

Washington County SWCD

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Winter 2015

Cost Share Assistance Available in Washington County

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The Washington County Soil and Water Conservation District (SWCD) is here to assist landowners to preserve their natural resources and increase productiveness of the land. The Washington SWCD can provide financial and technical assistance to install conservation practices through our cost-share program. Practices that have been implemented in recent years by Washington County landowners include:

- Exclusion fences to keep livestock out of sensitive areas and woods
- Seedings or permeant vegetative cover establishment
- Grazing systems - water development and distribution, cross fencing, liming and legume seeding
- Spring developments
- Nutrient management

Row crop farmers can take advantage of the new cover crop prac-

tice being added in the county. There are many additional practices to be utilized by landowners of Washington County, such as stream protection practices, forest buffers, well decommissioning and more. The cost share program is funded by one-tenth-of-one-percent of the Missouri sales tax. General steps to receive cost share are as follows. Once a landowner has declared interested in a practice, the Washington district technician would visit the property site, talk with the landowner(s) and evaluate if the practice qualifies for financial assistance. If the landowner wants to pursue installing a conservation practice, a conservation plan/ map would be developed. The technician would clarify the NRCS standards and specifications associated to the desired practice with the landowner and a cost-share contract would be developed. Once a contract has been signed by the landowner,

technician and Washington SWCD board member and then board approved, the landowner can begin installing the practice. Once the practice is complete, the technician would conduct a practice checkout to ensure all NRCS standards and specifications were followed as directed. Payment is then provided by the program office to the landowner that covers 75% state average cost of expenses needed to install the practice. If you are interested in installing a conservation practice on your production land, or would like more information, please stop by the Washington SWCD office located at 103 North Missouri Street, across from the courthouse in Potosi. You can also call the Washington SWCD Technician, Tiffany Woods at the office: 573-438-9214 or work cell: 573-465-3569. The program is open to landowners of Washington County. It does not cost you anything to have Tiffany come for a field visit or give you more information about the cost share program.

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No-Till Drill Available for Rent

The Washington County SWCD has a no-till drill for rent. The drill is equipped with a grain box and a legume box for seeding. The drill has had repairs done, new tires and is ready

to be rented. The cost of the drill is \$6.00 an acre. Call the office at 573-438-9214 for information or to reserve the drill.

Winter Cold Stress on Cattle

Factors that create stress during the winter months are cold, wind, snow, rain and mud. The primary effect on animals is due to temperature. All these factors alter the maintenance energy requirement of livestock. Maintenance requirement can be defined, as the nutrients required for keeping an animal in a state of balance so that body substance is neither gained nor lost.

Some published sources contain nutrient requirements for beef cattle that include guidelines for adjusting rations during winter weather. Even without published sources, competent livestock producers realize the need for more feed during cold weather. Make sure that water is available. If water is not supplied, cattle will reduce feed intake.

Daily dry matter intake of beef cows with respect to temperature							
Temp, F	<5	5-22	22-41	41-59	59-77	77-95	>95
Intake, % change	1.16	1.07	1.05	1.03	1.02	0.90	0.65

The metabolic response to the stimulus of cold involves practically all the systems of the body. The striated muscles shiver, the heart beats faster, breathing becomes deeper, urine flow is increased and the sympathetic and pituitary controlled systems are activated so to elevate biological oxidations (energy expenditure or heat production) in all tissues. The result is an increase in the cow's requirements for energy.

Spring calving cows, and particularly heifers, in poor body condition are at risk for calving problems. The result may be lighter, weaker calves at birth, which can lead to a higher death loss, and more susceptibility to things such as scours. Animals in poor condition before calving, provide inferior colostrum and lower milk production. This can lead to lighter weaning weights or fewer pounds of calf to sell. Females that are in less than desirable body condition at calving are slower to return to estrus. Therefore body condition at calving affects the current calf crop (milk production) and next year's calving date (rebreeding date).

In most years hay and stockpiled forage can adequately provide the needed nutrients, but it can vary widely and should be tested to make sure it is adequate. OSU Extension has a fact sheet on Forage Testing, ANR-2-98, that describes the proper sampling techniques for various forages and explains the results. Your local Extension Office may also have a test probe and can help with submitting the sample to a laboratory.

There is a range of temperature where cattle are neither too hot nor too cold and their performance is optimal. This temperature range is called the thermoneutral zone. It is the temperature range where the fewest nutrients are needed to maintain bodily functions. For cattle the lower temperatures of the thermoneutral zone are shown in Table I. All of the critical temperatures listed are effective ambient temperatures, which basically means the wind chill temperature is used if the cattle are not sheltered. The critical temperatures also take into consideration the insulating ability of the cattle, as shown by the change between a wet and dry coat.

Table I. Estimated Lower Critical Temperatures for Beef Cattle *

Coat Description	Critical Temperature
Summer Coat or Wet	60 degrees F
Dry Fall Coat	45 degrees F
Dry Winter Coat	32 degrees F
Dry Heavy Winter Coat	19 degrees F

• From Brossen, R. & Ames D. "Winter Stress in Beef Cattle" Cattle Producer's Library. CL760.

Winter Cold Stress on Cattle (cont.)

If we have a choice, snow is preferred to a cold rain. We lose what is called “air insulation” in cattle that get wet versus those that are out in the snow. The air pockets between hair fibers are a source of insulation. We lose this insulation when hair gets matted down in a cold rain. The result is that the Dry Winter Coat goes from having a critical temperature of 32 degrees F to about 59-60 degrees F.

From several studies it is estimated that for every one degree below the critical temperature a cow’s energy requirement (TDN) increases 1 percent. It is also estimated that for every ten degrees below the critical temperature the digestibility of the ration decreases by 1 percent. This means that when the temperature drops below the critical temperature the cattle need to be fed better. It may be that more or better hay needs to be fed.

Example of Effect of Temperature on Energy Needs

Effective Temperature	Extra TDN Needed	Extra Hay Needed (lbs./cow/day)	(or) Extra Grain Needed, (lbs/cow/day)
50 F	0	0	0
30 F	0	0	0
10 F	20%	3.5-4 lbs	2-2.5 lbs
-10 F	40%	7-8 lbs	4-6 lbs.

Besides cold weather effecting cattle performance producers have another thing to consider during winter, mud. It is less clear what effect mud has on a cow's energy requirements, but it is estimated that it can increase the maintenance requirement from 7-30%. If cattle have to deal with mud then their ration should also be improved, to help avoid the consequences listed above.

Another tool producers have to help determine if what they are feeding is adequate, besides forage testing, is Body Condition Scoring (BCS). In the last trimester of pregnancy a cow should have a score of 5,6 or 7 on a 1-9 scale. If a cow is going down in BCS then the ration is inadequate and should be improved.

Here are some additional sources of information:

Winter Supplementation of Beef Cows <http://ohioline.osu.edu/as-fact/0001.html>

Maximizing Fall and Winter Grazing of Beef Cows and Stocker Cattle <http://ohioline.osu.edu/b872/index.html>

Scoring Cows Can Improve Profits,L-292 <http://ohioline.osu.edu/l292/index.html>

Article Submitted By:

Steve Boyles, OSU Beef Extension Specialist



Heifer management helps rebuild cow herds to produce quality beef

Story source: David J. Patterson, 573-882-7519

SALEM, Mo. – Rebuilding the U.S. cow herd numbers takes more than keeping female offspring to breed. Managing beef heifers is as important as using improved genetics in developing replacements, says David Patterson, University of Missouri. As farmers save heifers to breed for increasing their cow herds, careful attention must be paid to pre-breeding care. Patterson told Dent County beef producers how to improve calving success as heifers join the cow herd. He is beef reproduction specialist with MU Extension.

Beef farmers enrolled in the Show-Me-Select Replacement Heifer Program have increased live births with calving-ease genetics. However, getting heifers pregnant takes long-term planning for nutrition and pre-breeding exams. A major cause of failure to breed is lack of body development in weight and condition. Unseen is lack of developed reproductive tracts.

Looking at condition or weighing the heifers won't tell you if they are ready to conceive, Patterson says. Exams by a veterinarian six weeks ahead of breeding gives time to correct problems, Patterson told a Sept. 11 meeting of the Dent County Cattlemen's Association.

If heifers are underweight or underdeveloped, more feed can help. "Starting early, corrections can be made before breeding," Patterson says. The unseen part is a low rank on a 5-point reproductive tract score. A score of 1 is for infantile ovaries. Scores of 4 or 5 shows heifers ready to cycle, or cycling. Heifers scoring 1 should be pulled and sent to a feedlot. "The 1s will never catch up," Patterson said. Pre-breeding management, including adequate feed, improves success in building a cow herd.

The U.S. cow herd has been in decline for six decades. That drop increased with severe drought in western ranching states. With short supply, beef prices set new record highs almost every week. "The demand is there," Patterson said. "The incentives are there, not only for more beef, but more quality beef."

While taking care of management, producers must not neglect genetics. Future profits will be for quality beef, not just commodity beef. With a shift to selling on premium grids, higher prices are paid for cattle that grade USDA choice. Bigger premiums are paid for cattle grading prime. Genetics largely determines prime grade in carcasses. Selecting sires with high scores on carcass quality helps. On a national average, only 3 percent of all carcasses grade prime. However, Patterson showed results of his research at the MU Thompson Research Center at Spickard. That farm, a part of the MU College of Agriculture, Food and Natural Resources, provided basic research for the Show-Me-Select heifer program.

Thompson Farm steers sent to feedlots grade 30 percent prime. Those MU steers top the market grid. They not only draw prime premiums, but also CAB (Certified Angus Beef) premiums as well. "Our Thompson Farm advisory board insisted we stay with Angus breeding in the commercial cow herd," Patterson said. "Angus represents most of the cow herds in north Missouri." Patterson used a two-page handout to describe management and breeding protocols for developing heifers, at the meeting in Dent County.

"There are lots of heifers being kept to build the cow herd," Patterson said. "Management can help make them a success. Genetics can improve their quality."

Source: <http://extension.missouri.edu/n/2333>

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Have you taken a Soil Test Lately?

Even though it is winter, you should consider getting a soil test done in the spring before you go out and buy fertilizer for your farm, yard or garden. Soil test cost \$15.00 per sample but \$15 is better than the high price of fertilizer if the analysis you put down isn't even what your soil needs. A soil test will tell you what nutrients are available in your soil and the recommendations to correct problems in your soil. Soil test provide a lot of useful information such as: pH level, phosphorus, potassium,

calcium, magnesium, organic matter percent and recommendations for corrective treatment. To take a soil test, select the area, take 6-12 core samples from the area, no deeper than 6 inches, place cores in a clean bucket, remove any sticks, rocks or live plant material, mix cores in bucket and break up clumps, place about 2 cups of soil in a zip locked plastic bag and submit sample for testing. If you are doing a soil test in a pasture try to keep each soil sample at 20 acres or less for an accurate test. Avoid

heavily traveled areas or watering areas. Once you have the soil that you want tested, bring it to the local MU Extension Office located at 113 North Missouri Street.

Testing Hay for Quality

The most common supplement fed to livestock during the winter is hay. Very few producers know what the nutritional value of their hay is and if that hay meets the animal's nutritional requirements. Hay testing allows the producer to avoid underfeeding, overfeeding, nutrient deficiencies of the animal and excessive cost related to improper supplementation. The only way to find out the nutrient content of hay is to have it analyzed by a forage testing lab. A forage test typically runs \$15 to \$19 per test. Common analysis results will include moisture, crude protein, acid detergent (A.D.) fiber, total digestible nutrients (TDN), calcium, phosphorus and nitrate. These numbers can help you figure out if a supplement is needed and how much.

To get a proper hay sample you need to use a forage sampler. Grabbing a handful of hay to send off will not provide a representative sample. The sampler consists of a metal 18" tube that fits on the end of a cordless drill. The tube is then pushed into the rounded side of a large bale, about waist high, or the end of a square bale. Up to 20 core samples from round bales and 400 samples from square bales can be combined to make one tested sample. However, all core samples need to come from the same cutting, is the same type of grass, and from one field or fields that have the same topography. Forage samplers can be borrowed from most local University of Missouri Extension offices. Be sure that the testing lab you choose is a certified lab. The list of certified testing labs can be found at www.foragetesting.org or ask your Extension office for help.

When you get your samples back feel free to call me to get an explanation of your results. We can then work on a ration if you need a supplement for your livestock.



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