

David Hallauer  
District Extension Agent, Crops & Soils

## **Nitrogen Application to Soybeans**

References differ slightly in the exact amount of nitrogen a soybean crop might need to reach desired yield levels, with most suggesting 200 or more pounds of N being the minimum for a 50-60 bushel per acre crop. Fortunately, a combination of soil and atmospheric fixation split that nitrogen need, with both typically contributing fairly equally to the total amount needed.

While that 50-60 bushel per acre yield level is pretty good, we know there are fields yielding well above that, begging the question: do those high yield environments require additional N? The short answer: not really.

Work done about 10 years ago at the North Central Kansas Experiment Field near Scandia looked at high yield soybeans and whether additional nitrogen might help push yield levels higher. The Scandia field provides a high yield environment while also offering the chance to compare results in both dryland and irrigated environments. They applied five different N rates (zero up to 160 pounds of actual N/A) to soybeans at beginning pod.

The results: while dryland yields exhibited a fairly wide range (73 to 89 bu/A), neither they nor the irrigated soybeans (90-99 bu/A yield range), the application of late-season N fertilizer in neither environment significantly increased soybean yield. Despite the increasing N demand required from high yielding soybeans – and the ability of rhizobia to keep up with late season N needs sometimes compromised - the soybean plant's ability to overcome and adapt was highlighted again by this work. Protein content? That's a different story for a different day.

If the fact results are from NC Kansas and not our different soil type/greater rainfall regions of NE Kansas, the response of soybeans to nitrogen has been inconsistent at best no matter where tested. South Dakota State found little value to added N in soybeans. Research conducted in Iowa has shown that N application at planting does not improve yield and only decreases nodulation while increasing the plant's dependency on the soil for nitrogen.

Work from the University of Nebraska is a little more encouraging, but still too inconsistent to provide standard year in/year out recommendations. They instead provide some very good advice as research continues on this important topic: *If you are considering an N application in soybean, keep expectations at a reasonable (low) level and give priority to fields with consistently high yields in previous years.* (Source: Is Soybean Yield Limited by Nitrogen Supply? 2018). It's good advice as we keep an eye on future research that can help define soybean N needs even further.

Ross Mosteller  
District Extension Agent, Livestock & Natural Resources

### **Purchasing Hay???**

There is a country song that says “rain makes grain...” which is true, but for graziers our focus is “rain makes forage”, something most of the region has experienced this year. Stored forage is part of nearly every ruminant livestock operation and in the past couple years it has come with increased cost. Fortunately, the trend of lower hay production and inventory in the major hay producing states appears to have reversed in 2024. However, the rain has created challenges with timely and proper harvest of hay. If you need to purchase hay to fill a forage gap this winter, there are some risks that need to be considered.

Most of the time, purchased hay is hauled in and fed without issue. Often times some of the best times to purchase this feed is directly out of the field from a known, local supplier. It’s a regular occurrence for many operations and should always be an option for consideration in the overall livestock feeding plan. Price tends to be a major driver of purchasing decisions, but there are additional costs that purchased hay can bring to an operation.

Not all hay is created equal. Sellers can make any claim about the quality of the hay, but the only way to truly know is to have a good representative forage quality analysis test. Many factors go into hay quality; plant maturity, species present, fertilization, moisture during the growing season, and how the hay was cured and put up are just a few. Even if a good guess of quality is close, a few percentage points either way on energy or protein content can mean the difference between good body condition, healthy calving and a successful breed back or not. Not only does a hay test provide a better understanding of what quality of product you are purchasing, it can help with finding the best deal when comparing options.

Don’t forget to consider toxicity issues when purchasing forages. Small grains and annual forage grasses and some weedy species like pigweed are of especially high concern for nitrates. A forage nitrate test can quickly tell if there is a problem or not and is something to ask for before purchase. Hay that was put up in a hurry may not have been dried and cured properly. Wet hay often leads to mold growth. Besides lowering the quality of feed, mold can cause respiratory issues and in some cases mycotoxin development. While not every mycotoxin is the same, consumption can lead to lowered gain and in extreme cases abortion and/or death. Horses tend to be very sensitive to moldy hay.

Invasive species in the form of weeds and insects can be a concern as well. Ask questions about problem species in the area where the forage is harvested and ask for assurance that the forage is free of these issues. Reserve the right to refuse the hay after inspection upon arrival. When feeding hay of unknown source, do it in a small area, so if a problem does develop it is isolated and hopefully, controllable. Weedy hay may contain plants that are toxic to livestock. Since hay is a dried form of the plant and often limit fed or ground, animals can end up consuming more of these problem plants or insects. Keep an eye out for anything unusual in the bales and try to identify unknown plants or insects if possible.

Most producers have a good handle on how much quantity is needed to make it through a normal winter. Hopefully planning already takes into consideration a worst-case weather scenario, but if not, it’s worth considering. What happens in an early winter with grazing days cut short? What about a cold dry spring and a late green up? Don’t forget the quality side of the equation. Does the hay inventory have the quality to cover animal nutritional requirements? What if an extended cold snap occurs and animal energy demands increase dramatically? By being prepared, purchased hay doesn’t have to come with an additional cost.

July 5, 2024

Laura Phillips  
District Extension Agent, Horticulture

No news this week.

Teresa Hatfield  
District Extension Agent, Family and Community Wellness

### **Staying Healthy: Medicare Offers Free Preventative Care**

We often hear about all the costs associated with Medicare. There are the monthly Part B premiums, co-insurance, co-payments, and deductibles. Some services are provided for free with no deductible. Medicare offers many preventive services aimed at keeping you healthy or detecting problems early when treatments work best. If you currently have Medicare Part B, the following preventative services may be available.

- “Welcome to Medicare” preventative visit: This is a one-time visit within the first 12 months that you have Medicare Part B. During this visit, the doctor will:
  - Record your medical and social history.
  - Check your height, weight, and blood pressure.
  - Calculate your body mass index (BMI)
  - Screen for the risk of depression
  - Give you a simple vision test.
  - Talk to you about creating advanced healthcare directives.
- Yearly “Wellness” visit: If you have had your Medicare Part B for over 12 months, you can get a yearly “wellness” visit. Remember that this is not a physical; Medicare does not pay for an annual physical. The “Wellness” visit is like the “Welcome to Medicare” visit. You will work with your doctor to create a screening schedule for other appropriate preventative services.
- Vaccinations: Medicare Part B covers shots including flu, pneumococcal, Hepatitis B, and COVID. Most other vaccinations are covered by Part D (Prescription drug coverage), this includes the shingles vaccination.
- Breast Cancer Screening (Mammograms): Women 40 and older are eligible for a screening mammogram every 12 months.
- Colorectal cancer screening: Colorectal cancer screening tests help find pre-cancerous polyps, remove them before they become cancerous, and detect colorectal cancer at an early stage.
- Prostate cancer screening: All men over 50 with Medicare qualify for this screening. Medicare covers the PSA test and the digital rectal examination once every 12 months.
- Counseling: Medicare provides for smoking and tobacco use cessation, obesity, depression, and alcohol misuse.

By utilizing these free preventative services, you are taking a positive step to maintain good health. Regular screening can help detect and manage serious health problems. Medicare offers a publication on all the free preventative services. To receive a copy of this publication or to learn more about the other free preventative services contact Teresa Hatfield at [thatfield@ksu.edu](mailto:thatfield@ksu.edu) or 785-364-4125.

Cindy Williams  
District Extension Agent, Food, Nutrition, Health and Safety

### **Making Jam and Jelly with Frozen Fruit**

I recently conducted a workshop on jams and jellies in the Meadowlark Extension District. Here are some tips that will help create successful jams and jellies from frozen fruit or juice:

- The best frozen fruits for jams and jellies are blueberries, red and black currants, gooseberries and rhubarb.
- Before freezing fruit, measure the fruit and label the container. Many fruits collapse as they thaw and may create an inaccurate measure.
- Jams and jellies from frozen fruit and juice are better if no sugar is added before freezing.
- When freezing fruit for jelly or jams, use  $\frac{1}{4}$  under-ripe and  $\frac{3}{4}$  ripe fruit.
- Thaw frozen fruit in the refrigerator until only a few ice crystals remain. Follow directions for the type of jam you are making and following the recommended proportions of fruit (measured before freezing), pectin and sugar.

When making jelly from frozen juice, thaw frozen juice in the refrigerator overnight. Measure juice and use it immediately in recommended proportions with sugar and pectin.

### **How Old are Your Spices?**

Do you ever buy a can of herbs and only use it once? It happens to all of us. Then we have a cabinet full of herbs and spices that get old and go out of date. Here is a general guide for how long to store herbs and spices:

- Dry herbs—1 – 3 years
- Ground spices—2 – 3 years
- Whole spices—3 – 4 years
- Seasoning/herb blends---1 – 2 years
- Extracts (except vanilla extract) – 4 years