

White clover



Life Span: Perennial

Varieties: Ladino-type cultivars, Osceola, Durana, Patriot, Louisiana LS-1, Regal, among many others

General Seeding Info:

Planting Rate (Drilled): 2-3 lbs per acre
Planting Rate (Broadcast): 3-5 lbs per acre
Planting Depth: 0-¼ inch
Planting Dates: September 15-October 15; February 15-March 15

General Grazing Guidelines

Begin Grazing: 6-10 inches
End Grazing: 3 inches
Typical Rest Days Needed: 20+ days

Seed Cost: Commonly available varieties \$5 - \$10 per acre; New varieties may be up to \$30 per acre.

Portions of the state best adapted: All

Soil Texture Preferred: Loam to Clay Loam

Financial assistance available through EQIP?
Yes

Local Seed Availability: Seed is typically available. Specific varieties may require ordering.

Key Characteristics

Ease of Establishment	★★★★★★
Drought Tolerance	★☆☆☆☆
Wet Site Tolerance	★★★★☆☆
Close Grazing Tolerance	★★★★☆☆
Seedling Vigor	★★★★☆☆
Hay Use	★★☆☆☆☆
Tolerance to Soil Acidity	★★★★☆☆

Common Advantage

White clover has excellent forage quality for livestock. Additionally, white clover can extend the grazing season and reduce nitrogen fertilizer needs.

Common Disadvantage

Bloat is a possibility if a very high percentage of clover is present in pastures. White clover will not tolerate use of certain herbicides.

Establishment Procedures:

No-till drill: Seed can be placed into the soil with a no-till drill. The existing sod must be short (2 to 3-inches) prior to using a no-till drill. For pastures that are mixed with warm season and cool season grasses, wait until the night time temperatures are consistently 60°F or lower before seeding.

Broadcast seeding: Seed can be broadcasted on short sod (2 to 3-inches). A drag may be useful to improve seed to soil contact for pastures with high thatch content. For pastures that are mixed with warm season and cool season grasses, wait until the night time temperatures are consistently 60°F or lower before seeding.

Frost seeding: Frost seeding is broadcasting seed on to the pasture surface during the late winter. The idea is the warming and freezing of the ground will help the seed get anchored into the soil. The benefits of frost seeding is (typically) most pastures are already grazed very short at this time and there is very little competition. In addition, there’s typically plenty of moisture during this period for germination unlike some fall months.

The advantage of fall seeding is a better, well-established root system going into spring grazing and the summer months.

Late winter frost seeding of white clover is well suited on tall fescue pastures.

For all establishment options, control any brush and weed issues prior to planning any clover plantings.

Fertility

Use nutrient recommendations from a current soil test.

Establishment: Apply lime 6-12 months prior to targeted planting date. Apply recommended fertilizer at planting. Do not apply nitrogen at planting. Nitrogen will stimulate growth of other plants and will cause unnecessary competition for the clover seedlings.

Management of existing white clover in pastures: Adequate soil nutrients and the proper pH are needed for stand persistence.

Consult with your local cooperative extension service for specific nutrient recommendations.

Grazing Management

After clover establishment, existing grasses may become competitive for newly planted legume seedlings. If so, graze the existing grasses to allow additional sunlight to reach the clover seedlings. Rotate livestock to another field before their grazing negatively affects the clover. Use this grazing strategy until the clover is well established.

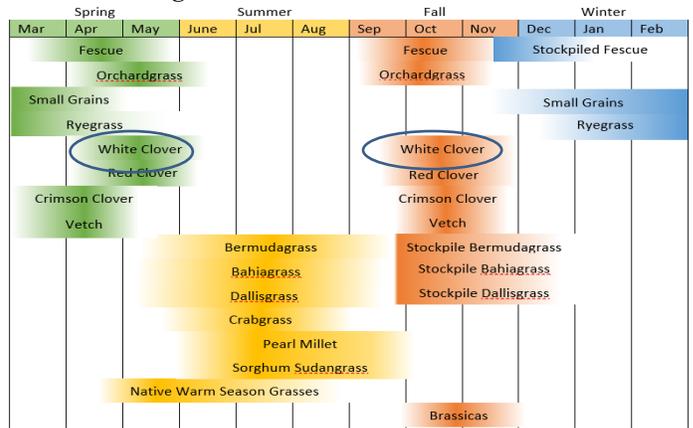
Clovers and other legumes store nitrogen in the leaves of the plants. When livestock consume the legume leaves, the majority of the nitrogen is excreted in urine and manure. This is the primary way to release fixed nitrogen back to the soil. Therefore, rotational grazing will improve the manure and urine distribution across the pasture compared to continuous grazing.

White clover varieties will differ on grazing pressure tolerance. For example, common white clover will tolerate close grazing compared to other varieties; however, may not provide the yield and leaf area compared to other varieties.

Compatibility with Other Forages

White clover is a complementary forage that can be best suited on cool season-based pastures such as tall fescue or orchardgrass. As a perennial, white clover is not as compatible with warm season grasses such as bermudagrass and bahiagrass.

Seasonal Forage Distribution



Most common reason for establishment failures

Two common reasons for establishment failures are planting with too much existing competition and planting the seed too deep.

Most common reason for stand failures

There are several common reasons that white clover stands decline over years. The use of certain herbicides (e.g. grazon, remedy) will eradicate white clover in pastures. Drought and over-grazing will contribute stand declines in addition to lack of nutrients and low pH. Producers may apply too much nitrogen fertilizer to clover stands which can encourage other plants to outcompete clover and reduce the nitrogen fixation capabilities.

Further Information on White Clover:

[Arkansas NRCS White Clover Job Sheet](#)

[University of Arkansas Cooperative Extension Service FSA 3134 Interseeding Clover and Legumes in Grass Sod](#)

[University of Arkansas Cooperative Extension Service FSA3137 Annual and Perennial Forage Clovers for Arkansas](#)

[University of Arkansas Cooperative Extension Service FSA2160 Value of Nitrogen Fixation from Clovers and Other Legumes](#)