

Alfalfa Winterkill

Dan Undersander, University of Wisconsin

Some alfalfa winterkill occurred in the past 3 months. It occurred largely from frozen crowns and is evidenced by soft mushy taproot just below the crown. Some plants may even begin to greenup and then die. Plants that put out second leaves are likely unaffected.

Some of the most common questions arising are:

1) Can I interseed to thicken the stand?

Interseeding alfalfa to thicken an alfalfa stand will generally not work. If the stand is one year or less old, plants will generally come up and then be outcompeted by the survivors from last year. Large dead spots should be disked first and then seeded. If the stand is 2 or more years old interseeding alfalfa will not work because of autotoxicity.

You can interseed grasses (ryegrass, Teff grass for one year or orchardgrass or tall fescue for two or more years) or clovers to thicken stand.

2) When can I reseed alfalfa into the same field?

If the stand was seeded last spring or later (less than 1 year old) the field can be disked and then reseeded immediately with no risk of autotoxicity. If the stand is 2 or more years old, there are autotoxic compounds that will reduce stand and/or future yield of the alfalfa and you should wait one year before reseeding.

3) What legume credits can I expect from the killed alfalfa?

If the stand is more than 1 year old you can expect 150 lbs N/a legume credit if the stand had 4 or more plants per square foot when killed. This is sufficient to grow a crop of corn for grain or silage with some starter fertilizer. If the alfalfa was seeded last spring, legume credits would be about 90 lbs N/acre if topgrowth was not harvested and about 30 lbs less if only stubble prior to winter.

4) What crops should I plant to recover?

The best crop to plant to reduce the forage loss from winterkilled alfalfa depends on the time of need and intended use. Generally the following is recommended for the most common situations:

1. Where tonnage is needed quickly to replace lost first cutting:

- a. A small grain is the best option to replace the loss of first cutting alfalfa. The crop will be able to be harvested at the middle to end of June. Oats is likely the best choice, triticale a second choice and barley a third choice (due to lower yield).
- b. Planting small grain with peas (60 lb/a of 50/50 mix) will increase crude protein and palatability of the mix but not yield. Doubling the oats in the mixture will increase yield about 15% but will be harder on the alfalfa.
- c. Spring planting winter wheat is not a good idea due to low yield.

2. For high season long yield

- a. **For silage**, corn is the best high tonnage option.
- b. **For haylage** best choices are seeding Italian ryegrass at 2 to 4 lbs/a with alfalfa (12 lb/a) or solo seeding alfalfa (12 lb/a) into a field with no alfalfa autotoxicity (see above).
- c. **For hay**, best choices are seeding Italian ryegrass at 2 to 4 lbs/a with alfalfa or solo seeding alfalfa into a field with no alfalfa autotoxicity (see above). Sorghum-sudangrass will produce the most tonnage in the seeding year for those want grass hay (2 to 3 cuttings harvested at 36 to 40 inch height). Teff grass is a new possible alternative. However Teff grass has not been widely tested in the Midwest.