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COMMON WEEDS OF COLORADO LAWNS

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COMMON WEEDS OF COLORADO LAWNS

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Weeds are a limiting factor in obtaining a good lawn. Tho a large number of weeds are to be found in our Colorado lawns only a few different kinds are very common. The recognition of these and a knowledge of how to eradicate them are questions that come to every property owner. It is the purpose of this paper to describe and figure the more common lawn weeds and give methods to be used in controlling them.

SUGGESTIONS FOR STARTING A WEED-FREE LAWN

Preparation of Soil.—In eliminating weeds from a lawn, the planting and care of the lawn plays a most important part. When starting a lawn the first thing to consider is the quality of the soil. Poor soils low in organic matter and high in alkali, or clay will not make the best lawn. A light loam, free from weed seeds and rich in humus will produce the best sod in the shortest time. The soil should be pulverized and then rolled after seeding. The rolling firms the soil on the surface, presses the particles against the seed, and thus insures that they will not blow away but have a good contact with the soil. Cover with a thin layer of composted manure to fertilize the soil and to protect the young plants as they come up. Sprinkle frequently.

Quality of Seed.—Use only the highest obtainable grades of seed. In order to have the assurance that the seed will grow, insist on seeing its germination and purity record or send a sample for test to the State Seed Laboratory, State Agricultural College. Tests will be made free of charge. Good seed, of high germination, free from impurities is the best insurance for a good sod.

How to send in weeds for identification.—When sending lawn weeds to the department of botany for identification, the following points should be observed:

1. Send a whole plant when possible, roots, leaves, stems and flowers, also fruit or seed when available. Identification is seldom possible from leaves or roots alone. Fragmentary samples are at best unsatisfactory and are often useless.

2. Select good specimens that are representative of the pests you are inquiring about.

3. Wrap in several thicknesses of moist newspaper, several more of dry wrapping paper, and if possible, enclose in pasteboard box, and send by mail. If the sample is too large to be mailed in one piece, cut it into several convenient lengths before wrapping.

4. It will be helpful if a description of the place and manner of growth of the sample is also sent.

The department of botany will gladly inform you of the name of your specimens and suggest the most successful methods for their control or eradication.

Address all samples, and inquiries to: Weeds, Department of Botany, Colorado Agricultural College, Fort Collins, Colorado.

MOUSE-EAR CHICKWEED—*Cerastium vulgatum*

Description.—This is a low-growing plant found in moist, soft ground. It has small leaves and minute white flowers. There are several other chickweeds that closely resemble it and are often found growing with it. The mouse-ear chickweed is a winter annual or perennial; some of the other forms are annuals. The growth of these weeds seems to be favored by excessive watering of parts of the lawn.

Time of bloom.

—April to October or throught the year.

Seed time.

—May to October, or throught the year.

Source.

—Grass and clover seed often contain the seeds of chickweeds.

Control.

—In very badly infested places it may be well to dig up the lawn and reseed heavily, using a good quality of blue grass or clover. If the stand of grass is such that it can cover the ground quickly after the weeds are destroyed they may be killed by spraying in cool



Mouse-Ear Chickweed

dry weather with a solution of iron sulfate, 2 pounds to the gallon of water. It is well to moisten the leaves first, and then drive the spray into the mat of leaves as forcibly as possible. Do not sprinkle the leaves for at least 48 hours after the application of the iron sulfate. Care should be taken that the spray does not get on the clothes, side walks or white painted wood work for the iron sulfate will leave an iron-rust stain. Sodium nitrate, chilean salt peter, 2 pounds to the gallon of water, applied in the same way is also effective, and does not stain the grass or clothes.

CRAB GRASS—*Syntherisma sanguinalis*

Description.—This annual grass grows close to the ground, and spreads by rooting at the joints wherever it touches the moist soil. The stems are too low to be cut by the lawn mower. The plant is in-

conspicuous until late in the summer heat. In late July or August finger-like seed-bearing branches appear on the ends of the creeping stems. After the production of seed the leaves and stems become yellow, and the plant dies.

The seeds germinate in the spring with other seeds upon the lawn.

Time of bloom.—July to August.

Seed time.—August to September.

Source.—Frequently found in lawn-grass mixtures and in Kentucky blue grass. It may be introduced in undecomposed stable manure, with irrigation water or blown in by the wind.

Control.—No spray will kill this grass and leave the lawn uninjured. The plants must be pulled or dug up. Good growth conditions for lawn grass will result in the crowding out of the crab grass.



Crab Grass

BROAD-LEAVED PLANTAIN—*Plantago major*

Description.—The broad-leaved plantain is a perennial weed easily recognized by its large, oval leaves which grow close to the ground from a thick vertical rootstock. The bases of the leaves and their stems are purple. Cylindrical flower-heads 3 to 12 inches long arise from the rosette of leaves. The chief portion of the plant lies so close to the ground that it smothers out everything under it and at the same time escapes the mower.

Time of bloom.—May to September.

Seed time.—June to October.

Source.—The small dark brown or black, irregular seeds

are a very common impurity in clover or lawn seed mixtures. They may also be introduced with insufficiently rotted manure.

Control. — Plantain yields readily to hand digging in dry weather just before the flowers appear. It may be killed by pouring a little crude carbolic acid or kerosene on the crown of the plant after first splitting it with a knife or chisel.



Broad-Leaved Plantain

NARROW PLANTAIN OR BUCKHORN

Plantago lanceolata

Description.—The plantain, also known as "Ribgrass", resembles broad plantain in its place and habit of growth. Its rootstock is larger, the narrow leaves are 2 to 10 inches long, and the plant is nearly as pernicious as the broad-leaved plantain. The flower heads are club shaped and are borne on a tall stem well above the tips of the leaves. At lower altitudes this naturalized pest from Europe is



Narrow Plantain or Buckhorn

dreaded in lawns and pastures particularly in light sandy soils.

Time of bloom.—April to October.

Seed time.—May to November.

Source.—Buckhorn plantain seed is a very common impurity in grass and clover seed. When wet the seeds are sticky on the outside which helps in their distribution.

Control.—Stray plants in a lawn should be dug out or they may be killed with carbolic acid poured on the opened crown. Lawns badly infested with plantain must be plowed and resown to get rid of it. Grass seed containing buckhorn should not be planted. It is a most troublesome weed.

SHEEP SORREL—*Rumex acetosella*

Description.—Sheep sorrel, also called red or field sorrel, is a common weed upon acid or sour ground; it is most often found in places that are deficient in organic matter or humus. Mature plants are from 5 to 16 inches high. In its early stages of growth it has numerous arrow-head-shaped leaves set thickly at the base of the stem. It has small reddish flowers and brown seed. Sorrel has creeping roots which grow horizontally about three inches deep. These roots of reproduction send up flower stalks at frequent intervals. Fortunately the shallow roots are easily destroyed by cultivation as they have little vitality when exposed to adverse conditions.

Time of bloom.—
May to September.

Seed time.—June to
November.

Source.—This sorrel usually occurs in impure clover seed. In 1923-1924, 80 percent of the white-clover seed analyzed in the State Seed Laboratory contained sorrel seed. The seed is also blown by the wind or introduced in hay used for mulching.

Control.—The most important means of combatting this sorrel is maintenance of soil conditions favorable to other plants, and unfavorable to sorrel. Lime in sufficient quantities to make the soil neutral usually prevents growth

of sorrel. Two pounds of iron sulfate to the gallon of water applied with a mist sprayer will kill the leaves and several treatments are usually sufficient to destroy the plant. Very bad spots should be dug up, carefully freed from roots and reseeded after the soil conditions have been corrected with lime.



Sheep Sorrel

DANDELION—*Taraxacum officinale*

Description.—The yellow flowers and fluffy white heads of ripe seed of the dandelion, arising from rosettes of leaves is too well known to need further description. It is an introduced plant and one of our most common lawn weeds.

Time of Bloom.—April to November, or thruout the year in protected places.

Seed Time.—April to November, or thruout the year.

Sources.—Dandelion seeds are occasionally found in clover and grass seed as an impurity but this is not the chief way the weed enters lawns. Wind-blown seeds are the chief source of infestation. These find root in the moist soil beneath a sod not sufficiently thick to smother out the seedlings.

Control*.—Digging the plants out with a long knife or spud has the advantage that the unsightly part is at once removed. This is not always a permanent cure for often one to several sprouts come up from the injured root. Very badly infested lawns will be most quickly improved if the soil is spaded up and the roots taken out entirely. The ground should be resodded or heavily seeded. This is best done when there is not a heavy crop of dandelions going to seed in the vicinity.

The following ways may be recommended for the control of dandelions:

1.—When the lawn is being established take great care in the preparation of the seedbed. Use only the best bluegrass seed available with a mixture of 10 to 15 percent of white clover when it is desirable to secure a thick soil cover. On dead or thin spots on old lawns reseed to discourage entrance of dandelions. Rake in the seed in such places, and tamp or roll the ground after planting to insure firm seedbed.

2.—In destroying individual plants, dig up the entire plant, partially removing the root will not kill it. Digging is most effective just at the time of blooming, or before. A second digging in the autumn will greatly weaken the plants that have survived the summer. A little salt dropped in the hole made by removing the dandelion will hinder recovery. Pouring kerosene into the split crown is also effective where but a few plants are to be killed.

3.—Keep the seeds from ripening. Cut off the flowers or rake off the heads and burn in a closed furnace or stove.

4.—The dandelion can be kept in check by spraying with iron sulfate tho this chemical may not completely control the weed. Spray

*For a very full account of the habits of the dandelion and experiments for its control, see Bulletin 236 of the Colorado Experiment Station, by B. O. Longyear.

badly infested lawns at least three times at intervals of two weeks with a solution of $1\frac{1}{4}$ pounds of iron sulfate per gallon of water. This is most effective when applied late in the summer or in the fall. Force the spray in the form of a fine mist into the crown of the plant. Cloudy damp weather is favorable if not followed by rain within 12 to 24 hours. Care should be used that the spray does not get on walks and clothes, as it stains whatever it touches. For a time the grass is discolored tho finally it becomes green again. Repeated use of iron sulfate will injure the grass as well as the dandelions, especially if the applications are heavy and frequent. This spray is much more effective upon young dandelions than upon old ones with smooth resistant leaves.

USE OF SPRAYS TO KILL LAWN WEEDS

Iron sulfate and sodium nitrate (chilean saltpeter) are the only spray materials that have been used with any success on lawn weeds. Most weed-killing sprays contain arsenic which kills grass as well as weeds. Sodium nitrate is recommended for chickweed and iron sulfate for chickweed and sorrel. They are made up and applied in the same way. Tho iron sulfate may be used on the dandelion it is not altogether successful in killing this plant. Iron sulfate when used on weeds, should be applied as a fine mist spray. The mist spray covers the leaves most evenly and is the most economical method of application, for the same volume of solution will cover much more area when it is applied as a fine spray.

How to make up the solution.—Dissolve the iron sulfate in water as recommended for the different weeds. Use 2 pounds per gallon for use on chickweed and sorrel and $1\frac{1}{4}$ pounds for dandelions. The material can best be dissolved by putting in a bag and hanging in the top of the vessel containing the water. The iron sulfate is heavier than water and sinks as it dissolves. Stirring is not necessary when the solution is made this way. Use iron or stone vessels to hold the mixture. Do not use tin or galvanized containers; use a spray pump with brass fittings and wash it in clean water after using, and oil working parts. Do not make up more of the solution than is needed as it will not keep well in solution. Care must be taken in spraying weeds with iron sulfate for the chemical is very corrosive and will leave rust stains on clothes, sidewalks or the walls of buildings.