

Henbit or Henbit deadnettle (Lamium amplexicaule L.)

Henbit is an annual belonging to the mint family of plants "Labiatae." The stems of henbit are square while the leaves are opposite, hairy, with rounded teeth. The lower leaves have petioles (stems) and the upper leaves are without petioles and clasping the stem. The flowers are in whorls in the axils of the upper leaves, tubular but 2-lipped, about 3/4 inch long. They are pinkish to purple and rather inconspicuous. Henbit is a weed appearing in the fall and spring months in golf courses, gardens, cultivated fields, waste places, and home lawns.

Bur clover (Medicago arabica) - spotted bur clover

The spotted bur clover is the most abundant in the Southern states, although bur clover is the name used for most of the annual species of *Medicago*. All these are native to the Mediterranean and are considered cool weather plants. Bur clovers in the South start growing in the fall and mature in the spring.

White clover (Trifolium repens L.)

White clover is a native of Europe probably originating in the eastern Mediterranean countries or in western Asia Minor. It came to America with our forefathers who brought "hay loft" seed with them. The Indians called white clover "White man's foot."

There are many selections of white clover. It is a perennial found growing from the equator to above the arctic circle. It has a prostrate habit of growth. The stems will root at the nodes if growing conditions are favorable. There are approximately 700,000 seed to the pound and these are easy to scatter by machinery or by golf players. There are three general forms of white clover: large; intermediate; and low growing.

CONTROL

The weeds which have been described above have some common characteristics. Most of them germinate and begin growth in the fall and reach their highest peak of growth in the spring. They may behave as annuals or perennials depending upon the area in which they grow. Of those listed, only white clover behaves as a true perennial in the South.

Because of their common characteristics the weeds may be controlled in fairways by similar methods. There are several approaches to chemical control and all those listed are fairly effective. The chemicals are not necessarily listed in order of preference.

1. A combination of 2,4-D and 2,4,5-T in which 1 qt. of 40% 2,4,5-T and 1 pt. of 2,4-D in 80 gallons of water is applied to each acre. A wetting agent may increase the effectiveness of this treatment.

Spraying should be done when wind velocity is below 3 or 4 miles per hour and the spray should be applied as a relatively large droplet to minimize the danger of drift.

2. Endothal applied as a spray at the rate of 3 or 4 lbs. per acre in 80 gallons of water is fairly effective. A wetting agent facilitates thorough wetting of the plant.
3. Ammonium nitrate applied as a spray produces a serious burn on any growing plant and is therefore quite useful in treating weeds growing in dormant bermudagrass turf. Dissolve 1 lb. of ammonium nitrate to each gallon of water and spray at the rate of approximately 150 gallons per acre. Such a treatment provides a substantial fertilizer application together with the weed control.

A word of caution should be offered in connection with the use of ammonium nitrate in spray equipment. This material is very corrosive on metal surfaces. Spray nozzles, metal lines and tanks must be cleaned thoroughly after use if damage is to be avoided.

4. Sodium arsenite is one of the oldest and most effective materials for control of winter annuals. Use 4 to 6 lbs. of sodium arsenite per acre in 80 gallons of water. A wetting agent will increase effectiveness. Sodium arsenite produces a burn when applied to actively growing plants. Bermudagrass seems to be able to recover quickly from such superficial burning, however. Of course, dormant bermudagrass is not injured.

Fortunately, the weeds discussed are not often serious problems in putting greens. Chickweed is perhaps the chief offender. It usually can be controlled by bruising the weedy spot and dusting with lead arsenate or calcium arsenate. Such treatment is necessarily confined to small spots. None of the general treatments listed above should be used on putting greens.

FERTILIZATION OF BERMUDAGRASS GREENS

Use of fertilizers on bermudagrass greens in the South involves many combinations of materials. Fertilizer for greens should provide nitrogen (N), phosphorus (P_2O_5) and potash (K_2O) in the ratio of 3-1-2. Use 2 pounds of nitrogen per 1000 square feet per month on bermudagrass in hot weather and 1 pound per month during cool months when the greens have been overseeded with cool-season grasses. This practice will provide about 18 pounds of N per 1000 square feet per year. If the 3-1-2 ratio of materials is used, you will apply 6 pounds of P_2O_5 and 12 pounds of K_2O . These nutrients do not leach readily and may be applied in spring and fall when weather is cool.

Some superintendents add a little potash during the summer months. Amounts up to one-half pound of Muriate of Potash (60% K_2O) per 1000 square feet may be applied during the summer if it is watered in promptly.

Frequency of application will depend upon the sources of nutrients. Soluble materials are sometimes applied weekly, whereas some of the ureaform products may be applied twice a year.

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