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Natural Resources Conservation Service
Alexandria, Louisiana
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Fact Sheet 8 Range and Pasture

Legumes of Louisiana

Fact Sheet 8 White Clover

Legume Series

- White Clover
- Crimson Clover
- Sericea Lespedeza
- Subterranean Clover
- Red Clover
- Alyce Clover
- Arrowleaf Clover
- Berseem Clover
- Ball Clover

Description

White clover, *Trifolium repens,* is an introduced, cool-season, perennial clover that spreads by stolons and forms shallow roots at its nodes.White clover is high in crude protein and is quite palatable and highly digestible. In the U.S., white clover varieties are classified according to their size or stature: small, intermediate, or large. A few varieties have good reseeding ability and act more like annuals than perennials. White Clover is low growing with tall stems of white flowers clustered into heads. Leaves are generally comprised of three non-hairy, oval leaflets that are usually marked with a white "V".

Several varieties are recommended for Louisiana: 'LA S-1', 'Osceola', 'Regal', 'Canopy', and 'California'. LA S-1 is an intermediate variety with good reseeding ability. It has some perennial tendencies, but summer survival is usually poor, especially on upland soils and it produces little fall growth. Osceola is a large (sometimes called ladino) variety that flowers more than other large varieties, but not as much as LA S-1. Its reseeding ability has not been evaluated in Louisiana. Summer survival has been good in south Louisiana and yields have been higher than LA S-1. Regal is a large type that usually does not produce seed under Louisiana conditions and acts as an annual. California and Canopy are also large types of white clover.

Adaptability

White clover is one of the most widely distributed forage legumes in the world and has a wide range of adaptation in Louisiana. It grows best in fertile, moist, well-drained clay or loam soils. White clover does not produce well on droughty soils that have a high sand content, although it can survive periods of dry weather. This species can tolerate moderately acid soils, although it produces and maintains a stand better in soils with a pH of 6.0-6.5.

Establishment

Planting should be done from September 15 through November 15 at a rate of 5 lbs of Pure Live Seed/acre. White clover can be seeded by many no-till or minimum till techniques or by broadcasting on closely grazed grass pastures. In conventional seedbeds, white clover is almost always seeded with a perennial grass. White clover should be planted at depths of ¼ to ½ inch. Do not cover the seeds deeper than ¾ inch, or poor stands will result. If seedbeds are soft and fluffy, rolling them before planting can help achieve the proper planting depth. Good seed to soil contact is important to ensure rapid germination and emergence.

It is more difficult to plant white clover into an existing sod than a prepared seedbed. Competition from the grass should be minimized prior to seeding. White clover seeds should be inoculated with the proper inoculum before seeding. Using an adhesive in applying the inoculant increases its effectiveness. Either commercial adhesive or mixtures of water with syrup or sugar can be used (exa. a can of cola).

Management

The key to maintaining white clover in a mixed pasture is to manage the pasture for the clover rather than the grass. Try to maintain around 30%-40% of the pasture in white clover. Heavy grazing favors white clover, while light grazing favors grass.

Grass competition from undergrazing is a problem when maintaining productive white clover stands. Pastures should be grazed to a height of 2-3 inches to prevent shading of clover by the grasses and then allowed to rest. Pastures may be grazed again when they reach a height of 4 inches.

Rotational stocking and continuous controlled stocking have both been used to successfully maintain pastures with white clover. Close continuous grazing will result in decreased leaf sizes and increased stolon branching. White clover does not require nitrogen fertilization, except when establishing it on a low fertility site. As a legume, white clover has the ability to fix nitrogen from the atmosphere, thus nitrogen application to improve production is not necessary. Spring applications of nitrogen will stimulate grass for early grazing, but excessive rates are detrimental to clover stands. White clover can fix between 75-150 lbs of nitrogen/acre/year. Some of this nitrogen is available for use by the grasses in the pasture too. For optimum production, lime should be put out if pH is below 6. As a legume, it requires ample supplies of phosphorus and potassium.

Bloat is a potential problem when grazing clover. Although it may be impossible to prevent all bloat, some precautions can greatly reduce the incident of this problem on white clover pastures. Do not graze livestock on pastures that are comprised of greater than 50-60% white clover. Never turn hungry animals into a lush white clover stand. Cull chronic bloaters. Put animals on white clover only when plants are free of surface moisture (dew or rain). If risk of bloat is high, feed bloat preventing compounds and provide dry hay.

Uses

White clover is the most important pasture legume for grazing. It is also a choice food for deer and other wildlife. Solid stands of white clover form a good erosion controlling cover on moist fertile soils.

Where To Get Help

For more information about white clover, contact your local Natural Resources Conservation Service office or visit following websites:

http://plant-materials.nrcs.usda.gov

http://www.la.nrcs.usda.gov

NRCS Natural Resources Conservation Service

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