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Stockpiling Forage for Winter Grazing

It is not too early to begin preparing for winter cattle feeding. Winter feed accounts for a large part of a cattle producer's costs. Grazing stockpiled forages during the winter may reduce feed costs significantly. Stockpiled forages provide high quality feed in late autumn and winter.

Mindful selection of the pastures to stockpile is important. Begin by choosing pastures relatively weed free. Weeds, especially broadleaf weeds, break up the canopy and allow cold temperatures to penetrate down into the forage earlier in the season. Tall fescue is the most common forage stockpiled for winter grazing. The upright growth pattern and waxy coating on the leaves make tall fescue more tolerant of cold temperatures than other cool season grasses.

Prepare the pastures to be stockpiled in late summer by grazing or mowing forage to a four-inch stubble height and applying nitrogen fertilizer at a rate of 50-100 pounds per acre by mid-August. This allows enough time for maximum forage growth before winter without sacrificing forage quality. On average, tall fescue will produce approximately 20 pounds of dry matter for every pound of nitrogen fertilizer applied in August.

Ammonium nitrate or polymer coated urea are the best sources of nitrogen to apply. Untreated urea fertilizer could be lost due to volatilization without adequate rainfall immediately after application. This makes it a less desirable fertilizer choice, especially when temperatures are warm. Ammonium sulfate fertilizer is also effective.

The quality and quantity of the forage available will decline as the winter progresses. Wet weather hastens the decline over time. Graze heavily fertilized stands early. If grazing is deferred later than January, the risk of dry matter loss associated with freezing, thawing, and death of the leaves is too great to justify nitrogen fertilization rates greater than 50 pounds per acre.

Results of a study conducted at the MU Forage Systems Research Center indicate the presence of red clover does not affect total stockpile yield, but does improve crude protein levels of the total forage available when nitrogen fertilization rates are 50 pounds per acre or less. Applying more than 50 pounds of nitrogen per acre will increase the ergovaline content (the toxin) of endophyte infected tall fescue above safe levels in autumn and will have a negative impact on the red clover stand the following season.

Forage utilization can be increased by implementing strip grazing. Start grazing close to the water source and progressively provide more pasture to the animals every three to seven days. Cattle can readily graze stockpiled forages through three or four inches of snow, but a quarter inch of ice can be detrimental to grazing.

For more information about the value of applying nitrogen fertilizer for stockpiled forages compared to purchasing additional hay or grain visit the Decision Tools page at www.beef.missouri.edu/tools/index.htm on the MU Beef website. Scroll down the page to the Nutrition heading and click on the Stockpile Pasture Decision Tool to download as a Microsoft Excel spreadsheet.

Source: *Valerie Tate, agronomy specialist*

August Gardening Tips

Ornamentals

- Deadhead annuals and perennials as needed. Cut back leggy annuals.
- Continue spraying roses that are susceptible to black spot and other fungal diseases. Remove diseased leaves that have fallen from beneath plants.
- Do not fertilize roses after August 15th. Fertilizing late in the season can promote new growth susceptible to freeze damage.
- Divide bearded iris now. Replant so tops of rhizomes are just above ground level.
- Prune to shape hedges for the last time this season.
- Evergreens can be planted or transplanted now to ensure good rooting before winter arrives. Water both the plant and the planting site several days before moving.
- Soak shrubs periodically during dry spells with enough water to moisten the soil to a depth of 8-10 inches. One inch per week is adequate. This amount is equivalent to 5 gallons of water.
- Once bagworms reach full size, insecticides are ineffective. Pruning off and burning large bags provides better control.
- Hummingbirds are migrating through gardens now. Mix 1 part sugar with 4 parts water and bring to a boil to kill any bacteria or mold present. Cool and fill the feeder.
- Monitor plants for spider mite activity. If found, hose them off with a forceful spray of water.

Vegetables

- Compost or till under residues from harvested crops to provide organic matter to the soil.
- Broccoli, cabbage, and cauliflower transplants should be set out now for the fall garden. Keep these cool-season plants well-watered and mulched with straw.
- Cure onions in a warm, dry place for 2 weeks before storing. Spread them apart



rather than stacking them.

- Sow seeds of beans, beets, spinach, and turnips now for the fall garden. Spinach may germinate better if seeds are refrigerated for one week before planting. Moisten the soil with cold water just before planting.
- Begin planting lettuce and radishes for fall the last 2 weeks of August. Water regularly to keep the soil cool.
- Pinch the growing tips of gourds once adequate fruit set is achieved. This directs energy into ripening fruits, rather than vine production.

Fruit

- Prop up branches of fruit trees that are threatening to break under the weight of a heavy crop. Early apple varieties will ripen this month.
- Blackberries are ripening during the first week of August. Do not delay picking. Ripe berries attract the Spotted Wing Drosophila that lay eggs in the berries which then quickly hatch into larvae and feed on the berries.
- Spray peach and other stone fruit tree trunks now to protect against peach tree borers. Borers can kill trees over time.
- Cultivate strawberries. Weed preventers can be applied immediately after fertilizing.
- Watch for fall webworm activity now. Remove webs from trees if practical.

Turfgrass

- Apply insecticides now for grub control on lawns being damaged by their activity.
- During the last week in August, dormant lawns should be soaked to encourage strong fall growth. Wait until September to reseed a lawn.

Source: *Jennifer Schutter, horticulture specialist*

Purple Paint Statute

The Purple Paint Statute, which pertains to trespassing, has been in existence for over twenty years in Missouri. In 1993, the Missouri legislature enacted the Purple Paint Statute (RSMO 569.145). This statute is another way for Missouri landowners to protect their property from trespassers. The Purple Paint Statute allows landowners to mark trees or posts with purple paint communicating to individuals that no trespassing is allowed. The traditional “No Trespassing” signs continue to convey clear messages as well.

The statute provides landowners with an easy way to keep out unwanted trespassers. The law does not require property marked with purple paint to be fenced; therefore, it is an economical alternative for landowners who have no need to fence their property.

The purple paint marks are more substantial and more difficult to destroy or steal than a “No Trespassing” sign.

In addition to the posting of real property as set forth in (RSMO 569.140), the owner or lessee of any real property may post the property by placing identifying purple marks on trees or posts around the area to be posted. There are purple paint guidelines that need to be followed to have the property marked correctly. The law states the marks are to be on trees or posts.

(1) A vertical line of at least eight inches in length. The bottom edge of each paint mark must be between three feet and five feet off the ground. The marks shall be placed no more than one hundred feet apart and readily visible to any person approaching the property; or

(2) A post capped or otherwise marked on at least its top two inches. The bottom of the cap or mark must be between three feet and five feet six inches high. Posts marked shall be placed not more than thirty-six feet apart and readily visible to any person approaching the property. Prior to applying a cap or mark, which is visible from both sides of a fence shared by different property owners or lessees, all owners or lessees shall agree to post their property.

Any person trespassing onto property marked by purple paint can be found guilty of a first-degree trespassing charge. First-degree trespassing is a Class B Misdemeanor, with potential punishment of a maximum \$500 fine and/or a maximum of 6 months in jail.

Purple boundary posting paint is formulated specifically for marking property. It is available at most hardware stores.

Note: This article is for educational purposes only. For specific legal advice consult an attorney.

Source: *Mary Sobba, agriculture business specialist*

In-Field Tips for Collecting Accurate Yield Monitor Data for Harvest

It is that time of the year to starting thinking about fall harvest. For those who collect yield monitor data, the first few days of the harvest season are a good time to ensure one is collecting accurate information. The first item on the yearly checklist should be verifying the firmware is up to date on the in-cab monitor and your GPS system. This may require checking with your dealership or visiting the company website.

Check the system software every year to make sure the most current version is being used.

Perhaps the most critical need is to calibrate the yield monitor as it affects yield estimates across all fields. While some operators use calibrations stored in the display from previous years (always double check to see how well previous calibrations are performing), most will need to perform new calibrations. For each calibration, try to conduct separate loads that span the variability of yields (high to low) expected when harvesting fields. Generally, one can change combine speed or header cut width to vary crop flow through the machine to create this variation while calibrating. *Figure 1* (on next page) shows an example of how different calibration load points (as a diamond) can be created by changing speed or cut-width to vary the flow rate through the machine.

In general, 3,000 to 6,000 lbs of grain are needed for each calibration load. Harvesting a full semi-load of grain per calibration load point will not necessarily improve calibration accuracy. Some yield monitors may only allow a two-point calibration, so it is best to calibrate a point of high flow, then one for a lower flow rate through the machine.

Remember separate calibrations are needed for different crops (e.g., corn or soybeans) and accuracy will generally improve when calibrating for significant moisture variability for a crop (e.g., high and low moisture corn). It should be noted with recently commercialized optical yield monitor systems (such as those available from CLAAS, Trimble, and Raven); test weight measurements become even more crucial when there is a change between different hybrids and crops.

In the end, remember that most well calibrated yield monitors should be able to estimate yields within 1% to 3% on a full-field basis. When looking at the sub-field scale, errors exceeding 3% can exist.

Further Resources

The following publications from University of Nebraska Extension go into more detail on collecting accurate yield data from management decisions:

Precision Agriculture: Best Management Practices for Collecting Accurate Yield Data and Avoiding Errors During Harvest -
<http://extensionpublications.unl.edu/assets/pdf/ec2004.pdf>

Improving Yield Map Quality by Reducing Errors through Yield Data File Post Processing -
<http://extensionpublications.unl.edu/assets/pdf/ec2005.pdf>

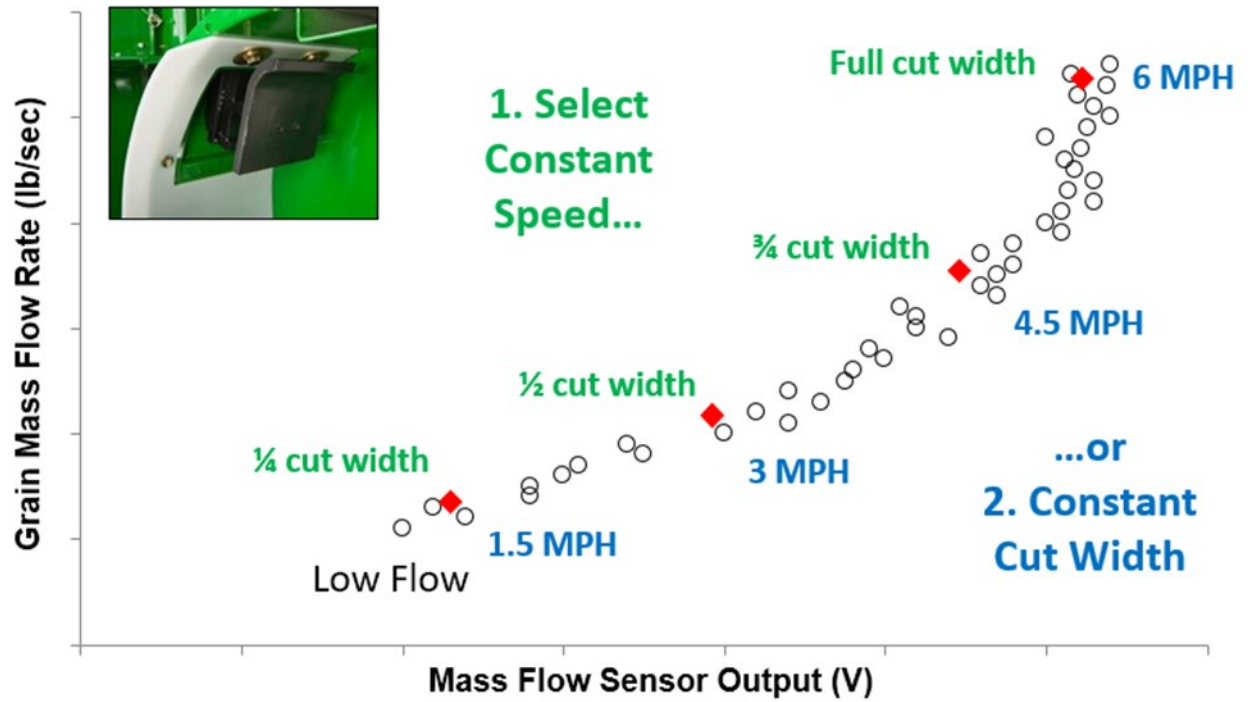


Figure 1: Two methods for varying clean grain elevator flow for yield monitor calibration: method 1 uses constant speed with varying cut-width; method 2 uses constant cut-width with varying speed. Either method can be used to generate calibration loads (points as a diamond) for your yield monitor.

Article adopted from <http://cropwatch.unl.edu/2016/field-tips-collecting-accurate-yield-monitor-data-harvest-2016>

Source: Kent Shannon, natural resource engineer