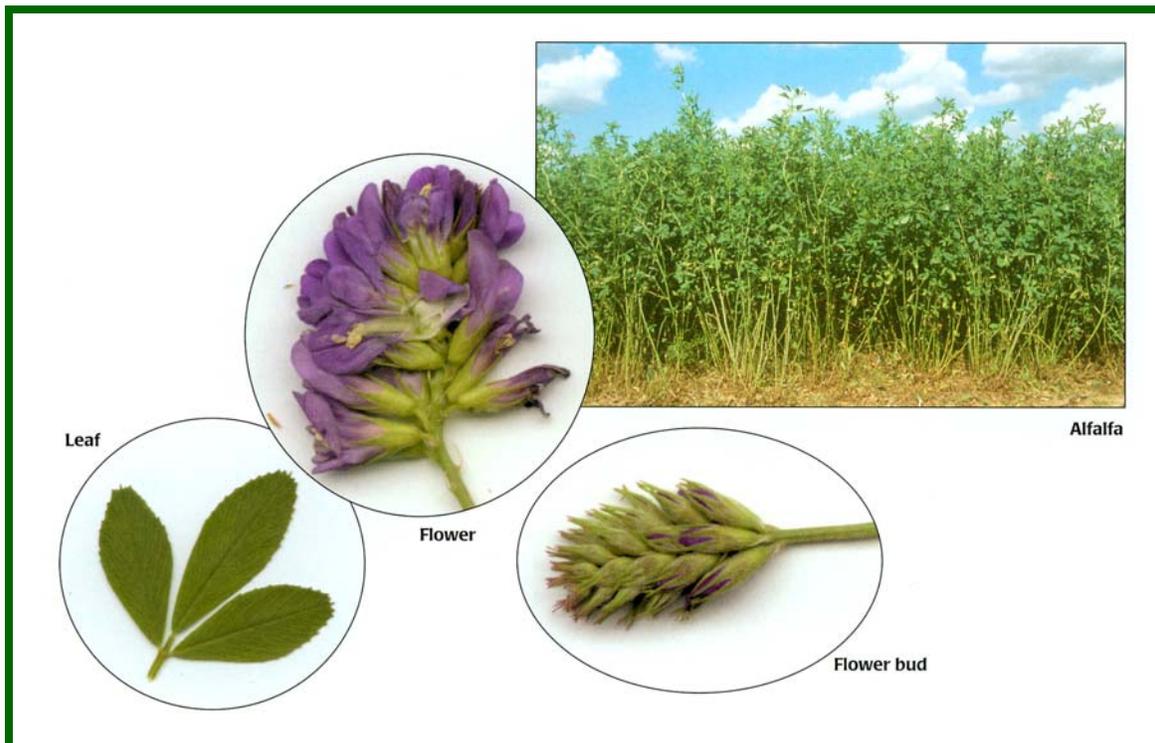


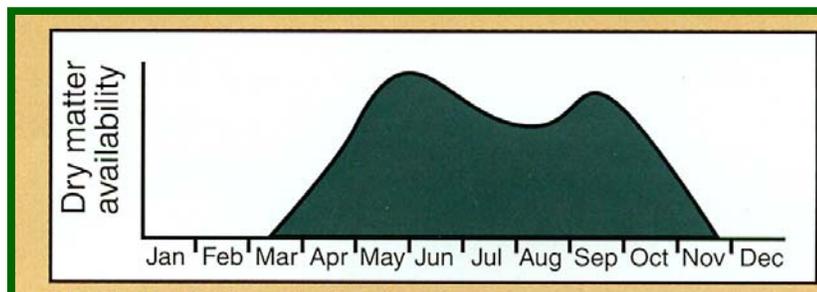
Alfalfa

Alfalfa is a popular legume due to its high quality, yield, and summer growth. However, alfalfa requires better soils and management to capture its benefits.

- Perennial legume
- Erect with leafy stems from large crowns at the soil surface
- Generally used for hay and silage but increasing use in pastures
- Withstands drought better than other legumes due to a deep taproot
- Grows well with orchardgrass
- In pure stands can cause bloat
- Prone to a number of disease and insect problems
- Should only be used on well drained fertile soils



Characteristics of alfalfa – note increased stemminess close to the ground



Generalized growth curve for alfalfa – varies with location

Source for graphics and photos: [A Guide to the Common Forages and Weeds of Pastures](#), MU Extension, University of Missouri - Columbia

Establishment: Must pay attention to detail

pH: 6.5-7.0

Soil: deep, well drained, fertile soils

Fertility at planting: No N; P and K per soil test

Inoculation: essential – use commercial inoculants

Date: 30-60 days < first killing frost in fall or 30 days < last killing frost in spring

Rate: 15-25 lbs/A for pure stands; 10-20 lbs/A with 3-5 lbs/A of orchardgrass

Method: 6-8" rows; cultipacker-seeder is the best planter in prepared seedbeds

Conventional seeding: seed 1/4-1/2" deep preferably with a cultipacker

A firm and compact seedbed is essential

No-till seeding: graze or mow the sod short; kill all vegetative competition with a herbicide, use insecticide, plant 1/4-1/2" deep with no till

Not suited for frost seeding due to weak seedling vigor

Management: requires a high level of management to capture benefits

Hay: 4 to 7 cuttings per year (depends on location and management)

Harvest at early bloom stage for compromise between quality and yield

Fertility: use a soil test to replace nutrients removed with hay; maintain pH

Grazing: rotationally graze for 1-7 days at a time; rest for 25-40 days at a time;

Use grazing tolerant varieties

IMPORTANT: Avoid bloat by

- seeding with grass
- turning cattle into new paddock only after forage is dry (no dew)
- not allowing cattle to get hungry prior to turn in

Approximate yield: 3-6 tons when well managed and adapted to location

Stand life: 3-5 yrs, up to 8 yrs with good management and adapted to location

In coastal plain, shorter stand life (2 to 4 yrs)

Relationship between the stage of alfalfa maturity at harvest to total digestible nutrients (TDN), crude protein (CP), and acid detergent fiber (ADF) on a dry matter basis

Maturity	TDN%	CP%	ADF%
Pre-bud	65	21.7	28
Bud	62	19.9	31
1/10 bloom	58	17.2	34
½ bloom	56	16.0	38
Full bloom	54	15.0	40
Mature	52	13.6	42

From Alfalfa in the South Source: Nutrient Requirements of Dairy Cattle, 1978, National Academy of Science, Publ. 1349

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