

Planning for Supplemental Feed Needs



Gene Schmitz

Last winter, I was fortunate enough to be invited on a 2-week study trip to Australia and New Zealand looking at their grass based dairy industry. One of the things I was really impressed by was how those producers planned ahead. They developed strategies for various situations well in advance of occurrence. This allowed them to take a more objective look at how they would respond to a situation before it occurred, rather than to make a hasty decision in the midst of a situation. Then they had the discipline to act on the appropriate strategy when the time came. How is this useful to Missouri producers and why should you care what a dairy producer halfway around the world does? Perhaps the following information will get your attention.

I have developed several example rations for backgrounding beef calves on hay diets using corn, soybean meal, soybean hulls, dried distiller's grains and corn gluten feed in various combinations and feeding rates. Occasionally, I will calculate the cost of these rations using current ingredient prices. I decided to take a look at these since it had been a few weeks since I checked out the prices for the various by-product feeds.

Bottom line is, if you are planning on using corn gluten feed or soybean hulls next winter, you should strongly consider purchasing at least some of those ingredients now. Local retail prices are listed in the \$120 per ton range for both of these ingredients. Let's translate those costs into actual feed costs for growing calves. Based on the nine rations I have calculated, feed cost per head per day ranged from \$.80 to \$1.08 for the same rate of gain. This makes cost per pound of gain range from \$.37 to \$.53. For 200 pounds of gain, feed costs range from \$74.60 to \$106.40, or a difference in feed cost of \$31.80 per head depending upon which combination of feed ingredients were used to obtain the same amount of gain.

Considerations for planning:

- How much forage will I have for winter?
- What will I estimate my purchased feed needs to be?
- Will it be profitable to background my calves this winter?

Let me try to answer a few of these questions. If you typically background your weaned calves and have the forage on hand to do so, I would suggest you take a serious look at several feeding programs and try to lock in at least some of your feed needs now. At least that allows you to control one variable in the production system - feed costs. If you have never used any of the by-product feeds, would a feed savings in the range of \$30 per head entice you to take a look at using those ingredients? (How do you know prices lower now...later?)

I would also give the same advice to cow-calf producers who use by-product feeds. Try to lock in at least some of your winter feed needs now while prices are low. If you need assistance with rations or have other feeding questions, contact your local MU Extension Livestock Specialist.

Source: Gene Schmitz, Livestock Specialist

Yield Monitor Calibration Tips : *Making the Most from Your Data*

As harvest gets closer, combines will be prepared for the upcoming fall season. It is important for those who are using yield monitors to start thinking about getting them ready for their data collection task. An investment of time now can go a long way toward preventing loss of data or downtime during the busy harvest season. Here is a checklist for calibrating your yield monitor. (Please note that these steps will vary according to your yield monitor's manufacturer.)

Steps to Take Before Going to the Field

- Back up any data from the memory cards if you have not done so already from the previous season. Delete the files from the memory card after the previous harvest data is backed up. It is good practice to keep several backup copies of the raw data in different locations in case it is lost, stolen, damaged or modified.
- Check your data card to be sure it works properly.
- Contact your local dealer or manufacturer to make sure that you have the most recent software and firmware upgrades for your yield monitoring and mapping system. You can obtain information about these upgrades through your manufacturer's web site or by contacting technical support.
- Visually inspect all sensors and cables. It's much easier to make repairs now than during harvest.
- If your moisture sensor is mounted in the grain tank auger, inspect it for wear or damage. If you have an elevator-mounted moisture sensor unit, make sure the manual clean-out switch engages the motor.
- Inspect the grain flow sensor for wear. You should also check the clean grain elevator for wear, missing or worn paddles, and loose chains. The clearance between the paddles and the top of the elevator should be between 3/8 and 5/8 inch.
- With your combine in an open area, power up your DGPS receiver and make sure you are receiving a good differential correction signal.
- Raise and lower the header to make sure you will be recording data when the header is lowered and not recording data when the header is raised.
- Finally, engage the separator and observe elevator speed. Put the combine in gear and drive forward to see if the ground speed indicator is working.



In-field Calibration Steps

- Begin by calibrating the temperature sensor. This is the only time you will have to perform this step. This step applies only to Ag Leader and Case IH AFS monitors.

- Remember to calibrate the moisture sensor for each grain type. Calibrating the moisture sensor on one load affects all loads of that grain type.
- Calibrating the grain flow sensor is the most important step in calibration of your yield monitor. Calibration loads should be at least 4,000 pounds. Weigh all calibration loads accurately - begin with the combine and weigh wagon or truck completely empty, and end with the combine completely empty and all grain in the weigh wagon or truck.

For Ag Leader and Case IH AFS monitors the manufacturers recommend calibrating the flow sensor using multiple grain flow rates to determine a calibration curve for a range of yield levels. A range of grain flow conditions can be achieved by simply driving the combine faster or slower than normal. One other approach for collecting calibration loads over a wide range of grain flow rates is to harvest using only 1/4 to 1/2 of the normal cutting width while traveling at normal speeds.

For other yield monitors (John Deere Greenstar, Micro-Trak, AGCO Fieldstar and CAT), the grain flow sensor is calibrated with one load of grain that is harvested under conditions similar to those expected during operation. Determining a zero reading when no grain is being harvested completes calibration.

- Before using the data from any yield monitor, weigh at least six separate loads either for the initial calibration or to recheck the calibration after a period of use.
- Remember to log in the correct crop type for all fields.
- Set swath width properly. In non-row crops set the monitor swath width 1 foot less than the platform width.

Recheck Calibration During Harvest Season

Calibration of your yield monitor should be repeated or checked if major differences in harvest conditions are encountered. Although the manufacturers' recommendations vary, Pioneer Hi-Bred International, Inc. suggests the following rules for re-calibration when harvesting corn hybrid trials.



Re-calibrate if one of the following occurs:

- Differences across hybrids exceed 5% in grain moisture.
- Differences across hybrids exceed 5 pounds per bushel test weight.
- Grain temperature varies more than 15⁰F.

Source: Kent Shannon, Natural Resource Engineering Specialist

Turfgrass Selection and Lawn Renovation for Cool-Season Grasses

In Missouri, cool-season grasses like Kentucky bluegrass, tall fescue and perennial ryegrass typically face disease pressures, drought, insects and the reduction of root mass due to the effects of heat and humidity. Many times lawns may appear thinned out, indicating a need for some fall renovation or overseeding. In Sept. night temperatures are cooler, rainfalls are typically more common, and the battle with summer annual weeds will come to a close with the first frost of fall. In these conditions our cool-season grasses will start to thrive and recover and it's also the best time of the year to plant new seed, open up the soil, and begin fall fertilization.

Turfgrass Selection.



There are many resources available that list turfgrass varieties for Missouri. State turfgrass specialist, MU guide sheets, garden centers and other lawn care experts are good sources for information about turfgrass selections and varieties. The

difficulty for most individuals is trying to find the varieties suggested. Lowe's, Home Depot, hardware stores and other garden centers cannot carry all of the premium varieties.

Sometimes the easiest approach is to list what they have and then cross-reference to the varieties listed for our area.

MU's guide sheet #6772, "**Cool-Season Grass Cultivars For Athletic Fields**," has excellent, good and fair listings for Kentucky bluegrass, tall fescue and perennial ryegrass. While it is written for athletic fields, the listings are excellent for home lawns as well. Call your local extension office for a copy this guide sheet or visit

<http://extension.missouri.edu>.

Lawn Renovation.

Labor Day weekend is usually an excellent time to start preparations for cool-season turfgrasses seeding.

Steps to successful turfgrass establishment are as follows:

- First, obtain a soil test for fertilizer recommendations. Having the needed fertilizer and lime on hand will save you time later; using them will improve successful establishment. A pH range of 6.5 to 6.8 is excellent for turf establishment. Starter fertilizers (e.g. 10- 24-18) are usually recommended at a rate of one pound of nitrogen per 1,000 square feet at time of seeding, but this is dependent on your soil test results.
- If you choose to renovate your lawn to different species of turf (bluegrass to fescue or vice versa), an application of glyphosate (e.g. Roundup) is needed to kill out the old turf (follow the label for application instructions). In seven to ten days a second application may be necessary to pick up any areas missed in the initial application. If your old lawn is totally brown, then soil prep and reseeding can take place seven days after the final application of Roundup.
- **(Or)** If your lawn only requires over-seeding to fill in thinned areas or small spots from summer disease or

drought, then glyphosate is not required. However, broadleaf weeds should be controlled, especially if infestations are high. Perennial broadleaf weeds such as dandelion and plantain are more effectively controlled in the fall as they store reserves for winter survival. Trimec or Weed-B-Gone are excellent over-the-counter products available to homeowners. Labels for these products usually recommend three weeks between spraying and seeding, therefore start early if controlling broadleaf weeds first.

- Then prepare the soil/site by removing debris such as rocks and visually inspecting the grade or slope to verify good surface drainage. Holes from rock removal or low water holding pockets need to be filled as poorly drained areas are detrimental to maintaining healthy turf.
 - Apply recommended fertilizers and lime now.
 - When seeding, it is important to have good seed/soil contact to improve seed germination. If you choose to renovate by killing the old turf, you have the option to till the soil and create a fine seedbed. (When tilling the soil, spreading straw after seeding will be needed to prevent erosion; purchase one bale per 1,000 square feet.) If soil tilling is not done, other methods to insure good seed/soil contact include a power rake or vertical mower. These types of equipment work up the top ½ inch of soil and can be used for complete or partial renovations. The best method of planting seed is with the use of a slit seeder. It should be set to plant seed in the soil about ¼" deep. In addition to better germination, shallowly planted seed has less chance of washing away in a heavy rain. The above mentioned equipment can usually be rented at a local business providing this service.
 - Recommended seeding rates for Kentucky bluegrass are 2 to 3 pounds per 1,000 square feet and 6 to 7 pounds for turf-type tall fescues. Mixtures of these two should be seeded at 6 to 9 pounds per 1,000 square feet. Surface seed applications following tillage, power raking or vertical mowing should be raked in lightly to help cover the seed with soil.
 - The final step is proper watering, with the first two weeks after seeding being critical. Until the seed germinates and starts to root, it can easily wash away. Try to keep the soil surface moist, not wet- avoid puddles and runoff. Do not let the seed dry out once it starts to germinate. On warm, windy day with lower humidity, several light waters may be needed.
- In a successful renovation, seedling turfgrass should be up and growing in 10 to 14 days. If your renovation takes place in the first half of September, you will be mowing your new lawn once or twice late in the fall. One month after seeing new seedlings, an additional fertilizer application of one pound of nitrogen per 1,000 square feet of a good, complete fertilizer (e.g., 24-4-12). A fall seeding program can start Labor Day weekend until month end (mid-October in some years).

Source: Brad S. Fresenburg, Extension/Research Associate

BOTTOM LINE TIDBITS: 4-H and FFA PROJECT INCOME

Many families are right in the middle of county and state fair activities and kids are or will be calculating their earnings from their 4-H or FFA projects. While the net income from 4-H or FFA projects will have to be reported for income tax purposes - if the youngster is required to file a tax return, the earnings **may not** be subject to self-employment tax (i.e. Social Security and Medicare taxes). If the project was entered into primarily for educational purposes, rather than for profit, and was completed under the rules and economic restrictions of the sponsoring 4-H or FFA organization, net income from the project will not be subject to self-employment tax.



For the majority of children these projects are not entered into with the intent of developing a trade or business, thus the income is not considered self-employment income. However, if the 4-H or FFA projects were entered into for the purpose of developing a trade or business, then the income from the activities would be subject to self-employment tax if the amount of net income is \$400 or greater.

Each case will need to be evaluated based on its own facts and circumstances. While most children participating in these 4-H and FFA projects hope to make money, their primary reason for participating in these projects is generally educational.

If the activity is not a trade or business, do not report the income and expenses on the Schedule F "Profit or Loss from Farming". Instead report the net income from this activity on Line 21, "Other income", on Form 1040. Attach a statement listing the gross income and expenses associated with the activity along with a statement indicating this activity is a 4-H or FFA educational project.

Source: Parman R. Green, Ag Business Mgmt. Specialist

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