

Alfalfa seeding rates revisited

By: Mike Hunter, CCE-NCRAT

I would like to take this opportunity to revisit alfalfa seeding rates. Alfalfa seeding rate studies have been done for decades and they all seem to be in agreement. For the Midwestern and Eastern United States, recommended alfalfa seeding rates are between 10 and 15 pounds per acre when seeded alone. When seeded with perennial grasses alfalfa can be seeded at 8 to 12 pounds per acre. There are many farmers that believe these rates are too conservative and they tend to increase the seeding rates.

According to Dan Undersander, University of Wisconsin, higher seeding rates do not equate to higher yields. He tells growers that regardless of the seeding rate used, alfalfa will thin down to 30 to 35 plants by the end of the seeding year. He uses some basic math to illustrate why many alfalfa growers can reduce their alfalfa seeding rates and not sacrifice yield. Alfalfa planted at 1 pound per acre is about 5 seeds per square foot. At a seeding rate of 15 pounds per acre you will have 75 seeds per square foot. After emergence is completed in three or four weeks only about 45 alfalfa seedlings will be present. Using his example, it really puts alfalfa seeding rates into perspective.

Most agronomists will agree that an optimum alfalfa stand will have 20 to 35 plants per square foot in the establishment year. In the first production year an optimum stand will have 12 to 20 plants per square foot and 8 to 12 plants per square foot in the second production year.

It is my observation that alfalfa seeding rates vary drastically around our area. I have talked to some growers that plant more than 20 pounds of alfalfa with a perennial grass. Growers that have put the time and effort into preparing a good seedbed have no reason to use higher than recommended alfalfa seeding rates. With today's alfalfa seed prices above \$5 per pound, reducing seeding rates by two or three pounds can save growers \$10 to \$15 per acre.

Dr. Undersander has found that high alfalfa seeding densities actually provides too much competition among the young alfalfa seedlings. Alfalfa forage yield is not a function of plants per square foot in the establishment year. It is related to larger and more stems per square foot.

I would challenge you to take a closer look at your current alfalfa seeding rates that you are using on your farm. If you are a firm believer that 18 to 20 pounds of alfalfa per acre is necessary it might be well worth your time to check stand densities four weeks after planting and again at the end of the seeding year to see where your stand densities end up. If what Dr. Undersander suggests is true you should have about 30 to 35 plants at the end of the season. It would be very easy to experiment for yourself on your farm with a few strips of reduced alfalfa seeding rates within the same field and comparing end of season plant densities.