

Ag Decision Maker

VOL. 28 NO. 2 / DECEMBER 2023

A BUSINESS NEWSLETTER FOR AGRICULTURE

INSIDE . . .

PAGE 4

All beef market participants strive to get a profit edge

PAGE 6

Cybersecurity on the Farm Conference to address internet security

PAGE 7

Farm Transitions Conference to be held in Ames Feb. 8-9

PAGE 8

Exports remain the key

UPDATES

The following [Information Files and Decision Tools](#) have been updated on extension.iastate.edu/agdm:

B1-15 Deductible Livestock Costs for Adjusting 2023 Income Tax Returns

C2-70 2023 Iowa State University Farmland Value Survey

C2-72 Historical Iowa Farmland Value Survey by County

The following [Video](#) has been updated on extension.iastate.edu/agdm:

A1-10 Chad Hart's Latest Ag Outlook

The following [Profitability Tools](#) have been updated on extension.iastate.edu/agdm/outlook.html:

A1-85 Corn Profitability

A1-86 Soybean Profitability

A2-11 Iowa Cash Corn and Soybean Prices

A2-15 Season Average Price Calculator

D1-10 Ethanol Profitability

D1-15 Biodiesel Profitability



Outlook for land values in 2024 and beyond

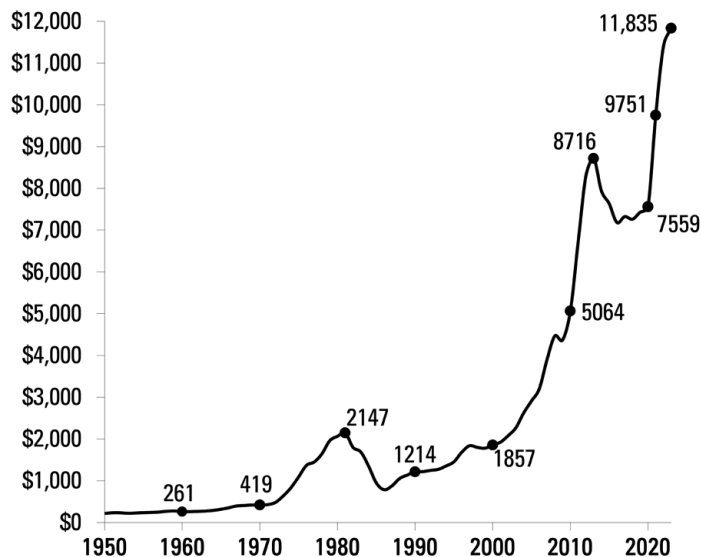
By Rabail Chandio, extension economist, 515-294-6181 | rchandio@iastate.edu

The slowing pace of the growth in Iowa farmland values is not really a surprise for some – in November 2022, over 30% of the 2022 Iowa State survey respondents thought land values in their territory would either remain the same or modestly increase in 2023. The small increase from the 2023 Iowa State University Land Value Survey of 3.7% falls within that expectation. On the other end of the spectrum, nearly 70% of the respondents believe that land values are higher than they should be and about 50% expect a decline in the next year. This

is explained by the downward pressures by rising interest rates, lower commodity prices, and higher input costs.

The estimated \$11,835 per acre statewide average for all qualities of land in Iowa represents a 3.7% increase in nominal land values from November 2022 (Figure 1). This modest increase, following the dramatic 17% surge last year, means that Iowa farmland values, still at an all-time high since Iowa State started tracking the land value information in the 1940s, have started to cool off. After

Figure 1. Average value per acre of Iowa farmland.
Source: Iowa State University Land Value Survey.

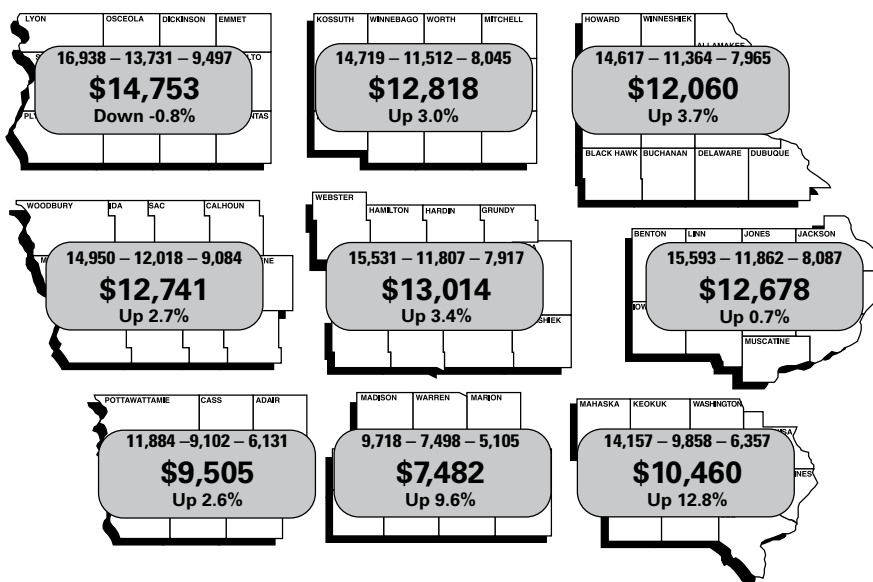


adjusting for inflation, the overall inflation-adjusted land values rose only 0.5%, and the inflation-adjusted land values fell in 45 counties. Despite the slowing pace, there is a variation in the change and inflation-adjusted land values in 42 out of 99 counties in Iowa are still at an all-time high.

Many of the factors behind the large surge in values last year continue to support this increase at the beginning of the year—interest rates were lower through the first half of the year, commodity prices were still elevated as weather and geopolitical uncertainty created crop production concerns, crop yields once again were a positive surprise despite the weather challenges throughout the growing season, cash and credit availability has remained ample and allowed farmers to stay aggressive in the land market, and investor demand grew stronger nudged by inflation concerns and lack of alternative investment options.

According to USDA Economic Research Service’s December 2023 farm income forecast, US net farm income is forecast to decrease \$31.8 billion (17.4%) from 2022 levels to \$151.1 billion in 2023 (in inflation-adjusted terms, a 20% fall). Despite the decline, US net farm income in 2023 is higher than the 2020 net farm income by 38%, and its 20-year average (2003–2022) by 36%. The decrease is driven by falling commodity prices and cash receipts from farming, along

Figure 2. 2023 Iowa land values by crop reporting district.
Source: Iowa State University Land Value Survey.



with lower direct government payments and higher production costs. In particular, both crop receipts and animal or animal product receipts are expected to decrease by 4% and 5%, respectively. Even though the direct government payments continue to fall, the 2023 direct government payments are forecasted at \$12.1 billion, reflecting the reduction in COVID-related assistance in 2023. As farm production expenses are rising, with the largest increases this year coming from interest expenses, the growth in expenses has caught up to the growth in revenues, making for tighter margins.

Eight of the nine crop reporting districts saw growth in their land values (Figure 2), with the Southeast and South Central districts reporting the highest percentage increases of nearly 10% or more. While these two districts have the highest

percentage increases this year compared to other districts, the percentage increase in their values is almost the same as last year. The regional trends suggest that the surging land values are cooling off first in the northern and central districts, where they surged with a much higher magnitude, whereas the southern areas are following with a lag. While land values could be thought of as net income divided by interest rates, net income tends to be localized while interest rates are more universal. The strength in these districts reflected the competitiveness of the land market, more investor influence (especially for recreational land use in South Central Iowa), lower land availability (with roughly half of the regional respondents indicating fewer land sales), as well as the positive impacts of better-than-expected crop yields. While low-quality land experienced

the largest percentage increase, specifically in the South Central and Southeast districts, the medium-quality land value change was only slightly smaller, with high-quality land capturing the smallest increase. Furthermore, previous research shows that experts' estimates are less informative and noisier for low-quality land, suggesting that more trust should be put in the Iowa State University Land Value Survey for high-quality land values than for low-quality land values. It is also worth noting that low-quality farmland in the Iowa State survey includes pasture, timber, and recreational tracts.

All Iowa counties except for 12 reported growth in nominal land values, although the magnitudes of increases are much smaller than in the previous two years—the largest percentage increase, 12.9%, was reported in Appanoose, Decatur, Lucas, and Wayne counties. Scott and Clinton counties reported the largest decreases at 3.9% and 1.9%, respectively. The 12 counties reporting a decrease in nominal land values are all located in Northwest and East Central districts, while the 45 counties reporting a decrease in inflation-adjusted values are distributed well in seven Iowa districts except for the South Central and Southeast districts where all counties report an increase. Moreover, in inflation-adjusted values, 68 counties have values that exceed the peaks from 2012 and 2013,

and 42 of these counties have record-high inflation-adjusted land values. The 42 record-setting counties that truly posted historically high land values, include all counties from the Southeast, no counties from the Northwest and North Central districts, and a more equal distribution across other crop reporting districts.

While there has been a tempering of land value growth potential in the short run, generally, respondents expect higher land values in the future. Nearly half, 49%, of respondents forecasted a decrease in their local land market in one year, while the most selected answer (29%) was for less than a 5% fall in land values.

Looking five years ahead, 16% of respondents forecast a decline, growing from the 11% that forecasted a decline 12 months ago and the 6% that forecasted a decline two years ago. However, roughly 60% of respondents still expect a further increase in land values, with an increase of 10%–20% selected by the largest number of respondents (30%). This is consistent with respondents' corn and soybean price forecasts—respondents expect stable to slightly rising corn and soybean cash crop prices. The Ag Economy Barometer led by Purdue University, a nationwide monthly agricultural producer survey, showed that the most surveyed farmers expect higher farmland prices 12 months from now, mostly due to strong

investor demand which is expected to outweigh the rising costs, lowering prices, and higher interest rates.

There have been three 'golden' eras for low land values over the past 100 years. The first one ended in a long, drawn-out decline in land values from 1921 to 1933, the second golden era ended with a sudden collapse from 1981 to 1986. The third golden era ended with an orderly adjustment in values from 2014 onwards as opposed to a sudden collapse. We are now at the cusp of another great period of farmland values, and if the economy bypasses a recession as planned, we should be able to end this era without a rapid collapse in land values.

Details on the survey can be found on the [CARD website](http://www.card.iastate.edu), www.card.iastate.edu/farmland and historical data can be downloaded in the AgDM Decision Tool [Historical Farmland Values Data](#), <https://go.iastate.edu/AGDMC270LV>, or in AgDM File C2-72, [Historical Farmland Values](#), <https://go.iastate.edu/AGDMC272>.



All beef market participants strive to get a profit edge

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

Feeding cattle and beef packing are both margin businesses. In cattle feeding the margin is the value the feedlot gets for the fed steer or heifer, less the feeder purchase cost and costs to feed the animal. In beef packing, the margin is the value of the beef cuts plus by-products, less the cost of the fed animal and costs to slaughter and process it.

Price discovery for fed cattle begins with the market average price level. Beef packers buy fed cattle over a range of prices around the market average price. Packers do not determine the market average price because they neither control supply nor demand. But packers can influence prices paid around the market average price level as they arrive at a transaction price for a given quantity and quality of cattle at a given time and place.

Similarly, beef packers sell beef cuts and by-products over a range of prices around the market average wholesale price. They do not determine the market average wholesale price. But they can influence prices received around the average price level through price discovery.

Cost control is crucial

Suppose all packers generally receive the market average wholesale price for beef cuts and by-products. Further suppose all packers pay the market average price for fed cattle. If so, then packers have about the same gross margin. Then the packer with the lowest costs will capture the largest net margin or profit. Therefore, packers seek ways to control costs per head slaughtered as an attempt to improve net margins.

Packing plants have fixed costs and variable costs. Some fixed costs are depreciation of the plant and equipment, interest, insurance and property taxes. Some variable costs are labor, utilities, and shipping.

Bigger plants may have lower fixed costs per head of total capacity. Bigger plants have potential to spread their fixed costs over more head of cattle actually slaughtered, which can lower total cost per head.

However, to realize that potential advantage over smaller plants, larger plants must operate at near capacity all of the time. A larger plant operating at a lower level of plant utilization may have higher costs per head slaughtered than a smaller plant operating at near capacity.

Published data on costs are limited

The weekly USDA Beef Carcass Price Equivalent Index Value ([NW LS410](https://mymarketnews.ams.usda.gov/viewReport/2825), <https://mymarketnews.ams.usda.gov/viewReport/2825>) report is an antiquated report that provides, among other things, information on slaughter and processing costs. Packers voluntarily provided the cost information. The data were last updated in 2007. Then the processing cost was published as \$12.00/cwt and the slaughter cost was published as \$50.50/head. Multiplying the \$/cwt processing cost by a dressed hundredweight gives a \$/head processing cost.

USDA has received good participation from packers in supplying yield information to calculate beef carcass cutout and primal values. That same level of participation has not occurred for sharing of cost information. This is a business decision. Revealing costs can give an edge to competitors. Low participation results in insufficient data to determine an industry average slaughter and processing cost.

Even if cost data were readily available, costs most certainly vary dramatically across plants, so any one average number wouldn't represent costs very well.

Furthermore, information is not available on the proportion of costs that are fixed versus variable.

Nonetheless, knowing packer costs is important. For a margin business, over time—not necessarily for a day, a week, a month, or even a year—the market will pay, on average, the fair cost of production—no more and no less. This includes a fair return to the resources used and the risk of employing them to produce.

Indexed series provides approximation

The US Bureau of Labor Statistics builds a producer price index for animal slaughtering

and processing (NAICS Code 31161). This index can be used to continue the NW_LS410 report series by setting December 2007 as the base date. Doing so, provides an up-to-date time series of beef packer costs that are in line with industry estimates. Beef packing costs averaged \$200/head from 2016 through 2020 according to the indexed series (Figure 1). Costs surged in 2021 and 2022 amid inflationary pressures. Recently costs have been above \$250/head.

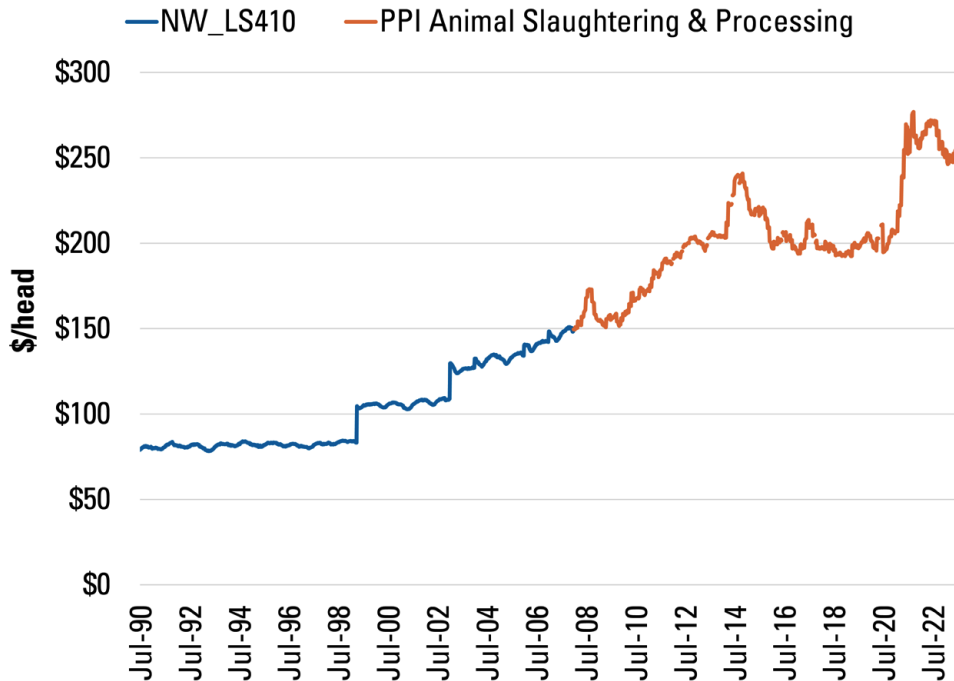
However, any reports on packer costs are coarse. The main conclusion that can be drawn from them is that the long-term trend in costs is up.

Good margins occur at the wrong time

Packers can manage through tighter margins when slaughter levels are big. Wider margins are needed when numbers are small. To the contrary, the supply situation propels margins in the opposite direction. That is, tighter margins when cattle numbers are low and wider margins when numbers are high.

The clearest indicator of which beef packers have the highest costs, and tightest margins, is who idles capacity when fed cattle supplies are small.

Figure 1. Estimated cattle slaughter & processing costs. Data Source: USDA Market News Service and US Bureau of Labor Statistics. Calculations by Lee Schulz. May 2020 data omitted due to COVID-19 disruptions.



Cybersecurity on the Farm Conference to address internet security

Registration is live for one-day cybersecurity event!

The first of its kind [Cybersecurity on the Farm Conference](https://go.iastate.edu/2024FARMCYBERSECURITYEVENT), <https://go.iastate.edu/2024FARMCYBERSECURITYEVENT>, offered by Iowa State University Extension and Outreach, will be held at the Iowa State University Alumni Center in Ames on Jan. 11, from 8:30 a.m. to 3:30 p.m.

In an era where technology is reshaping every industry, farming stands at the crossroads of innovation and tradition. This one-day conference is designed to address the unique intersection of today's agriculture and cybersecurity.

For farmers, this workshop offers insights into the ever-evolving world of digital lending in farming and the shift toward online agricultural marketplaces. There will be critical discussions on the potential cyber threats that emerge when working in the agricultural sector. By the end of the day, farmers will be better equipped to navigate farming on the internet while keeping a keen eye on safety and security.

"As a farmer I'm used to risk from the markets and the weather, but it has been very eye-opening to learn how vulnerable my farm and family can be to cybersecurity risks," said Alexis Stevens, farm management specialist with ISU Extension and Outreach. "Conferences like this one are helping me

implement strategies to avoid cyberattacks so I can have peace of mind."

Through panel discussions with industry experts and a resource fair with trusted service providers, this conference is designed to support farmers as they work to create a seamless integration of cybersecurity into existing systems.

"Bad actors are increasingly targeting agriculture and farmers, and as a farmer, you need to know what the threats are, how you can be prepared and where you can turn for help. This is exactly what our panelists will be discussing," said Doug Jacobson, university professor of electrical and computer engineering and director of the [Center for Cybersecurity Innovation & Outreach](http://www.cyio.iastate.edu/), www.cyio.iastate.edu/.

The resource fair will be available during the lunch hour and breaks. The resource fair

features experts and service providers at the juncture of farming and cyber tech.

Participants will be part of a transformative dialogue. As farming goes digital, it's important to ensure that it is secure. Registration is available through Jan. 10, and the cost is \$40. Refreshments and lunch are included. Register online at <https://go.iastate.edu/BPGFN4>.

This conference is being offered by the ISU Extension and Outreach Farm Management Team and the Center for Cybersecurity Innovation & Outreach. View the full agenda, [Cybersecurity on the Farm Conference](https://go.iastate.edu/2024FARMCYBERSECURITYEVENT), <https://go.iastate.edu/2024FARMCYBERSECURITYEVENT>.

Contact Madeline Schultz for more information, schultz@iastate.edu or 515-294-0588.

IOWA STATE UNIVERSITY
Extension and Outreach

Cybersecurity on the Farm Conference

January 11, 2024
8:30 a.m. - 3:30 p.m. | Iowa State Alumni Center | 429 Alumni Ln. | Ames, Iowa

<https://go.iastate.edu/BPGFN4>

Farm Transitions Conference to be held in Ames Feb. 8-9

Learn directly from farm transition and estate planning experts

The 2024 Farm Transitions Conference will be held Feb. 8-9 at the Gateway Hotel and Conference Center in Ames.

More than 15 presenters including attorneys, farm management experts, and farmers will offer two full days of presentations on a wide variety of topics related to farm transitions and estate planning. The conference theme is "Sowing Success," and the event is hosted by the Beginning Farmer Center at Iowa State University.

The first day, Feb. 8, will focus on transition planning, and the second day will focus on estate planning.

Kitt Tovar Jensen, manager of the Beginning Farmer Center at Iowa State, said the program is designed to help attendees navigate the complexities of a family business and facilitate connection to the various professionals, governmental agencies and agricultural organizations that can offer support.

"The success of your farm depends on your ability to make decisions with the information available to you," she said.

The program is for beginning farmers as well as those looking to transition their farm to the next generation, and also those who simply want to review their current farm transition plans. There will be new content and sessions this year, so even if you attended in the past, plan on learning something new.

Topics and sessions

During the estate planning sessions, presenters will talk about the importance of estate planning for all farms and family situations. Topics will include the basics of wills, trusts, the probate process, taxes, farmland appraisals and strategies for communication and mediation.

The second day will also include a discussion with retired farmers Kathy and Caroll Hoksbergen, who will share their personal experiences about farm transitions and journey to find a farm successor.

"I'm really excited to hear from both sides of the process. Speakers include professionals working in this area as well as those who have gone through a farm transition and can speak from personal experience,"

said Tovar Jensen, who is also a staff attorney with the Center for Agricultural Law and Taxation at Iowa State. "This year's conference will provide practical advice that people can put to use, and hopefully we can help some folks avoid mistakes and family disputes by thinking proactively and constructively."

Both days include time for networking with other attendees and presenters.

"I want to make sure people can connect to the professionals who are here," she said. "I really want people to feel empowered to take the next step in their farming operations after they leave the conference."

All participants will receive a complimentary copy of Estate and Succession Planning for the Farm, a 100-page workbook published this fall by ISU Extension and Outreach.

Register online at www.regcytes.extension.iastate.edu/farmtransitions/. For more information, visit the [Beginning Farmer website](http://beginningfarmer.iastate.edu/), <https://beginningfarmer.iastate.edu/>. Tovar can be reached at 515-357-6680 or kwtovar@iastate.edu.



Exports remain the key

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

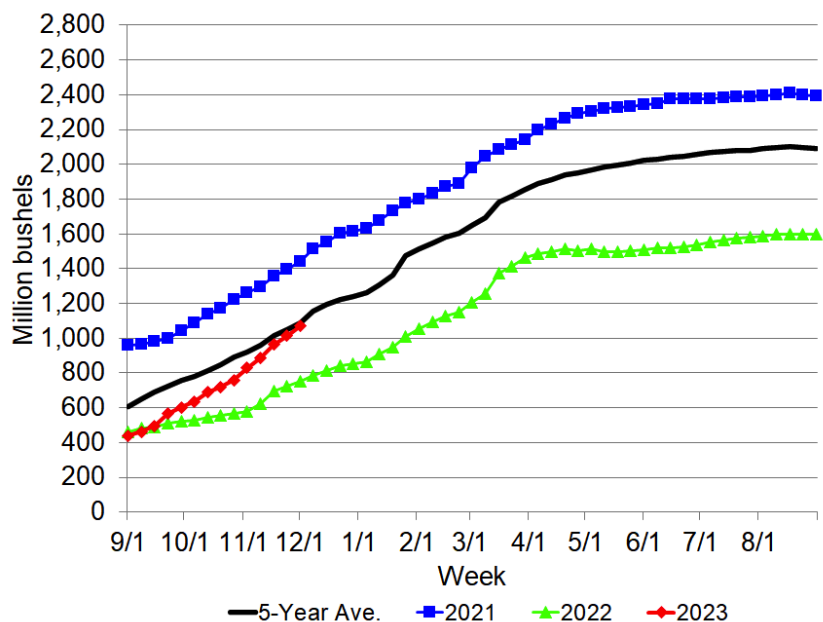
USDA's World Ag Supply and Demand Estimates (WASDE) report for December contained only one change to the US corn and soybean supply and use tables, but that change highlights the challenge for the markets in 2024. And it is a repeat from 2023, the search for stronger exports. This year, we are looking for signs of a rebound in exports. USDA's projection shows that could be happening as they increased 2023-24 corn exports by 25 million bushels, raising projected international sales to 2.1 billion bushels for the period Sept. 1, 2023 to Aug. 31, 2024. The strength in export sales had been one of the strongest pillars supporting crop prices during the 2020 and 2021 marketing years. The 2020 marketing year set the record for bushels exported for both corn and soybeans. The 2021 marketing year set the record for dollars raised via corn and soybean exports. But international sales fell off during the 2022 marketing year, as the combination of high US prices, plentiful crop supplies from other countries, and global inflation took their toll. The retreat in international demand set the stage for the price declines throughout the 2023 calendar year. But with lower prices, and an assist from weather issues in South America, export sales may be on the rebound.

Corn exports provide the best evidence for an international resurgence. Figure 1 shows the highs and lows of export sales for corn. International corn sales for the 2021-22 marketing year set the record for the most dollars earned from exports. The surge in sales was tied to the rebound in the global economy following the initial COVID wave and the implementation of the US-China Phase One trade deal. In fact, China, for a short while, became the top market for US corn exports. Beyond the surge in Chinese purchases, US corn sales were also growing in many of our traditional markets, such as Mexico and Japan.

However, those sales dramatically slowed for the 2022 crop. China slipped back behind

Mexico in corn purchases. But China wasn't the only market purchasing fewer bushels, as Japan, South Korea, and several other countries reduced their trade. The decline was global, as many countries reduced their purchases of US corn by 30% or more. Some of the major factors that led to this downturn were high US corn prices (especially relative to corn prices in other competing export countries), a stronger US dollar, the relative increase in corn production outside the US, and the availability of other feedgrains to balance out livestock rations around the globe. But recovery seems to be happening for the 2023 crop, as the figure shows. Corn export sales have recently caught back up to the five-year average.

Figure 1. United States corn export sales pace. Source: USDA-FAS.



Thus far, during the 2023-24 marketing year, corn sales are up nearly 36% in comparison to last year and are within 20 million bushels of the five-year average pace. Figure 2 details the year-over-year change in US corn export sales by country, specifically highlighting the current top six markets for US corn (listed in order from left to right across the graph). The Chinese pullback continues, but it is the only market in decline. We have seen significant increases in corn sales to our North American neighbors. Japan has more than doubled their purchases from last year at this time. Many of the factors that were pushing down exports last year have flipped. Our prices have fallen enough to be very competitive in the global market. The dollar has weakened against most currencies over the past several months. This set the stage for USDA's upward adjustment in projected exports for the 2023 crop.

While the corn market has already reached back up to the five-year average for exports, the soybean market continues to lag last year. However, over the past five weeks, export sales have picked up and show that a similar recovery may be building for soybeans. The general trade story for soybeans over the past few years is similar to that of corn. The 2021-22 marketing year was one for the record books, with China leading the purchases. Exports for the 2022 crop started strong, but faded as the marketing year wore on.

Figure 2. Year-over-year change in United States corn export sales by country. Source: USDA-FAS.

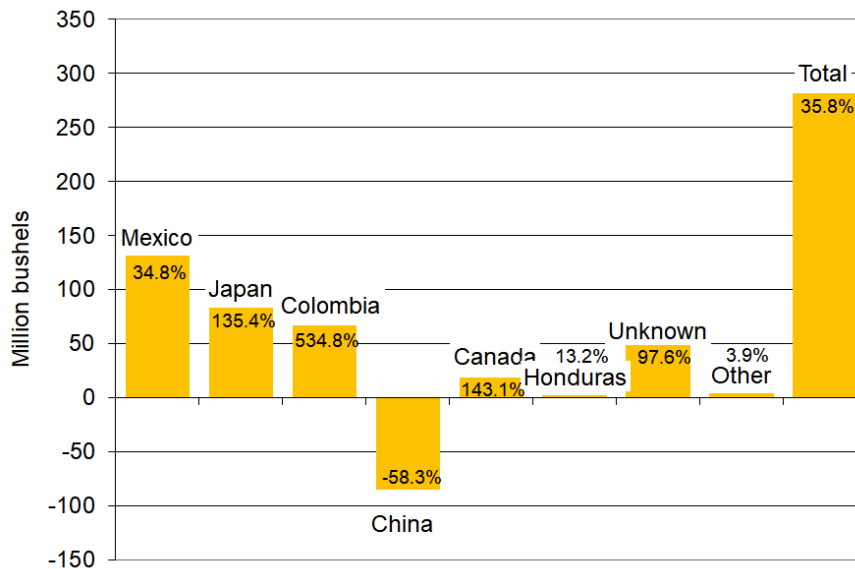
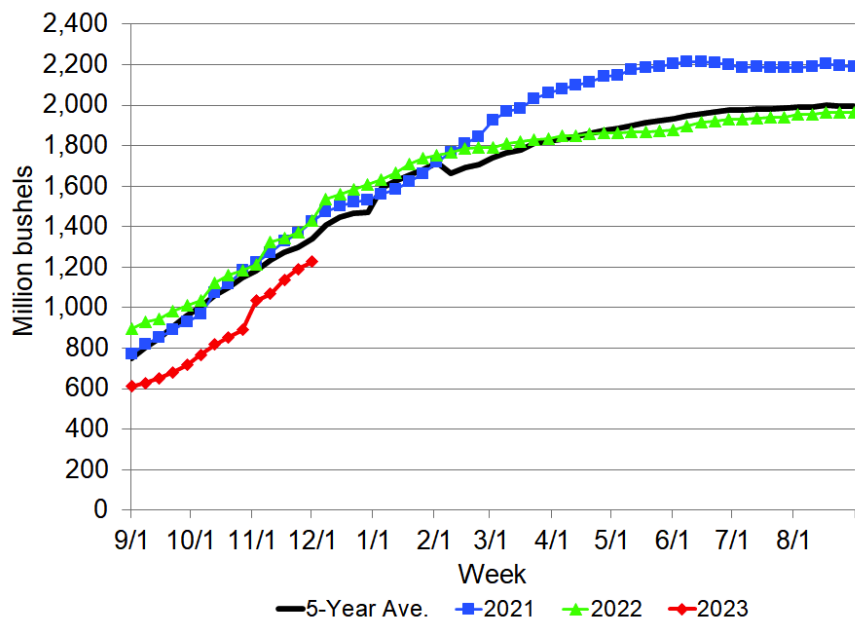


Figure 3. United States soybean export sales pace. Source: USDA-FAS.



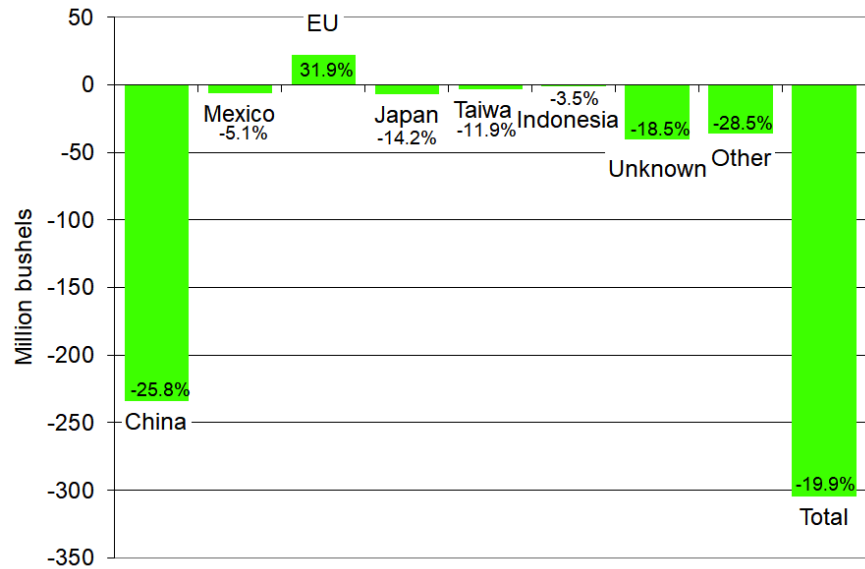
By the end of the marketing year, soybean exports fell below the five-year average. The start of the 2023 marketing year was slow, as export sales lagged the five-year average by roughly 200 million bushels. But that gap has been cut in half over the past few weeks.

However, there is still a sizable hole compared to last year. As Figure 4 shows, Chinese purchases are down by 230 million bushels this year. But the pullback in soybean export sales is not just in China, as there are a number of countries purchasing fewer US soybeans, including Mexico, Japan, Taiwan, and Indonesia. The factors limiting soybean exports parallel those that were limiting corn: high US

prices (especially relative to prices in other competing export countries), a strong US dollar over the past couple of years, and the increase in production outside the US. The recent bump in sales was not enough to push USDA to change their soybean export projection, but the data should be watched over the next few weeks, to see if the sales pace can approach the five-year average.

Last year at this time, I wrote “The current sales data shows that an international rebound might not be in the cards until US crop prices retreat enough to compete with other exporting countries.” Well, prices have retreated, with corn prices falling more than soybeans. And that relative difference can be seen in the export recovery as well, as corn export sales look

Figure 4. Year-over-year change in United States soybean export sales by country. Source: USDA-FAS.



relatively better than soybeans. The outlook for price increases this winter is tied to export sales. Hopefully, the last few weeks of trade data are an indication of better days ahead.

Listen to the latest [Market Outlook video](https://youtu.be/2RcTUNbKwV4), <https://youtu.be/2RcTUNbKwV4>, for further insight on outlook for this month.

Ag Decision Maker is written by extension ag economists and compiled by Ann Johanns, extension program specialist, aholste@iastate.edu.

PERMISSION TO COPY

Permission is given to reprint ISU Extension and Outreach materials contained in this publication via copy machine or other copy technology, so long as the source (Ag Decision Maker Iowa State University Extension and Outreach) is clearly identifiable and the appropriate author is properly credited.

This institution is an equal opportunity provider. For the full non-discrimination statement or accommodation inquiries, go to www.extension.iastate.edu/diversity/ext.