the July weather.

Going forward, we are going to use the acreage numbers from the June Planted Report. Therefore, the 2021 corn planted acreage is 92.7 million acres with a harvested acreage of 84.5 million acres. With a yield of 175.5 bu/ac, the 2021 U.S. corn production is estimated at 14.82 billion bushels.

The weekend saw very warm temperatures in the northwestern Corn Belt with limited precipitation. There is more rain in this week's forecast for the region, but it probably will not be enough to make up for the ongoing moisture deficit. The corn will start to pollinate in the next 2-3 weeks and the weather during that period will go a long way in determining the eventual corn yield.

As of June 29th, the Drought Monitor and the USDA estimated that 38% of the U.S. corn acreage was in some level of drought and that many of those areas have been in drought for weeks. If those areas stay in drought through pollination, the corn yields could be significantly impacted.

On Tuesday, the condition of the U.S. corn crop could hold steady or plus or minus 1 point. I think the conditions will decline in the northwestern Corn Belt and maybe in some of the southern states such as Arkansas, Mississippi, Tennessee, and Kentucky. The condition of the corn should improve in the eastern Corn Belt states.

The June Planted Report indicated that farmers would plant 92.7 million acres of corn, which is up 1.6 million acres compared to the March Prospective Plantings Report. The table below shows the changes in acreage for the 18 major states from the March Prospective Plantings Report to the June Planted Report. As you can see, the northeastern Corn Belt accounted for a large percentage of the increase. Unfortunately, that is the same area

experiencing moisture deficits. I think having increased acreage in a moisture deficit region could weigh on the nationwide corn yield.

Changes in Acreage – 2021 March Prospective to 2021 June Planted

Corn		Soybeans	
acres		acres	
Minnesota	+500,000	N. Dakota	+200,000
S. Dakota	+400,000	Iowa	+100,000
Illinois	+300,000	Missouri	+100,000
N. Dakota	+300,000	Michigan	+ 50,000
Indiana	+200,000	Arkansas	0
Ohio	+200,000	Illinois	0
Colorado	+120,000	Kentucky	0
N. Carolina	+ 60,000	Louisiana	0
Tennessee	+ 50,000	N. Carolina	- 50,000
Kansas	0	Tennessee	- 50,000
Kentucky	0	Wisconsin	- 50,000
Michigan	0	Indiana	-100,000
Missouri	- 50,000	Kansas	-100,000
Iowa	-100,000	Minnesota	-100,000
Penn.	-100,000	Nebraska	-100,000
Nebraska	-200,000	Ohio	-100,000
Wisconsin	-250,000	S. Dakota	-200,000

2021 U.S. Soybean Yield Lowered 0.8 bushels to 50.0 bu/ac

The 2021 U.S. soybean yield was lowered 0.8 bu/ac this week to 50.0 bu/ac, and I have a neutral to lower bias going forward.

The nationwide soybean yield was lowered due to the ongoing problems in the northwestern Corn Belt. They are forecasted to receive some rain this week, but it does not appear to be enough to overcome the current moisture deficits.

Going forward, I am going to use the acreage numbers from the June Planted Report. Therefore, the 2021 soybean planted acreage is 87.5 million acres with a harvested acreage of 86.7 million acres. With a yield of 50.0 bu/ac, the 2021 U.S. soybean production is estimated at 4.33 billion bushels.

As of June 29th, the Drought Monitor and the USDA estimated that 33% of the U.S. soybean acreage was in some level of drought and that many of those areas have been in drought for weeks. Most of those acres are in the northwestern Corn Belt where the growing season is relatively short.

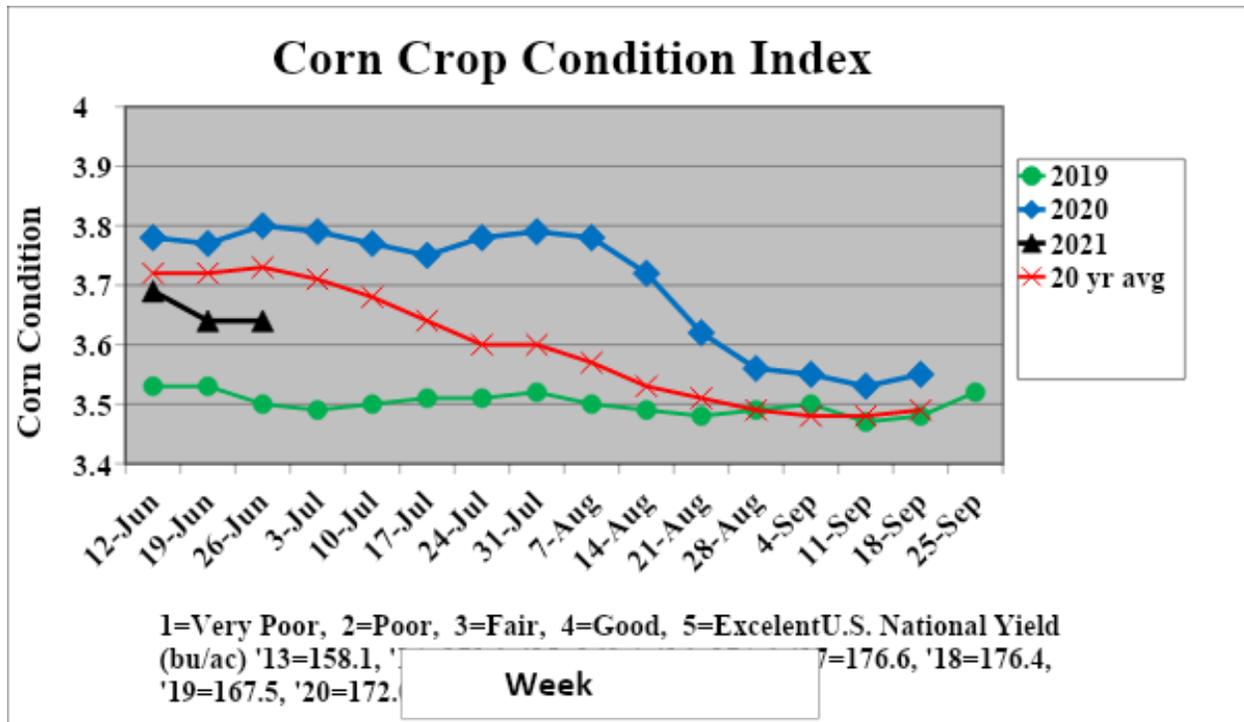
Some of the early planted soybeans in North Dakota and South Dakota generally start to turn yellow by mid-August and they start dropping their leaves by the third week of August. Therefore, some of the soybeans in those two states only now have 4-6 weeks to flower, set pods,

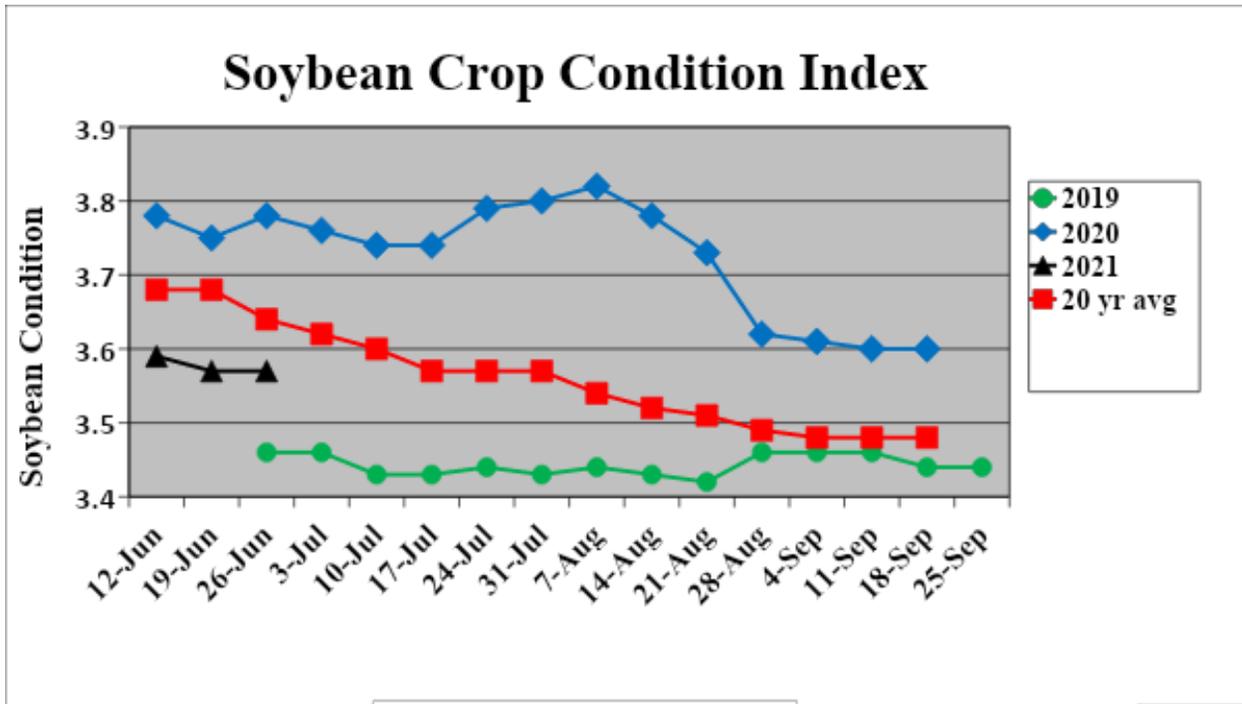
and fill pods. They can ill afford to miss a week of potential growth due to ongoing moisture stress.

The June Planted Report indicated that U.S. farmers will plant 87.55 million acres of soybeans in 2021, which is down 45,000 acres from the March Prospective Plantings Report. As you can see from the table above, there was not much change in most states with the biggest changes in North Dakota (+200,000 acres) and South Dakota (-200,000).

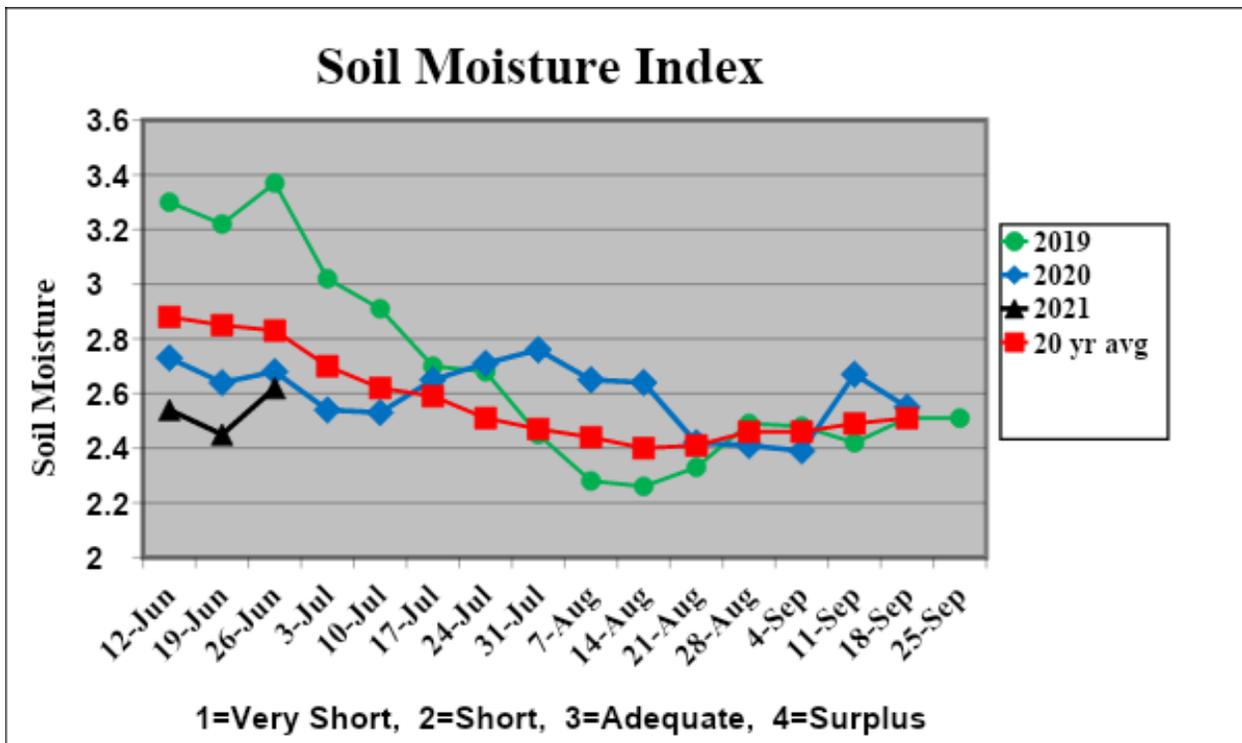
I did not see any significant reason why not to use the USDA acreage numbers. Prior to the report, my acreage estimates were 800,000 acres too high for corn and 400,000 acres too high for soybeans.

The graphs below reflect last week's crop conditions, but the model was adjusted to use the planted acreage from the June Planted Report released last week.





1= Very Poor. 2=Poor. 3=Fair. 4=Good. 5=Excelent U.S. National Yeild (bu/ac) '13=44.0.



1=Very Short, 2=Short, 3=Adequate, 4=Surplus

2021 U.S. Crop Estimates

- 2021 U.S. corn planted acreage 92.7 million acres (37.52 mha)
- 2021 U.S. corn harvested acreage 84.5 million acres (34.20 mha)
- 2021 U.S. corn yield 175.5 bushels per acre (11,037 kg/ha)
- 2021 U.S. corn production 14.82 billion bushels (376.42 mmt)

- 2021 U.S. soybean planted acreage 87.5 million acres (35.44 mha)
- 2021 U.S. soybean harvested acreage 86.7 million acres (35.10 mha)
- 2021 U.S. soybean yield 50.0 bushels per acre (3,355 kg/ha)
- 2021 U.S. soybean production 4.33 billion bushels (117.84 mmt)

2021 U.S. Crop Estimates

	<u>Current Estimate</u>	<u>Maximum</u>	<u>Minimum</u>	<u>2020 Production</u>
	billion bushels			
<u>Corn Production</u>	14.82	15.21	14.36	14.18
(84.5 mac harvested)	(175.5 bu/ac)	(180.0 bu/ac)	(170.0 bu/ac)	(172.0 bu/ac)
(84.5 mac harv. USDA)	(179.5 bu/ac USDA)			
<u>Soybean Production</u>	4.33	4.42	3.98	4.13
(86.7 mac harvested)	(50.0 bu/ac)	(51.0 bu/ac)	(46.0 bu/ac)	(50.2 bu/ac)
(86.7 mac harv. USDA)	(50.8 bu/ac USDA)			

2021 U.S. Crop Estimates – Metric Units

	<u>Current Estimate</u>	<u>Maximum</u>	<u>Minimum</u>	<u>2020 Production</u>
	million metric tons			
<u>Corn Production</u>	376.42 mt	387.14 mt	365.63 mt	360.25 mt
(34.20 mha harvested)	(11,037 kg/ha)	(11,320 kg/ha)	(10,691 kg/ha)	(10,790 kg/ha)
(34.20 mha harv. USDA)	(11,289 kg/ha USDA)			
<u>Soybean Production</u>	117.84 mt	120.11 mt	108.35 mt	112.54 mt
(35.10 mha harvested)	(3,355 kg/ha)	(3,422 kg/ha)	(3,087 kg/ha)	(3,369 kg/ha)
(35.10 mha harv. USDA)	(3,409 kg/ha USDA)			

Areas of Concern for 2021 U.S. Crops

- Dry conditions in the western and northwestern Corn Belt.
- A forecast for a return of hot and dry conditions during the month of July.
- Too much rain and localized flooding in selected locations of the central and eastern Corn Belt.

Coldest Temperatures in 20 Years Impacts Brazil's Safrinha Corn

It has been the “trifecta” of problems for Brazil’s 2020-21 safrinha corn. It was planted historically late, it was then impacted by a historical drought, and now it was impacted by some of the coldest temperatures in 20 years.

A mass of arctic air swept into southern Brazil last week with the coldest temperatures of the season thus far. Widespread frosts/freezes were reported across southern Brazil and Paraguay for three consecutive nights. The safrinha corn in the states of Parana, Mato Grosso do Sul, Sao Paulo, Goias, and Minas Gerais had already been severely impacted by some of the driest weather ever recorded in south-central Brazil. Losses from the frosts will make a bad situation even worse.

The damage is also expected to be severe in neighboring Paraguay where the corn crop experienced strong frosts/freezes. This is important for livestock producers in Brazil because they have been importing corn from Paraguay due to the lack of available corn supplies in Brazil.

The frosts occurred as far north as the state of Goias and in addition to the safrinha corn, the cold temperatures also impacted sugarcane, coffee, and citrus. Livestock producers will also be impacted by higher corn prices due to very tight corn supplies.

2020/21 Brazil Corn Estimate Lowered 2.0 mt to 88.0 Million Tons

The 2020/21 Brazil corn estimate was lowered 2.0 million tons this week to 88.0 million and I have a lower bias going forward. According to AgRural, the safrinha corn in Brazil is 12% harvested compared to 23% last year. This represents an advance of 5% for the week.

The coldest temperatures in 20 years resulted in three consecutive nights last week of freezing temperatures which negatively impacted the safrinha corn in south-central Brazil. The extent of the damage will not be fully known until the corn is harvested, but yields will be very disappointing and there will be poorer quality grain especially for the latest planted corn.

Drought had already lowered the yield potential for the safrinha corn and now the frosts will make the situation even worse. For the corn that was approaching maturity, there will probably be little damage. For the corn that was pollinating, the damage could be as high as 80%. The safrinha corn development in Brazil is so spread out, it is hard to judge the total extent of the damage.

For the earlier planted safrinha corn, it would be the equivalent of some corn fields in the U.S. experiencing three nights of frost in late September or early October. The yields in those fields would probably not be impacted very much.

For the later planted safrinha corn, it would be the equivalent of some corn fields in the U.S. experiencing three nights of frost in mid-July. The yields in those fields could be devastated.

Mato Grosso Safrinha Corn – The Mato Grosso Institute of Agricultural Economics (Imea) reported that farmers in the state had harvested 22.4% of the safrinha corn as of late last week compared to 46% last year and 39.5% average. This represented an advance of 12.7% for the week. The fastest harvest pace is in northeastern Mato Grosso where 34% of the corn has been harvested. The slowest harvest pace is in south-central Mato Grosso where 12% of the corn has been harvested.

The safrinha corn in Mato Grosso did not experience any frost, but previous dry weather has resulted in lower-than-expected corn yields.

Parana Safrinha Corn - In the state of Parana, a corn specialists from the Department of Rural Economics (Deral) estimated that 1.8 million hectares of the 2.5 million hectares of safrinha corn in the state (72%) was at a stage of development that could be negatively impacted by the cold temperatures.

Deral reported that as of last Monday, 11% of the safrinha corn in Parana was pollinating, 62% was filling grain, 27% was mature, and 2% was harvested. The corn was rated 33% poor, 41% average, and 26% good. These ratings were released before the frosts of last week.

The amount of damage caused by the frosts depends primarily on the stage of development of the crop. The greatest damage will occur in the crop that is still pollinating or starting to fill the grain. The least amount of damage will occur in the crop that is mature or approaching maturity. It takes a few days after a frost to judge the extend of the damage which could range from slight damage to potentially a complete loss of the crop.

Deral had already reduced their initial expectations of the safrinha corn crop by approximately 5 million tons to 9.8 million. The corn specialists for Deral indicated that their estimate of the safrinha corn crop will move lower once the full extent of the frost damage is known.

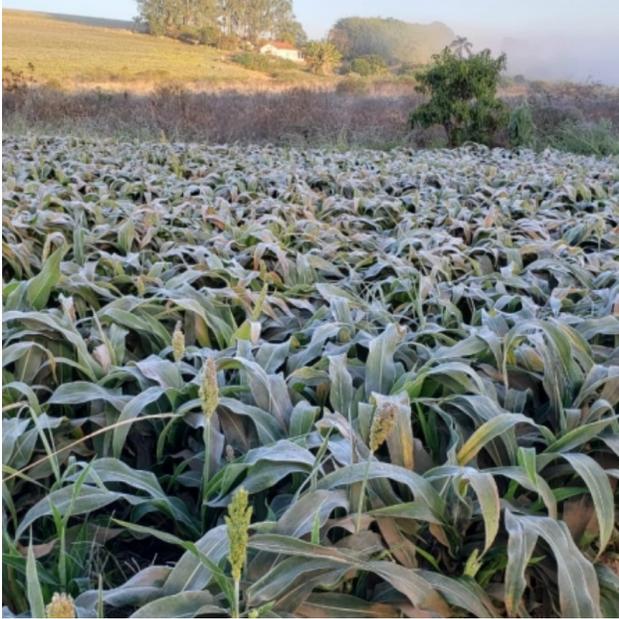
There will be a wide range of losses from the drought and cold temperatures. For example, in the municipality of Marechal Candido in western Parana, the President of the Rural Syndicate estimated that some fields that had been expected to produce as much as 120 sacks per hectare (114 bu/ac) may now be as low as 30 sacks per hectare (28.6 bu/ac).

Goiás Safrinha Corn – The frost last week in Brazil got as far north as southern Goiás, which is very unusual. According to the President of Aprosoja-GO, some of the safrinha corn in the state went 50 days without rain and had already suffered yield losses of as much as 30%. The frosts lowered the yields even more, but the full extent of the losses probably will not be known until the corn is harvested. The corn harvest in Goiás should accelerate over the next ten days.

Below is a series of pictures published by Noticias Agricolas late last week. The pictures are mostly from Parana and can be attributed to the Cocamar Cooperative and Camila Danielle Nichtervitz and Bruno Fagan.







Brazil's Corn Exports in July Could Fall 50%

July is usually the month when Brazil starts to ramp up its corn exports, but Brazil's corn exports this July are expected to fall far short of original expectations. Brazil was expected to export about 33 million tons of corn in 2021 with almost all the exports coming from the safrinha corn crop. Unfortunately, the safrinha corn was planted much later than normal and it then endured a historic drought and last week it was hit by three consecutive nights of freezing temperatures.

The final safrinha corn production will not be fully known until the crop is harvested, but it is guaranteed to be much lower than originally anticipated. As a result, Brazil's corn exports in 2021 may end up closer to 20 million tons.

Trade sources in Brazil are reporting many "washouts" as exporters prefer selling to the domestic market where prices are higher. The corn that will be exported in July is from previous contracts, but going forward, traders would rather sell to the domestic market, thus the export "washouts."

According to the maritime agency Cargonave, there are 39 vessels scheduled to load corn at Brazilian ports during the month of July compared to 85 vessels in July of 2020. Brazil may export 2.5 million tons of corn during July compared to 5 million tons in July of 2020 according to data from the Brazilian National Cereal Exporters Association (Anec). Brazil will export corn during July, August, and September, but after that, corn exports are expected to diminish significantly.

Domestic corn prices are expected to remain strong in Brazil at least through the end of the year. This should encourage Brazilian farmers to significantly increase their acreage for the 2021/22 safrinha corn crop.

2020/21 Paraguay Corn Estimate Lowered 1.2 mt to 3.0 Million Tons

The 2020/21 Paraguay corn estimate was lowered 1.2 million tons this week to 3.0 million and I have a neutral to lower bias going forward.

The corn crop in Paraguay has also been impacted by drought and freezing temperatures just like in neighboring Parana. According to the Vice President of the Soybean and Cereal Producers Association of Paraguay (APS), the second crop of corn was planted later than normal, and it encountered prolonged periods of dry weather during most of its development. Last week, the corn in Paraguay also suffered from three consecutive nights of frosts.

The total extent of the damage will not be known until the crop is harvested and there will probably be lower quality grain as well. Paraguay has been exporting corn to Brazil, but there now may not be enough corn to meet those export contracts which will force producers and exporters to renegotiate their contracts.

2020/21 Argentina Corn Estimate Unchanged at 47.0 Million Tons

The 2020/21 Argentina corn estimate was left unchanged this week at 47.0 million tons, and I have a neutral bias going forward.

The Argentina corn was 51.6% harvested as of late last week and there are not expected to be any significant yield losses due to the freezing temperatures last week because most of the corn was mature. The cold temperatures might negatively impact the seed quality of some of the latest planted corn that had not completely matured.

South American Corn Estimate Adjusted Lower

The 2020/21 South American crop estimates were lowered for Brazil and Paraguay due to drought and recent frosts. We will not know the total extent of the losses until the corn is harvested, so the corn production estimates for both Brazil and Paraguay might be reduced in future reports.

2020/21 South American Soybean Production

<u>Country</u>	<u>Current Estimate</u>	<u>Maximum</u>	<u>Minimum</u>	<u>2020/21 USDA</u>	<u>2019/20 Production</u>	
		Million metric tons				
Brazil	134.0	135.0	133.0	137.0	128.5	
Argentina	45.0	46.0	44.0	47.0	48.8	
Paraguay	9.2	9.4	9.0	9.9	10.1	
Bolivia	2.9	3.5	2.5	2.9	2.8	
Uruguay	<u>2.0</u>	<u>3.0</u>	<u>2.5</u>	<u>2.0</u>	<u>1.9</u>	
Total	193.1	196.9	191.0	198.8	192.1	

2020/21 South American Corn Production

<u>Country</u>	<u>Current Estimate</u>	<u>Maximum</u>	<u>Minimum</u>	<u>2020/21 USDA</u>	<u>2019/20 Production</u>
		Million metric tons			
Brazil	88.0	90.0	83.0	98.5	102.0
Argentina	47.0	48.0	46.0	47.0	51.0
Paraguay	3.0	3.5	2.5	4.6	3.8
Bolivia	1.2	1.0	0.7	1.2	1.1
Uruguay	<u>0.7</u>	<u>0.8</u>	<u>0.5</u>	<u>0.6</u>	<u>0.7</u>
Total	139.9	143.3	132.7	151.9	158.6

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