

Jody G. Holthaus
District Extension Agent
Livestock and Natural Resources

Mud-Costly Weather Hazard

Adverse winter weather, like we saw this past winter, 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 in doing this.

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

Cedar Apple Rust Infections

They don't start out as much to look at, but cedar-apple rust galls are certainly showy right now. That means time for treatment if you want to protect apple trees.

Maybe you didn't even notice them. They start out as small woody looking galls that kind of resemble a knot on the branches of cedar trees. When April rains arrive, they seem to explode, with bright orange, gelatinous tendrils that will remain on the tree in to May. Their damage to the host juniper is slight, and no treatment program is necessary.

While they don't harm cedar trees, their damage to apple trees is the 'can't miss it' bright yellow-orange spots with dark centers that infect most all non-tolerant apple species. The spots may coalesce to the point of leaf drop, potentially weakening the tree, meaning treatment is often necessary to help maintain production. Numerous fungicides are labeled for cedar-apple rust, with applications starting as soon as the tendrils are noticed on the cedar trees, with applications following every seven to ten days for as long as the galls remain active.

For further information on cedar-apple rust, including treatment options, check out our K-State Research & Extension fact sheet available in your District Extension Office or online at: <https://blogs.k-state.edu/turf/cedar-apple-rust/>.

Pesticide Recordkeeping Survey

Any time a Private applicator uses a restricted use pesticide (RUP), they are required to keep records of said use. As product labels have changed, so, too, has the need for improved record keeping options by Private applicators applying several commonly used herbicides

To help producers meet those record keeping requirements, the Kansas State Pesticide Safety program is working to collect data on what producers need to be able to more efficiently keep accurate records. They are doing so via a seven question survey developed to gather perceptions related to the use of pesticide recordkeeping books/apps and what tools you would like to see to assist in the recordkeeping process. When you have a chance, check the survey out at: https://kstate.qualtrics.com/jfe/form/SV_86r84ilD5huDIUZ

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

No news from Cindy this week.

Nancy C. Nelson
Meadowlark Extension District
Family Life

Physical Activity for Weight Management

Getting regular physical activity is a key component in helping you maintain a healthful weight. While Walk Kansas is not a weight loss program, many participants report that they lose weight after the 8-week program.

In general, the most effective way to lose weight is to reduce the number of calories you eat.

Physical activity helps you maintain a healthy weight and is essential for healthy aging. Studies show that physical activity can also help you prevent gaining back any weight you have lost.

Here are several ways that physical activity helps with weight maintenance and healthy aging.

1. **Maintaining muscle mass.** Around age 25 to 30 you begin to lose muscle, and the rate of muscle loss accelerates around age 50. Some muscle loss is part of the aging process, but inactivity accounts for the rest. When lean muscle disappears, your metabolism slows down. Exercise can help maintain your muscles and keep your metabolism higher.
2. **Muscle building and repair.** Any type of exercise will tire your muscles. Strengthening exercises, in particular, will cause microscopic tears in your muscles that your body has to repair so the muscles can get stronger. This process of repairing and building muscle helps you burn more calories.
3. **Helps improve lifestyle choices.** Regular exercise helps to reduce stress, improves your ability to think more clearly, helps you get better sleep, and makes you feel good. Practicing healthful lifestyle habits can also cut your risk for developing chronic health conditions such as heart disease and diabetes.

If you already have chronic health conditions, regular exercise and maintaining a healthy weight can help you manage your illness more effectively.

As you continue to set goals for your health, focus on the changes you want to make in your habits and lifestyle.