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Ag Decision Maker

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A Business Newsletter for Agriculture

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A trade-driven market

By Chad Hart, extension economist, 515-294-9911, chart@iastate.edu

The 2020 calendar year continues to provide surprises around each bend. But at least for agriculture, the year is finishing out on a strong note. Despite the drought and derecho, agricultural production was robust. If the current USDA yield projections hold, the 2020 corn crop will be the 3rd largest on record, while the 2020 soybean crop will be the 4th largest ever. Normally, strong production numbers like those drive harvest-time prices to calendar year lows. Instead, we saw prices rise throughout harvest. For that to happen, we needed a surge in demand from somewhere. That surge came from the international marketplace.

During the latter half of 2020, export sales across the agricultural complex have raced higher. The increase in ag sales covers many crop and livestock markets, so the international surge is not specific to one product or one particular use. Viruses are a critical part of the story, and it's not just the coronavirus. The lingering impacts of African Swine Fever continue to shape the Chinese protein market and the potential for meat trade across the globe. COVID-19 highlighted challenges in global ag supply chains and fostered increased desires to lock in purchases in a timely manner. And while the global economy has taken a step back with the COVID-19 shutdowns and restrictions, global needs for protein and feed grains continue to rise. Trade flows are also showing the results of the signed trade deals from the past couple of years: Phase 1 with China, USMCA, Japan, and South Korea.

International sales have been the driving force in the soybean market for the past decade. So it's not unusual for traders to fixate on soybean export sales. But the pace of sales for the 2020 soybean crop has been more than enough to impress traders and send prices significantly higher. As I write this article, USDA has released the export sales data covering the period from the beginning of the marketing year (Sept. 1, 2020) to the week ending just before Thanksgiving. Those 12 weeks of data have provided the fuel for the price rallies across agriculture.

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Handbook updates

For subscribers of the handbook, the following updates are included.

Yield Protection Crop Insurance – A1-52 (2 pages)

Delayed and Prevented Planting Provisions – A1-57 (6 pages)

Deductible Livestock Costs for Adjusting 2020 Income Tax Returns – B1-15 (1 page)

Suggested Closing Inventory Prices For 2020 Records – C1-40 (2 pages)

Please add these files to your handbook and remove the out-of-date material.

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Inside . . .

Iowa State University
Extension and Outreach

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For soybeans, the export surge has translated into a doubling of sales compared to this time last year. Figure 1 outlines the various components of the surge. In Figure 1, the current list of the top six soybean sales markets are listed in order. The bar shows the change in soybean sales year-over-year in bushels and the percentage shown with each bar gives the percentage change in sales year-over-year. The seventh bar shows the change in sales to unknown destinations, sales that have been made to international companies, but where the delivery point has not yet established. The eighth bar, titled "Other", displays the accumulated sales to countries outside of the top six markets. The final bar shows the total global shift in US soybean sales. As the figure shows, the soybean surge is nearly completely driven by China and unknown destinations. Since soybean sales to unknown destinations most often end up in China, the reality is that the soybean story is all about China. The trade fight between the US and China had significantly reduced soybean trade between the two countries over the past couple of years, but China had remained our top market for soybeans. With the signing of the Phase 1 trade deal and China's efforts to rebuild their hog herd following the African Swine Fever outbreak, US-China soybean trade was set to rebound. However, the strength of the rebound was surprising with sales into China basically tripling compared to last year at this time. The sales to unknown destinations tripled as well. The combination meant that nearly one billion more bushels of soybeans have already been purchased in the international marketplace before Thanksgiving. While we have seen some increased demand from other countries, notably Mexico, Egypt, and Indonesia, the changes outside of China are being swamped by the changes within China.

China is not the only reason export sales have found another gear. The corn market is experiencing a much broader increase in international demand. As Figure 2 displays, the increase in corn sales is happening across not only the current top six export markets, but also in unknown destinations and throughout the rest of the world. China is a major player, for the same reasons as with soybeans, due to the Phase 1 deal and the hog herd recovery. Historically, China has been a small to nonexistent corn market for the US as China is the 2nd largest producer of corn in the world and generally produces enough corn to meet domestic needs.

Figure 1. Soybean export sales shifts
(Source: USDA-FAS)

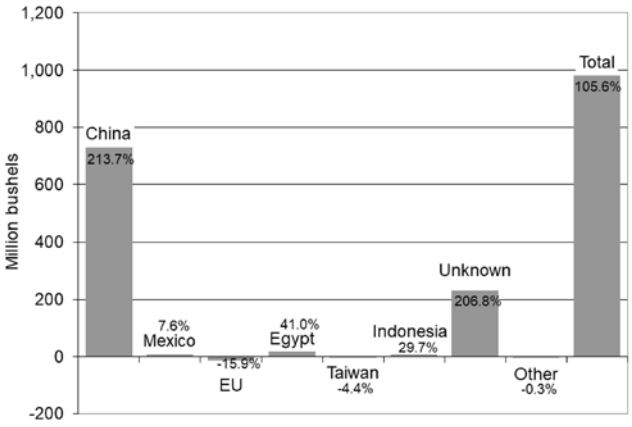
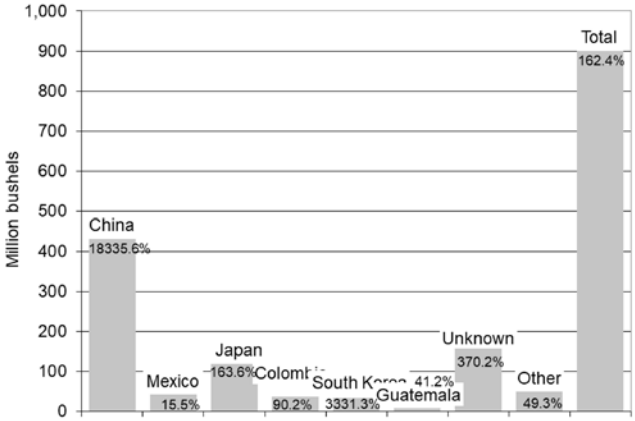


Figure 2. Corn export sales shifts *(Source: USDA-FAS)*



However, the trade deal and herd rebuilding have created a record-setting opportunity for US corn, as export sales to China have grown to over 400 million bushels, currently placing China as the top destination for US corn. But other trade deals are also promoting US corn in international markets. The trade agreements with Japan and South Korea have provided substantial support as well, with Japanese purchases more than doubling and South Korean purchases growing by over 3000%. Corn sales to Central and South America are on the rise, with Mexico, Colombia, and Guatemala each purchasing at least 15% more this year. Corn export sales growth outside of the top markets is up 50% as well. It is this broad-based surge in corn sales that prompted USDA to project record corn exports this marketing year.

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A trade-driven market, continued from page 2

USDA's current supply and use tables provide the fundamentals behind the price rallies. For corn, the growth in production has been more than met by increases in usage. While the 2020 crop is the 3rd largest, the projected corn usage for the 2020 marketing year (highlighted in the gray box) is set to be a record. Feed and residual usage has been high last marketing year and this one as meat production continues to build to record levels. Corn usage for ethanol is projected to rebound somewhat, following the COVID-induced declines. But the major swing is in exports, with 2.65 billion bushels of US corn headed to international markets. With total corn usage set at 14.825 billion bushels, corn stocks are projected at 1.7 billion bushels. The second year of stocks decline allowed USDA to raise its' season-average price estimate to $4 per bushel, the highest level since 2013.

For soybeans, it's a similar tale. The growth in production has been more than met by increases in usage. While the 2020 crop is the 4th largest, the projected soybean usage for the 2020 marketing year is set to be a record. Crush demand is supported by record meat production. And the major swing is in exports, with 2.2 billion bushels of US soybeans headed to international markets. With total soybean usage set over 4.5 billion bushels, soybean stocks are projected at 190 million bushels. The second year of stocks decline allowed USDA to raise its' season-average price estimate to $10.40 per bushel, the highest level since 2013.

The futures markets have mostly agreed with this assessment or have been even more positive. As the trade wrapped up on November 30th, the futures-based estimates for the season-average prices stood at $3.98 per bushel for corn and $10.70 per bushel for soybeans. So USDA and the futures market are aligned on corn, with futures providing a slightly better outlook for soybeans. Looking beyond 2020, futures prices indicate a small pullback for corn and a larger decline for soybeans, mainly based on expectations that more land will move into soybean production next year.

Table 1. Corn supplies and usage *(Source: USDA-WAOB)*

		2016	2017	2018	2019	2020
Area Planted	(million acres)	94.0	90.2	88.9	89.7	91.0
Yield	(bushels/acre)	174.6	176.6	176.4	167.5	175.8
Production	(million bushels)	15,148	14,609	14,340	13,620	14,507
Beginning Stocks	(million bushels)	1,737	2,293	2,140	2,221	1,995
Imports	(million bushels)	57	36	28	42	25
Total Supply	(million bushels)	16,942	16,939	16,509	15,883	16,527
Feed & Residual	(million bushels)	5,470	5,304	5,429	5,827	5,700
Ethanol	(million bushels)	5,432	5,605	5,378	4,852	5,050
Food, Seed, & Other	(million bushels)	1,453	1,451	1,425	1,430	1,425
Exports	(million bushels)	2,294	2,438	2,066	1,778	2,650
Total Use	(million bushels)	14,649	14,799	14,288	13,887	14,825
Ending Stocks	(million bushels)	2,293	2,140	2,221	1,995	1,702
Season-Average Price	($/bushels)	3.36	3.36	3.61	3.56	4.00

Table 2. Soybean supplies and usage *(Source: USDA-WAOB)*

		2016	2017	2018	2019	2020
Area Planted	(million acres)	83.4	90.2	89.2	76.1	83.1
Yield	(bushels/acre)	52.0	49.3	50.6	47.4	50.7
Production	(million bushels)	4,296	4,412	4,428	3,552	4,170
Beginning Stocks	(million bushels)	197	302	438	909	523
Imports	(million bushels)	22	22	14	15	15
Total Supply	(million bushels)	4,515	4,735	4,880	4,476	4,709
Crush	(million bushels)	1,901	2,055	2,092	2,165	2,180
Seed & Residual	(million bushels)	146	113	127	112	139
Exports	(million bushels)	2,166	2,129	1,752	1,676	2,200
Total Use	(million bushels)	4,214	4,297	3,971	3,953	4,519
Ending Stocks	(million bushels)	302	438	909	523	190
Season-Average Price	($/bushels)	9.47	9.33	8.48	8.57	10.40

Organic beef captures price premiums

By Lee Schulz, extension livestock economist, 515-294-3356, lschulz@iastate.edu

In 2019, the US had 1.974 million acres of National Organic Program USDA certified pastureland and 41,780 organically-certified beef cows. The price of organic beef averaged $9.26 per lb in 2019 which represented a premium of $3.66 per lb or 67% over conventional, according to USDA Agricultural Marketing Service Weekly Retail Organic Price Comparison reports.

Producers get premiums, too. But amounts are hard to pin down. We are unaware of any USDA report, or other source, for organic cattle prices or price premiums. One reason is organic beef production is by and large not a spot market business, it's a program. Producers don't treat it as an option. They develop long-term supply relationships predominantly using forward contracts to help assure a 12-month supply to meet a 12-month demand.

Premiums are the result of consumer demand as well as the additional costs to produce organic beef. Consequently, to determine whether to target a product to the organic market, or any market for that matter, producers need to understand both the added cost to produce for the specific market and the price elasticity of demand for the product.

Organic is a marketing tool

USDA's National Agricultural Statistics Service recently released the 2019 Organic Survey, which was part of the 2017 Census of Agriculture program. This was the sixth comprehensive organic survey USDA has conducted. The previous was conducted in 2016.

The National Organic Program states that all farms, ranches and handling operations displaying the "USDA Organic" seal must be certified organic by the state or by a private agency accredited by USDA, to ensure standards are followed. Farms that follow the National Organic standards and have less than $5,000 in annual sales can be exempt from certification. The exempt farms may use the term "organic," but may not use the "USDA Organic" seal. The 2019 Organic Survey published data from producers that were certified organic and those transitioning to organic certification.

Organic is not just a label. It is a marketing tool. Producers must adhere to strictly regulated processes and be vetted by USDA-accredited certifiers in order to receive the organic designation. Animals raised on an organic operation must meet animal health and welfare standards, not be fed antibiotics or growth hormones, be fed 100% organic feed and have access to the outdoors.

Organic gaining traction in Iowa

Results of the 2019 Organic Survey released October 22, 2020 show Iowa had 26 organic certified beef cow farms, 107 organic milk (dairy) cow farms and 143 organic other cattle farms. Other cattle include heifers that have not calved, steers, calves and bulls. From 2016 to 2019, Iowa added 9 organic beef cow farms, 31 organic dairy cow farms and 48 organic other cattle farms.

Iowa is tied for fourth with Pennsylvania nationally in the number of organic beef cow farms behind only New York, California and Vermont. Iowa ranks eighth in both organic dairy cow operations and organic other cattle operations. Even so, Iowa only has about 4% of US organic cattle operations. Iowa ranks lower in inventory numbers and has about 2% of the national organic cattle inventories.

In 2019, Iowa had 133,691 acres of organic certified agriculture land. Organic pastureland acres rose by 49% or 6,616 acres from 2016 to 20,167 acres in 2019. Organic cropland totaled 113,524 acres in 2019, up 27% or 23,939 acres from 2016. Organic acreage is still less than 1% of total Iowa farmland. Iowa did have 369 acres transitioning to certified organic pastureland and 12,790 acres transitioning to certified organic cropland in 2019. Land must have had no prohibited substances applied to it for at least three years before the harvest of an organic crop.

The Iowa organic beef cow inventory at 1,117 head decreased by 25% from 2016 to 2019 but remained near 2011 and 2014 levels (Figure 1). For perspective, Iowa's total beef cow inventory was over 905,000 head in 2019. Iowa's 5,967 organic milk cow inventory rose 53% from 2016 to 2019. The organic other cattle inventory climbed 29% to 6,755 head.

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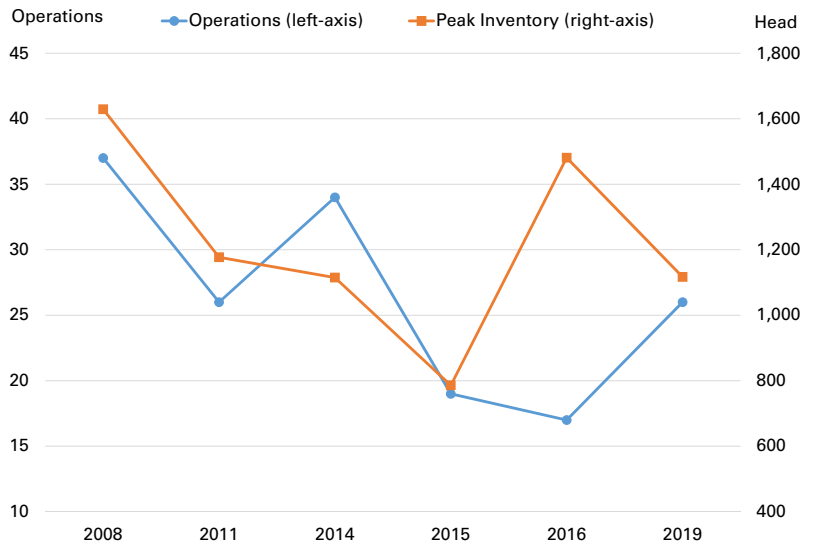
Organic beef captures price premiums, continued from page 4

Iowa organic farms sold $144.596 million in organic commodities in 2019, up 10% from 2016. Organic sales from farms in Iowa are distributed 48% from crops, including nursery and greenhouse, 13% from livestock and poultry, and 39% from livestock and poultry products.

Iowa's largest organic animal agriculture commodity is chicken eggs. With $37.106 million in sales in 2019, eggs represent 26% of all organic sales in Iowa (Figure 2). Milk from cows is second for livestock with $19.103 million in sales or 13%. Other cattle sales, which would presumably be mostly fed cattle, accounted for $3.347 million in sales or 2.3%. These values were roughly the same for hogs and pigs sales.

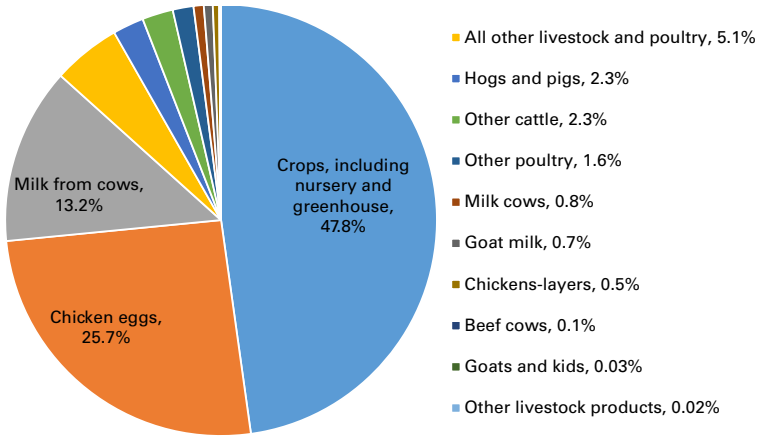
In 2019, the average value of sales per Iowa certified organic farm was $186,095. Average sales values per farm certainly vary widely within farm types and across farm types. Average farm value of sales was highest for chicken eggs at $378,630 per farm. Swine farms and dairy cow farms were similar at $198,136 and $181,935, respectively, per farm. Other cattle farms averaged $30,154 while beef cow farms averaged $7,521 (Figure 3).

Figure 1. Iowa organic beef cow operations and inventory



Data Source: USDA NASS

Figure 2. Iowa organic sales, percentage of total ($144,596)



Data Source: USDA NASS. Other livestock and poultry include sheep and lambs, chickens-broilers, turkeys, and all other livestock.

Organic offers diversification opportunity

In Iowa, 45% of all farms with organic sales are 100% organic and the other 55% are mixed operations. The data do not shed light on what percentage of total organic sales, and sales by commodity, are from 100% organic operations. Nonetheless, the organic market appears to be an important opportunity for diversification for many conventional Iowa farms.

Of the Iowa producers surveyed, 45% said a major challenge is regulations. Over a third expressed issues with pricing and/or production problems. Specific to organic beef, research suggests costs of production are higher than commodity beef because of lower productivity, increased processing and marketing costs and additional risks.

Some argue that drought more heavily stresses the organic segment of the beef industry than the conventional segment. Survey data gathered in Iowa in 2019 would not have detected that challenge. The latest weekly Drought Monitor showed 36% of Iowa in drought and an additional 32% abnormally dry. This time last year, no drought or abnormally dry conditions were reported in Iowa.

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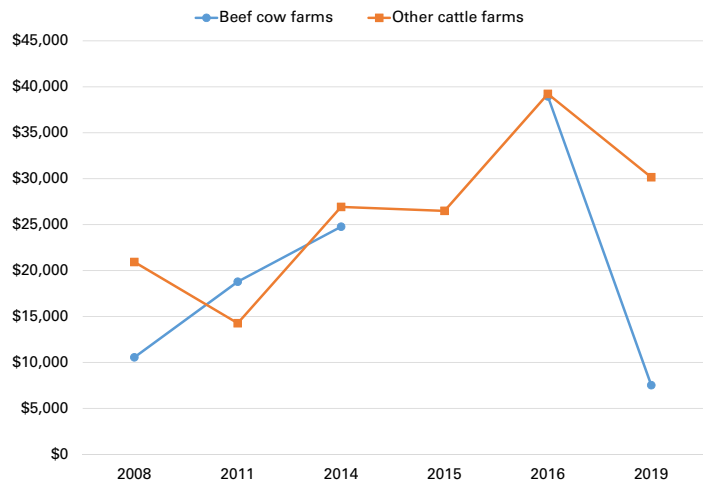
Organic beef captures price premiums, continued from page 5

Figure 3. Average value of sales per certified organic Iowa beef farm



Data Source: USDA-NASS. 2015 organic beef cow farm sales withheld to avoid disclosing data for individual farms.

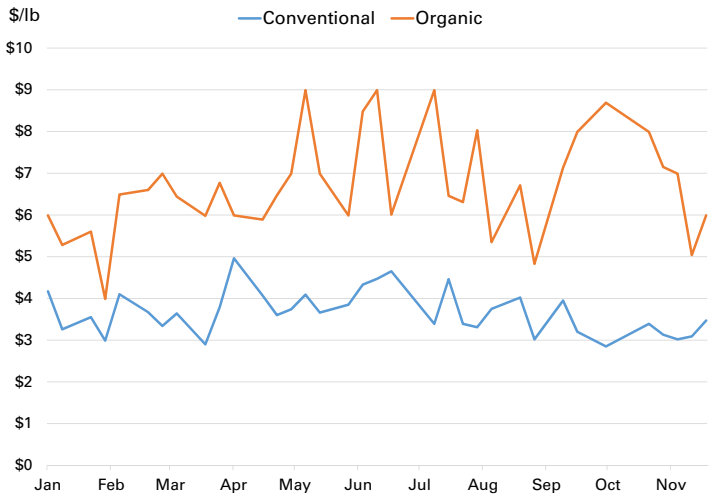
Organic beef in the marketplace in 2020

USDA Agricultural Marketing Service's Weekly Retail Organic Price Comparison report provides advertised retail prices at major retail supermarkets for items identified as "Organic" and items identified as "Conventional" for all regions. Ground beef is the most advertised product, specifically 80% to 89% lean. After ground beef, boneless New York strip steak is the most advertised.

Organic premiums differ greatly by product. In 2020, the premium for organic ground beef, 80% to 89% lean, ranged from $1.00 per pound to $5.84 per pound with an average of $3.04 per pound. Organic boneless New York strip steak premiums ranged from $2.12 per pound to $14.40 per pound with an average of $6.99 per pound.

These data also indicate retail prices for organic products can vary more widely than prices for conventional products. For example, prices for conventional 80% to 89% lean ground beef ranged from $2.85 per lb. to $4.96 per pound so far this year (Figure 4). Prices for organic label product ranged from $3.99 per pound to $8.99 per pound At least in the case of a staple, like conventional ground beef it appears retailers may ration available supplies rather than using prices to ration demand. This is less so the case with organic labeled ground beef.

Figure 4. Weekly 80-89% lean ground beef advertised retail price, 2020



Data Source: USDA-AMS Weekly Retail Organic Price Comparison reports.

Updates, continued from page 1

Internet Updates

The following Information Files have been updated on www.extension.iastate.edu/agdm.

Farmland Lease Annual Report – C2-06 (Decision Tool)

Evaluating Your Estate Plan: Trusts as an Estate Planning Tool – C4-59 (4 pages)

Current Profitability

The following profitability tools have been updated on www.extension.iastate.edu/agdm/info/outlook.html.

Corn Profitability – A1-85

Soybean Profitability – A1-86

Iowa Cash Corn and Soybean Prices – A2-11

Season Average Price Calculator – A2-15

Ethanol Profitability – D1-10

Biodiesel Profitability – D1-15