

David Hallauer  
District Extension Agent, Crops & Soils

### **Corn Disease Management Thoughts**

The corn ‘disease of focus’ the past couple of years has been Tar Spot. We’ve answered the question of will it get here (yes...) and know it’s already present in some Northeast Kansas fields (about three weeks earlier than normal). That information helps us evaluate management for Tar Spot, but don’t forget other diseases or general management along the way.

Southern Rust is typically our *other* disease of concern most seasons. It usually shows up a little later in the season relying on spores being transported from the southern reaches of the country via wind/weather events to get it here in time to be a problem. Thus far, it has yet to be detected *anywhere* in the country, and while that may change, it’s not yet a pressing issue.

Whether it’s Tar Spot or Southern Rust or other diseases (Common Rust, Gray Leaf Spot), fungicide best management practices remain the same. Sure, the products might be different (see efficacy ratings from the Corn Disease Working Group at: <https://cropprotectionnetwork.org/publications/fungicide-efficacy-for-control-of-corn-diseases>) but the goal is still to utilize fungicides in an appropriate manner to control disease and retain product effectiveness for the long haul.

Start by avoiding the assumption a fungicide is a necessity. Hybrid susceptibility, field history, previous crop, and weather should all be considered. For example, Southern Rust likes warm days/nights (> 80 degrees) and high humidity while Tar Spot prefers mild temperatures (60F to 73F), high relative humidity (>75%), and greater than seven hours of leaf wetness.

Next, keep scouting. While there are predictive apps (Field Prophet and Tarspotter come to mind...) as well as tracking websites like Corn ipmPIPE (<https://corn.ipmpipe.org/>), scouting is still necessary. Most apps aren’t yet predicting Tar Spot in the Meadowlark District – but it’s here. Take a firsthand look at fields to see when diseases arrive and if treatment is necessary.

If disease *is* present at pressures great enough to warrant a fungicide application, hold off until VT-R1 when possible (in some cases, it may not be...). Fungicide efficacy likely won’t last much past three to four weeks, opening the door to late season infestations. If applications can be delayed, they can help with later developing diseases to protect the crop further into grain fill.

Crop disease pressure is concerning and sometimes a fungicide is necessary. When deciding, keep the above factors in mind to help make decisions to maximize the application’s return on investment and retain fungicide efficacy.

Ross Mosteller  
District Extension Agent, Livestock & Natural Resources

### **Stable Flies on Pasture**

Last month we discussed face flies and I promised to discuss other types of flies throughout the summer. Finding my cows bunched up in the corner of the pasture with their legs covered in mud this past week, indicates that it might be timely to discuss stable flies on pastured cattle. Stable flies aren't just an annoyance. They cause reduced average daily gain, and it may take as few as four flies per leg to cause economic injury.

Stable flies require daily blood meals, usually twice daily, depending upon the weather. They prefer to feed on all four legs and the belly of pastured animals. Their piercing mouthpart can cause pain and irritation to the animal. Additionally, as blood feeders they can vector disease, such as anaplasmosis. After feeding, the stable fly will seek a shaded resting location, off of the animal, to digest the bloodmeal. The stable fly is similar in size to the house fly but is dark gray and has dark irregular spots on its abdomen. The complete life cycle from egg to adult ranges from two to three weeks.

The female deposits eggs in spoiled or fermenting organic matter sometimes mixed with animal manure, moisture, and dirt. The most common developing sites are in feedlots, usually around feed bunks, along the edges of feeding aprons, under fences and along stacks of hay. Grass clippings and poorly managed compost piles also provide ideal larval developing sites. Stable flies are proficient fliers and can travel many miles away from developmental sites, making them even more problematic.

Since stable flies are most commonly found on the legs of cattle, there are some animal behavior signs that indicate that this is a problem pest in your herd. Animals fighting stable flies may display a variety of behaviors, including: tail flicking, skin twitching, leg stomping, standing in water, bunching in corners of the pasture and/or laying with legs tucked underneath them.

Insecticidal sprays are the most common option for controlling stable flies on range cattle. Control products include (active ingredient listed, many brand names use these ingredients): Coumaphos, Permethrin, natural pyrethrins and Phosmet. These products can be applied using a low-pressure sprayer or mist blower sprayer. Weekly applications are required to reduce fly numbers.

Another effective control strategy is to target fly resting places. In pasture settings this can be trees, windmills, fencerows or shaded areas with tall grass. On warm days, especially in the afternoon, these resting sites could be sprayed targeting the foliage, using permethrin or natural pyrethrins. Avoid spraying water tanks and water sources, and always follow label recommendations.

Stable flies impact weight gain on both pastured and confined cattle. Research conducted at the University of Nebraska saw a reduced average daily gain of 0.44 lb. in three, 84-day trials with cattle not receiving an insecticide treatment compared with cattle that did. An economic injury level of five flies per leg has been suggested and is often exceeded in normal pasture conditions. UNL has a very comprehensive livestock insect control publication that can be accessed at:

<https://entomology.unl.edu/livestock/livestockpestcontrol.pdf>

Laura Phillips  
District Extension Agent, Horticulture

### **Tomato Leaf Curl**

Throughout the summer, many gardeners notice their tomato plants have curling leaves. There are various reasons why tomato leaves can curl, but luckily the different causes present different symptoms.

The most common reason for tomato leaf curl is environmental stress, often from change in soil moisture. Tomato plants need a lot of water, and, in times of drought or high temperatures, tomato plants will curl their leaves up and over to reduce the amount of leaf tissue exposed to the sun. This helps the leaf stay cooler and retain water. These inwardly curled leaves without any sign of discoloration indicate that more water is needed.

If you are over-watering your tomatoes, you may see some curling, but it will be accompanied by drooping yellow leaves. Big changes in their environmental conditions, like fluctuating water levels or temperatures, can cause leaf curl, so wait until their conditions stabilize before expecting their leaves to return to normal. The good news is that unless the environmental stress is severe, it likely will have little effect on your yield.

Other environmental causes of curling leaves include transplant shock, excessive pruning, and nutrient imbalances. If your tomatoes were recently planted or pruned, water them well and they should recover within a couple of weeks. Nutrient imbalances can also cause leaf curl and will usually present with leaf discoloration. Too much nitrogen, for example, can cause tomato leaves to curl inward and turn a darker green. Tomato plants exposed to excessive nitrogen will also have a hard time setting fruits. When fertilizing your tomatoes always keep in mind that you can have too much of a good thing.

Although leaf curl is most often due to environmental stress, there can be more severe causes of leaf curl. Tomatoes are sensitive to herbicides, and drift from nearby spraying can cause their leaves to curl. Unlike environmental stress, herbicide damage is often accompanied by twisting or bending stems and leaves, dying tissue, or leaf discoloration. The exact symptoms will vary depending on the type of herbicide.

The last reason for tomato leaf curl is a virus. While more uncommon, it is possible for tomato plants to contract viruses that cause curling leaves and twisting new growth. These symptoms initially look incredibly similar to herbicide damage, but the diseases generally include yellow mosaic discoloration as they progress. There are over a dozen viruses that affect tomato plants, and the exact virus can only be identified by lab testing and viruses cannot be cured.

Although viruses are possible, it is important to remember that leaf curl is incredibly common in tomatoes undergoing environmental stress. Next time you notice your tomato leaves curling offer them some water. Wait until you see die back, yellowing, discoloration, or twisting and deformed new growth before worrying.

Teresa Hatfield  
District Extension Agent, Family and Community Wellness

## **Prevent Heatstroke in Parked Vehicles**

It can only take a few minutes for the temperature in a parked car to reach dangerously high temperatures. We have all heard the horrific stories of children and pets left only in a parked car, only to succumb to the heat. Death can occur quickly to children and pets in less than 10 minutes. Even on days when the temperature seems to be comfortable, even as low as 70°F, the temperature can rise inside a car to dangerous levels.

Nearly all states have reported deaths from children left in a hot car. Kansas has 15 recorded hot car deaths, higher than the per capita national average. Fifty-four percent of children who die in vehicles are forgotten by their caregivers, most often because they were not dropped off at their childcare provider. In more than 30% of cases, a child got into the vehicle by themselves. Most deaths occur in June, July, August, and throughout the rest of the year.

Children's bodies overheat more quickly than adults, with infants and children under three at the most significant risk. Children's bodies can absorb more heat on a hot day than adults. Small children cannot act to protect themselves from heatstroke; they cannot remove themselves from the hot car to seek shelter, and often, they cannot tell someone they are getting too hot. Dogs do not sweat to cool their bodies, so they can overheat quickly. Heatstroke warning signs include:

- Red, hot, and moist or dry skin
- No sweating
- A strong, rapid pulse or a slow, weak pulse
- A throbbing headache
- Dizziness
- Nausea
- Confusion
- Being grouchy or acting strangely

We must remind ourselves to be vigilant and aware of what we are doing and to focus on protecting those in our care. For better safety, follow the following tips.

- Never leave a child or infant unattended in a vehicle, regardless of the outside temperature, even if the windows are open or the air conditioning is running.
- Always check all the seats in your vehicle before locking and leaving the car.
- Do not let children play in an unattended vehicle; this is not a play area.
- Place your purse, computer, cell phone, or other essential item in the back seat so you can see the child.
- Ask your childcare center to call you if your child doesn't arrive on time for childcare.

If you see a child alone in a hot vehicle, call 911 immediately. If distressed, take steps to get them out as quickly as possible. Kansas law protects good Samaritans who act to save a child, a vulnerable person, or a dog, cat, or other animal kept as a household pet. Cool the victim by spraying with cool water (do not use ice or an ice bath). Stay with the victim until law enforcement arrives.

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

### **Picnic Precautions: Avoid Foodborne Illness While Dining Outdoors**

Summer is definitely here! It is time to break out the barbecue and hit the outdoors for fun in the sun. But before you pack up your picnic basket for a fun-filled afternoon at the park, fire up the backyard barbecue, or prepare a poolside lunch for friends, there are a few very important precautions you should take to prevent foodborne illness from ruining your outdoor eating activities.

- Wash your hands often! When preparing a variety of foods at the same time, it is important not to pass bacteria from one food to another with your hands. Washing your hands with warm soapy water for at least 15 seconds before preparing foods and after handling raw meats will significantly lower the risk of foodborne illness.
- Keep raw meats and ready-to-eat foods separate! Cross contamination occurs when juices from raw meats accidentally touch cooked or ready-to-eat foods. Make sure to use two separate cutting boards; one for raw meat, and the other for fruits and vegetables.
- "Make mine well!" Whether you like your steak rare or not, it is very important to cook your large cuts of meat throughout. It is ok to have pink in the center, but make sure the outside is cooked to a dark brown. When barbecuing poultry or seafood, always make sure the meat is cooked through out. Use a food thermometer to check the proper cooked temperature of the foods you are preparing.
- Never wear the same plate twice! Plates that have had raw meats on them should always be washed immediately. Never use the same plate once the meat has been cooked!
- Keep hot food hot and cold food cold. Particularly when you're enjoying an afternoon picnic in the sun, it is critical that cold foods such as potato salad, stay chilled throughout the day. Hot foods, like steak, chicken or hot dogs should be kept covered in foil to retain heat. At the end of the day, make sure to promptly refrigerate all the food you intend to save for the next day. This will help reduce the growth of bacteria in the food.
- Keep melons out of the "danger zone." Melons can pose a risk for foodborne illness if not prepared or stored properly. Before cutting into a melon, wash the outer surface with water thoroughly to remove surface dirt—even if the melon looks clean. Once a melon has been cut, you must keep it chilled in ice or refrigerated at 45 degrees or less. Cut melons can be served without refrigeration for a maximum of 4 hours.
- Safety on the side. Never keep side food items out for longer than two hours that are prepared with mayonnaise or are considered high in protein. Bacteria can multiply in moist foods including salads and desserts. Keep your cold side dishes chilled and away from the sun at all times.