K-STATE Research and Extension | Meadowlark District

March 19, 2021

Jody G. Holthaus
District Extension Agent
Livestock and Natural Resources

Fenceline-What's Worse?

My husband asked me this question, "what's worse, the polar vortex or the mud?". My answer was the polar vortex. Baby calves born during the brutal cold, had little chance of survival without assistance. Now, weeks later, ears, noses, feet are showing signs of frostbite. Mud is bad too, just better!

Mud, can trim away pounds and increase costs of production up to 20% or more. Whether for feedlots or for wintering areas, proper holding pen design and maintenance are crucial to keeping cattle dry and comfortable under adverse climatic conditions. In general, mud is one of our costliest weather hazards. The more you concentrate animals under wet conditions the slower pen surfaces dry, causing maintenance energy requirements to increase. In the summer, too much mud on cattle limits the ability of the animal to dissipate heat. Wet muddy areas, inside or outside of pens, are potential breeding areas for flies, which can exacerbate heat stress problems. In the winter, cattle maintenance requirements can be over 50% greater in pens containing wet, muddy cattle versus dry, clean cattle, causing reduced comfort and performance. Summer-time is a good opportunity to get feedlot and other cattle holding pens prepared for next winter, especially if you had mud problems this year. This is accomplished by including mounds and/or good drainage in pen. Good lot drainage is critical to minimizing mud. The basic goal is to remove water as quickly as possible from the pen with minimum erosion of soil and manure. Mounds are useful for enhancing drainage in pens with very little slope and can also provide wind protection for cattle in the winter and allow for enhanced air-flow in the pen in the summer. If mounds are put in a pen it is easier to build mounds and shape pens as the first step when installing new lots. The cost is minimal at most locations if shaping is done before installing fencing, bunks, water troughs and aprons. • In smaller pens, incorporate most of the lot in the mounds and valleys. • Ideally a 3 to 5% slope (away from feed bunks) should be maintained in the pen, with the mound on the center-line of the pen, perpendicular to the high side of the pen and parallel to the direction of slope. • Mounds should have valleys on both sides, with the valley running between the fence and the mound. • Fence lines, which are parallel to the mounds, should also be elevated to allow all water to drain to the valleys and to the back of the pen. • In old lots, mounds can be built from a mixture of manure and dirt. • Locate the debris basins for collecting run-off outside the pen. • Keep the back of the pen clean and open to allow pen drainage to discharge directly into debris basins. • Most pen surfaces, including mounds, will need reshaping and soil added each year. Finally, it is essential that pens surfaces are cleaned annually, with any manure or undigested materials removed from the pen and firm hard-clay surfaces remain. Undigested material, largely in the form of fiber, tends to have a high water holding capacity. These materials will significantly contribute to mud problems by not allowing the surface to dry as fast as they could, plus they may prevent water from running out of the pen. Also, the amount and depth of mud in a feeding area is also dependent on the number of head or density of cattle in the area. A cow-calf pair, reared in drylot, can require over 750 square foot, while a feedlot animal normally requires about 1/3 this amount of space. However, under muddy conditions, space requirements can easily be doubled, depending on drying conditions and drainage. Under Kansas climatic conditions, we rarely can eliminate the effects of adverse weather conditions, however we can minimize effects. Keeping livestock clean and dry will insure animal comfort and enhance returns. The design and maintenance of cattle holding and feeding areas play a crucial role.

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

Foxtail Research

One of the more common hay field invaders on the increase over the past decade has been one (or more) of the three foxtail species we can have in Northeast Kansas – green, giant, or yellow. Some infestations are so heavy it's difficult to believe there's still brome present.

Northeast Area Extension Agronomist Dr. Stu Duncan looked at three different herbicide products focused on foxtail control during the 2020 growing season. Products were applied in late March and again post-harvest (mid-June), with ratings collected every other week to determine the degree of control, possible injury, and overall yield.

On the positive side, the late March applications all resulted in some level of control. Prowl H2O actually controlled over 90 percent of the foxtail as monitored through harvest.

On the negative side, post-harvest applications weren't as successful, resulting in less than 35 percent control across treatments. Herbicide injury was present as well. Some of it was likely due to hard freeze events that occurred following application, and while it wasn't always statistically significant, it *was* visible, resulting in removal of one of the products as this study continues in 2021 (including one site in the Meadowlark Extension District)

The most negative results came in the form of yields and late season infestations. No treatment combination reduced foxtail infestations at the end of the season, despite apparent suppression when ratings were taken in late June. In plots where herbicide injury was not significant, yields were still not statistically different between treated and untreated plots.

See complete 2020 results in the KSU Agronomy e-Update at: https://eupdate.agronomy.ksu.edu/article_new/foxtail-infestations-in-smooth-bromegrass-hay-meadows-430-2 .

Preparing Garden Soil

According to the Kansas Mesonet, the areas that needed rain this past week, got it, meaning most of the state decent precipitation to start spring. As nice as that may have been for replenishing soil moisture, it may slow garden soil.

When summer 'problems' arise in the garden, we often blame insects, disease, or soil fertility. Sometimes, however, the problem is the soil we're standing on – and how we managed it to start the growing season.

Working soil when wet destroys soil structure. Instead of natural soil particle sizes, we get clods, some of which last all summer. We can also get hard pans that prohibit moisture and roots from penetrating, resulting in plant growth issues all season.

If you want to check soil to see if it's too wet to work, try the squeeze test. Start by grabbing a handful of soil, making sure it comes from the depth you plan to work the garden (deeper soils often contain more moisture than at the surface). If water comes out, it's too wet – avoid tillage. If no water drips out, push a finger in to the squeezed soil. If it crumbles, it's probably dry enough. If your finger just leaves an indentation, however, more time is needed.

Early planting tip: if more moisture is coming and you want to try to keep an area dry to plan a little earlier, try tarping the area. Uncover it when it's dry and check soils again. Hopefully there will be enough protected area that you can get to dry out for early plantings.

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

Sharpening Financial Survival Skills Is More Important Than Ever

Some say, "when the going gets tough, the tough gets going" and the going is tough right now for millions of Americans from the economic fallout sparked by COVID-19. Even for the toughest among us, it's not easy to pick up the pieces, especially after a job or business loss.

Many of the people who are now going to food pantries and seeking assistance have never had to rely on these resources before. It has been a shock to many of them to lose their income, almost overnight.

Sometimes it's helpful to put pen to paper—or fingers to computer—and take steps to sharpen your survival skills. Remember the motto—Use your resources so they do the most good. Some resources will be used to buy goods and services you use or consumer. Other resources may be invested in retraining, job searches, or other future needs.

One resource we have in the extension office (located in Seneca, Holton or Oskaloosa) is a fact sheet, Sharpening Survival Skills or available from the KSU Bookstore at this address: (https://bookstore.ksre.ksu.edu/pubs/MF3501.pdf) . The information is a part of a series of fact sheets, also located at this address: (https://www.k-state.edu/family-finaces/whenourincomedrops.htm) titled When Your Income Drops, focused in helping individuals and families through difficult financial times.

Some steps include:

*Plan how to use your resources. Identify what you need and separate needs from wants.

*Substitute costlier goods and services for less costly where possible. Is walking an option rather than driving? Store brand versus name brand? Borrow or rent seldom-used equipment rather than buying. Substitute actions for gifts—lawn mowing for child care…or vice versa?

*Find new uses for resources you already have.

*Conserve resources through wise use. Consolidate trips—get the most use from each time you take a trip out in the car. Wait until you have a full load to do laundry.

*Cooperate with others to stretch resources. Organize food, housing, or childcare cooperatives and carpools. Sell unwanted or unused items.

*Take advantage of available community resources. Examples are Supplemental Nutrition Assistance Program (SNAP), Temporary Assistance for Needy Families (TANF), health insurance through the Affordable Care Act and Kansas Low Income Energy Assistance Program (LIEAP).

Another resource that the Meadowlark Extension District and K-State Research and Extension are working to make available to anyone interested is offering free-educational online classes concerning various financial topics. Called "Wallet Wise—Focus On Your Finances" will be offered every Thursday, starting April 22, from noon to 1:00 p.m. There is no

fee to participate, but registration is required in order to get the link. Sessions will be every Thursday and continue through May 27th.

You can register for one or all of the sessions. Topics to be covered include: Doing a financial check-up, attitudes about money and emotions, develop a spending plan, savings, emergency fund, managing debt, credit, credit scores and more. For further questions, contact Cindy Williams at 785.863.2212 or csw@ksu.edu . More information and registration links will be coming out soon.

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Nancy Nelson
Meadowlark Extension District
Family Life

Safe Handling of Take-Out Foods

The food delivery business has grown in the last year. It is still important to remember food safety!

Remember the two-hour rule and keep foods out of the temperature danger zone of 40-140°F. If you plan to eat hot foods later, divide into smaller portions and refrigerate. Keep cold foods cold too.

Got leftovers? If leftovers are at room temperature more than two hours, discard them. Refrigerate or freeze leftovers for later use.

When reheating food in the microwave oven, transfer it to a microwave safe plate or container. Sure, it's another step but I wonder how often it is skipped. Cover and rotate food for even heating. Always allow standing time before checking the internal temperature of the food.

Reheat foods containing meat or poultry to an internal temperature of at least 165 °F. Use a food thermometer to verify the internal temperature of the food.

Reheat sauces, soups, and gravies to a boil.

If reheating in the oven, set oven temperature no lower than 325 °F.

Reheating in slow cookers and chafing dishes is not recommended because foods may remain in the "Danger Zone" (between 40 and 140 °F) too long.