USDA NRCS
United States Department of Agriculture
Natural Resources Conservation Service

Plant Fact Sheet

BURCLOVER

Medicago polymorpha L.

Plant Symbol = MEPO3

Contributed by: USDA NRCS Plant Materials Program

Caution: This plant may become invasive.

Uses

Livestock: All classes of livestock except horses and mules will eat burclover readily, especially when the plant is maturing. Mature stands are highly nutritious and, when abundant, may serve as a finishing feed for lambs. Where growth is lush, the herbage has been known to cause bloat in livestock, particularly those unaccustomed to grazing it. Heavy use of the pods is most noticeable after the spiny burs have been softened by fall rains. While summer grazing burclover, sheep often accumulate numerous burs in the wool, lessening the value of the clip.

Cropland: Burclover is commonly used as a cover crop in orchards. Its rapid, dense growth characteristics and its ability as a legume to fix nitrogen and thus increase the available soil nitrogen supply add to its value for such use. Burclover is particularly useful in orchards and vineyards as a reseeding annual used in association with strip cover management. It can be mowed to control excessive growth, which will not hinder its ability to produce a seed crop for the next year. After seed maturity it can be mowed or disked.

Wildlife: Quail and deer make extensive use of the dry burs.

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 is considered noxious in Arizona. 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

Medicago polymorpha L., burclover, is a shallow-rooted annual legume. The characteristic growth habit of burclover is one of numerous prostrate stems branching from the crown and spreading outward 6 to 30 inches. Where thick stands develop stems may become erect, obtaining heights of 18 to 24 inches in more favorable years. The leaves are subglabrous and clover-like in appearance, with leaflets normally wedge-shaped and toothed toward the top. The inflorescence is usually quite limited, presenting only a few small, yellow, pea-like flowers. The several-seeded fruit is a flattened, coiled pod, commonly up to 1/4 inch in width and fringed with a double row of conspicuous, hooked spines. Well developed plants may produce more than 1,000 pods. The seed is rather large for a legume of this type, usually developing to over 3/32 inch in length.

Although often considered an indigenous California plant, burclover was introduced from southern Europe. Burclover has become extensively naturalized in the United States from cultivation as a hay or cover crop. It is one of the more widely recognized *Medicago* species, especially west of the Sierra Nevada and Cascade Mountains, where it is most abundant.

Adaptation

Burclover may occur in pure stands, but most often it is associated with other winter annuals, such as soft

chess, wild oats, and filaree species. As a winter annual, burclover germinates in autumn following the first rains of the season and matures early in the summer. It is particularly adapted to mild, moist winters and hot, dry summers. Optimal annual rainfall for burclover is 10 to 25 inches.
Although burclover will succeed in many soil types, heavy loams are most suitable and valleys and low foothills are generally the preferred sites of natural plant development. This species inhabits all exposures and grows well under light conditions varying from full sunlight to heavy shade. It is tolerant of slightly alkaline conditions and is less acid tolerant than subterranean clover. Favorable growth is usually restricted to a soil pH range of 4.7 to 8.0. Flowering period for burclover commonly begins in February. On very moist soils, the plants are later maturing than on well-drained lands.

For a current distribution map, please consult the Plant Profile page for this species on the PLANTS Website.

Establishment
Burclover does poorly on soils of low fertility. In establishing stands, except on very fertile soils, the use of fertilizer is routinely recommended. Growth is especially poor on droughty, sulfur deficient, granite soils and fertilization with sulfur and phosphorous is required.

Seedings of burclover are made in late summer or early fall. Later seeding provides little time for fall and winter growth and plants are more susceptible to cold temperatures and frost-heaving. The recommended seeding rate is 9 pounds per acre. In dry areas, one irrigation period just before seeding is ordinarily required. Earlier seeding or unusually dry falls may necessitate a second irrigation to keep seedlings from being lost to drought.

Naturalized stands of burclover usually have adequate seed inoculation. For added success in developing new stands, inoculation of the seed with commercial inoculate is recommended. Scarification of the seed may also be necessary to ensure proper establishment.

Management
Where burclover is adapted on rangeland, seeding is usually not necessary as the seed is already present. Production can be enhanced with cultivation, fertilization and proper grazing management. Existing stands in orchards and vineyards will continue to re-seed indefinitely under proper management. Wait for seed to mature before spring tillage. Don't apply herbicide to strips intended for cover crop. Use phosphorous and sulfur to encourage burclover in mixed grass-clover stands.

Cultivars, Improved, and Selected Materials (and area of origin)
No cultivars are specifically recommended. Other species of burclover include *Medicago rigidula* (L.) All. and *Medicago hispida* Gaertn. Seeds are available at commercial seed stores in the west.

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Edited: 05Feb2002 JLK; 25may06jsp

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>