ALFALFA

Lucerne, Medic

Medicago sativa Fabaceae

ECHO® PLANT INFORMATION SHEET

Description

Probably native to Persia, alfalfa was introduced to North America by Spanish colonists. As a perennial, leguminous plant of high yield, high protein content and vigorous growth, alfalfa is the most important hay and silage plant in North America, Argentina, Southern Europe, Asia and other temperate zones. It can be used in crop rotation as it fixes nitrogen in nodules on its roots and the leaves return the nitrogen to the soil as they decompose. Appropriate bacteria must be present in the soil either from previous alfalfa crops or added as innoculant at planting time (refer to EDN 101 for further inoculent information).

Uses

For livestock consumption, the high protein content of the leaves (22- 23%), makes alfalfa an ideal crop usable in several forms. A growing industry has come from dehydrating, grinding, and pelleting the plant for use as a feed for cattle, horses and many small animals. It is used to reduce water runoff and soil erosion. It is an excellent pasture for hogs, cattle, and sheep, often in mixtures with smooth bromegrass, orchardgrass or timothy. Alfalfa may be grown as a cover crop and often increases yield of succeeding crops, as potatoes, rice, cucumber, lettuce, tomatoes (increased by 10 MT/ha), corn, apples, and oranges.

Common Names

- German
  - Luzerne
- French
  - luzerne
- Indonesian
  - Alfalfa
- Spanish
  - alfalfa

Cultivation

- Elevation: 0-4000 m (13,000 ft)
- Rainfall: 500-600 mm/year (20-24 in); once established, is quite drought tolerant
- Soil Types: Grows on a variety of soils, but thrives on rich, friable, well-drained loamy soil with loose topsoil supplied with lime; does not tolerate waterlogging and fails to grow on acid soils.
- Temperature: can withstand high temperatures of up to 40° C (100 F) as well as light frost; the degree of adaptability varies with different strains.
- Light: full sun Alfalfa is a deep-rooted plant, able to withstand drought.

Alfalfa should be protected from grazing animals until it reaches full maturity. It is a heavy feeder, requiring soil that is rich in nutrients especially phosphorus, sulphur and potassium when cut frequently for hay.

Harvesting and Seed Production

After establishment, the pasture can be kept grazed to 4 inches. In subtropical areas, alfalfa may be rotationally grazed for up to eight years. Alfalfa is usually cut for hay just as bloom begins and in recurring cycles thereafter. Alfalfa plants bloom over a period of time, so it is best to harvest seed when most of the spiral-twisted pods have turned brown.

Pests and Diseases

New varieties have been developed that are dual purpose, for haying and grazing and at the same time are resistant to Phytophthora root rot, aphids and nematodes.

Cooking and Nutrition

The sprouted seeds of alfalfa are eaten raw in salads, sandwiches, breads, and soups. The leaves, which are rich in vitamins, may be dried and sprinkled on cereal, added to soups, or brewed into tea. Carotene and chlorophyll are extracted from the leaves commercially. Seeds can be ground into meal for making mush or bread.

References

Heuzé V., Tran G., Boval M., Noblet J., Renaudeau D., Lessire M., Lebas F., 2016. *Alfalfa (Medicago sativa)*. Feedipedia, a programme by INRA, CIRAD, AFZ and FAO. https://www.feedipedia.org/node/275 *Last updated on November 22, 2016, 13:50*

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