

White Clover

White clover (*Trifolium repens* L.) is the world's most widely grown clover.

White clover originated in the Mediterranean region and was subsequently spread throughout Europe by wind, water, birds, and grazing animals. It was cultivated in the Netherlands in the 1600's and introduced into England in the 1700's. Early European colonists who had recognized its value as a pasture plant brought it to America. White clover evolved in areas characterized by fertile soils and good soil moisture. Its evolution and spread was closely associated with the domestication of grazing animals.

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Prepared by: Dr. Garry Lacefield and Dr. Don Ball both Extension Forage Agronomists/Professors, University of Kentucky and Auburn University, respectfully.

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P.O. Box 3366, Salem, OR Salem, OR 97302-0366
 Phone: 503-364-2944 • Fax: 503-581-6819
 Email: info@ostlund.com • Web: www.oregonclover.org

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grown clover.

WHITE CLOVER



ADAPTATION AND USE

White clover grows best in humid areas of the temperate zones during cool, moist seasons. Optimum growth and persistence occurs on fertile soils with adequate soil moisture availability and when competition from other plants is minimized by grazing or clipping. It is not tolerant of drought or extremes in soil pH. White clover provides high quality grazing, is an excellent nitrogen-fixing perennial legume, and can play an important role in soil conservation, soil improvement, and crop rotations.

White clover is most often grown in association with cool-season grasses (orchardgrass, Kentucky bluegrass, perennial ryegrass, tall fescue, brome-grass, and to a small extent with perennial warm season grasses. White clover supplies nitrogen and improves the nutritive value of pastures. It is one of the most nutritious and palatable of all legumes. Although white clover is best suited for grazing, it can be used for haylage, hay, soil improvement, and reclaiming disturbed lands. Yields are lower than for red clover or alfalfa when harvested for hay or haylage.

White clover is more widely adapted within the United States than any other clover species. It is a common component in cool season perennial grass pastures, especially east of the Mississippi river and in humid portions of the Pacific Northwest. Though less common in warmer and/or drier areas, it can be grown or found in specific sites across the nation.



DESCRIPTION

White clover is a low growing short-lived perennial, and in areas where it is well adapted, individual plants will often live for three to five years. In more stressful environments such as the lower South, it often survives only one to two years. It is a leafy plant that often grows 8 to 12 inches tall and that spreads by stolons (above-ground runners) and forms shallow roots at nodes (Figure 1). Leaves are non-hairy and usually marked with a white "V". White flowers are clustered into heads. Seeds are extremely small with over 700,000 per pound. Together with surviving plants and natural reseeding, a white clover stand will sometimes persist for many years.

Three types of white clover, based on plant size, are grown in the USA. Small white clover, generally referred to as "wild white" originated in England. The "intermediate" types are larger than wild white clover. Many unnamed varieties of white clover sold in the USA are intermediate types and are referred to as "common" or "white dutch," white clover. Large leaf white clover, "ladino,"

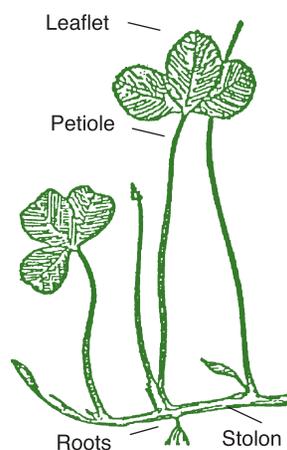


Figure 1. White clover spreads by creeping stems (stolons) that root at the nodes.

is taller growing and may produce more forage than intermediate types, but does not persist as well in stressful environments or with grass competition. Ladino types are most commonly seeded for pasture in the USA.

ESTABLISHING THE CROP

Getting a good stand of white clover is a first and critical step to success with this high quality, persistent crop. Since white clover is usually grown with a cool season perennial grass, it is usually either seeded at the same time as the grass or seeded into an existing grass stand. Regardless of when it is seeded, certain principles and practices are important for success. These will be discussed below; however, readers should refer to state and local sources for specific recommendations for their area.

SOIL SELECTION: White clover grows best in moist, well-drained, fertile soils. Because of its shallow root system, it does not grow well on dry soils. The shallow root system also limits production during hot, dry summer months.

FERTILITY: The most important investment in a fertility program is a soil test, which will indicate soil needs with regard to pH, phosphorus, and potassium. White clover yields better and stands last longer when grown on soils with a medium level of phosphorus and potassium. A pH of 6.0 - 6.5 is usually recommended for excellent yields and stand persistence. In some states, minor elements may also be recommended. Refer to state recommendations for specific elements and rates.

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