

Can You Successfully “Thicken-Up” Old Alfalfa Stands?

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University and private alfalfa researchers do not recommend the practice of interseeding new alfalfa into old, thin alfalfa stands (“thickening-up”). However, there are many inquiries on this practice year after year, and always the same answer – Don’t do it! There are very few situations where a grower has any chance of success when thickening-up an old alfalfa stand, and although seed companies would love to sell the seed, they also have vested interest in keeping grower-customers profitable! Let’s review why the odds are strongly against success when alfalfa growers attempt to thicken-up old stands.

What kills new seedlings in established alfalfa stands?

The environment surrounding a germinating alfalfa seed in an old, established alfalfa stand is as hostile as one could image. Diseases, insects, and nematodes specific to alfalfa have had years to build up in the soil and in the root and crown tissue of older plants. As soon as young, fresh tissue is available (the germinating alfalfa seedling), these pathogens attack, and the new seedlings “melt” away within a few months of seeding.

Another reason why young alfalfa seedlings seem to melt away after interseeding is the presence of old alfalfa plants. This competition takes on two forms: competition for light, water, and nutrients; and autotoxicity. Even very thin older stands provide stiff competition for light and water as new seedlings attempt to establish. In addition, the older plants will excrete compounds from their roots and top growth which are autotoxic to the germination and growth of new alfalfa seedlings.

What should a grower do?

For producers with thin alfalfa stands, the best advice is to destroy the stand (plow or herbicide) and rotate to a different crop for at least one year. This allows pest pressures and autotoxic compounds in the soil to dissipate completely before new alfalfa seedlings attempt to establish. Although the practice of thickening-up old alfalfa stands looks attractive on paper (lower seedbed preparation costs and lower seed costs – 8-10 lbs/ac vs. 18-20 lbs/ac), it is not cost effective. Thickened-up stands will quickly revert to their thin, run-out condition, and become weedy and unproductive. The best bet is to plow the old stand, take the nitrogen credit and rotation benefit on a subsequent cereal crop, and establish new alfalfa acres on ground that has been out of alfalfa for at least one year.

