

Jody G. Holthaus  
District Extension Agent  
Livestock and Natural Resources

It seems most of the District is in a moderate drought. Livestock enthusiast are anxious! Planning now can help ease the mind. While there is no single right or wrong answer of what to do, there are some strategies that producers can consider as they plan how to battle these conditions.”

There is the old saying that you cannot feed your way out of a drought. Buying feed can get expensive. You can easily spend more than you would ever be able to recover. In some cases, producers might want to consider selling part of a herd (cows, calves, animals that are not easy keeping) instead of investing large amounts of money in feed. Easier said than done, reviewing your herd records can aid in this decision.

Producers need to determine how much capital they are willing to spend to keep the herd intact. Biting the bullet now by selling some cows will keep you from spending money feeding the poorer cows in the herd

Rotationally grazing, and giving paddocks some rest will help with grazing efficiency. Of course, if there is no moisture for regrowth this may not work.

If the situation continues to worsen, producers should consider moving their cows to a “sacrificial pasture” to be fed. This practice allows other pastures to rest. This will lower costs for feed hauling and the time spent driving to different pastures. If producers rent pastures, they should inform their landlord about plans to let pastures rest.

Producers may be able to feed less expensive alternatives. Corn, wheat and soybean prices are the lowest they have been in a while. Supplementing can also reduce forage intake.

With the perceived shortage of hay this fall, consider ammoniating wheat straw. Ammoniating improves the hay nutritive value. It also improves digestibility, intake and the crude protein level. The ammoniating can also inhibit mold and fungus growth.

A few years ago, we did some ammoniating demonstrations. It is pretty simple; first determine the weight of the bales you will be using. Weigh at least 5 bales to get a good idea of the average weight. Research has shown that approximately 3% ammonia on a roughage dry matter basis provides good results. For example, 10% moisture content on wheat straw has 90% dry matter which equates to 1800 pounds of dry matter per ton of straw ( $2000 \times .90$ ).

Pile them in a pyramid, cover with a single sheet of 6 or 8 mil black polyethylene. Make sure there are no holes or tears, put 8 or more inches of soil around the pile to make it air tight.

We do have hoses and manifolds that you can borrow to make the application easier. Apply ammonia slowly no more than 30 pounds of ammonia per minute. Slow application will minimize ballooning and stretching of the plastic sheet.

With this warm weather, you can feed within 2 weeks, as the weather cools the waiting to feed time increases. Be extremely cautious using Anhydrous ammonia, wear protective equipment, bleed off hose pressure before disconnecting. If you can have the tank with the right amount of anhydrous, then you can just empty the tank. It's important to only ammoniate low quality forages that are dry. Do not feed to cows that have calves under one month of age.

What does this cost? Depending on the cost of anhydrous, ammoniating costs around \$25 to \$40 per ton of roughage. If you need additional details or want to borrow our hoses, give me a call.

David G. Hallauer  
District Extension Agent  
Crops & Soils/Horticulture

### **Leaf-Spot Diseases of Tomato**

You'd think in a spring/early summer this dry that fungal diseases wouldn't be a big issue. It's true that the drier weather and warmer temperatures have reduced some disease pressures – but not all. Fungal diseases on tomato certainly fall in to the latter category.

It's not uncommon to notice brown spots on tomato leaves this time of year. They are likely the result of infection by one of two diseases: Septoria leaf spot or early blight. Even in a dry year, tomato foliage tends to get thick, we water to keep them alive, and humidity is high. These conditions are a welcome mat for fungal infections.

Despite the name, early blight typically occurs *after* Septoria. Early blight spots are typically brown and larger than Septoria spots, often with a pattern of concentric circles resembling a target. Septoria spots are smaller and dark.

Leaves that are heavily infected can turn yellow and drop. Because the older leaves are the most susceptible, disease symptoms tend to start at the bottom of the plant and progress upward. Heavy defoliation can occur if preventative or reactive measures aren't implemented.

Preventive measures can include mulching, caging, or staking the plants to help keep them up off the ground, hopefully putting them just a little further away from soil moisture. It will also increase circulation around the plants and encourage them to spread out, reducing optimum disease conditions.

Mulching is another option. It helps by reducing the amount of disease carrying water droplets that can splash up on to the plant either by natural rainfall or overhead watering.

You can't do much about it this year, but it's always a good practice to rotate the area in the garden where you plant tomatoes as well. If space allows, select an area that hasn't been planted to tomatoes or related crops (peppers, potatoes, eggplant) for several years.

Because they are fungal diseases, fungicides *are* an option. Coverage is the key, so make sure you get fungicide applied to both the upper and lower leaf surfaces when fruit is about the size of a walnut (reapply following rainfall). Products containing the active ingredient chlorothalonil are good choices for fruiting plants because of its zero-day waiting period - meaning fruit can be harvested once spray is dry. If chlorothalonil doesn't seem to be working, try a product containing mancozeb. The waiting period on this product is typically around five days, meaning harvest can't occur until the preharvest interval has passed. Always read and follow label directions. If diseases have previously been a problem, start protection programs before you see disease pressure. Control on heavily infected plants is virtually impossible.

Cindy S. Williams  
Meadowlark Extension District  
FACS

## Healthy Grilling Tips

Do you like your grilled steaks extra well done? Then please read on.... These early summer days stir up an urge to be and do as many things outside as possible. And that means it's time to dust off that grill, stock up on fire fuel and pull out those favorite recipes. Summer belongs to the backyard barbecue, and for good reason. Grilling outside helps us reunite with neighbors, friends and family. It keeps our houses cool and our bellies happy. Plus, grilling is one of the healthiest methods of cooking, or so we think. I don't mean to point out the fly in the potato salad, but some reports do show a correlation between grilled foods and a higher risk of developing cancer.

But don't roll that grill out to the curb yet. Grilling can be a nutritious method of cooking, and with some precautions, it can also be a healthy and safe way to cook, too. The secret lies in not overcooking your food. Turns out, burnt food doesn't just signal bad news for your taste buds, it can also mean bad news for your cancer risk as well.

At high temperatures, compounds in grilled meat, poultry and fish are converted into chemicals called heterocyclic amines (HCA's) which have been linked to a number of cancers. This also holds true for cooking these same foods at high temperatures using broilers and fryers.

Also, the smoke generated when fat and juices drip on the hot coals or rocks can contain polycyclic aromatic hydrocarbons (PAHs), another potential cancer causing chemical. As the smoke rises up past the food it can deposit PAHs on the surface of the meat.

Following these simple procedures can make grilling a safer procedure:

- \* Select low-fat cuts of meat and trim away excess fat. Remove poultry skin to prevent fat from falling on coals and causing flames to flare.
- \* Choose smaller cuts of meat, like kabobs, as they take less time to cook.
- \* Try grilling your favorite vegetables or fruits. They do not contain the protein that forms harmful HCAs.
- \* Marinate your meat. Use marinades that contain vinegar and/or lemon. This gives the surface a higher acidity, which drastically slows down the formation of HCA. Marinating for as little as 40 minutes is effective in reducing HCA. Thicker marinades have a tendency to "char," possibly increasing exposure to carcinogenic compounds so choose a thinner one.
- \* Discard any juices before grilling. This will cause less smoke flare ups, limiting exposure to cancer-causing agents.
- \* Always thaw meat first. This also reduces the cooking time.
- \* Flip burgers often; once every minute. Turning burgers once a minute while cooking over lower heat reduces HCA and will kill E. coli bacteria. The meat should reach 160 degrees to kill the E. coli.
- \* Keep the flames from touching the meat directly.
- \* Create a barrier to prevent juices from spilling and producing harmful smoke. Try lining the grill with aluminum foil and poking holes, and cooking on cedar planks.
- \* Eat a balanced diet rich in fruits and vegetables that contain protective antioxidants.
- \* Use tongs instead of a fork to turn meat. Piercing the meat with a fork can release juices and fat that can cause flame flare-ups.
- \* Grilling meat is not the only way HCA is produced in meat or fish. Any method of cooking meat with extremely high heat, such as pan searing; pan roasting or frying, can cause HCA to form. It is better to cook meat on lower heat.

To end on a good note, the cancer risk from eating grilled foods is relatively low compared to other risk factors such as obesity, smoking and poor nutrition. So, please, enjoy your grilled foods while keeping these precautions, and other cancer-reducing behaviors, in mind.

Nancy C. Nelson  
Meadowlark Extension District  
Family Life

### It's Melon Season

Summer and fresh, juicy melons are a perfect match. Whether you grow them or buy from somewhere else, handling and prepping them safely at home is important.

It is easy to forget that melons grow on the ground. They are exposed to pests and microorganisms from the soil. Here are some tips to safely prepare your melon.

Select a melon with no imperfections. Damage to rinds can cause mold growth or other bacteria to travel to the inside of the melon.

Before cutting the melon, wash your hands. Be sure equipment and utensils are clean and sanitized, including your sink.

Place the melon under running water and scrub the outside rind with a produce brush.

Cut the melon and rinse the pieces as you go. Serve immediately. Store any cut melon leftovers in the refrigerator