

WHITE CLOVER

Trifolium repens L.

Plant Symbol = TRRE3

Contributed by: USDA NRCS Plant Materials Program



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Uses

Forage: White clover is the most important pasture legume. It is highly palatable, nutritious forage for all classes of livestock. White clover is commonly planted with orchardgrass, ryegrass, or tall fescue. 'Ladino' planted with orchardgrass produces the premier forage combination for intensive grazing systems in the Northeast. 'Ladino' grows tall enough to be harvested for hay, silage, and green chop. Common white clover seldom grows tall enough to be harvested for hay or silage.

Beautification: White clover is seeded at 2 pounds per acre with grass for stabilization on moist soils. On dry sites it usually establishes only on wet or moist areas.

Wildlife: White clover is a choice food for deer and elk.

Erosion control: Grass seedings benefit from the nitrogen produced by white clover included in the seed mixture. Solid stands of white clover form a good erosion controlling cover on moist fertile soils, but stands may be sparse or spotty on dry sites.

Status

Please consult the PLANTS Web site and your State Department of Natural Resources for this plant's current status (e.g. threatened or endangered species, state noxious status, and wetland indicator values).

Weediness

This plant may become weedy or invasive in some regions or habitats and may displace desirable vegetation if not properly managed. Please consult with your local NRCS Field Office, Cooperative Extension Service office, or state natural resource or agriculture department regarding its status and use. Weed information is also available from the PLANTS Web site at plants.usda.gov.

Description

Trifolium repens, L., white clover, is a perennial legume that originated in Europe and has become one of the most widely distributed legumes in the world. It has a prostrate, stoloniferous growth habit. The leaves are composed of three leaflets, which may or may not have a "crescent" or "water mark" on the upper surface. Leaves and roots develop along the stolon at the nodes.

The flower heads, each consisting of 40 to 100 florets, are borne on long stalks from the leaf axils. Florets are white but may have a pink hue.

Adaptation and Distribution

White clover thrives best in a cool, moist climate in soils with ample lime, phosphate, and potash. In general, white clover is best adapted to clay and silt soils in humid and irrigated areas. It grows successfully on sandy soils with a high water table or irrigated droughty soils when adequately fertilized. White clover seldom roots deeper than 2 feet, which makes it adapted to shallow soils when adequate moisture is available.

White clover is distributed throughout the United States. For a current distribution map, please consult the Plant Profile page for this species on the PLANTS Website.

Establishment

The standard seeding rate is two pounds per acre. For pasture establishment, seeds are drilled into a well-prepared seedbed that has been plowed, harrowed, and compacted to produce a firm seedbed.

The seeds are inoculated before seeding. For stabilization use, seeds are broadcast on roadside cuts and fills by cyclone seeders, hydroseeders, or blower-type equipment.

The proper time of seeding is determined by seasonal and moisture conditions. This may vary from April to May. Late summer and fall seedings should be conducted while adequate moisture is still in the soil to assure establishment before freezing.

Management

Management for forage is aimed at maintaining 40% to 50% clover. Close grazing (2 inch stubble height) favors clover, whereas light grazing favors grass. Well-fertilized grass will outgrow clover in fall and winter and could smother the clover.

Spring applications of nitrogen will stimulate grass and provide early feed, but excessive rates are detrimental to the clover stand. Phosphate applications are broadcast in fall or spring according to soil tests. Sulfur, boron, or magnesium may be needed for maximum production on some soils in the western part of white clover's range.

Pests and Potential Problems

There are no serious pests of white clover; however, in the South, white clover is susceptible to a number of insect pests, as well as leaf and root diseases.

Cultivars, Improved, and Selected Materials (and area of origin)

The three general types of white clover usually recognized are (1) large, (2) intermediate, and (3) small.

Large type: 'Ladino' is the recommended cultivar of the large type. It is two to four times as large as common white clover. It is very well suited to the interior areas of western Oregon, away from the coast. It will winter kill under dry winter conditions, and is susceptible to slug damage. It requires a high soil phosphate level and good management for maximum production. 'Pilgrim' and 'Merit' have been developed for winter hardiness.

Intermediate type: 'Grassland Huia' is representative of the intermediate type. It was formerly designated 'New Zealand'. It is very well adapted to locations along the coast and interior western Oregon where slugs are a problem.

Small type: "New York" wild white clover is an example of the small type, which is adapted to higher

elevations and colder areas. It is the most drought-resistant type. It is very persistent in pastures, withstands close grazing, and is the least productive of the white clovers. 'Kent Wild' white clover is also a small type.

White clover seeds are available at most commercial seed stores.

Control

Please contact your local agricultural extension specialist or county weed specialist to learn what works best in your area and how to use it safely. Always read label and safety instructions for each control method. Trade names and control measures appear in this document only to provide specific information. USDA, NRCS does not guarantee or warranty the products and control methods named, and other products may be equally effective.

Prepared By & Species Coordinator: USDA NRCS Plant Materials Program

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For more information about this and other plants, please contact your local NRCS field office or Conservation District, and visit the PLANTS Web site <<http://plants.usda.gov>> or the Plant Materials Program Web site <<http://Plant-Materials.nrcs.usda.gov>>

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