Assessing Alfalfa Stand Condition in the Spring

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As alfalfa comes out of dormancy in the spring we should evaluate stands for condition and yield potential. The earlier we make a determination the more possibilities we have for remedial action. This stand assessment should occur in three parts:

1) **Are individual plants alive?** This assessment can begin as soon as the frost is out of the ground and continue until spring greenup occurs. The process is to dig a few plants 4 to 6 inches deep and look at the condition of the taproot. If the taproot is turgid (like a potato, leftmost plant), it is alive and healthy. If the root is browned, dehydrated, and ropey (like two plants on the right), it is dead or dying. This assessment can be repeated until greenup occurs and stand can be assessed on that basis.

2) **Are plants injured?** Alfalfa forms buds in the fall for spring growth. If these buds are killed the plant must form new buds in the spring, delaying growth and reducing yield. The three taller stems in the picture (above line) are from buds formed in the fall and the shorter stems are from buds formed in the spring. The delayed, shorter growth will reduce yield of first cutting and then plants will recover. If you see this, consider management to reduce this in the future, such as adequate soil pH, fall application of potassium, more winterhardy varieties.

3) **Are there thin spots in the field?** A healthy stand should have 55 stems/ft^2. Early assessments, before stems are visible, may need to assess based on plant count. A high yielding alfalfa stands seeded last year should have 20 plants/ft^2, counts as low as 12 will produce good yield but result in shortened stand life. Stands, seeded last spring or fall with less than 12 plants/ft^2 should be disked and reseeded.

A high yielding alfalfa stand over 1 year old should have at least 6 plants/ft^2. If plant density is less than 6, oats (2 bu/a) or Italian ryegrass (10 lbs/a) can be overseeded to increase yield this year. Stand should be turned over either immediately or at end of year.

Thin Stand Adequate Stand