Tips on getting the most from alfalfa

DeKALB, Il. - The keys to maximizing return on investment in alfalfa depend on successful stand establishment and management. There are many factors that need special attention.

Establishment begins with variety selection. Yield and resistance to diseases and insects are primary considerations when selecting an alfalfa variety. Many alfalfa varieties offer relatively good yield potential but vary markedly in resistance to disease and insects. The importance of resistance to a particular disease is somewhat dependent upon the geographic area. However, varieties that have high levels of resistance to several diseases offer the best opportunity for profitable production.

Winter hardiness, ability to recover quickly from intensive cutting schedules, and adaptability to long rotations should also be considered when selecting an alfalfa variety.

as possible in the spring or, if fall seeded, six weeks ahead of the normal date of the first killing frost. A firm, well prepared seedbed is essential to establish good seed-soil contact and germination. A seeding method should be selected that places seed at a uniform ¹/₄-to ¹/₂-inch depth on heavy soil; 1/2- to 1-inch on sandy soil. Only high quality, properly inoculated seed should be used. Under ideal conditions, a seeding rate of 10 to 12 pounds per acre is adequate. Heavier rates of 15 to 18 pounds per acre are recommended when broadcast seeding, where seedbeds are less than ideal, on lighter soils, when chemicals are used to control weeds, or where harvesting is planned during the seeding year.

Alfalfa should be seeded as early

Companion crops are not recommended unless needed to control soil erosion while the alfalfa seedlings are becoming established. When a companion

crop is used, the seeding rate of the companion should be reduced to avoid excessive competition with the alfalfa. Early removal of the companion crop is also recommended.

Soil tests should be used to determine fertility needs. A soil test will also indicate whether lime is needed. Under most conditions, a soil pH of 6.5 to 7.0 is optimum for maximum alfalfa production. Soils having a pH below 6.0 should be limed six months prior to seeding alfalfa to allow enough reaction time to adjust the soil pH. Most essential nutrients are more avaiable to plants at pH values above 6.0.

Soil test values of 30 to 40 pounds per acre extractable P and 250 to 300 pounds per acre exchangeable K are adequate for producing good yields of alfalfa. To sustain yields and maintain stands, annual applications of phosphorus and potassium should replace what the crop removes. Each ton of alfalfa

produced removes about 10 pounds phosphate (P2O5) and 50 potash (K₂O). Top-dress fertilzer can be applied any time it is convenient. Under high vield management where annual fertilizer applications are large, the fertilizer should be applied half following the first cutting and half following the last. Such an application keeps alfalfa growing through the season and encourages a fast start in the spring.

Cutting three or four times a year at first bloom produces the highest yield of hay, protein, and TDN. A rule of thumb is to cut at 1/10 bloom. The last cutting in the fall should be taken 4 to 6 weeks before the expected date of the first killing frost. This allows time for root reserves to be replenished before winter dormancy. Late fall cutting or grazing of dormant alfalfa should be done in a manner that leaves sufficient stubble to catch and hold snow for plant protection during the winter.

Rotating alfalfa fields with other crops is the key to successful renovation of alfalfa stands. Research suggests that alfalfa plants may release phytotoxic factors that are detrimental to reestablishing alfalfa within a year. Although alfalfa auto-toxicity is not clearly understood, research results show a significant advantage for rotating to other crops following alfalfa. This advantage seems especially pronounced for corn.



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