



Alfalfa Production

by Pat Feryn, CCA-ON

Alfalfa is the highest yielding perennial forage crop grown in Ontario. Many alfalfa producers are producing less than they potentially could in their total crop production. High yields of up to 6 tons per acre are achieved by some producers. As well, there is opportunity, on many farms, to increase the crop rotation benefit by reducing the number of years an alfalfa stand stays in production.

First of all, to get top alfalfa production, good drainage is required. One of the beauties of alfalfa is the deep root that can draw water from up to 20 feet below the soil surface. Avoiding compaction is important if roots are to go that deep.

Weed Control Always start clean by controlling all weeds prior to seeding. This may take some years of effort by controlling perennial weeds in previous crops. Use a preplant burndown herbicide for early season weeds. Broadleaf weeds that germinate after planting, such as pigweed and ragweed, can be taken out with 2,4-DB.

Fertility First of all, ensure that the soil pH is above 6.1. Lime, if necessary, at least 1 year prior to establishing alfalfa. Incorporate P at planting time to encourage root growth. Maintain P levels by adding 10 pounds of P205 per ton of alfalfa removed. While K is less important during stand establishment, it is very important to maintain medium to high K levels to maximize production and to reduce winterkill. Alfalfa removes about 50 pounds of potash per ton of yield, so a 6 ton crop will remove close to 300 pounds of potash. Adding about 30 pounds of N is a prudent practice at seeding time. This N can be from this year's manure, a previous year's manure or it can be part of the P application. An early N application in 2nd or 3rd year alfalfa can help to get things growing more quickly in the spring, especially if there is some grass in the stand. Add 1 to 2 pounds of actual Boron per acre if any deficiency occurs, or soil type is drought prone or sandy. Alfalfa removes about 5 pounds Sulphur per ton, so keep an eye on the need for S as well. Apply manure or fertilizer within 4 days of cutting.

Stand Establishment Like any crop, alfalfa seed needs to be planted not too deep into adequate moisture into a level seedbed. Many seeding failures are due to either planting too deep, or from uneven moisture in the seed zone. In a clay or loam soil, plant at 1/4 to 1/2 inch deep, with the shallower depth in heavier soil. Light soils may require seeding depth of 1/2 to 1 inch. Plant the seed not too deep, and into moisture. Pack after planting to improve seed to soil contact.

Consider summer seeding alfalfa. This is a way to get a full production year out of your alfalfa next year. One thing to watch out for is volunteer cereals. First off, disc or lightly till the stubble

after harvest to encourage the grain to germinate. Then apply glyphosate to kill the cereal. Drill alfalfa 1/4 to 1/2 inch deep and pack. Do this by August 10 in 2700-3100 CHU areas. More than 3100 CHU, do this by August 20. If you can't get it done by then, plant straight alfalfa, with no grass such as timothy, and apply a graminicide after the cereal germinates. The thing to do is to start clean! Another critical item is having adequate moisture. Don't even try to establish alfalfa in hot, dry conditions.

Choosing a Variety Alfalfa Variety Performance Yield comparisons are available from the GoForages website. There is a 5-10% difference between the top and the lower yielding varieties, and this advantage can be yours just by choosing the right variety. If you choose a variety that does well in years 3 and 4, that is a sign of winter hardiness. Consider disease resistance and choose a variety with resistance to diseases that are of concern to you.

Shorter Rotations Length of life of the stand is influenced by many factors. A shorter cutting interval will have the effect of producing more and higher quality forage in terms of digestibility and protein, but this could reduce the life of the stand. This is not a problem if you plan for it and plant a new seeding to replace this stand. A further advantage to this strategy is realized when you plant a row crop the next year in that field. Corn yield will be 10-15% higher, with a reduced nitrogen requirement compared to corn grown after corn. The ideal life of the stand is 3 years, including the seeding year, in most cases.

Insects Alfalfa weevil can build up to serious levels before first cut. Control is either by cutting, if alfalfa is at bud stage, or spraying for an earlier infestation. Leafhopper damage is most severe in new seedings, especially in hot, dry conditions. A leafhoppers infestation in a new seeding can reduce the yield for the life of the stand.

Remember that many of the production costs are the same whether you produce low yield or high yield alfalfa. Attention to detail in producing this crop is worth the effort!

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Pat Feryn is an independent agronomist working in Perth, Oxford and Middlesex counties specializing in all aspects of field crop production.

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