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Evaluating Alfalfa Stands

Were you expecting more from last year's alfalfa yields? Did your plants get enough time to winterize in the fall or are you concerned about winter kill? Evaluating your alfalfa stand in the spring is key to planning management and setting expectations for this year.

While most scouting occurs after plants green up, a bit of preemptive scouting can help focus efforts later on problem locations as days get busier with spring planting. First. Dig down next to a plant 4-6 inches and look at the taproot. A healthy plant will be white and firm, while winter damaged plants will have stringy taproots, yellow or brown in color.

Next, look for basal buds at the crown of the plant. Buds form in the fall and proper growth is a big reason the winterization period in the fall is so important for alfalfa stands. In-tact, alive buds will start growth sooner and produce a larger first cutting. No buds doesn't mean the plant is dead and won't recover, but will more than likely mean a smaller first cutting.

Finally, take a stand count. There are two options when evaluating your stand: 1) by the number of plants per square foot (typically recommended for new stands, like plantings last fall) and 2) by the number of stems for established stands; University of Wisconsin research shows that stem count more accurately predicts yield compared to plant number. However, either method will give you more information when making management decisions. Before green up, plant numbers are the only option we might have.

A hay square is a quick and easy way to determine the number of plants per square foot or stems. While we call it a hay square, square or circle shapes work equally well. A 17 x 17 inch square or 19 inch in diameter circle are the size we want for easy math.

Pick 4 to 5 random areas in your field to sample. With growing plants, we would count the plants or stems that would be harvested, typically anything over 6 inches. If there is no growth, just count plants. Next, divide those numbers by 2 to get stems or plants per square foot. For established stands having 4 to 5 healthy plants per square foot or 55 stems per square foot would warrant a productive and healthy stand. Stem counts below 55 see a significant decrease in dry matter production.

For stands planted last fall, you will see more plants per square foot compared to stems. Remember, that a good rule of thumb is, for every pound of seed planted, expect 3 to 5 plants. With that in mind, a seeding rate of 20 lbs. per acre would have the potential for 60 to 100 plants per square foot. The University of Wisconsin suggests reseeding new plantings that contain fewer than 12 plants per square foot.

Bottom line: evaluate your established and newly seeded stands this spring to set expectations and inform management later on in the year. Look for a healthy tap root, in-tact basal buds, and 4 to 5 plants and per square foot for established stands. In newly seeded stands, having 12 plants or greater per square foot will still leave you with a productive stand.

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