Unlike many recent years, fall has been very dry and soils continue to be dry over much of western Iowa. The conditions have been excellent for harvest and fall fieldwork but troubling for soil moisture recharge. Soils in eastern Iowa are generally better, though not wet.

This situation seems likely to continue into next year. Though temperatures have been warm and kept soils from freezing, rains have not occurred to recharge moisture. Current outlooks and climatology are working against us at this point. Typically, precipitation is more limited in the winter, and current outlooks don’t indicate any expected wet periods. The initial December outlooks continue to show elevated probabilities of warmer than average temperatures, though no clear signal on the precipitation side. With EC or “Equal Chances”, there is a slightly higher chance (34%) of near climatological behavior, there maining balance split between above and below-normal conditions. The configuration seen in these outlooks do show a strong resemblance to the classic La Niña signature over the continental United States.

The winter outlooks just released by the National Weather Service Climate Prediction Center are heavily influenced by the current La Niña (referring to sea surface temperatures in the Pacific). The current La Niña is fairly strong and expected to last into early spring, likely influencing winter and possibly spring planting. Looking at the outlooks for meteorological winter (December-January-February), Iowa straddles a couple boundaries during La Niña events. Temperatures warmer than average are more likely to our south while slightly better chances at colder than average exist to our north. A more active precipitation pattern is possible again to our north and east, while drier conditions are more likely in the plains and to our south.
Regulating water 
Soil helps control where rain, snowmelt, and irrigation water goes. Water and dissolved solutes flow over the land or into and through the soil.

Sustaining plant and animal life 
The diversity and productivity of living things depends on soil.

Filtering and buffering potential pollutants 
The minerals and microbes in soil are responsible for filtering, buffering, degrading, immobilizing, and detoxifying organic and inorganic materials, including industrial and municipal by-products and atmospheric deposits.

Cycling nutrients 
Carbon, nitrogen, phosphorus, and many other nutrients are stored, transformed, and cycled in the soil.

Physical stability and support 
Soil structure provides a medium for plant roots. Soils also provide support for human structures and protection for archeological treasures.

How to safely make homemade jerky

Venison jerky is an easy to make flavorful snack. Remember when processing any meat, food safety must be at the forefront. In recent years, illnesses due to *Salmonella* and *E.coli* O157:H7 from homemade jerky have raised questions about the safety of traditional drying methods.

Safe drying temperature and time
It is important that the meat strips reach a sufficient temperature in the drying process to kill harmful pathogens that may cause foodborne illness. A food dehydrator, or your oven, should maintain a temperature of at least 145 to 155 F for 4 to 6 hours when drying meat. But, to ensure the meat strips reach a temperature where pathogens are destroyed, the University of Wisconsin recommends heating the jerky (after drying) in a preheated 275 F oven for 10 minutes. This method, as a final step in the drying process, achieves an extra margin of safety and produces a quality jerky product.

Check temperature with food thermometer
Take time to check the temperature of your dehydrator before drying. Place the metal stem of a dial thermometer between two trays so you can read the dial outside the dehydrator. Turn on the dehydrator and allow the temperature to stabilize. Adjust the thermostat to reach current research temperature recommendations of 145 F or above.

Use high-quality meat
For quality jerky, use only lean meats in excellent condition and trim visible fat.

Freeze meat first
Freezing the venison prior to marinating makes it easier to slice and helps kill any parasites that might be present. Always marinate meat strips in the refrigerator, not on the counter. Dehydrate until a test piece cracks but does not break when it is bent. Jerky can be stored for 1 to 2 months at room temperature and in the freezer for up to 6 months.

What Soil Health Does
USDA Natural Resources Conservation Service

Healthy soil gives us clean air and water, bountiful crops and forests, productive grazing lands, diverse wildlife, and beautiful landscapes. Soil does all this by performing five essential functions:

Regulating water - Soil helps control where rain, snowmelt, and irrigation water goes. Water and dissolved solutes flow over the land or into and through the soil.

Sustaining plant and animal life - The diversity and productivity of living things depends on soil.

Filtering and buffering potential pollutants - The minerals and microbes in soil are responsible for filtering, buffering, degrading, immobilizing, and detoxifying organic and inorganic materials, including industrial and municipal by-products and atmospheric deposits.

Cycling nutrients - Carbon, nitrogen, phosphorus, and many other nutrients are stored, transformed, and cycled in the soil.

Physical stability and support - Soil structure provides a medium for plant roots. Soils also provide support for human structures and protection for archeological treasures.
Drought and other weather events have ultimately caused a tight forage supply going into the winter-feeding period for multiple operations. Here are some tips to make the most of the forage resource you’re feeding this winter.

1. Calculate feed needs and compare to inventory. A basic calculation assumes intake to be 2.25 - 2.5% of body weight. Knowing this, a quick calculation for feeding 100 mature cows for 5 months would be:

   \[ 100 \text{ cows} \times 1300 \text{ lb} \times 2.5\% = 3,250 \text{ lb DM/day} \times 150 \text{ days} = 487,500 \text{ lb or 244 ton} \]

Then account for the forage dry matter. If we assume the hay is 85% dry matter, 287 tons of hay is needed. Feed waste should also be accounted for, with 10-15% expected to be wasted in good feeding programs. That means 330 ton of hay is needed to feed 100 mature cows for 5 months. Don’t forget to account for bulls, heifers, weaned calves, or other livestock when calculating feed needs and comparing feed inventory.

2. Reduce nutrient requirement and feed intake. Some of the more obvious strategies to reduce feed needs include early weaning fall-calves, and following through on marketing cows that you held off on selling until a new tax year. Additionally, consider environmental factors that impact feed needs, and take action to reduce spikes in nutrient requirements. Two examples would be providing windbreaks to combat cold stress and controlling mud. Research shows that 4 - 8 inches of mud reduces feed intake by 15% and increases requirements.

3. Look for ways to minimize feed waste. Bale storage methods and bale feeders have been extensively studied to compare feed waste. Bales should be smaller in diameter than the feeder. By feeding smaller diameter hay, more hay will fall into the bottom of the feeder rather than on the ground as cows pull out and consume the hay. Although associated with a high capital cost, improving storage or feeding methods doesn’t take long for hay savings to pay for the investment.

4. Limit access to hay. Research has demonstrated that a cow consumes her intake of dry forage within 6 hours. Because of this, restricting time to hay access can reduce intake and waste by ~20%. This set-up requires knowing the hay feed value to ensure nutritional requirements are met. If not met, a supplement is needed. Adequate feeder and bunk space are critical. The same concept applies when limit feeding hay in the field by ensuring cows have the hay cleaned up within 6 hours of feeding with minimal waste.

5. Consider a supplement. While supplementation is often already needed by late gestation because hay quality is insufficient to meet nutrient requirements, supplements can also be used to reduce hay intake and stretch the hay supply. While feeding a supplement should reduce forage intake, remember that feeding a pound of supplement will not result in a pound of forage replaced. If feeding a supplement, be sure to include an ionophore. Ionophores can improve feed efficiency up to 10% by lowering maintenance requirement of rumen microbes, therefore, lowering feed intake.
Estimating a Value for Corn Stover
William Edwards, retired ISU Extension Economist

Corn stover is an abundant source of winter feed for beef cows in Iowa. When supplemented with protein, vitamins and minerals, stover can supply the nutritional needs of cows that are in moderately good body condition during fall and early winter. Corn stover is also in demand for livestock bedding and as feedstock for the production of ethanol.

An obvious advantage of utilizing corn stover is its wide availability and low cost. This has created a small but important market for stover, both as a harvested product and as a standing crop in the field. As with any market, though, a price must be determined.

Three general approaches can be used:
- What is the value to the purchaser, based on feedstuffs replaced by corn stover?
- What is the cost to the seller of harvesting the stover and replacing lost crop nutrients?
- What is stover selling for on the market?

Price for Harvested Corn Stover Based on Feed Value

Price per bale
It is not always convenient to weigh large bales, so corn stover is often priced by the bale instead of the ton. If a typical large bale of corn stover weighs approximately 1,500 pounds (0.75 tons), then the value per ton can be multiplied by 0.75 to arrive at a price per bale.

The weight of a bale will vary considerably depending on the type of baler used and the dryness of the stover. Large round corn stover bales typically contain about 8 to 10 pounds of dry matter per cubic foot.

Cost Value
The costs for windrowing, baling, collecting and transporting corn stover can be estimated from typical farm custom rates such as those reported in Ag Decision Maker File A3-10: Iowa Farm Custom Rate Survey (www.extension.iastate.edu/agdm/crops/html/a3-10.html). Chopping and raking are two alternatives for accumulating material into a windrow. If bales must be transported to the point of sale, that cost should be included, as well. Wrapping round bales with plastic netting instead of twine adds about $1 per bale to the total cost.

Market Value
Although market prices for harvested corn stover are not reported on a regular basis, bales are sometimes sold at hay auctions. Some auctions report prices on their websites, which can be located by searching on "hay auction". Recent auction prices in Iowa for large round bales of corn stover have ranged from $30 to $40 per bale, with some sales as high as $45 per bale. Processors who wish to utilize corn stover for producing biofuels or other products generally will pay a higher price in order to assure they receive clean, dry material in timely fashion. Rates are usually set in advance by contract.

For complete article go to: https://www.extension.iastate.edu/agdm/crops/html/a1-70.html
Yard and Garden: Selection and Care of Christmas Trees
Zach Clemens, ISU Extension communications Specialist, Integrated Pest Management

AMES, Iowa -- Now that Thanksgiving is behind us and the leftover turkey and pumpkin pie is gone, thoughts turn toward Christmas and finding that perfect tree for the holidays. In this post-Thanksgiving installment of Yard and Garden, Mark Vitosh, district forester with Iowa Department of Natural Resources, gives some tips on selecting and caring for your Christmas tree.

What types of Christmas trees are available?
Tree species commonly available at tree farms and commercial lots in Iowa include Scotch pine, white pine, red pine, Fraser fir, balsam fir, Canaan fir, Douglas fir, Concolor fir, white spruce and Colorado spruce.

What factors should be considered when purchasing a Christmas tree for the holidays?
A few decisions should be made before going out to buy a Christmas tree. Decide where you are going to place the tree in the home. Be sure to choose a location away from heat sources, such as a fireplace or radiator. Also, decide on the size (height and width) of the tree you want.

Christmas trees may be purchased from cut-your-own tree farms or as cut trees in commercial lots. A list of tree farms in your area can be found at the Iowa Christmas Tree Growers Association website at http://www.iowachristmastrees.com/

Carefully check trees at commercial tree lots to ensure the freshness of previously cut trees.

When looking for a tree, select one that has a straight trunk. A tree with a straight trunk will be much easier to set upright in the stand. Check the diameter of the trunk to make sure it will fit in your stand. A tree with a bare side may be fine if you intend to place it in a corner or against a wall.

How can I determine the freshness of a cut Christmas tree?
The freshness of cut Christmas trees can be determined with a few simple tests. Gently run your hand over a branch. The needles on a fresh tree will be pliable. Those on a dry tree will be brittle. Another test is to lift the tree by the trunk and lightly bounce the butt on the ground. Heavy needle drop indicates a dry tree. A fresh tree will drop only a few needles.

How long can a cut Christmas tree remain in the house?
The length of time a cut Christmas tree can remain in the home is determined by the tree species, the freshness of the tree at purchase, and its placement and care in the home. In general, a fresh, well-cared-for Christmas tree should be able to remain in the home for three to six weeks. Remove the tree from the house when its needles become dry and brittle.

Should I add any material to the water to prolong the freshness of my Christmas tree?
Do not add anything to the water. Molasses, sugar, soft drinks, aspirin or commercial products provide no real benefit to tree longevity. The keys to keeping a Christmas tree fresh are to place the tree away from any heat source (fireplace, heater, radiator, etc.) and keep the tree reservoir full of water. Check the tree reservoir at least once or twice a day. Fresh trees absorb large quantities of water (especially in the first few days). If the water level drops below the bottom of the trunk, water uptake will be drastically reduced or cease when the reservoir is refilled.
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Calendar of Events

JANUARY
1  Office Closed for Holiday
6  Extension Council Organizational Meeting, Extension Office, 7 pm
7  Commercial Manure Applicator CIC, Extension Office, 9 am and 1 pm
26  Private Pesticide CIC, Extension Office, 9:30 am and 1:30 pm

FEBRUARY
18  Private Pesticide CIC, Extension Office, 9:30 am and 1:30 pm

Upcoming Private Pesticide Applicator Trainings
All trainings will be held at the Extension office at
320 N Main St, Allison (limit 10/session)
1/26/2021 9:30 am and 1:30 pm (both full)
2/18/2021 9:00 am and 7:00 pm
3/11/2021 9:00 am and 1:00 pm
4/8/2021 9:30 am and 1:30 pm