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District Extension Agent
Crops & Soils/Horticulture

Fungicide Applications in Corn

A tour of Meadowlark Extension District fields last week suggested consistent presence of Gray Leaf Spot (GLS) in scouted fields at very low levels. That's a good sign – but one that could change rapidly as we proceed through the growing season. As the optimum application window approaches (years of fungicide application research suggest the single best time to apply fungicide to corn for GLS control is from VT to R1), it's a good time to think about how we manage fungicide applications to achieve the highest effectiveness.

Timing is one key. Early applications (V7/V8) won't persist against late-season pressure. Protection from the fungicide is limited and if disease pressure is sufficient, a second application may be needed. If GLS *isn't* an issue, but you are worried about southern rust and want to wait to see what happens on that front, keep in mind that foliar fungicides are best applied prior to R5 for southern rust control (think in the R2 range). Visit <https://corn.ipmPIPE.org/southernCornrust/> to follow Southern Rust progress (currently found in Louisiana and points east, but not yet north). For fungicide recommendations, visit the Crop Protection Network at: https://cropprotectionnetwork.s3.amazonaws.com/CPN2011_FungicideEfficacyControlCornDiseases_04_2022-1650470887.pdf.

When scouting, consider other factors as well: hybrid susceptibility (more susceptible hybrids will have a greater response to a fungicide), previous crop residues, weather (southern rust is favored by warm days and nights above 80 degrees F with high humidity, field history, and disease pressure. According to the data from Illinois corn fungicide trials, if at least five percent of the ear leaf area is affected by disease at the end of the season, a foliar fungicide applied at VT and R1 would likely have been beneficial.

With any luck, you'll avoid a fungicide application altogether. If not, it's a great time to evaluate where to focus your efforts.

Tomato Leaf-Spot Diseases

July has arrived, and soon, too (if they haven't already) will fungal diseases of tomato. If you find brown spots on the leaves, you may well have either Septoria leaf spot or early blight.

While you'll usually see Septoria first, both diseases can infect leaves, turning them yellow and causing them to drop from the plant. Bottom leaves will show disease pressure first.

To try and prevent issues, consider mulching, caging, or staking to hold plants up off the ground. Enhance circulation and implement other practices to help plant leaves dry more quickly. Work to keep water from splashing disease spores from the ground to the plant as well. Mulch is again a good option for this. After the season, make a mental note to rotate tomatoes to a different area of the garden next year.

Sometimes, all of our cultural efforts don't quite cut it. If you have to use a fungicide, apply to both the upper *and* lower leaf surfaces, reapplying if rainfall removes it. Time applications to protect the plant when it becomes most susceptible when the fruit is about the size of a walnut. Multiple products are available, but they do have different pre-harvest intervals to adhere to. As with any pesticide, *always* read and follow all label directions.

If you've had problems in the past, make sure you start protecting plants *before* these diseases are first seen. Control is almost impossible on heavily infected plants.

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

Coping with Stress

While aging is often accompanied by stressful life changes, studies show that most older adults feel happy about their lives. Some things you can do to help manage stress are the following:

- Take care of yourself. When dealing with stress, it's important to get plenty of sleep and maintain a healthy diet. Avoid caffeine and alcohol.
- Get regular exercise. Exercise releases hormones that help you fight off stress.
- Participate in social activities. Find activities you enjoy that will give you more social interaction.
- Share your feelings with friends and loved ones. This is the best way to get those emotions out in the open.
- Learn relaxation techniques. Mind-body techniques, such as deep breathing, meditation and yoga, can be helpful. You might also relax by reading, listening to music or walking around your neighborhood.
- Put things in perspective. Accept that there are things you just can't control---try to see the positive aspects of change. Solve whatever problems you can and let go of the rest.
- Get professional help. If you are still struggling with stress or depression, talk with your health care provider. Treatment with counseling or medication may help you get back on track.

Teresa Hatfield
District Extension Agent
Family & Community Wellness

Aging and Muscle Loss, Yikes!

Stay Strong, Stay Healthy



As we get older, even as early as our 30s, we lose muscle mass. Muscle loss really starts to accelerate in our 50s, and by the time people are aged 60 to 70, we have lost 12% of their muscle mass, and people over age 80 have lost around 30%. This muscle loss is known as sarcopenia, and aging is one of the risk factors. Muscle loss can cause us all sorts of problems, such as loss of balance, loss of stamina and increased weakness, increased falls and fractures, the inability to do activities of daily living, greater inflammation, and risk of heart disease.

Less than 20% of older adults engage in adequate physical activity, and fewer perform strength training. Strength and resistance training is an excellent way to combat the effects of muscle loss. Even if you have never worked with weights before, strength training as you get older has many benefits. Strength training can improve balance, enhance flexibility, relieve arthritis pain, control weight gain, lift depression, reduce stress, reduce the risk of heart disease, and improve sleep.

Stay Strong Stay Healthy is a program offered through K-State Research and Extension designed to help maintain or improve your muscle mass. The University of Missouri adopted Stay Strong, Stay Healthy from the Tufts University program for women. Participants in Stay Strong, Stay Healthy meet for one hour twice a week for eight weeks. Activities include warm-up exercises, strengthening exercises with or without weights, cool-down stretches, and lots of fun. Class members are encouraged to exercise once more on their own during the week. Evidence has shown that this program works—participants who have completed the program report feeling better in their overall health and feel stronger. Participants who have completed pre and post fitness assessments improve their balance, flexibility, and stamina.

Stay Strong, Stay Healthy will be offered by the Meadowlark Extension District at the Holton Courthouse in room 105 starting on August 1. Classes will meet on Mondays and Wednesdays for one hour, beginning at 9:30 a.m. The class cost is \$20 per person for all 16 sessions. Hand and leg weights are provided; all you need to do is wear comfortable clothing and closed-toed shoes. Class space is limited, so drop by or call the Holton extension office to register for the class.

Ross Mosteller
District Extension Agent
Livestock & Natural Resources

Introduction and Meat Yield in Carcasses

Although not a new face to Meadowlark Extension District, but I am new to the Livestock and Natural Resources position. This is my first news column in this Agriculture role, so here's my quick bio and then we'll dive into the topic. I'm originally from Bern, Kansas and currently live three miles from where I grew up, with my wife Tonya and our three children - Maddy, Lane and Lindy. After completing an Animal Science degree at Kansas State, I was hired as the Agriculture agent in Washington county, moved into the River Valley District Livestock agent role and have served as the 4-H Youth Development Agent in Meadowlark District for the past twelve plus years. I'm excited to work with livestock producers across the District, while my office remains in Seneca.

Today I'll tackle a natural, timely, topic that transitions from 4-H to livestock for me. With county fair rapidly approaching, many 4-H and FFA members offer livestock projects for sale as freezer meat. Consumers who buy a live animal from a local producer or 4-H member for custom processing, are often surprised by the amount of meat they receive, the amount of freezer space needed and that they did not get back the entire live weight of the animal in retail cuts. This example is with beef, but typical dressing percentages for the other species are listed and the calculations will be similar from that point on.

Dressing Percentage is an important term to remember as it represents the portion of the live animal weight that is converted into the hot carcass weight. Dressing percentage is calculated as: $(\text{hot carcass weight} \div \text{the live weight}) \times 100$. The hot carcass weight (HCW) is the weight of the unchilled carcass in pounds after the head, hide and internal organs have been removed. For most cattle, the HCW will be approximately 60 to 64 percent of live animal harvest weight, with 62% being average. Dressing percentage ranges for other species are: Sheep & Goats - 44 to 56 with 50% an average, Swine 68 to 72 with 70% an average and meat poultry are typically close to 70% as well. For example, a 1400-pound animal with a hot carcass weight of 880 pounds has a dressing percentage of approximately 63%.

It is not uncommon for the buyer of a live animal to question "if the HCW is 880 pounds and I take home 550 pounds in retail product, where is the rest of my meat?" The hot carcass weight includes bones, excess fat and moisture loss that will not be packed and wrapped for home consumption. Roughly one third of the hot carcass weight gets removed, such as excess fat, bone and other trim. Additionally, carcasses are composed of 70 to 75% water, so as they chill, evaporation will cause the carcass weight to decrease 2 to 5%. Our example 880-pound carcass could lose nearly 40 pounds solely due to water loss by evaporation!

In summary, the amount of meat that is cut and wrapped for consumption will be much less than the live weight of the animal. In our example the 1400-pound beef animal will yield a hot carcass weight of approximately 880 pounds (840 pounds cooled). When deboned and trimmed, there will be approximately 570 pounds of product to fill your freezer. Keep in mind, a quarter of beef takes an approximately 4.5 cu. ft. of chest freezer. A side (half), requires around 8 cu. ft. of space, while a whole beef will need 16 cu. ft.

Supporting locally grown animals, especially youth livestock projects at fair time, is an excellent way to fill your freezer with wholesome, quality products; just be prepared with reasonable expectations for meat yield. Sources include publications from the University of Tennessee Extension and South Dakota State University.