

NORTHEAST OHIO AGRICULTURE NEWSLETTER

Your Weekly Agriculture Update for
Ashtabula and Trumbull Counties

September 10, 2024



White mold in soybean and tar spot in corn.

In This Issue:

- Soybean Harvest Considerations During Dry Weather
- Drought, An Early Harvest, and Fall Herbicide Applications
- In Stressful Times, Who Do You Turn To?
- USDA Farm Service Agency (FSA) Has Assistance Programs for Ohio Farm Operations Impacted by Drought
- Post-Harvest Grain Marketing in a Low-Price Environment

Hello Northeast Ohio Counties!

Harvest is rapidly approaching aided by the continued dry conditions. Several fields of beans have started to drop leaves. The rapid progression of maturity this season can mask late season diseases like sudden death syndrome (SDS) and *Diaporthe*. If you notice unusual pockets of soybeans turning yellow early than expected, give me a call and I can take a look.

Dry weather also brings additional challenges and risks at harvest. Now is a great time to inspect your fire extinguishers and maybe pick up a couple more.

Stay safe!

Lee Beers
Trumbull County
Extension Educator

Soybean Harvest Considerations During Dry Weather

By Laura Lindsey

Source: <https://agcrops.osu.edu/newsletter/corn-newsletter/2024-31/soybean-harvest-considerations-during-dry-weather>

Currently, most of Ohio is experiencing abnormally dry to exceptional drought conditions (***U.S. Drought Monitor***), which can bring along additional challenges during harvest.



Soybeans in Fayette County

Pod Integrity. When dry pods are re-wetted, they may split and shatter, resulting in soybean seeds on the ground (Figure 1). At harvest, shatter losses are less likely to occur when grain moisture is approximately 13%. As grain moisture decreases, shatter losses can increase.

In previously conducted field trials, we've measured 8% loss when harvesting at 9% grain moisture content. At 13% grain moisture content, we still measured some loss, but at a much lower level (1-2%). If possible, harvest soybean timely to avoid pod shatter and harvest losses. The loss of four soybean seeds per square foot equals about one bushel per acre in loss. These losses may not always be easily visible as the seeds are often covered by soybean residue and chaff, which need to be brushed away from the soil surface.



Figure 1. Pod splitting and shattering in Clark County, 2017. Pod damage in Pickaway County associated with extreme drought conditions in 2024.

Green stem. Green stem occurs when soybean stems remain green while the pods have reached their mature color (Figure 2). Green stem may be the result of a source/sink problem. If there are a limited number of pods (sink), there are fewer places for the plant's photosynthates (source) to go. Seasonal environmental stress is commonly associated with green stem syndrome. Premature loss of pods and/or seeds during mid-reproductive growth stages inhibits the sink strength.

Green stem syndrome does not appear to limit yield; however, it can severely reduce harvest efficiency. The presence of green stems will require operators to reduce their combine speed, and the green stems may plug harvest equipment. For more information about green stems, please see this Science for Success

FactSheet: https://soybeanresearchinfo.com/wp-content/uploads/2024/02/20240123_Factsheet_GreenStem_V1.pdf.



Figure 2. Green stem syndrome in Clark County, 2024.

Drought, an early harvest, and fall herbicide applications

By Alyssa Essman

Source: <https://agcrops.osu.edu/newsletter/corn-newsletter/2024-31/drought-early-harvest-and-fall-herbicide-applications>

Moderate to exceptional drought conditions (D1-D4) are being experienced in much of Ohio. Conditions are worse in the south and southeast regions of the state. Crop plants are maturing rapidly, and harvest is either underway or expected to be early in many areas, especially these harder hit regions. Between tough growing conditions this season and low commodity prices, it's a fair question to ask if it's worth investing in a fall herbicide application this year. One consideration is the likelihood of an earlier than average harvest, which means that the window for fall



Giant Ragweed

applications may be longer than normal. The potential benefit from including this application in a no-till production system is dependent on field history and the presence or lack of some species that are most easily controlled in the fall. The goal for these applications is really to target emerged weeds, especially troublesome winter annual, biennial, and perennial species such as marehail, annual ryegrass, wild carrot, and dandelion. Populations of waterhemp, giant ragweed, and other summer annual species will not be influenced by a fall application.

The dry pattern may reduce winter annual weed emergence some, especially if there are no considerable precipitation events between now and the first frost. Whether or not a fall application will be necessary may depend on rainfall and weed emergence patterns through the end of the application window in late-fall. Scouting to monitor weed emergence and growth after harvest will help determine if an application is necessary. A

relatively inexpensive but effective application provides the most value, especially in years like this year when prices are low, and conditions have been tough. Glyphosate + 2,4-D is an effective combination for most of the target weeds at this application timing and can be applied ahead of corn or soybeans. Some other effective fall application programs include:

Corn or soybeans next spring

- Glyphosate + 2,4-D
- Metribuzin + 2,4-D
- Dicamba + 2,4-D
- 2,4-D + tribenuron and/or rimsulfuron (Basis, Nimble, Audit, Express, Victory, Crusher, Leopard, etc.)

Soybeans next spring

- Canopy EX/Cloak EX/Fallout + 2,4-D
- Canopy/Cloak DF + 2,4-D

Corn next spring

- Simazine + 2,4-D

In trials conducted at Ohio State in years past, there was no benefit of adding metribuzin or other residual herbicides when applications are made late in the fall. Chlorimuron (Classic, Canopy, Cloak, etc.) is one active ingredient that can persist into the spring; however, it's often a better strategy to prioritize spending on residual products for use in the spring when more benefits will be realized. The main deciding factor in whether to include a fall herbicide as part of your program should be the presence or lack of overwintering weed species (winter annuals, biennials, and perennials) that are most effectively controlled in the fall. Although the death of plants is slower, herbicides applied into December are still effective, so the decision about whether to make an application can be determined later in the year depending on weather and weed emergence patterns. As a general reminder, foliar herbicides are more effective when daytime temperatures are 50°F or higher, and nighttime temperatures are above 40°F. Herbicides applied in cooler temperatures can result in a slower kill or poor control. Using appropriate adjuvants according to label guidelines can ensure better performance in these tough conditions, and where weeds are weathered and stressed. Check herbicide labels prior to selecting rates as the herbicide rate used may influence crop rotation intervals.

The need for a fall application will likely depend on conditions in a given region and may differ from field to field within an operation. Repeated scouting from now through December to assess weed emergence and growth, especially following precipitation or frost events, can be helpful in making this decision. As always, reach out if you have questions at Essman.42@osu.edu.

In Stressful Times, Who Do You Turn To?

By Sarah Noggle

Source: <https://agcrops.osu.edu/newsletter/corn-newsletter/2024-31/stressful-times-who-do-you-turn>

Farmers are some of the most humble, down-to-earth people I know. They take great pride in feeding the country. Yet, the stresses they and their families currently face are overwhelming for everyone involved. While they understand that farming inherently involves risk, particularly from unpredictable weather, there are times when even the most resilient farmers need support and encouragement to manage their mental, physical, and emotional well-being.



Corn in Pickaway County 2024,
Photo Courtesy of Mike Estadt

Most farmers live on the land they work, making it impossible for them to escape the constant stress. Many of us can step away from our jobs when things get overwhelming, but farmers don't have that luxury—they live, sleep, and breathe their occupation.

The decisions farmers are making today are uncharted territory, especially given the ongoing drought. They worry about the dry conditions: How will I feed my livestock? Where will my income come from? Whether you're a farmer reading this, a farm spouse, neighbor, family member, or someone in agribusiness, one thing is certain: farmers are the heartbeat of our communities. As you read this week's CORN newsletter, I ask you to consider stepping outside your usual routine.

Take a moment to slow down and breathe. Whether you're a farmer, a family member, or someone else, we all live in a fast-paced world where decisions can affect countless people. Remember, we're all in this together. It's more important than ever to be kind and supportive.

Take five minutes to care for yourself. Depression and anxiety are real, and sometimes it can feel like you can't take another step. But you are valuable, you are needed, and things will be okay. Maybe not in the way you originally envisioned, but in time, you'll find your path.

Share a smile, nod, or wave with someone today. It's a simple gesture that can mean a lot, especially during difficult times. And remember, it takes fewer muscles to smile than to frown.

If you think a farming family needs extra help, don't hesitate to reach out to your local Extension Office. They can point you in the right direction for support.

This week's CORN newsletter is full of valuable information to assist with decision-making. No, it's not all rainbows and unicorns—these are real-life, tough decisions. Farmers, as you read these articles, keep a few things in mind: write down your options, weigh the pros and cons, and talk with your local Extension Educator or invite them for a farm visit. We at OSU Extension are here for you. Even if you've never visited our office, our services are free, and we genuinely care about your well-being.

As you read through the OSU Extension articles, take a moment to reflect on your options. If you have questions about managing drought-affected acres, contact your local crop insurance agent, Farm Service Agency (FSA) Office, loan officer, banker, or family. Don't assume they know your plans—communication is key to getting the support and answers you need.

Additionally, share this information in any way possible—forward the email, tweet about it, share it with non-farm friends, post it on social media, or print it off and share it at church or the local grocery store. The agricultural community is strong, with diverse opinions, stresses, and directions. Some people may have no idea what's happening in the agricultural world, so educate them.

Finally, I encourage the community to check in on your farming neighbors and their families. Visit the farm, bring dinner, and spend time with them. They may offer excuses about how busy they are or that their house isn't clean, but they still need your support, even if they don't realize it.

In some cases, professional help may be necessary. The 988 Lifeline is a free, confidential resource for anyone facing mental health challenges, emotional distress, or substance use issues. Trained counselors are available to listen and provide support and by calling 988 one could save a life.

Financial pressures may mean many families are skipping vacations this year, but human interaction is invaluable. While a text message may seem like a simple way to check in, sometimes texts aren't enough. Farmers need empathy and understanding, not just sympathy. Go old-school—play a board game, set aside social media, and have a real conversation. These actions cost nothing but time. Have you ever thought about giving back to those who help feed the world?

If you need more resources or have questions, reach out to Ohio State Extension's Farm Stress Team at u.osu.edu/farmstress.

Take it one day at a time.

Northeast Ohio Agriculture

OHIO STATE UNIVERSITY EXTENSION
Ashtabula and Trumbull Counties

USDA Farm Service Agency (FSA) Has Assistance Programs for Ohio Farm Operations Impacted by Drought

By David Marrison and Aaron Wilson

Source: <https://farmoffice.osu.edu/blog/thu-09052024-428pm/usda-farm-service-agency-fsa-has-assistance-programs-ohio-farm-operations>

Drought conditions started in Ohio back in mid-June and have intensified all summer. According to the U.S. Drought Monitor report on August 27, 2024, D4-exceptional drought was introduced to Ohio (Meigs and Athens Counties) for the first time since the U.S. Drought Monitor's inception in 2000. On September 5, D4 increased to 7.35% of the state, while other categories of drought (D1-D3) significantly expanded. It is important to remember that D4 conditions only occur once every 50 to 100 years.

Despite much needed rainfall occurring last week from Meigs and Athens counties to Belmont County, it was not enough to overcome the drought conditions made worse by scorching heat with many days with high temperatures in the mid to upper 90s. Farther north, very little rain fell in August or during the summer. At the Zanesville Municipal Airport for example, only 0.17" of rain fell in August and 4.95" fell in June-August. This marks the driest August on record and second driest summer for this location for the period 1946-2024. Similar conditions are present for many counties across south central and east central Ohio.

Impacts are numerous and widespread including very poor pasture conditions, lack of hay growth, low ponds, dry creeks, water hauling, and failing crops. Even for counties in lower drought categories, drought stress is present with early changing leaves on trees and stress on native plants. With drought conditions expanding nearly statewide, there will be increased combine and field fire risk this harvest season as well.

The Secretary of the United States Department of Agriculture (USDA) issued two natural disaster designations (August 30 and September 3) which designated 23 counties as primary disaster counties with an additional 16 counties classified as contiguous. According to the U.S. Drought Monitor, these counties suffered from a drought intensity value during the growing season of 1) D2 Drought-Severe for eight or more consecutive weeks or 2) D3 Drought-Extreme or D4 Drought-Exceptional. The following are the counties which have been designated as of September 3.

Primary counties eligible in Ohio: Athens, Belmont, Fairfield, Fayette, Gallia, Guernsey, Harrison, Highland, Hocking, Jackson, Jefferson, Madison, Meigs, Monroe, Morgan, Muskingum, Noble, Perry, Pickaway, Pike, Ross, Vinton and Washington counties.

Contiguous counties also eligible in Ohio: Adams, Brown, Carroll, Champaign, Clark, Clinton, Columbiana, Coshocton, Franklin, Greene, Lawrence, Licking, Scioto, Tuscarawas, and Union counties.

These designations allow the USDA Farm Service Agency (FSA) to extend assistance to agricultural producers through a variety of programs. These programs are available to both new and existing users of FSA services. Please note that each program has eligibility requirements and payment limitations.

Below are short descriptions for each of the drought assistance programs:

Emergency Loan Program: This program provides emergency loan assistance to farm operators. These loans can be used to meet various recovery needs including the replacement of essential items such as equipment or livestock, reorganization of a farming operation, or to refinance certain debts. For production losses, a 30% reduction is required to be eligible. Losses to quality may also be eligible for assistance. Producers can borrow up to 100 percent of actual production or physical losses to a maximum amount of \$500,000. The deadline for producers in designated primary and contiguous counties to apply for loans is between April 21 -28, 2025 depending on the county. Complete details about ELP can be found at: <https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdfiles/FactSheets/2019/emergency-loan-program.pdf>

Disaster Set-Aside Program (DSA): This program allows FSA borrowers to set aside of one payment due to qualified disaster. Each payment set-aside must be repaid prior to the final maturity of the note. Any principal set-aside will continue to accrue interest until it is repaid. The borrower must be current or not more than 90 days past due on any FSA loan when the application is completed. Borrowers have 8 months from date of the disaster designation to apply. More details about the DSA program can be found at: <https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdfiles/FactSheets/2019/disaster-set-aside-program-factsheet-19.pdf>

Noninsured Disaster Assistance Program (NAP): This program provides financial assistance to producers of non-insurable crops that have lower yields or crop losses due to natural disasters such as drought. Eligible crops must be commercially produced agricultural commodities for which crop insurance is not available. Such crops include (but are not limited to): crops grown for food; crops planted and grown for livestock consumption, such as grain and forage crops; specialty crops, such as honey and maple sap; value loss crops, such as aquaculture, Christmas trees, and ornamental nursery and turf-grass sod. Eligible producers must have purchased NAP coverage for the current crop year. NAP payments are limited to \$125,000 per crop year, per individual or entity for crops with basic coverage. Any NAP payments received with additional (buy-up) coverage is to \$300,000. More information about NAP can be found

at: https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdfiles/FactSheets/noninsured_crop_disaster_assistance_program-nap-fact_sheet.pdf

Tree Assistance Program (TAP): This program provides financial assistance to qualifying orchardists and nursery tree growers to replant or rehabilitate eligible trees, bushes, and vines damaged by natural disasters such as drought. To be eligible, at least a 15 percent mortality loss, after normal mortality, must be determined due to a natural disaster. Payment is the lesser of either 65% of the actual cost of replanting or the maximum eligible amount established by FSA. Replacement of eligible trees, bushes and vines must be made within 12 months. More information about TAP can be found at: https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdfiles/FactSheets/tree_assistance_program-tap-fact_sheet.pdf

Conservation Reserve Program (CRP) Haying and Grazing: FSA permits emergency haying and grazing on certain CRP practices in a county designated as D2 or higher on the U.S. Drought Monitor, or in a county where there is at least a 40 percent loss in forage production. It should be noted that before haying and grazing, producers should contact their FSA office to determine if the county remains eligible and to obtain a modified conservation plan. After a county is approved for emergency haying and grazing, conditions are reviewed monthly to determine whether continuing the emergency activities is warranted. To date, 31 counties in Ohio are eligible. These can be found in Table 1

Table 1: Ohio Counties Eligible for Emergency CRP Grazing

County	State Date		County	Start Date		County	Start Date
Adams	8/20/2024		Greene	9/03/2024		Muskingum	7/16/2024
Athens	7/16/2024		Guernsey	7/16/2024		Noble	7/16/2024
Belmont	7/16/2024		Harrison	7/30/2024		Perry	7/23/2024
Brown	8/20/2024		Highland	7/30/2024		Pickaway	7/16/2024
Carroll	8/20/2024		Hocking	7/23/2024		Pike	7/30/2024
Champaign	9/03/2024		Jackson	7/30/2024		Ross	7/16/2024
Clark	9/03/2024		Jefferson	7/23/2024		Scioto	8/20/2024
Clinton	8/20/2024		Lawrence	12/19/2023		Tuscarawas	7/30/2024
Coshocton	9/03/2024		Licking	8/27/2024		Union	9/03/2024
Delaware	9/03/2024		Madison	7/16/2024		Vinton	7/23/2024
Fairfield	7/16/2024		Meigs	7/16/2024		Washington	7/16/2024
Fayette	7/16/2024		Montgomery	9/03/2024		Warren	9/03/2024
Franklin	7/16/2024		Monroe	7/16/2024			
Gallia	7/30/2024		Morgan	7/16/2024			

More information about the emergency grazing of CRP acreage can be found at: <https://www.fsa.usda.gov/programs-and-services/conservation-programs/conservation-reserve-program/emergency-haying-and-grazing/index>

Livestock Forage Disaster Program (LFP): This program provides compensation to eligible livestock producers who have suffered grazing losses due to drought on land that is native or improved pastureland with permanent vegetative cover or that is reported on the FSA-578 with initial intended use of grazing. This program looks at acreage and intended use directly from the producer certified FSA-578 form. This program also provides compensation for eligible livestock. Eligible livestock must be animals that receive the majority of their net energy requirement of nutrition via grazing. Covered livestock include beef cattle, dairy cattle, deer, equine, goats, llamas, and sheep. The 2018 Farm Bill established a maximum annual per person and legal entity payment limitation for LFP of \$125,000. More details about the LFP program can be found at: <https://www.fsa.usda.gov/programs-and-services/disaster-assistance-program/livestock-forage/index>

Livestock Indemnity Program (LIP): This program benefits to livestock owners or contract growers for livestock deaths in excess of normal mortality caused by adverse weather. Note that drought is not an eligible adverse weather event except when death loss is associated with anthrax which occurs because of the drought. In addition, Mycoplasma Bovis is an eligible loss during drought for bison. Payment levels are based on national payment rates that are 75% of the market value of applicable livestock. Cattle, poultry, swine and other livestock are covered. More information about LIP can be obtained at: [https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdfiles/FactSheets/livestock indemnity program lip-fact sheet.pdf](https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdfiles/FactSheets/livestock%20indemnity%20program%20lip-fact%20sheet.pdf)

Emergency Assistance for Livestock, Honeybees, and Farm-Raised Fish (ELAP): This program provides emergency assistance to eligible producers of livestock, honeybees, and farm-raised fish for losses due to disease, or adverse weather not covered by the Livestock Forage Disaster Program and the Livestock Indemnity Program. Assistance is provided for losses resulting from the cost of transporting water to livestock and hauling livestock to forage or other grazing acres due to a qualifying drought. For commercial bee producers, ELAP provides for additional feed purchased to sustain honeybees during drought conditions when natural feed is not available. ELAP also assists farm-raised fish operations for excess mortality and excessive feed requirements due to eligible weather conditions. Learn more about each facet of the ELAP program at:
Livestock- <https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdfiles/FactSheets/elap-livestock-fact-sheet.pdf>
Honeybees- [https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdfiles/FactSheets/2022/fsa elaphoneybeefact sheet-22.pdf](https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdfiles/FactSheets/2022/fsa%20elaphoneybeefact%20sheet-22.pdf)

Farm-raised fish- https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdafiles/FactSheets/2022/elap_farmraisedfish_factsheet-2022-final.pdf

Emergency Conservation Program (ECP): This program provides funding and technical assistance for farmers and ranchers to restore farmland damaged by natural disasters and for emergency water conservation measures in severe droughts. Specific assistance can be sought for providing emergency water during periods of severe drought to grazing and confined livestock or through existing irrigation systems for orchards and vineyards. Additional details about ECP program can be found at: https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdafiles/FactSheets/emergency-conservation-program-ecp-fact_sheet.pdf

Disaster Assistance Discovery Tool: FSA has developed an on-line disaster assistance discover tool which allows producers to learn the USDA assistance programs which might fit their operation due to this year's drought. This easy-to-use tool can be accessed at: <https://www.farmers.gov/protection-recovery/disaster-tool>
Take Action and Report: Producers are encouraged visit their local Farm Service Agency office to report crop and livestock losses. By providing this data, producers can learn their eligibility for the FSA disaster programs. Additionally, this data can serve as a catalyst for potential ad hoc disaster relief programs for crops and livestock which are not covered by an existing program.

More information: Producers are encouraged to contact their local Farm Service Agency office to explore program which they may be eligible. Producers can locate their local office at: www.fsa.usda.gov/oh

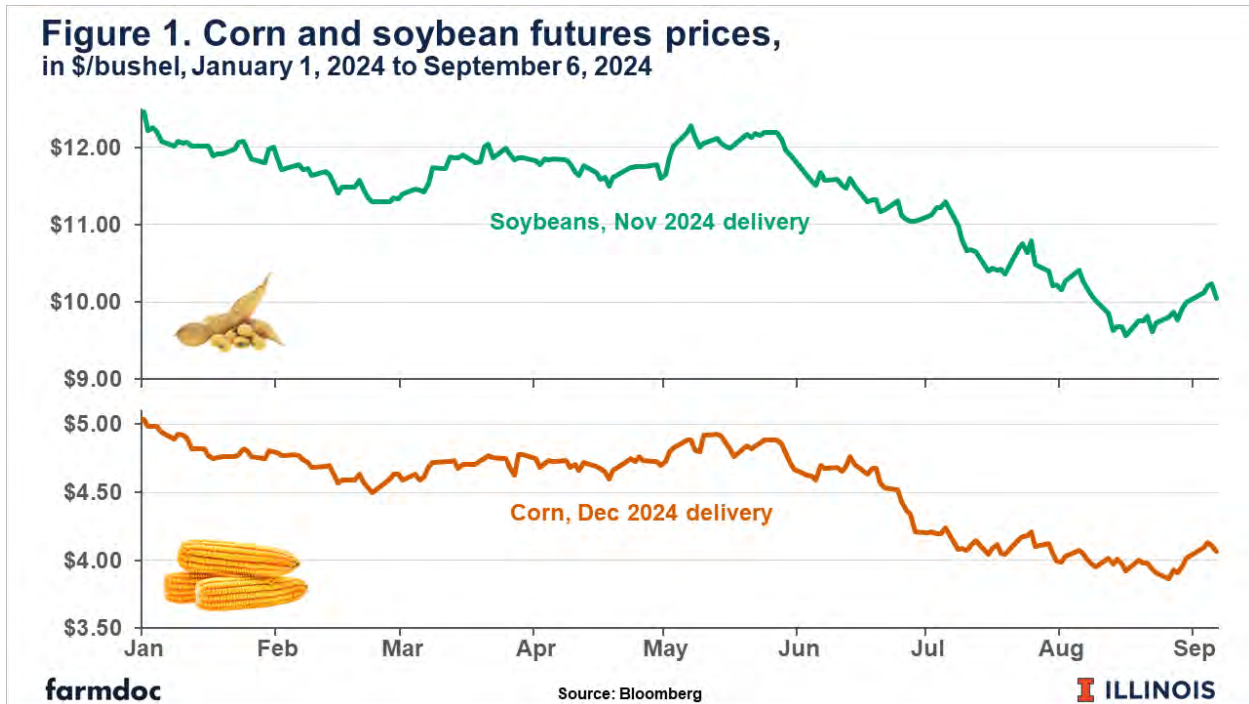
Post-Harvest Grain Marketing in a Low-Price Environment

By Joe Janzen

Source: <https://farmdocdaily.illinois.edu/2024/09/post-harvest-grain-marketing-in-a-low-price-environment.html>

In the summer of 2024, two big price changes occurred in corn and soybean markets. First, price levels declined, beginning in June and continuing to the present. Figure 1 shows new-crop corn and soybean futures for delivery during the upcoming fall harvest period (the December 2024 corn and November 2024 soybean contracts) both fell by about 20% between the last week of May and late August.

Figure 1. Corn and soybean futures prices, in \$/bushel, January 1, 2024 to September 6, 2024



The second big change over the same May to August period was the increase in calendar spreads, the difference between the price for delivery in early 2025 to the fall 2024 harvest-time price. Figure 2 shows the spread between March 2025 and harvest-time contracts roughly tripled for soybeans and doubled for corn. While the increase in soybean spreads was concurrent to the price decline, corn spreads only really began to increase in late June. This article discusses the implications of larger spreads for commodity marketing in the post-harvest period.

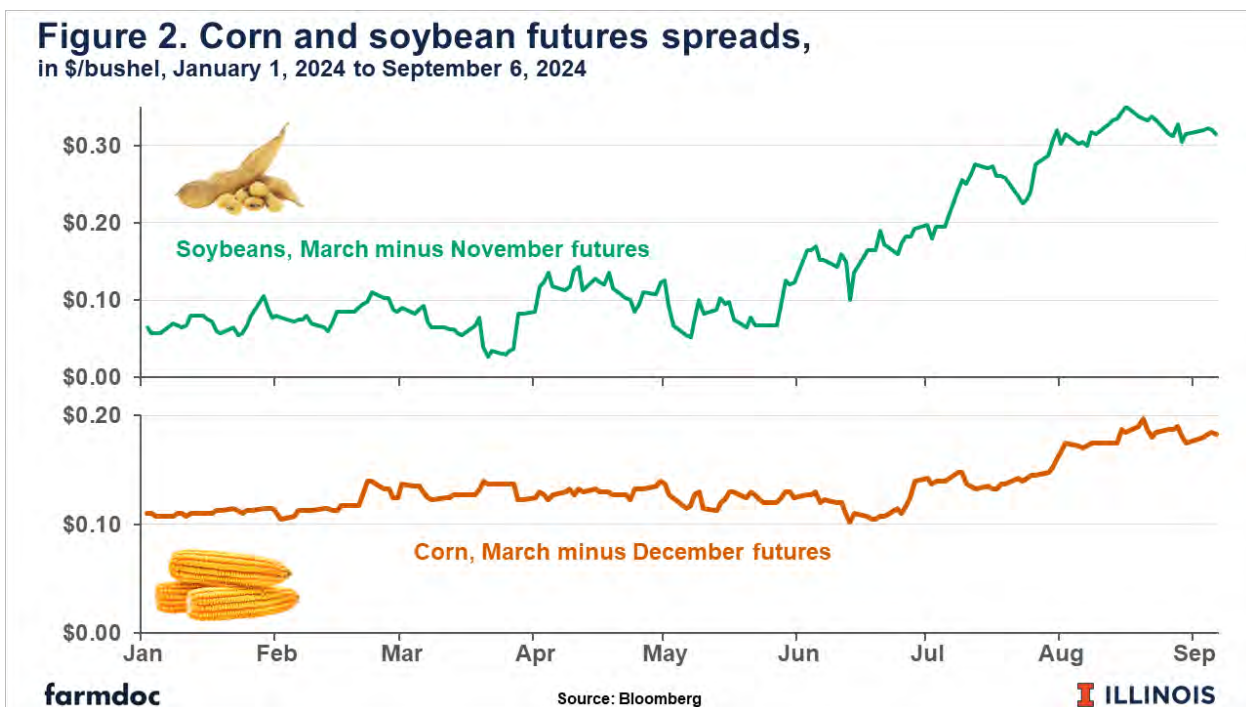
The explanation for lower prices and larger spreads is straightforward. The market will be adequately supplied in the near term. The coming US corn and soybean crop is ***expected to be historically large***. No substantive new demand has emerged to meet this increase in supply. As such, spreads must rise so futures markets may perform one of their principal functions, allocating grain that is abundant now to post-harvest time periods where it is less so by incentivizing enough storage. The spread is commonly called the 'carry', since it represents the return to the act of 'carrying' or storing the grain over time.

Evaluating Current Futures Spreads

What do larger spreads mean? It helps to first understand what they are not. Positive carry observed in the futures market today should not be viewed as a guarantee of better prices later in the marketing year (relative to prices at harvest). There is

continued fundamental price risk. For instance, March 2025 corn prices may be as likely to be below the current \$4.25/bushel price as above it.

Instead of a forecast, futures spreads provide a guaranteed return for those willing to hold the commodity to that later date relative to what could be earned for selling for near-term delivery. The carry is what the market offers to those who would commit to providing the service of storing grain from now until a given future date. A common adage is that ‘you can’t capture the carry unless you sell the carry’, that is the revenue is not guaranteed unless a sale for deferred delivery is made. The alternative, holding unpriced grain in storage, is simply speculating on the prospect that the commodity will be worth more in the future than the current price. This article offers no analysis relevant to the decision to hold unpriced grain in storage after harvest in 2024 or at any other time.



The decision to sell the carry or take the price given by the market at harvest must be evaluated relative to the costs of storage. These costs can generally be divided into two types: physical costs related to the handling, maintenance, and insurance of physical crop inventories, and the opportunity cost of giving up revenue from grain sales at harvest in favor of a higher price later. Note these costs of storage are incurred whether the commodity holder captures the carry or is speculating on unpriced inventory.

Table 1 provides a simple evaluation of the per-bushel profitability of corn and soybean storage given current futures spreads. The profit calculation is simply the price spread

between two delivery dates (after and at harvest) less the assumed physical and opportunity costs of storage over the same period (explained further below). Note that per-bushel costs may vary more widely among different farm and commercial storers than is noted in Table 1. Even within a given business, the cost of storage may vary substantially with the quantity stored.

Table 1. Returns to New-Crop Corn and Soybean Storage Under Different Interest Rate Assumptions

	Corn		Soybeans	
Harvest-time Futures Price (\$/bu)	4.06 (Dec)		10.05 (Nov)	
March-Harvest Spread (\$/bu)	+0.18		+0.32	
Storage Period (in months)	3 (Dec-Mar)		4 (Nov-Mar)	
Short-term Interest Rate (annualized %)	4.5	8.5	4.5	8.5
Opportunity Cost (\$/bu)	0.05	0.09	0.15	0.29
Physical Cost (\$/bu, at 0.04/bu/month)	0.12		0.16	
Storage Return (\$/bu)	+0.017	-0.024	+0.004	-0.130

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Note: Prices given are as of September 6, 2024

ILLINOIS

In Table 1, physical storage costs are based on a rate of four cents per bushel per month, which roughly approximates the current price charged to farmers by commercial elevators for storage in the Corn Belt, excluding additional fees or in-charges. Opportunity costs are based on two scenarios for the interest rate used to value foregone revenue (that is the current price for harvest delivery). The lower rate is 4.5%, roughly equal to the current return on high-yielding savings accounts. The implicit assumption here is that foregone revenue has no higher return than simply putting it in the bank. The higher rate is 8.5%, or roughly the current interest rate on new farm operating loans according to data from the ***Federal Reserve Bank of Chicago***. The implicit assumption in this case is that foregone revenue could have been used to pay down operating loan debt.

These calculations suggest current spreads provide positive profit from storing for both corn and soybeans, but only if the estimated opportunity cost is relatively low. Under low opportunity cost assumption (interest rate is 4.5%), storers cover both physical and opportunity costs, penciling out a small profit of roughly two cents per bushel for corn and half a cent per bushel for soybeans. Under the high opportunity cost assumption,

physical costs would need to be roughly one cent per bushel per month lower for corn and about three cents lower for soybeans for the current spread to cover all storage costs. This difference highlights how opportunity costs of storage are larger for soybeans than for corn on a per-bushel basis due to the higher per-bushel value of soybeans.

Implications

The analysis above provides a starting point for post-harvest marketing discussions about which crop gets stored first at harvest and which farms, commercial elevators, and locations are more likely to store than others. Notice that the physical costs of storage are essentially the same on a per-bushel/per-month basis. Commercial grain storage rates typically reflect roughly similar cost of a bushel of grain occupying what may be scarce storage space. However, opportunity costs vary substantially between corn and soybeans. While larger spreads in the soybean market make up some of this difference, they do not equilibrate the returns to storage among crops under current market conditions.

When should a farm or other commercial firm in the grain supply chain store corn or soybeans? Obviously, one time is when the firm wants to speculate on the future value of the commodity. As noted above, corn and soybean prices are now lower than past values, but this article provides no guidance on the likelihood of higher prices in the coming marketing year.

Profitable storage generally happens when the firm has available capacity both in terms of its physical space and financial ability to defer revenue. This capacity is greater for small quantities of storage; physical storage costs grow as storage space becomes scarce or storage and handling infrastructure becomes constrained. The logistics of crop movement at and after harvest may also play a role in storage decisions but these are difficult to quantify on a per-bushel basis like the calculations in Table 1.

The economics of the sell-versus store decision can be continuously monitored and evaluated. Changing market conditions affect the profitability of storage. Later this week, the USDA's September WASDE report may adjust the production and use projections. Perhaps more consequential for storage and post-harvest grain marketing will be the September 30 Grain Stocks report, where USDA will provide estimates for corn and soybean inventories as of September 1, the end of the 2023/24 marketing year and the beginning of the 2024/25 marketing year. The stocks report will provide an assessment of how old-crop grain stocks were drawn down going into the new marketing year and whether significant stocks remain on-farm, occupying what is likely to be scarce physical storage capacity for the upcoming harvest.

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