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OHIO STATE UNIVERSITY EXTENSION

NORTHEAST OHIO AGRI-CULTURE NEWSLETTER

Your Weekly Agriculture Update for Ashtabula and Trumbull Counties

October 15, 2024

Weed surveys are complete for NE Ohio!

In This Issue:

Hello Northeast Ohio Counties!

Soybean harvest is wrapping up for most of the region. Despite dry weather, reported yields have been average or in some cases well above average. As we move into corn harvest, I hope the trend continues and we see better than expected yields.

Now is a great time to sample for soybean cyst nematode. If you have any samples ready to go, please drop them off at the Trumbull County Extension office and we can arrange shipping to Columbus.

Stay safe!

Lee Beers
Trumbull County
Extension Educator

The Season's First Widespread Frost and Freeze Potential

By Aaron Wilson
Source: https://agcrops.osu.edu/newsletter/corn-newsletter/2024-36/season's-first-widespread-frost-and-freeze-potential

Climate Summary
Wet conditions returned to the northern tier of counties this week, where 0.3-2.55 inches of rain fell in showers and storms associated with a strong autumn cold front. This has helped knock down some of the dust kicked up by harvesting dry fields across northwest Ohio. Since the remnants of Hurricane Helene on September 27, much of the southern two-thirds of state has remained dry. Cooler temperatures have kept drought stress from worsening, but without meaningful precipitation, drought conditions persist. While pastures have greened up, the lack of precipitation is keeping soil moisture deficits around, creeks and rivers running on the lower end of historical records, and livestock producers hauling water in southeast Ohio. As of October 8, 2024, the ***US Drought Monitor*** depicts approximately 8% of the state in D4 - exceptional drought with about 65% of the state still experiencing drought conditions (D1-D4).

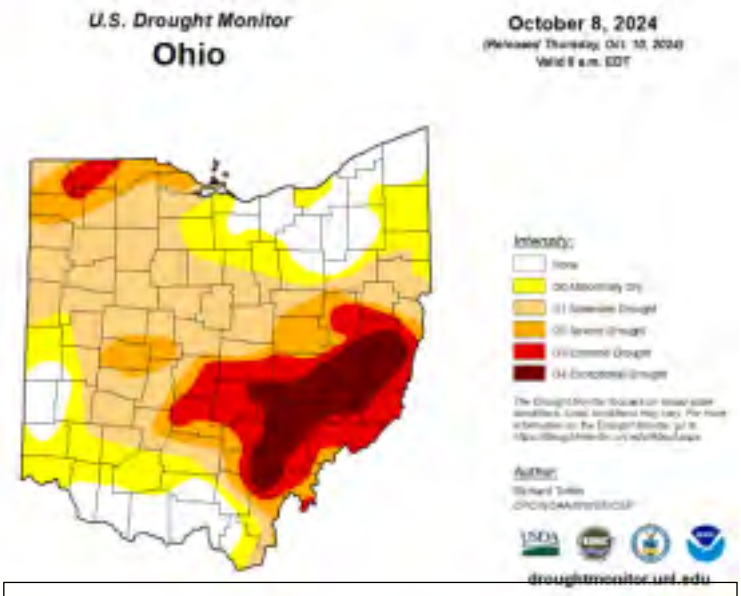


Figure 1. U.S. Drought Monitor depiction for Ohio as of October 8, 2024.

If you are continuing to experience drought impacts or to document improvements, you can view or submit local reports at the ***Condition Monitoring Observer Reports*** page. For a more detailed look at conditions and resources, visit our ***Drought Response Page*** or for the latest up-to-date conditions, seasonal outlooks, and monthly climate summaries, please visit the ***State Climate Office of Ohio***.

Weather Forecast

The week is starting out much cooler, with gusty northwesterly winds and high temperatures only in the upper 40s to mid 50s. Scattered showered and storms are possible through Tuesday, with the greatest chance across northeast Ohio. Overnight lows on Wednesday and Thursday mornings will flirt with and possibly drop below the freezing mark (32°F), marking the first widespread frost/freeze conditions for the state. For northern Ohio, this is about the average time the first freeze occurs. For central and southern Ohio, only about 10-20% of the time do we experience a freeze this early (e.g., Dayton, Cincinnati, Columbus, Athens). High pressure will take control of our weather for Wednesday through Sunday, with mosly sunny skies and temperatures warming back into the 60s and 70s by the weekend. The***Weather Prediction Center*** is currently forecasting less than 0.25” of rain for most of the state, with localized amounts of up to 1.5” in northeast Ohio (Figure 2).

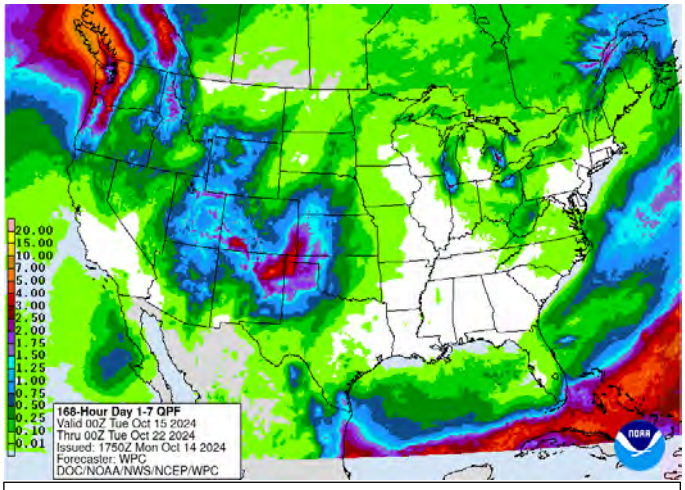


Figure 2. Precipitation forecast from the Weather Prediction Center for 8pm Monday October 14 – 8pm Monday October 21, 2024

After this brief cool spell and warming trend this weekend, the 8-14 day outlook from the ***Climate Prediction Center*** and the ***16-Day Rainfall Outlook from NOAA/NWS/Ohio River Forecast Center*** show strong probability for above normal temperatures and near to below normal precipitation (Figure 3). Climate averages include a high-temperature range of 62-66°F, a low-temperature range of 42-45°F, and weekly total precipitation of 0.55-0.7”.

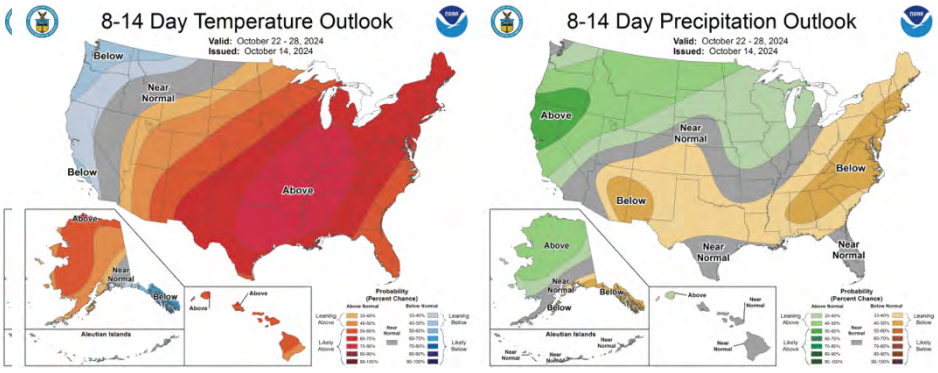


Figure 3. Climate Prediction Center 8-14 Day Outlook valid for October 22 - 28, 2024, for left) temperatures and right) precipitation. Colors represent the probability of below, normal, or above normal conditions.

Precipitation, Cooler Weather, and Corn Dry Down

By Osler Ortez and Alexander Lindsey
Source: https://agcrops.osu.edu/newsletter/corn-newsletter/2024-35/precipitation-cooler-weather-and-corn-dry-down

With >70% of mature corn and harvest season just started it is time for a brief update on dry down and potential lodging issues post-recent storms. Cooler than normal temperatures and wetter than normal precipitation can impact corn drydown. We recently transitioned to cooler temperatures as well as ample precipitation in many parts of the state.

Corn Dry Down and Calendar Dates

Once corn reaches physiological maturity (when kernels have obtained maximum dry weight and black layer is formed), it will dry approximately 0.75 to 1% per day during favorable drying weather (sunny and breezy) during the earlier part of the harvest season (from mid-September to late September). By early to mid-October, dry-down rates usually drop to 0.5 to 0.75% per day. Between late October to early November, field dry-down rates drop to 0.25 to 0.5% per day. Finally, by mid November, drydown rate is estimated at about 0 to 0.25% per day. The later it gets, drying rates go lower and at times drying can be negligible.

Corn Dry Down and Growing Degree Days

On the other hand (outside of calendar dates), estimating dry-down rates is possible by looking at Growing Degree Days (GDDs). Available literature has indicated that it generally takes about 30 GDDs to lower grain moisture each point from 30 to 25%. Drying from 25 to 20% requires about 45 GDDs per point of moisture loss. Note that these estimates are general and not hybrid specific; a hybrid's requirements for actual drydown may vary. By this time of the year (October), and with the current weather, we are accumulating about 5 GDDs per day (assuming Tmax = 60F, Tmin = 50F).

Corn Dry Down and Past Research in Ohio

Past research in Ohio evaluating drydown provides insights on effects of weather conditions:

- During warm & dry fall conditions, grain moisture loss per day ranged from 0.76 to 0.92%.
- During cool & wet fall, grain moisture loss per day ranged from 0.32 to 0.35%.
- Under warm & dry fall conditions, 24 to 29 GDDs were needed for each percentage point of moisture loss (that is 24 to 29 GDDs needed to decrease 1% of moisture).
- Under cool & wet conditions, 20 to 22 GDDs were needed for each percentage point of moisture loss.

Summary
Overall, grain moisture losses (drydown rates) are lower under cool & wet weather than under warm & dry weather. We need warm and dry days to speed up corn harvest progress this year. The general recommendation is to harvest corn for dry grain storage at about 25% of field grain moisture or less. However, allowing corn to dry down (e.g., below 20%) while it stands in the field risks yield losses from stalk lodging, ear drops, ear rots, insect feeding, and other wildlife related causes. If one of those is a concern, consider harvesting those fields earlier (even if at higher moisture). The costs associated with drying grain (in the farm or at the elevator) should be also considered as part of making harvest decisions.

For instance, recent storms raised questions and concerns for corn lodging. When lodging damage happens during the grain filling stages (R2 and later), flattened plants will likely remain that way through harvest. Most of the recent lodged corn was at the dent stage (R5) or phisiological maturity (R6). Yield losses from lodging are most severe when it occurs during pollination time or early reproductive stages (R2-R4). However, if corn becomes lodged during the later part of the season, ears might be non-harvestable if the damage is severe and no harvest accommodation can be made to pick ears from affected plants on a field (e.g. use of a reel, snout cones). Concerns may also be elevated with downed grain corn, as often the lodged plants will decrease air circulation and could lead to more ear disease formation and possible kernel sprouting.

To read more about these and other issues associated with strong storms, consult OSU Factsheets AC-1054 (***https://ohioline.osu.edu/factsheet/ac-1054***) and ANR-0151 (***https://ohioline.osu.edu/factsheet/anr-0151***).

Should Machinery Be in an LLC?

By Barry Moore
Source: https://farmoffice.osu.edu/blog/mon-09162024-942am/should-machinery-be-llc

A common question related to farm business planning is: should I put my machinery in a separate LLC for liability protection? Like most answers to legal questions, the answer is “it depends”. Let’s discuss this issue further.

First, let’s look at the strategy behind using a machinery LLC. Machinery is put into an LLC and then the farming operation leases the machinery from the LLC. The idea is that if the machinery is involved in a liability incident, such as an accident on the road, the liability is trapped in the machinery LLC and does extend to the farming operation or other assets.

Unfortunately, strategy and reality are not always the same. Machinery LLCs do provide some liability protection but do have definite limitations. The problem is that the source of the liability may be the operator of the machinery, not the machine itself. If the liability is due to operator error, the liability will likely come back to the operator. If the operator is working on behalf of the farming operation, the liability can and likely will come back to the farming operation. Let's look at an example:

- Farmer operates a grain farm and often has large equipment traversing narrow roads. Understandably, Farmer is concerned about the potential liability of the machinery. He places his machinery in Machinery LLC. Farmer leases the machinery from Machinery LLC.
- After the LLC is established, Farmer's employee is moving the corn planter from one field to another and is involved in a traffic accident. It is determined that employee was at fault for the accident.

Machinery LLC, in this situation, will probably not provide much liability protection. The source of the liability for the accident is not the machine but the operator. So, liability follows the operator which brings the liability back to the farming operation. Farmer's farming operation is at risk to the liability caused by the accident.

If the accident referred to above was caused solely by a failure of the machine and not operator error, then the LLC would provide liability protection to the farm operation. However, most accidents involving farm machinery are due to operator error rather than machinery malfunction.

LLCs can provide liability protection, even if operator error causes the liability, but they must be operated in a very specific manner that will require considerably more management. To maximize liability protection, the LLC must be the employer of the machine operator. The farm operation then contracts with the machinery LLC to essentially provide custom operations. This strategy requires separate payrolls for both the farming operation and the machinery LLC and tracking which employee is working for which business. Frankly, this strategy is not feasible for most farm operations.

Where this strategy does sometimes work is with grain trucks. An LLC can be established for holding the grain trucks. The truck LLC has a payroll separate and apart from the farming operation. When an employee is hauling grain, they are paid by the trucking LLC rather than the farming operation. The farming operation pays the truck LLC a custom hauling rate. If an accident occurs while hauling grain, the farming operation has considerable protection from the resulting liability. Let's look at an example:

- Farmer sets up Truck LLC and transfers his grain trucks to the LLC. The new LLC establishes a payroll and instructs all employees to keep separate hours depending on whether they are doing farm work or trucking work. Farmer's farm operation pays Truck LLC a custom hauling rate for all grain hauled.

- Employee is hauling grain to the elevator when they cause a traffic accident. The employee and Truck LLC (as the employer) is likely to be liable for the accident. However, the farm operation is likely insulated from liability because it neither employed the driver nor owned the truck.

The above example illustrates how LLCs can be set up to maximize liability protection for farming operations. However, this maximized liability protection requires considerably more management including leases, tax returns, and separate payrolls. This situation usually works best when the farming operation has already been doing some custom hauling and is familiar with managing custom hauling contracts.

So, what do we do to overcome the limitations of LLCs? The answer is liability insurance. The most important and effective liability protection is liability insurance. Using business entities for liability protection should only ever be as backup to the liability insurance. Before spending time on machinery LLCs, farmers should take the time to review their insurance policy with their insurance agent to make sure all activities and assets are covered. There is no substitute for good liability insurance.

While machinery LLCs have limitations for liability protection, there are still many reasons they may be beneficial to a farm operation. The following are a few benefits of machinery LLCs:

- Consolidation of ownership. It is common for different family members to own different pieces of equipment or to share ownership in equipment. Over time this can become complicated and cumbersome. For convenience and easier management, it can be beneficial to put all machinery in one LLC and then each family member receives an ownership interest in the LLC.
- Transition planning. It is very easy to transfer ownership in an LLC –essentially just signing a piece of paper. In situations where we may want to transfer the ownership of machinery over time, LLCs are a great method to do this.
- Avoiding probate. Machinery is untitled so cannot be made transfer on death to avoid probate. However, the ownership interests of a machinery LLC can be transfer on death avoiding probate. By transferring machinery to an LLC then making the LLC ownership transfer on death, probate can be avoided on machinery.
- Tax planning. LLCs can be taxed as partnerships, C-Corporations, S-Corporations or sole proprietorships. The flexibility of the LLC tax structure can allow for creative tax planning.

Machinery LLCs do provide at least some liability protection for farming operations but in many situations the protection may be limited. However, there are many other good reasons to consider establishing a machinery LLC. Discuss the strategies and their advantages and disadvantages with your legal and tax advisors to determine if a machinery LLC may be the best strategy for you.

Pasture, Rangeland and Forage Rainfall Index Insurance: An Insurance Product for Illinois Livestock and Forage Producers

By Brittney Goodrich
Source: https://farmdocdaily.illinois.edu/2024/10/pasture-rangeland-and-forage-rainfall-index-insurance-an-insurance-product-for-illinois-livestock-and-forage-producers.html

The Pasture, Rangeland and Forage Rainfall Index (PRF-RI) is a crop insurance product underutilized by Illinois livestock and forage producers. Only 6% of the eligible acres in Illinois were insured in 2024, much lower than use west of the Mississippi. Like other Federal crop insurance programs, PRF-RI is heavily subsidized. Over time, PRF-RI has returned $1.29 in payments for each $1.00 in producer-paid premium. Illinois and Midwest livestock and forage producers should consider using PRF-RI as a risk management tool.

PRF-RI Use in Illinois
PRF-RI has been available as a risk management tool for livestock and forage producers in Illinois since 2016. According to the 2022 USDA Agricultural Census, Illinois producers operated roughly 742,000 acres of pasture and 473,000 acres were harvested for hay production. In 2024, approximately 70,000 acres were enrolled in PRF-RI, meaning less than 6% of eligible forage land in Illinois is enrolled in this subsidized insurance program.

Only about half of Illinois counties have any acreage enrolled in PRF-RI. The top five counties with the highest percentage of forage acreage enrolled in PRF-RI are Hamilton (27%) and Jefferson (24%) in southern IL, Kendall (27%) and Grundy (23%) in northeast IL, and Hancock (20%) in western IL.

Figure 3. Illinois Acres Enrolled in PRF-RI by Coverage Level and Year, 2016-2024

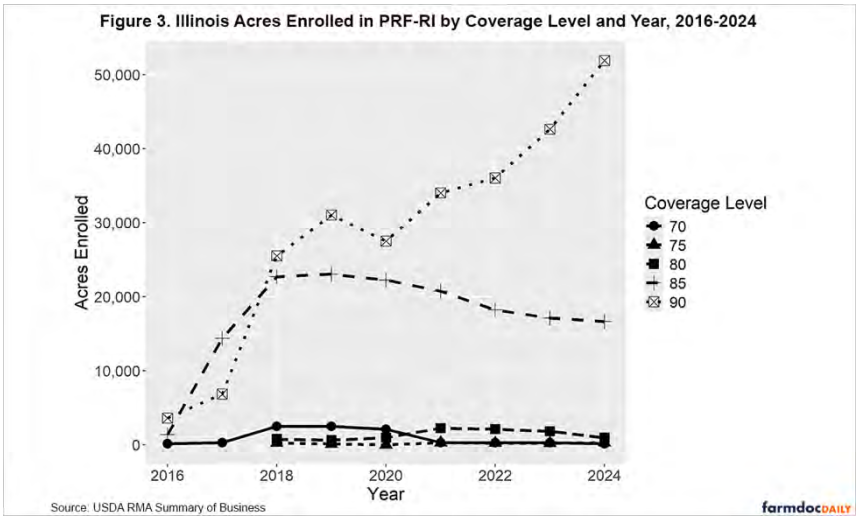


Figure 3 displays the total acreage enrolled in PRF-RI in Illinois by coverage level. The highest coverage levels of 85% and 90% are most popular, and the 90% coverage level by far has had the largest growth in acreage. Of the roughly 70,000 acres of Illinois forage land enrolled in PRF-RI in 2024, 74% were enrolled at the 90% coverage level.

How PRF-RI Works

PRF-RI is meant to insure livestock and forage producers against lower than average rainfall which could decrease forage production. This program covers perennial pasture, rangeland or forage so annual forage is not covered by this insurance product. PRF-RI is index insurance, meaning policies are not based on actual forage yields. Payments and coverage are based on a grid system, where grids cover an area of 0.25 degrees latitude by 0.25 degrees longitude (roughly 17 miles x 13 miles in Illinois). A policy is based on the specific grid in which the hay or pasture is located. Rainfall index values are calculated by a weighted average of nearby National Oceanic and Atmospheric Administration (NOAA) weather stations and are reported in relation to historical average rainfall in that grid.

To participate in PRF-RI, producers make multiple decisions:

- Insured Acres: Producers must choose the number of acres to insure. Producers do not have to insure all of their forage acreage.
- Intended Use (Hay or Graze): Producers must choose between haying or grazing as the intended use for the acreage. Grazing acres have a lower premium cost but also lower potential indemnity payments than hay acres. If producers indicate hay production as their intended use, they must also choose whether the acreage is irrigated or not and whether the acreage is Certified or Transitional Organic.
- Coverage Level: The coverage level is the rainfall index level at which an indemnity payment is triggered. Possible coverage levels are 70, 75, 80, 85, or 90 percent. Higher coverage levels have higher premium costs. There are different premium subsidy levels (the portion of the premium that the Federal Crop Insurance Corporation will pay). Subsidy levels range from 51 to 59 percent, with the lowest coverage level (70 percent) receiving the highest subsidy level (59 percent).
- Productivity Factor: Producers can adjust the covered value of their forage by adjusting the productivity factor to be between 60 to 150 percent. A base value of production is provided by the RMA for each county that differs by intended use (hay acreage typically has higher county base values). The productivity factor adjusts the coverage level relative to that base value to best represent a producer's coverage preference. Together, the decisions on coverage level and productivity factor determine the dollar amount of protection. For example, if the county base value is $100 per acre, a coverage level of 90 percent and productivity factor of 125 percent would result in a dollar protection amount of $112.50 per acre.

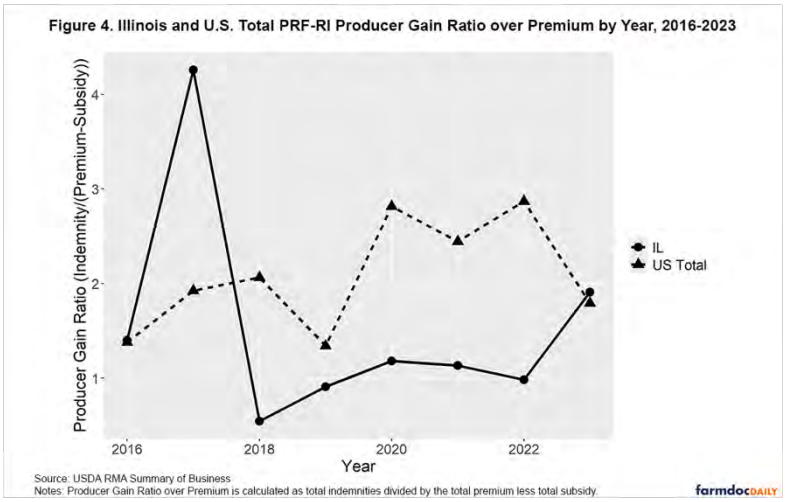
Two-month Index Interval and Percentages of Value: The crux of the PRF-RI insurance lies in the choices of coverage level and two-month intervals. Producers must choose two-month intervals in which they want to insure against low rainfall. Two-month

intervals run from January/February to November/December, and a participant cannot choose overlapping intervals, i.e., March/April and April/May.

The participant must place a percentage of value into each chosen interval, and the percentage of value across all intervals must sum to 100. To minimize risk, the percentage of value should reflect the ranking of which month intervals matter most for forage production. For example, if a participant chooses 90 percent coverage and March/ April and May/June intervals, an indemnity is paid if the rainfall index in either March/April or May/June falls below 90 percent of its historical average.

PRF-RI Performance

Figure 4 shows the producer gain ratio over premium for PRF-RI from 2016 to 2023 for Illinois and the total U.S. The producer gain ratio over premium is defined as the total indemnities divided by the total producer-paid premium (total premium less total subsidy paid by the government). A producer gain ratio of one would mean that on average producers received the same amount in indemnities as they paid out in premiums. On average Illinois producers received more in indemnities than they paid out in premiums: for every $1 spent on PRF-RI premiums, Illinois producers received $1.29 in indemnities. This was lower than the overall U.S. total, in which producers received $2.18 in indemnities for every $1 paid in premiums. The producer gain ratio of course varies from year to year as seen in Figure 4. While Illinois producers on average received less per dollar spent on PRF-RI than the U.S. as a whole, it is worth noting in fewer than half of the years, Illinois producers paid more in premiums than they received in indemnities (gain ratio less than one).



Summary and Further Information

PRF-RI insurance is a subsidized insurance product that has potential advantages for livestock and forage producers in Illinois. It offers a chosen level of protection against the loss of precipitation. Because the premiums are subsidized, the producer cost of this insurance coverage is reduced.

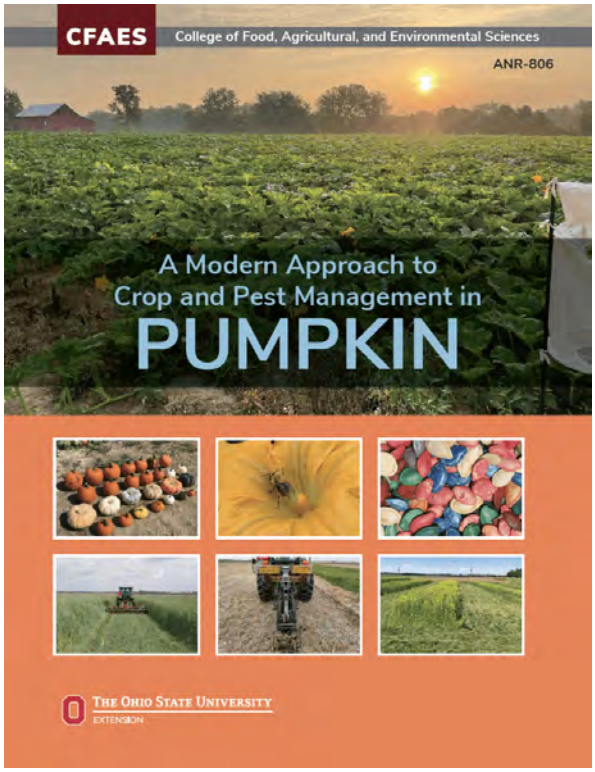
PRF-RI is not a sufficient risk management strategy on its own. It should be utilized along with other risk management practices, such as forage diversification, improved soil fertility, and grazing management.

PRF-RI insurance can be purchased through any ***authorized crop insurance agent***. The enrollment deadline for each year is December 1 of the prior year. The premium payment deadline is September 1 of the following year, so premiums do not need to be paid up front.

The USDA Risk Management Agency provides more information as well as ***an interactive decision tool*** that can be used to search for grids, explore policy options and costs, and plot out historical rainfall indices and policy outcomes.

New Pumpkin Production and Pest Management Guide Available

Source: https://u.osu.edu/vegnetnews/2024/09/28/new-pumpkin-production-and-pest-management-guide-available/



A new 72-page guide, “A Modern Approach to Crop and Pest Management in Pumpkin – ANR 806”, was published in August 2024 to help both beginner and experienced growers produce a better crop. Thirteen specialists from Ohio State University, Michigan State University and Cornell University worked together to produce this guide which increases awareness of modern IPM practices such as mechanical weed control, cover crops, pollinator protection and negative impacts of certain pesticide mixtures. Basic topics like weed, insect and disease management are also covered, as well as the benefits of natural enemies and a pumpkin enterprise budget to measure overall profitability. In addition to colorful images and layman’s text to explain each topic, QR codes are sprinkled throughout the guide to provide deeper dives on most topics via factsheets, bulletins, websites and videos from specialists around the country. Although the guide was written for growers in the Midwest, most concepts will apply to growers in the Northeast and Southeast regions of the country.

Copies of the guide can be ordered and purchased at your local Extension county office or online at OSU Extension Publishing (***https://extensionpubs.osu.edu/a-modern-approach-to-crop-and-pest-management-in-pumpkin/***)

Farm Office Live Scheduled for October 18

Source: https://farmoffice.osu.edu/blog

OSU Extension will be offering the October Farm Office Live webinar on Friday, October 18 from 10:00 to 11:30 a.m. Farm Office Live is a monthly webinar of updates and outlooks on legal, economic, and farm management issues that affect Ohio agriculture. Some of the topics which will be addressed during this webinar include:

- Fall Crop Insurance Update
- USDA Drought Assistance Programs
- Legal Update
- Tribute to Paul Wright
- Is H-2A a Viable Option for Your Farm
- 4th Quarterly Fertilizer Price Summary
- Winter Program Update

Featured speakers include guest Farm Office members Peggy Hall, Jeff Lewis, David Marrison, Robert Moore, Eric Richer, and Clint Schroeder. Register for this and future Farm Office Live webinars through ***this link on farmoffice.osu.edu***.