

David Hallauer  
District Extension Agent, Crops & Soils

## Fungicide Resistance

While yield losses from diseases like Gray Leaf Spot, Southern Rust, and Tar Spot underscore the value of an appropriately timed fungicide application in corn (response potential in lower disease pressure soybeans is much less...), there's still work to be done to avoid one of the big issues seen with weed control products: resistance.

Herbicide resistance *is* a concern, but fungicide resistance is on the rise as well. A 2022 survey of fields with Frogeye Leaf Spot in six counties confirmed resistance to the QoI class of fungicides across all six counties with 85 percent of the samples exhibiting resistance. It's not 100 percent and it's only with one fungicide class, but it *is* enough to warrant consideration of resistance management if a soybean fungicide application is in the back of your mind.

Delaying resistance starts (and ends) with scouting. The main disease warranting a fungicide in our soybean fields is Frogeye Leaf Spot. Finding frogeye for the 2022 survey was difficult and is a good reminder that scouting for *fungus* disease presence (bacterial diseases are not affected by a fungicide...) should be the first step in making an application decision.

If applying a fungicide, avoid single fungicide class products. According to UNL Plant Pathologist Dr. Loren Geisler, the genetic diversity of frogeye leaf spot allows it to develop resistance more rapidly when single mode of action products are used. Whether using a premix product or tank mixes, use multiple fungicide classes to combat resistance.

Apply labeled rates. As with weed control products, applying a sub-lethal product dose only increases resistance risk. Labeled rates applies to the rate of active ingredient *and* carrier.

Finish with a post application field scouting to evaluate how well the fungicide managed disease. If diseases aren't adequately controlled, find out why. It may not be resistance, but the prevalence of confirmed resistance means it deserves a second look.

Geisler summarizes his resistance thoughts in a 2017 publication this way: *If we are not diligent in managing resistance, we could soon be faced with the same situation challenging us in weed control. Many herbicides are available, but we currently only have three fungicide modes of action that are commonly used commercially. Because the tools in our disease management toolbox for fungal diseases are more limited than those for weed management, it is imperative that we all be good stewards of fungicide use in our row crops.* Good advice...

For fungicide efficacy ratings in soybeans, see the Crop Protection Network's soybean fungicide efficacy rating chart at: <https://cropprotectionnetwork.org/publications/fungicide-efficacy-for-control-of-soybean-foliar-diseases> or request a copy from any District Office.

Ross Mosteller  
District Extension Agent, Livestock & Natural Resources

## Prussic Acid Poisoning

Summer annual forages can be a great tool in the tool box for graziers. Just this week I turned out a group of cows on a patch of mixed summer annual forages to give the brome pasture some rest. This is always a practice that comes with trepidation on my part, as there are a couple issues that can cause health issues and even death with our ruminants, notably nitrates and prussic acid. The most rapid and lethal issue at this time of year is prussic acid, so that will be the focus this week.

Prussic acid toxicity is often thought to be an issue in hot/dry summers, directly after killing frost or other times of plant stress. Stress leads to certain plants becoming toxic, including plants in the sorghum family. Prussic acid is highest in the leaves of young plants with the upper leaves containing the very highest amounts. Large amounts of nitrogen fertilizer, coupled with imbalances of nitrogen and phosphorus in the soil, can increase potential for prussic acid toxicity. When planting sorghums for grazing, check the toxic potential of the particular variety. Plants like Johnsongrass and Shattercane can have very high levels while Pearl Millet is relatively low.

Hydrocyanic acid, also known as cyanide or prussic acid, is the toxin causing issues. The toxin is created when the harmless hydrocyanic glycosides in plants are stressed and break down. Once the hydrocyanic glycosides in the plants are damaged, they quickly convert to prussic acid which can kill an animal within minutes of being consumed. When cattle chew and ingest the plants high in hydrocyanic glycoside, the prussic acid is released in the rumen and absorbed into the blood stream. The toxin prevents cells from taking up oxygen. Blood becomes saturated with oxygen which cannot be absorbed by the cells. The clinical signs are excitement, muscle tremors, increased respiration rate, excess salivation, staggering, convulsions, and collapse. Death in the animals is caused due to asphyxiation.

Treatment is possible and animals can make a full recovery, if caught and treated quickly by a veterinarian. If you have animals displaying clinical signs of prussic acid toxicity, immediately remove all the animals that appear normal to a new pasture and contact your veterinarian. The veterinarian can treat the sick animals to reverse the toxicity. While treatment is an early option, prevention is always the best approach. Management practices that can reduce or prevent prussic acid toxicity include:

- Select and plant varieties that are known to be lower in prussic acid production
- Fertilize according to accurate soil testing recommendations
- Graze mature plants to avoid actively growing plants or lush regrowth
- Turnout a few head to observe for issues, before grazing the entire herd
- Never turn hungry animals out on potential prussic acid plantings
- Hay or ensile problem plant species
- In the fall of the year, wait until plants have cured following a killing frost, typically one week

Testing for prussic acid is a possibility, but given the volatile nature of the toxin, it can be a challenge to get an accurate measure. Proper, representative sampling is extremely important as well. Getting a test is never a bad thing, but it can create a false sense of security if done improperly. Plants can be tested for prussic acid, but it can be challenging. If not done properly, producers may get a false sense of security. To learn more, visit with your local Extension Office or reference the K-State publication [“Prussic Acid Poisoning” MF3040](#) found at the KSRE Bookstore.

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Laura Phillips  
District Extension Agent, Horticulture

No news article this week.

Teresa Hatfield  
District Extension Agent, Family and Community Wellness

### **Medicare Prescription Payment Plan: Coming in 2025**

One of the changes coming to Medicare Part D plans in 2025 is the Medicare Prescription Payment Plan (MPPP). According to the Centers for Medicare and Medicare Services (CMS), this new payment option will allow Medicare beneficiaries with a Part D drug plan to spread prescription costs across the calendar year. All plans, including Medicare Advantage Plans with Part D coverage, will offer this payment option. Participation in the program is voluntary, and there is no cost to beneficiaries. Beneficiaries will not incur any interest or fees with the program. In 2025, new changes to Medicare will cap your out-of-pocket expenses at \$2,000. The cost cap will be for everyone with Medicare and a Part D plan, even if you don't join the MPPP.

Beneficiaries that select the MPPP option will still have to pay your plan premium (if you have one). You will get a bill from your health or drug plan to pay for your medications instead of at the pharmacy. You will still be responsible for the cost of your medications. If you want to know how much your medication costs, you must ask your pharmacy before you take the medication home.

Deciding whether this option will work for you will require some consideration. If you have high out-of-pocket drug costs early in the calendar year, this option will spread out what you pay across the calendar year. The MPPP will not lower the costs of your prescription drugs, but help you better manage your expenses during the year.

The MPPP program might not be a good match for you if:

- Your yearly drug costs are low.
- Your drug costs are the same each month.
- You're considering signing up for the MPPP late in the year.
- You get or are eligible for Extra Help from Medicare.
- You get or are eligible for the Medicare Savings Program.
- You get help paying for your drugs from other organizations, like a State Pharmaceutical Assistance Program, a coupon program, or other health coverage.

Keep in mind that your payments might change every month, depending on whether or not you fill a new prescription. For example, if you fill a new prescription late in the year, your monthly payments for the remaining months will go up.

If you are interested in enrolling in MPPP, you will have the option to do so during the Medicare Part C and D enrollment period in the fall. This enrollment period starts on October 15 and ends on December 7, 2024.

The MPPP will take effect on January 1, 2025. If you have questions about Medicare or need help determining your options, call Teresa Hatfield at the Meadowlark Extension District at 785-364-4125 or email at

[thatfield@ksu.edu](mailto:thatfield@ksu.edu).

*Resources: Centers for Medicare and Medicaid Services*

Cindy Williams  
District Extension Agent, Food, Nutrition, Health and Safety

### **Canning Previously Frozen Foods**

Sometimes, freezing is the quickest way to preserve fresh food from the garden or farmers market. But can that frozen food be used in canning? In many cases, it depends on the food itself. Freezing will change the texture and soften the food upon thawing. This will cause the food to pack into jars differently compared to fresh foods.

For example, frozen tomatoes could pack into jars differently than freshly prepared tomatoes and cause overfilling of jars since they are softer when thawed. Overfilling can result in under-processing (and therefore possible spoilage on the shelf) and possibly under acidification with more tomatoes in the jar than expected. Process times are dependent on food being prepared as described in the preparation steps printed with the time. The best recommendation is to use these tomatoes in something that is well cooked like stewed or crushed tomatoes or make tomato juice or sauce.

The only way to consider doing this with tomatoes is to freeze the tomatoes for a very short time of just a few weeks at most, without any other added liquid or ingredients. Then when you have enough, thaw them completely and use all the tomatoes and their juices in the pack to make the crushed tomatoes with the hot pack method.

Unsweetened frozen and thawed fruit can be used in place of fresh fruit in jams and jellies. For best results, measure frozen fruit before thawing.

For more food or food preservation questions, be sure to contact me at the Meadowlark Extension District Office in Oskaloosa. I can be reached at 785-863-2212 or [csw@ksu.edu](mailto:csw@ksu.edu)