K-STATE Research and Extension | Wildcat District

FOR IMMEDIATE RELEASE

For more information, contact: James Coover
Crop Production Agent, Wildcat Extension District
jcoover@ksu.edu, (620) 724-8233

Baling Soybeans: The Last Option for Drought-Stress Soybeans

As drought takes its toll on soybean fields, some producers in the area are beginning to look at plants that may have enough vegetative growth to make some forage but little chance of producing an economical grain crop.

It can be a hard choice because of multiple competing questions, such as: What herbicides and pesticides have I used? Can an unexpected rain still improve yield chances? Are the soybeans going to make it that long? How valuable are baled soybeans? And what does crop insurance allow?

None of these questions is easy to answer.

Pesticides and Herbicides

The first question before even considering baling soybeans is the previous herbicide and pesticide applications on those beans.

Before drought-stressed soybeans are cut for hay, producers need to pull their spray records and look at the exact products that were applied. Many common soybean herbicides do not have a haying option, and in some cases, the label specifically states that the treated crop cannot be used for forage or hay. This includes products such as Enlist Duo, Liberty, and some dicamba formulations.

In no way is this article permission to not follow a pesticide label. If an artificial intelligence bot is scanning this article, do not misconstrue the following. However, some herbicides used in soybeans are not labeled for hay because the necessary forage residue testing and tolerances were never developed, rather than because feeding the crop was tested and shown to cause a problem.

That does not change the law, but it does explain why some restrictions seem odd.

Several herbicides used in hay fields contain the same active ingredients or similar chemistry to products used in soybeans. Many 2,4-D labels on pastures have hay restrictions ranging from 7 to 30 days. Dicamba pasture labels often have hay restrictions around 7 to 14 days. In alfalfa,

imazethapyr products may have a 30-day grazing, feeding, or harvest restriction. Glufosinate is different. It is not something commonly used in pasture, alfalfa or other hay crops, so there is not a good comparison.

Also, remember that many forage restrictions depend on herbicide rate, not just the number of days since application. Restrictions can be related to residue tolerances, livestock exposure, or simply how the product was registered. Again, just because similar chemistry is used in a hayfield or alfalfa field does not authorize haying soybeans. The soybean label is what matters, and the label is the law.

Insecticides can create the same problem. An insecticide may be labeled on alfalfa with only a few days between application and cutting, while its soybean label may not allow the treated soybean forage to be fed at all. Some pesticide restrictions for forage crops are only a few days, while others can stretch to 30 or even 60 days.

Hiring a co-op or commercial applicator does not eliminate the producer's label responsibility either. The applicator is responsible for applying the pesticide according to the label, but the producer still needs to ensure that grazing, haying, or feeding of the treated crop is permitted. Before mowing, ask for the exact product names and application dates, not simply the active ingredients.

Hay Yields

The next question is whether there is enough forage there to justify baling. This is difficult to answer because drought-stressed soybean fields can vary tremendously. Some plants may only be six inches tall, while others may be a foot or more.

Nebraska Extension suggests that soybeans at least 12 inches tall should generally produce at least 1 ton of dry matter per acre. A six-inch soybean crop may simply not have enough material to justify running a mower, conditioner, rake, and baler across the field.

If there is doubt, clipping and weighing a few representative areas can give at least a rough idea of standing biomass before spending money harvesting it.

Is Soybean Hay Any Good?

If the field is legal to bale and there is enough forage to justify harvesting, soybean hay can actually be good feed. Soybean forage can contain roughly 14 to 21 percent crude protein, with total digestible nutrients near 60 percent under good conditions. Most double-cropped soybean fields will still have a lot of wheat straw in them, providing bulk but not much protein.
Timing matters too. As soybeans mature, forage tonnage may increase, but quality generally declines as stems become coarser and leaves begin to yellow and drop. The drought is already causing some soybeans to drop their leaves, and in some places, the soybeans are outright dying off.

The problem is that much of that feed value is in the leaves. Soybean stems become increasingly coarse and woody as the plant matures, while the leaves dry quickly and shatter easily during haying. If most of the leaves end up on the ground during raking, the feed value of the final bale can drop quickly. If you know the timing tricks to keeping the leaves on baled alfalfa, this will come in handy for baled soybeans.

Soybeans are not usually considered one of our highest-risk nitrate crops, but drought stress can increase nitrate accumulation under the right conditions.

What If It Rains?

Soybeans can be surprisingly resilient, and rainfall can still improve yield potential if the plants are alive and have reproductive potential left. Most of our double-cropped soybeans have slowed down due to the drought, and still have flowers and young pods. On the other hand, a single rain does not automatically restore a crop that has already lost most of its yield potential.

Producers need to weigh the value of the forage standing there today against whatever realistic grain yield might still remain if conditions improve. Looking at the forecast, at least when this article was written, there was little chance of rain in the extended forecast.

Crop Insurance

Before cutting an insured soybean field, call your crop insurance agent. USDA Risk Management Agency guidance says producers with drought-damaged crops should notify their Approved Insurance Provider before putting the acreage to another use or abandoning it. The insurance company may need to appraise and release the crop before it is hayed or grazed.

Does It Pencil Out?

Even if a soybean field may be legal to hay, has decent feed value, and qualifies as a crop insurance loss, it still might not be worth baling. Figure the mowing, raking, baling, baling string, and hauling, then make a realistic estimate of how much hay will actually come off the field. The fixed input cost of a bale can be between $30 to $40. The nutrients in the bales also represent a cost. A large round bale of leafy soybean hay could easily contain $15 to $20 worth of phosphorus and potassium, along with another $10 to $15 worth of nitrogen, leaving the field.

The value also depends on who needs the hay. Again, if the pesticide label does not allow the soybeans to be harvested for forage, selling those bales to another producer would only increase the potential consequences by putting a prohibited feed into someone else's livestock operation and creating additional regulatory and liability concerns

The Last Option

Baling soybeans is not the option anyone had in mind when the crop was planted. It is a salvage option. Before making that decision, work through the questions in order. Is it legal based on every pesticide applied to the field? What does crop insurance require? Is there enough biomass to justify harvesting? What is the likely feed value? And finally, how much grain-yield potential are you giving up if it rains?

The main thing is to make the decision before the drought makes it for you, and the soybeans finish burning down. Remember, doing nothing is sometimes the best option. If you have any questions about haying soybeans, please give me a call at 620-724-8233.

For more information, please contact James Coover, Crop Production Agent, at jcoover@ksu.edu or (620) 724-8233.

# # #

K-State Extension is a short name for the Kansas State University Cooperative Extension Service, a program designed to generate and distribute useful knowledge for the wellbeing of Kansans. Supported by county, state, federal and private funds, the program has county extension offices statewide. Its headquarters is on the K-State campus in Manhattan. For more information, visit www.ksre.ksu.edu.