

KENTON COUNTY COOPERATIVE EXTENSION

Agriculture Newsletter

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Hay Storage: Safe Handling, Storage Method Losses, and Fire Prevention

By Dan Allen; Agent for Agriculture and Natural Resources Kenton County

Each year at this time farmers are actively cutting and storing their hay to get their herds through those cold winter months when our forage is scarce. While cattle producers prefer the round bales and horse owners like the square bales, proper handling and adequate storage ensures that the quality of their hay will meet the nutritional needs of the herd.

Safe Handling

The safest method of handling large bales are with rear attachments, because rear tires are better suited to carry extra weight and will balance the entire tractor better. Here are some safety tips to consider when handling these bales.

1. Never walk or work under a raised loader.
2. Raise and lower loader arms slowly and steadily.
3. Allow extra length in turning radius.
4. Stay away from the outer edges atop banks or slopes.
5. Avoid overhead wires and obstacles when raising the loader.
6. Carry the load low to the ground and watch for obstructions on the ground.
7. Always use the recommended amount of counterweight to ensure good stability, usually over the rear wheels.
8. Operate the loader from the operators' seat only. Utilize the tractor seat belt at all times.
9. Never lift or carry anyone on the loader, bucket, or attachments.
10. Lower the loader when parked or being serviced.
11. Tractors used to move bales should have roll over protection (ROPS).

Storage Method Losses

It is estimated that poorly stored hay can result in 5 to 15 percent loss in one year. The weathered gray moldy layer is usually refused by the livestock. Properly stored hay can decrease this loss significantly.

Continued on Page 2

Kentucky Beef Cattle Market Update

*Kenny Burdine, Livestock Marketing Specialist
University of Kentucky*

USDA's July Cattle report showed a continued decrease in cattle numbers from July of 2008. Estimates included a 1% reduction in the number of beef cows and a 2% reduction in the number of heifers being held for beef replacements. On a side note, this was after a 500,000 cow downward revision to the July 2008 beef cow estimate. This report is further indication that the beef herd continues to shrink.

Drought was a major factor in herd reductions during 2007 and 2008, but weather has been much friendly this year overall. Cow-calf operations have continued to liquidate because adequate profit has just not been there. While calf prices have improved from where they were in late 2008, many operations continue to struggle as many production costs remain high.

The USDA does not make state-level estimates in July, but I would expect that Kentucky numbers are following the national trend this year. Kentucky lost just under 100,000 cows during 2007 and 2008 due to both drought and a lack of profit. Heifer retention was estimated to be way down in January, so I would be surprised if Kentucky showed a year-over-year increase in beef cow numbers by the end of this year.

It's clear that cost structures on cow-calf operations have changed, so the prices needed to be profitable have also changed. Five or ten years ago, we would be expanding with prices where they are now. But, it appears that these price levels are not sufficient to encourage beef producers to grow their herds. Herd liquidation is likely to continue until prices reach a level that sends a signal to producers to expand.



Dan Allen, Kenton County Agriculture and Natural Resources Agent

Continued from page #)

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Here are some tips to consider when storing your hay bales.

1. Store bales in a well drained areas. Hay that touches the soil results in greater loss.
2. Place bales on gravel, pallets or tires to minimize dry matter loss. (Tires may hold water and are not as highly recommended.)
3. Elevation is not necessary for bales covered in solid plastic.
4. For hay stored less than 90 days, plastic tarps over bales may be adequate storage protection.
5. When storing bales outside, maximize solar exposure to reduce moisture levels.
6. Avoid storing hay in shaded areas close to trees or buildings.
7. Flat ends of bales should be butted together firmly to provide a barrier to precipitation.

Fire Prevention

Hay fires usually occur within six weeks of baling, but have been known to occur in hay several years old. Heat is generated by the respiration that occurs directly after cutting and baling. Temperatures may reach up to 130°. Depending upon the moisture content at the time of cutting and other factors, this temperature decreases slowly and will stabilize near the ambient temperature of the storage facility.

The recommended moisture content for baling large hay bales is 15-18% while the conventional square bales can be 20-25%. Ideally the weather that hay is baled should be less than 50% relative humidity. The curing process in the field can be sped up by using a tedder or hay rake to fluff windrows of hay.

While spontaneous ignition is rare, to determine how hot it is in a stack of hay a probe or thermometer is lowered into the stack to determine the temperature. At 130 to 140°, there is no problem but should be checked in a few hours. When temperatures rise about 150° it is reaching critical stages, and fire is imminent at 175° to 190°. If you detect temperatures above 175°, smell or see smoke, call the fire department immediately. Water should be injected into the hot spots and then the hay may be moved.

More Information/References

Publications on hay storage and safety are available at the Kenton County Cooperative Extension Service office. Please stop by and ask for Hay Fires: Prevention and Control by University of Tennessee Agricultural Extension Service; Large Round Bale Safety by Virginia Cooperative Extension; Hay Storage: Dry Matter Losses and Quality Changes by Mississippi State University Extension Service.

Beef Herd Care for Late Summer and Early Fall

●Provide shade and water! Cattle will need shade during the hot part of the day. Check water supply frequently – as much as 20 gallons may be required by high producing cows in very hot weather.

●Avoid working cattle when temperatures are extremely high – especially those grazing high-endophyte fescue. If cattle must be handled, do so in the early morning.

●Keep a good mineral mix available at all times. The UK Beef IRM Basic Cow-Calf mineral is a good choice.

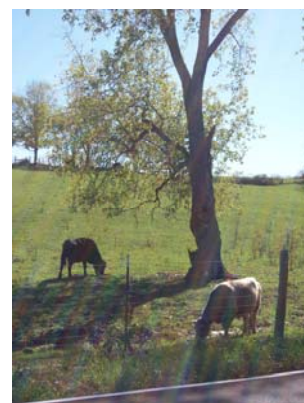
●Cattle may also be more prone to eat poisonous plants during periods of extreme temperature stress. They will stay in “wooded” areas and browse on plants that they would not normally consume. Consider putting a roll of hay in these areas and/or spraying plants like purple (perilla) mint which can be toxic.

●Take soil samples to determine pasture fertility needs. Fertilize as needed, this fall.

●Select pastures for stockpiling. Remove cattle and apply nitrogen when moisture conditions are favorable. Stockpiled fescues can be especially beneficial for fall-calving cows after calving.

●Do not give up on fly control in late summer, especially if fly numbers are greater than about 50 flies per animal. You can use a different “type” of spray or pour-on to kill any resistant flies at the end of fly season.

Dr. Roy Burris, Beef Extension Specialist, University of Kentucky



County Agriculture Investment Programs Open September 8

The Kenton County Agriculture Development Council will be accepting applications for the County Agriculture Investment Programs **starting Tuesday, September 8 through Wednesday, September 30**. Applications will not be available until this date. They may be picked up at the Kenton County Extension Office, 10990 Marshall Road, Covington, from 8:00 a.m. to 4:30 p.m., Monday through Friday.

In this new program, as mandated by the state board, all past cost-share programs will be available, plus a couple new ones. The local board has set two levels of 50% cost share funding as follows:

Maximum reimbursement of \$5000

- **Agricultural Diversification**, includes numerous areas relating to diversification such as commercial horticulture, aquaculture, agri-tourism, and timber.
- **Farm Livestock Fencing Improvement**, for farm boundary fencing.
- **Farm Structure & Commodity Handling**, for hay & commodity storage structures and handling equipment,
- **Forage Improvement & Utilization**, for forage seeding and pasture improvement, filter fabric pads, and fence & water for rotational grazing systems.
- **Goat & Sheep Diversification**
- **On-Farm Water Enhancement**, for building and renovating farm ponds, drilling wells, developing springs and city water hook-up.
- **Cattle Handling Facilities**, includes beef and dairy cattle handling facilities, pen for bulls, and pen for weaning calves.

Maximum reimbursement of \$2,500

- **Cattle Genetics Improvement**, includes the purchase of full or semen, A.I., and heifer purchase.
- **Commercial Poultry, Dairy & Swine**
- **On-Farm Energy Efficiency & Production**, for installation of energy-efficient grain drying systems and building projects, renewable energy projects, and biomass production.
- **Technology**, for precision ag equipment, animal data management, computer record keeping, and broadband service.

When filling out the application, note that you can apply for **no more than 3 cost share areas**. More

detailed guidelines for each area are available at the Extension office, or on the web at <http://agpolicy.ky.gov/funds/caip.shtml>.

Northern Kentucky Cattle Association News

Business was brisk at the ribeye booth at the Kenton County Fair when the sun was shining. Unfortunately, due to extremely rainy weather and two day's cancellations, the bottom line will be lower than usual. However, we will still make a decent profit. Thanks to Joe Bergman of Southern States for donating the propane; to the Kenton County Fair Board for helping with booth setup; and to all the volunteers that worked the booth (and those that were ready, willing and able but got rained out). We will try again next year.

Please visit Jerry Brown and NKCA members selling ribeye sandwiches at the Car Show in Boone County in mid-September. The Boone County Extension Office can give you the details. Proceeds will go to the NKCA. Congratulations to Scott and Stephanie Kimberlin who earned the golden spatula once again at the Kenton County Fair's Ultimate Hamburger Cook-off. The competition was tougher than ever!

The Northern Kentucky Cattle Association sponsored banners for the following livestock champions:

Congratulations to Kenton County Fair 4H/FFA Youth Market Steer participants! Grand Champion Rate of Gain went to Kyle Mann and Reserve Champion went to Nick

Mann. Grand Champion Showman was Mackenzie Penick, and Reserve Champion was Moriah Penick. Congratulations to Boone County Fair 4H/FFA Youth Market Steer participants! Grand Champion Rate of Gain went to George Gripshover and Reserve Champion went to Colleen Rouse. Grand Champion Showman was Charles Kunkel, and Reserve Champion was Lawrence Kunkel.

Nancy Kloentrup, Secretary/Treasurer



Mark Your Calendar!

Thursday, September 3 - KFGC Field Day, Anderson County

Saturday, September 19 - 3rd Annual A.J.Jolly Ride Horseback Trail Ride

Friday, September 25 - Ohio Amish Country Goat Show and Field Trip. Contact Kenny Bowen at (859) 472-5443.

Thursday, October 1 - Goat and Sheep Referendum - Vote at your local Cooperative Extension Office

Monday, October 26 - Are You Ready for an Emergency? Durr Center Taylor Mill

Tuesday, October 27 - Kentucky Beef Conference, Fayette County Extension Office

Thursday, October 29 - 10th KY Grazing Conference, Princeton, KY

First 3 Friday's in November—Greener Living Series—Green up your home and garden and discuss home energy, conservation, growing "greener" gardens and more!

Tuesday, November 10 - Holiday Open House, Durr Center Taylor Mill

Tuesday, November 10 - Backyard Bird Feeding - Durr Annex Dixie Highway

Tuesday, November 17 - Wildlife Management for Woodland Owners, Durr Center Taylor Mill

Thursday, December 3 - Holiday Greens for Decorating, Durr Center Taylor Mill