

Alfalfa Management From Cradle To Grave

Four-Year Investment Choose Wisely

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Dale Strickler, Forage Technical Agronomist, Forage First/Croplan Genetics, spoke recently in Shawneetown, Missouri at the Alfalfa Field Day. Strickler covered alfalfa management from field selection, field preparation, planting techniques, weed control, insect control, disease control and harvest management in order to help growers determine how long they should keep the stand or kill it and cash in the nitrogen credit and reestablish another stand.

Field selection is important according to Strickler, "field selection is really important, it is critical to choose a well-drained field." Strickler dug into the soil and explained what to look for, "it is real easy when there are ducks. When there are ducks on a field that is a poorly drained field. How do you tell when it hasn't rained for while? Dig under the ground. Look at the subsoil coloration. A well-drained soil will have oxidized iron compounds that color the subsoil red or brown. A poorly drained soil will have reduced iron compounds that color the subsoil gray or blue. Intermediate levels of drainage will have mottling of gray and red. Alfalfa is a very deep-rooted crop. If it doesn't have a lot of soil depth to explore it will not reach its potential. A deep-rooted crop has no advantage if you only have six inches of soil. Alfalfa is a tremendous water user so it really needs that soil depth in order to extract water."

Fertility requirements need to be evaluated. "Some of your immobile nutrients like phosphorous, potassium and ph need to be considered. Ph is critical in alfalfa. Alfalfa will not perform in an acid soil. You need to get it neutralized preferably a year before planting," said Strickler.

"I have seen some emergency remedies on liming alfalfa even after it is planted but, it is never as satisfactory as taking care of it up front. We are trying to get farmers prepared to plant alfalfa even a year or more on out into the future, take out the perennial weeds, selecting the correct variety. What are their criteria? Are they going to be baling hay, are they going to be grazing? How are they going to harvest? How intense is their management going to be?"

The average life of an alfalfa stand is four to five years. "I own a farm up in north central Kansas. When I bought it I had a 22-year-old stand of alfalfa out there. That is about as extreme as I have ever seen. It was still productive. Four or five years is probably average. People who are intensively managing their alfalfa stands are moving to a shorter rotation now. They are going more around three years because the most productive years of the stand is the first, second and third year. If you can have a higher percentage of your land in young alfalfa versus old alfalfa you can raise more tons per acre on the average. Also a higher percentage of that is growing corn or corn silage or some other crop that can use that nitrogen credit."

Strickler demonstrated the use of PEAQ sticks to estimate the quality and tonnage producers have in the field. "You could do some marketing before it is up in the bale. If you are calling around trying to get your hay sold before it is actually in the bale, it is nice to know how many bales you are going to have. Providing it does not get rained on, you can also get a reasonable quality estimate, dairy quality or beef cattle quality."

Strickler hopes to help growers decide when an alfalfa stand is too old. "Most people take out their alfalfa after it lost them money for a year. We are trying to show people how to anticipate when an alfalfa stand is going to tank. When is it going to lose quality, lose production, become weedy, start losing plants and lose you money in that one year. We want to prevent that. With the cost of nitrogen fertilizer, it is really useful to take that nitrogen credit and raise a corn crop. You will never raise a better corn crop than what you can after a stand of killed alfalfa. You will never raise a cheaper corn crop than what you will after a stand of killed alfalfa. Cash in that credit, raise your monster corn crop and reestablish another alfalfa field."

Producers need to look for crown rot according to Strickler, "crown rots will eventually kill your alfalfa plants. They give you plenty of warning that they are going to kill your alfalfa plants. The alfalfa plants will typically get crown rot one year and die over the winter. The next spring they are just not there and about the time you realize it, it's too late to get the rest of stand killed and go on to corn. We are trying to predict when that happens."

Strickler explained farmers can dig the alfalfa up by the roots across the field. Split them and look for evidence of crown rot. Have the sample graded on a scale from one to five. Five is essentially a dead plant and zero a healthy plant. When you get to stage one it is the initial starting point for crown rot. This crown rot will

progress at about one to two steps per year. When the majority of the stand is at stage three, it is time to take it out.

Personally Strickler prefers the no-till drill for planting he said, "in a no-till system situation you already have a firm seedbed. Why spend a lot of time, money and diesel fuel getting it loose and then trying to get it firm again. So I really like using no-till. At one time we were told that you can't no-till alfalfa, it just doesn't work. With the improvements in seeding equipment I see

Dale Strickler, Forage Technical Agronomist, Forage First/Croplan Genetics, recently speaking on alfalfa management.

Photo by John LaRose, Jr.



that a lot of acres are seeded no-till. One year I seeded half and the other half I used conventional no-till. No comparison. The no-till stands were just so much more uniform, I didn't have crusting, I didn't have blowing, I didn't have the gullies when I got a big rain."

Strickler discussed seeding rates. "Ordinarily somewhere in the 12 to 20 pounds per acre is the norm. The biggest difference that you will see between a 20-pound seeding rate and a 12-pound seeding rate is that first year. You will have a lot more plants out there to compete against weeds and you will have a lot finer stemmed, higher quality stand. Grower need to balance the higher quality with higher costs. Most of the weed problems you will have with alfalfa are in the establishment year. Those first few cuts pretty much pays for the extra investment in seed. I like to be pretty aggressive on seeding rates so I can get the thicker stand and help compete against weeds."

Weed management involves taking out annual and perennial weeds. Strickler said, "we really don't have any herbicidal tools for taking them out and being perennial they will keep coming back from the roots. For a lot of your annual weeds, mowing is pretty good weed control and there are a large number of labeled herbicides. Pigweeds are something difficult to take out economically in an alfalfa stand. There are herbicides that are labeled for pigweeds, but the rate needed to kill the pigweeds is expensive. 2,4DB will take out pigweeds. It is labeled one to three quarts per acre. The one-quart rate I have seen that used and it made pigweeds mad. Where they went up to two quarts they did a fair job, three quarts will do a good job but you are talking quite a bit of money. I like using the plant, the best herbicide ever invented is your crop. The competition that your crop affords, that is one reason I like the higher seeding rates. I think it saves you some herbicides later on. That one time investment stays with you for years to come."

Choosing an alfalfa variety depends on which market you are serving. "There are places for cheap alfalfa. I know in Kansas we are piddling around planting alfalfa in the fall and killing it in the spring and growing corn. You don't need or want an expensive alfalfa for that market. If you are in the business of producing forage, a quality variety might cost you a dollar a pound more than some old public variety that is 50, 60 years old and been around since World War II. At a 20-pound rate you are looking at maybe \$20 additional per acre for a better variety. With a one half ton per acre yield increase in a four-year stand at \$150 per ton for quality dairy hay; you have made an additional \$300 with a \$20 investment. You can't find an investment like that in the stock market. Invest in a good variety. Planting alfalfa is a long-term investment and it is just like picking someone to marry. You don't go with whoever is cheapest. It is a long term investment so pick wisely." Δ

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