

Ag Decision Maker

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INSIDE . . .

PAGE 4

Iowa, El Niño, and La Niña

PAGE 6

Early harvest adjustments

PAGE 9

National Farm Safety and Health Week 2023

UPDATES

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

A1-34 Corn and Soybean Commodity Loan Rates

A1-44 Supplemental Coverage Option (SCO) and Enhanced Coverage Option (ECO) County Yields for Iowa (Decision Tool)

C2-29 Lease Supplement for Use in Obtaining Tile and Drainage Improvements Between Landowner(s) and Tenant(s)

C6-42 Setting Personal, Family and Business Goals for Business Success

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



Reliable high-speed internet an input into farming

By Lee Schulz, extension livestock economist,
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Lev Grossman, American novelist and journalist, said, "If my generation is remembered for anything, it will be as the last one that remembers the world before the internet."

Some people view the internet and the world wide web as one and the same. They are not.

The internet provides pathways for various computer networks to communicate with each other. The birth date of the internet is widely considered to be January 1, 1983.

The world wide web, or web for short, is a way of accessing and navigating the internet. The web was conceived on March 12, 1989. It revolutionized the internet on April 30, 1993 when it was released into the public domain.

The web is a portion of the internet. You can use the internet without using the web. Sending an email does not require use of the web. The reverse, however, doesn't hold true. It is not really possible to browse the web without using the internet.

Many things we do as part of our daily life can now be done over the internet. This includes farming.

Providing access to risk management tools

Farming is inherently risky. Farmers must deal with unpredictable weather, wide fluctuations in commodity prices, volatile input costs, policy debates, geopolitical tensions, and the list goes on. Information flowing on the internet can help farmers monitor these risks by providing real-time access to news, weather and market conditions. Producers employ a variety of strategies and tools to manage risk in production and markets. Often the place to start is over the internet.

Nationally, 85% of farmers responding to a USDA survey reported having access to the internet in 2023. It was the same percentage in Iowa. In 1997, only 12% of Iowa farms had access to the internet. Access jumped to 30% in 1999, 45% in 2001 and 63% in 2007.

USDA's National Agricultural Statistics Service asks farmers broad questions in its annual June Agricultural Survey. Questions on farm technology usage and internet access were added to the survey in



odd-numbered years beginning in 1997. Farmers are also asked about business tasks they complete via computers and the internet. NASS releases the data in the biennial [Technology Use \(Farm Computer Usage and Ownership\)](https://usda.library.cornell.edu/concern/publications/h128nd689), <https://usda.library.cornell.edu/concern/publications/h128nd689>, report published in August.

The 2023 Technology Use report estimates are based on survey responses from approximately 14,000 agricultural operations, and represent all sizes and types of farms.

Possible pandemic-related abnormality

In 2023, 29% of Iowa farms used the internet to purchase agricultural inputs (Figure 1). That was down from 32% in 2021, but up from 6% in 2001. Agricultural inputs include seed, fertilizer, chemicals, veterinarian supplies, feed, machinery, replacement parts, farm supplies, office equipment, etc. Additionally, 28% of Iowa farms used the internet to conduct agricultural marketing activities in 2023. That was a down from 32% in 2021, but up from 9% in 2001. Agricultural marketing activities include direct sales of commodities, on-line crop and livestock auctions, on-line market advisory services, commodity price tracking, etc. The COVID-19 pandemic hiked farmers' reliance on the internet for various activities. Maybe some of the dip from 2021 to 2023 is simply reverting to normal levels.

Figure 1. Use of internet by Iowa farms. Data Source: USDA-NASS.

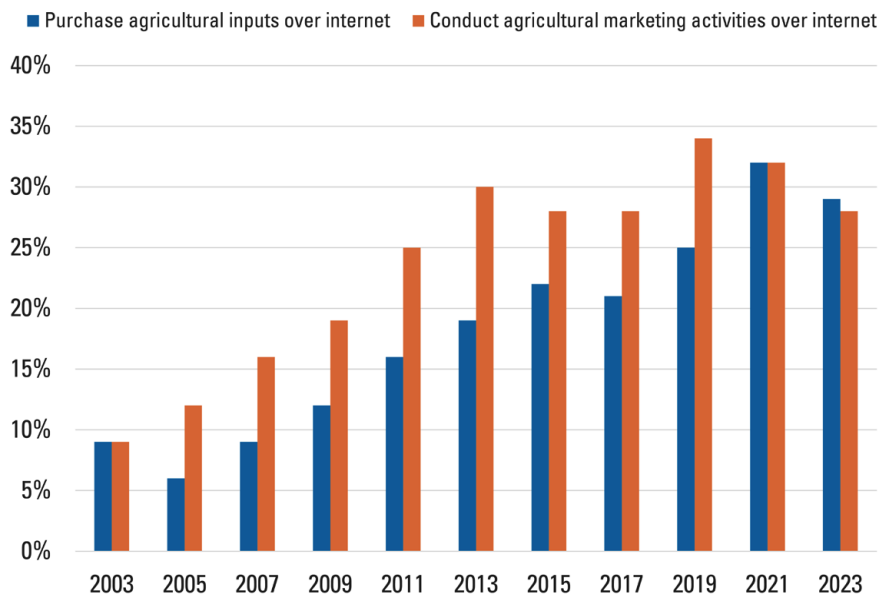
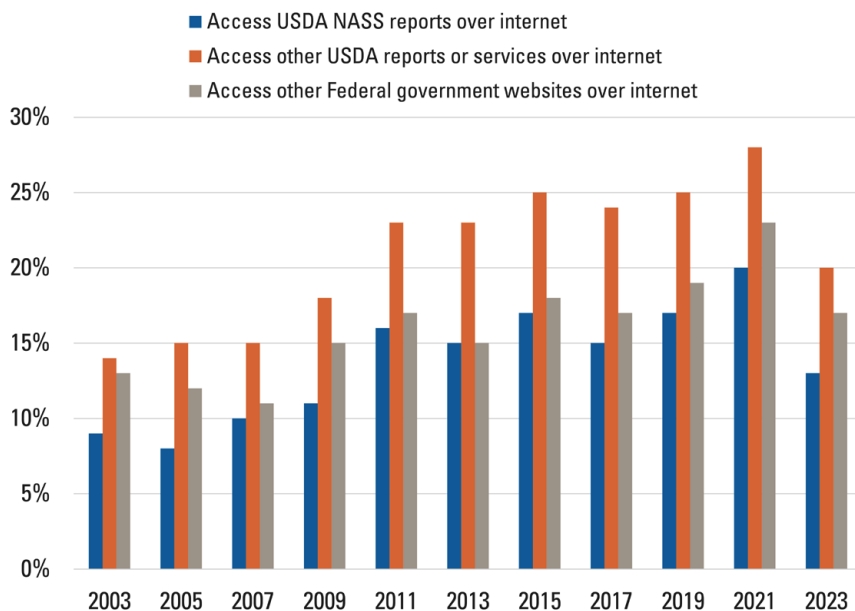


Figure 2. Internet access of reports, services, and websites by Iowa farms. Data Source: USDA-NASS.



USDA NASS issues about 400 national reports every year. These national reports are complemented by about 125 state reports. The reports provide broad coverage of agriculture, including more than 165 crop and livestock items. For example, cattle inventory numbers are published semiannually. Details on hog numbers, cattle on feed, production of eggs, milk, and meat are issued in monthly and quarterly reports.

In 2023, only 13% of U.S. and Iowa farms accessed USDA NASS reports over the internet (Figure 2). For Iowa this is down from

20% in 2021 and the smallest percentage since 11% of farms in 2009. The percentage of farms does not speak to the number of acres and/or head of livestock represented.

Web helps secondary sources improve information delivery

The static, and in some cases declining, share of farms accessing USDA reports on the web may be surprising, given that these reports serve as a primary informer of the fundamentals underlying agricultural markets. On the other hand, input suppliers, market advisors, grain and livestock buyers, auction markets, financial institutions and others have all dramatically increased their presence since the web entered the public domain in 1993. Many of those market participants are adept at analyzing data USDA gathers from farmers, gleaning highlights from reports and repackaging information.

This is not new. Radio stations have been reporting grain and livestock price data collected by USDA's Agricultural Marketing Service for over 100 years. Journalists and extension specialists have been relaying information collected by USDA since the beginning.

Most secondary sources do accurately and reliably report data farmers provide to USDA. Still, farmers could do well to occasionally scrutinize the original reports. Doing so can provide assurance that secondary sources are

conveying trustworthy and accurate information and are providing an appropriate level of detail and delivery mode.

Farmers have more cell phone computing power in their pockets

In 2023, 75% of Iowa farms had a desktop or laptop computer and 80% of Iowa farms had a smart phone. Seventy-three percent of Iowa farms had a smart phone in 2021. In 2023, 36% of Iowa farms owned or used a tablet or other portable wireless computer.

Most people reading this likely use both a desktop or laptop and a smart phone. While some may favor one over the other, mobile websites have become much more user friendly. The processing power of smartphones now rivals the desktops of the past.

NASS data show 52% of Iowa farms conducted business with non-agricultural websites (e.g., making airline reservations, ordering gifts or services, purchasing tickets for family amusement, etc.) in 2023. But, only 21% of farms conducted business with any USDA website (e.g., USDA service center eForms requesting services from Farm Service Agency, Natural Resource Conservation Service, and Rural Development, accessing USDA customer statement, etc.) and only 8% of farms conducted business with any other Federal government website (e.g., Federal Disaster relief, etc.). Ongoing efforts by USDA to integrate new sources of data, better collect and use information, and create more

user-friendly interfaces should help USDA reach more farmers.

USDA app broadens access

On July 27, 2023, USDA released Version 3.0 of its free [USDA Market News Mobile Application \(app\)](https://www.ams.usda.gov/press-release/usda-releases-version-30-market-news-mobile-app-offers-easier-access-organic-retail), www.ams.usda.gov/press-release/usda-releases-version-30-market-news-mobile-app-offers-easier-access-organic-retail. The app was first launched in February 2022 and expanded in June 2022. It allows users to search for current and historical reports by location, state, or commodity. Users can also add reports to their favorites for easier access, share reports via text or email, subscribe to reports, and share the aggregated data behind reports via email for additional analysis. The app provides real-time notifications when a new report is published.

In 2023, only 20% of Iowa farms accessed other USDA reports or services over internet. This is down from 28% in 2021 and the smallest percentage since 2009 (18% of farms). Again, this is surprising given the free, unbiased price and sales information to assist in the marketing and distribution of farm commodities that USDA AMS provides. Each year, AMS issues thousands of reports, providing the industry with key data. The reports give farmers, producers and other agricultural businesses information to evaluate market conditions, identify trends, make purchasing decisions, monitor price patterns and more.

I challenge you to check out the various USDA reports and see what you are missing.

Improving internet access in rural Iowa will drive innovation

In 2023, 51% of internet connected Iowa farms used a broadband connection (DSL, cable, fiber optic) while 75% of internet connected Iowa farms had access through a cellular data plan. Seventeen percent had satellite internet. Only 3%

of Iowa farms still had dialup internet. Percentages do not add to 100% due to operators with multiple types of internet access. Expanding access to high-speed internet across Iowa continues to be a priority at the state and federal level.

NASS first surveyed farmers on precision agriculture practices in 2021. The question asked: "In the last 12 months, did this farm or ranch use precision agriculture practices to manage

crops or livestock? This would include the use of global positioning (GPS) guidance systems, GPS yield monitoring and soil mapping, variable rate input applications, use of drones for scouting fields or monitoring livestock, electronic tagging, precision feeding, robotic milking, etc."

In 2021, 52% of Iowa farms used precision agriculture practices to manage crops or livestock. This rose to 54% in 2023.



Iowa, El Niño, and La Niña

By Don Hofstrand, retired agricultural business specialist

Reviewed by Eugene Takle, retired professor emeritus, Iowa State University

This article is part of our series focused on the causes and consequences of a warming planet.

You may have heard these terms bantered about in the media. They have strange names and impact our weather. Let's take a look at El Niño and La Niña and how they impact us.

Before we start, let's describe how these events got their names. During the 1700s' fishermen, living on the coast of Peru, noticed the periodic onset of a warm and wet period. They named it "El Niño de Navidad" because it often began in December, around the time of Christmas. The people called the phenomenon El Niño (pronounced El Neenyo) which means "the boy child" in reference to the birth of Jesus. Later, the other event was named La Niña (pronounced La Neenya) which means "the girl child."

They are both intermediate climate phenomenon that originate in the Pacific Ocean around the equator. It is a cycle of warm El Niño and cool La Niña episodes that happen every three to seven years. It is the most dramatic year-to-year variation of the Earth's climate system, affecting weather conditions around the world.

The two are related but cannot occur at the same time because they are the opposite of each other. There are also times when neither exist.

At the equator, trade winds blow from east to west (the opposite of here in Iowa where they blow from west to east). The trade winds are impacted by high pressure systems in the Pacific. When El Niño occurs, the trade winds weaken (or even reverse) causing the eastern Pacific next to South America

to warm up more than usual and bring rainfall to the dry South American west coast. Conversely, when La Niña occurs, trade winds strengthen, pushing the warm Pacific surface water westward which causes an upwelling of deep, cold water in the eastern Pacific off the coast of South America to fill the void. The impact of El Niño is shown in Figure 1 and La Niña in Figure 2.

El Niño can form when ocean temperature is above average by about one degree or more. Conversely, La Niña can form when ocean temperature is below average by one degree or more. When ocean temperature is normal, neither develops.

The warm water in the Pacific Ocean transfers heat into the atmosphere through convection (warm-moist air rising from the ocean causing the forming of

thunderstorms). Where this occurs is important. Warm water in the east from El Niño causes thunderstorms in the east. Warm water in the west from La Niña causes the thunderstorms to occur in the west.

These changes in atmospheric circulation can impact weather systems around the Earth. Each phase causes predictable disruptions of temperature, precipitation, and winds in the tropical Pacific Ocean. These disruptions trigger a cascade of global side effects.

Current conditions

The world has just experienced the end of three consecutive years of La Niña that ended last March. This is shown by the three years of moderate temperatures and drought conditions in the Midwest. Three years of La Niña is rare and there is some evidence that it may have been impacted by climate change. This period was followed in June, by a switch to El Niño which led to warmer conditions. El Niño, when combined with climate change, has led to record breaking temperatures in many parts of the world, including the United States.

Impact of climate change

As human-caused climate change disrupts weather patterns around the world, one overarching question is how will it affect El Niño/La Niña. One manifestation is that strong

Figure 1. El Niño event – December 1997. Image source: NOAA Climate.

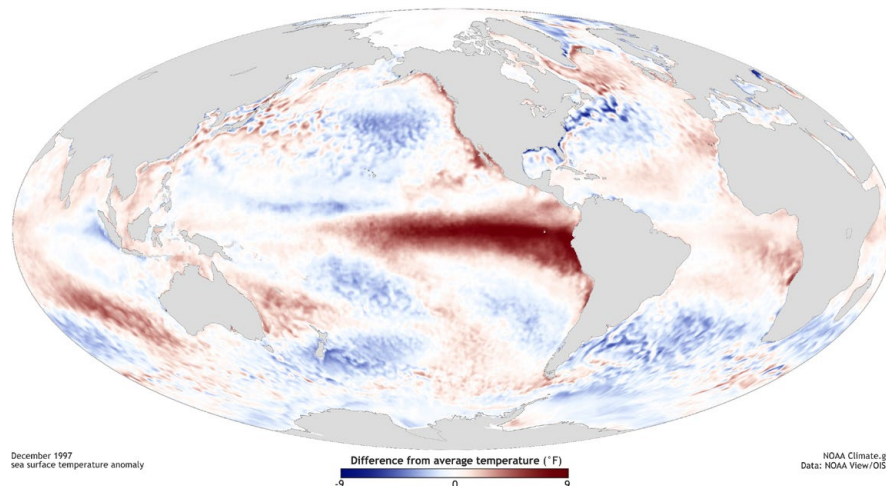
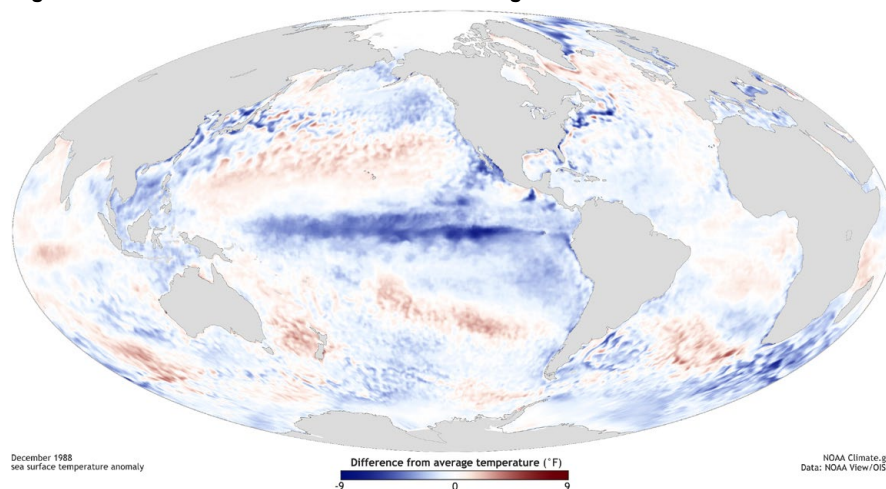


Figure 2. La Niña event – December 1988. Image source: NOAA Climate.



El Niño and La Niña events are becoming stronger and more frequent. There is high likelihood that these variations have increased in amplitude by up to 10% since 1960 due to the observed rise in greenhouse gas concentrations in the atmosphere. This amplified cycle translates to more extreme and frequent droughts, floods, heat waves, wildfires, and severe storms.

These variations are likely to become even stronger (by

15-20%) later this century if atmospheric greenhouse gas concentrations continue to rise.

For farmers and other lowans, stronger and more frequent El Niño/La Niña events will cause more volatile weather extremes. Learning to cope with this volatility will be challenging.

See the [Ag Decision Maker website](https://www.extension.iastate.edu/agdm/energy.html#climate), [extension.iastate.edu/agdm/energy.html#climate](https://www.extension.iastate.edu/agdm/energy.html#climate), for more from this series.



Early harvest adjustments

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

September is the month when the United States Department of Agriculture (USDA) brings in some new data sources to tighten up production estimates. It is the month for the first round of objective crop yield surveys for corn and soybeans where USDA representatives physically examine the crops across the nation. It is also the month when the acreage data gathered by the USDA Farm Service Agency (FSA) can be fully compared to earlier estimates. These new data sources provided some surprises for the markets and created some offsetting adjustments to the national corn and soybean production numbers.

Last year, both crops saw a reduction in planted area as planting delays showed up in force in the FSA data. This year, both crops receive a bump in planted area as more rapid planting allowed additional area to be sown. For corn, national planted area was increased by 772,000 acres to a total of 94.868 million. That brought corn planted area up by over seven percent from last year. The estimates for corn area were lowered in 19 states, held steady in 11, and increased in 18; so the increases were relatively larger than the decreases. Iowa and Illinois saw the largest declines

with both states having 300,000 acre declines from the June estimates. However, that area was more than made up for in other states. Nebraska led the charge higher, with 450,000 additional corn acres. Kansas added 250,000 acres. Minnesota and Missouri each chipped in 200,000 acres. Louisiana, North Dakota, Ohio, and South Dakota increased by least 100,000 acres.

Nationally, total planted area for soybeans was increased by 95,000 acres, to 83.6 million acres. That is still 4.4% below last year's planting. Fewer states had increased acres (eight) than decreases (14), but the sizes of the gains tipped the national total higher. North Dakota soybean plantings increased by 550,000 acres. Illinois added 350,000 acres. Iowa added 250,000 acres. Kansas increased by 200,000 acres. On the downside, Nebraska lost 250,000 acres, South Dakota dropped 200,000 acres, and Minnesota and Ohio declined by 150,000 acres each.

The next piece to the supply puzzle is the yield. The September yield estimates are a combination of the data from USDA's objective yield survey and the simultaneous farmer yield survey. This year's objective yield data has given both indications of

good yield potential but also lost opportunities due to the drought and heat this year. Figure 1 displays the ear counts and estimated yields from the field observations for the past five years and the September update. The ear count is shown in the blue bars and uses the left axis of the graph. The 2023 ear count was the highest it has been over the five-year period, reflecting that good yield potential. However, the historical data also show that ear counts tend to decline as months pass, so we may expect that to happen again this year. The measured yield from the field observations is shown in the red dots on the graph and uses the right axis. The September 2023 observation is in the middle of the pack historically, conveying that while there were plenty of ears, those ears were not filling as well as in previous years.

Figure 2 shows the current state and national yield estimates and how they have changed compared to last year. The national average corn yield estimate fell 1.3 bushels to 173.8 bushels per acre, but that is still slightly above last year's yield. Iowa's corn yield estimate was set at 200 bushels per acre, the same as last year. The heat and drier conditions across the center of the Corn Belt come

out in the map. Minnesota, Wisconsin, Illinois, and Missouri are all seeing seven to ten percent declines in corn yields. With somewhat better weather conditions across the Plains, higher corn yields are estimated for the line of states from North Dakota to Texas. Putting together the acreage and yield updates, USDA found evidence to increase the corn production estimate slightly, by 23 million bushels, to 15.134 billion bushels. If this production estimate holds, that's a gain of 1.4 billion bushels from last year.

The soybean objective yield data for this year shows some consistency with the 2021 crop, but as the historical data indicate, patterns can change. This year's pod count is in the middle of the pack historically. Pod counts tend to increase slightly as harvest progresses. The objective yield estimate is also roughly in line with the yield estimates with the 2020-22 crops. There is no discernable pattern how that will evolve over the next couple of months. In 2020 and 2022, the objective yield estimate slowly declined. In 2021, it slowly rose.

The national average soybean yield estimate came in at 50.1 bushels from the August figure, but still above last year's yield. The state yield losses are a bit more dispersed for soybeans, with North Dakota and Iowa joining the list with lower projected yields this year.

Figure 1. USDA objective corn yield data in September. Ears per acre and yield for 10 state region. Source: USDA-NASS.

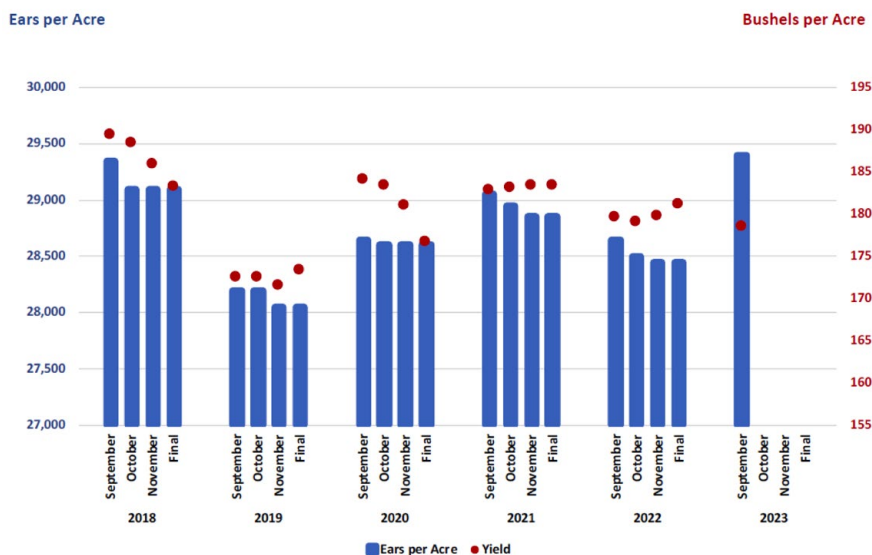
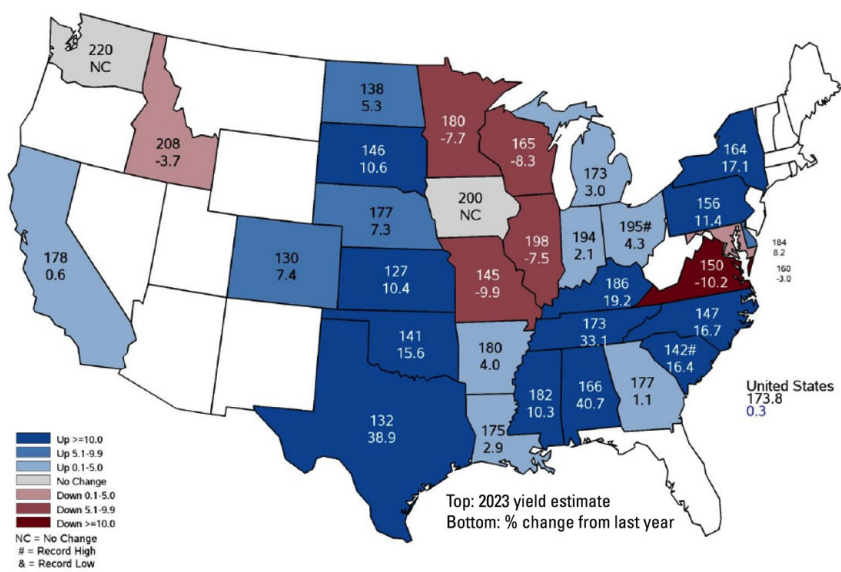


Figure 2. US corn yield estimates in September. Source: USDA-NASS.



The eastern US is seeing increased soybean potential, with record yields projected in Indiana, Ohio, New York, Kentucky, and Tennessee. Overall, national soybean production is projected at 4.146 billion bushels, which is 130 million bushels below last year and over 300 million bushels below the 2021 crop.

On the usage side, there were no changes for the 2023 corn crop. That allowed USDA to maintain its 2023-24 season-average price estimate at \$4.90 per bushel. Soybean usage adjustments reduced domestic and international consumption. For the 2023 crop, exports were lowered by 35 million bushels, reflecting lower sales in many

countries given what had been high US prices. Domestic crush dropped by 10 million bushels, so while domestic usage is still expected to grow, that growth was reduced. Despite the losses in usage, 2023-24 ending stocks are projected at 220 million bushels, down 25 million from last month and down 30 million from last year. And the 2023-24 season-average price estimate increased 20 cents to \$12.90 per bushel.

Listen to the latest [Market Outlook video](https://youtu.be/LuX-8ZeZMvU), <https://youtu.be/LuX-8ZeZMvU>, for further insight on outlook for this month.

Figure 3. USDA objective soybean yield data in September. Pods per 18 square feet and yield for 11 state region. Source: USDA-NASS.

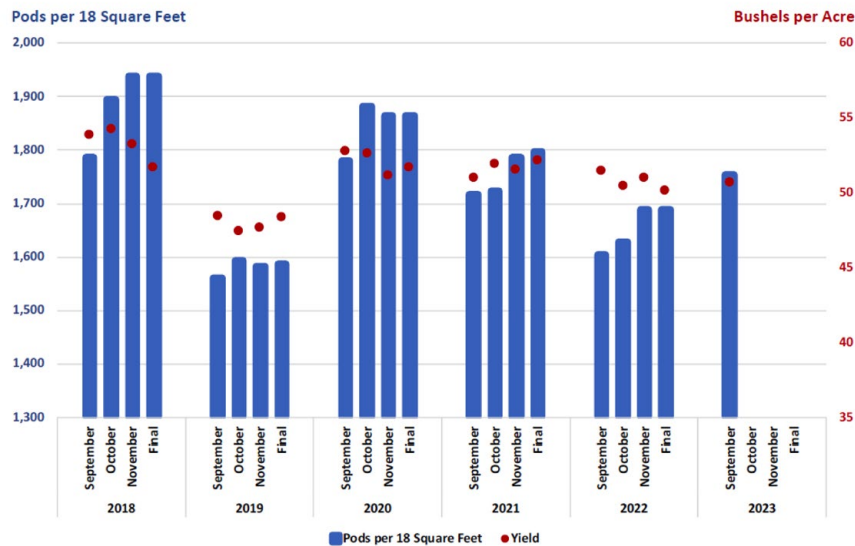
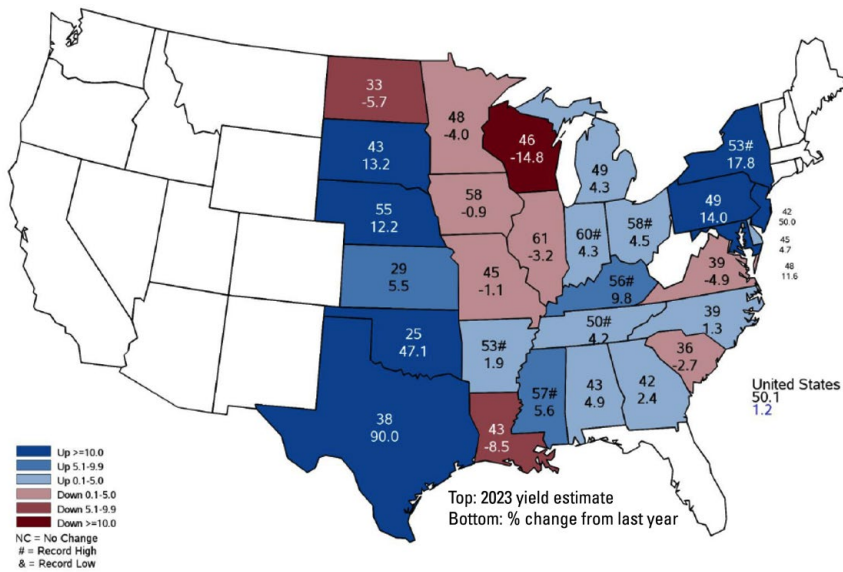


Figure 4. US soybean yield estimates in September. Source: USDA-NASS.



National Farm Safety and Health Week 2023

The National Education Center for Agricultural Safety

The 2021 data for the US Bureau of Labor Statistics indicates that the agricultural sector is still the most dangerous in America with 453 fatalities. Fall harvest time can be one of the busiest and most dangerous seasons of the year for the agriculture industry. For this reason, the third week of September has been recognized as National Farm Safety and Health Week. This annual promotion initiated by the National Safety Council has been proclaimed as such by each sitting U.S. President since Franklin D. Roosevelt in 1944. National Farm Safety and Health Week is led by the National Education Center for Agricultural Safety (NECAS), the agricultural partner of the National Safety Council.



The 2023 theme for National Farm Safety and Health Week is “No One Can Take Your Place.”

Go to the NECAS website, www.necasag.org for more information and links to daily webinars. It is everyone’s responsibility for safety both on the farm and the rural roadways of America.

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

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