Virginia Polytechnic Institute, Blacksburg. Agricultural Extension Service.
MR-182.

TH CONTROL OF WILD GARLIC

Wild garlic, or wild onion (Allium vineale), is a troublesome nuisance in pastures, small grains, seed crops, and lawns. It probably causes as great an economic loss to people in Virginia as any other weed.

METHOD OF REPRODUCTION

Garlic reproduces by hard and soft bulbs formed in the soil and by aerial bulblets formed above the ground. The large soft-shelled bulbs sprout in the early autumn and the hard-shelled bulblets in the spring. All of these bulblets in the soil may not germinate the same year; hence, there is need for continued suppression against this pest. Aerial bulblets also start new plants and are spread by getting into grain and grass seed. Every effort should be made to prevent aerial bulblets from forming. The removal of bulblets from seed crops increases the cost of production and is almost impossible to do entirely.

CONTROLS

Three methods of controlling wild garlic are winter plowing, early pasturing with young stock and dry cows, and spraying with 2,4-D weed killer.

WINTER PLOWING. If the infested land is plowed between January 1 and March 15, many of the hard and soft bulb sprouts are killed. Plowing at other seasons of the year destroys sprouts from only one type of bulb and the weed continues to thrive. Under favorable conditions, plowing during the late winter may result in a considerable degree of control. Some land should not be plowed because of possible erosion.

GRAZING. On dairy farms, a practical way to prevent "garlicky milk" is to turn young stock and dry cows into the infested pasture in the early spring, before the blue grass is large enough to be grazed but when the wild garlic clumps are three or four inches tall. Animals at that time are hungry for green feed and nibble the wild garlic leaves to the ground. Later when the blue grass is ready to pasture and the milk cows are turned in, little garlic remains and no off-flavor is imparted to the milk. On ladino-orchard grass pastures, however, this is not such an effective means of control for the garlic may not be eaten unless the animal population is very high.

SPRAYING WITH 2,4-D. If wild garlic is sprayed with 2,4-D after the first of the year, but before new bulblets begin to form in the soil by March 15 or April 1, about 95 percent of the plants are likely to be killed. The leaves curl, turn yellow, and gradually die and the bulbs decay. A single spray applied annually for 3 years (see directions below) will usually give effective control of wild garlic or onion. Sometimes two annual sprays may be enough.

The ester form of 2,4-D (preferably the low volatile ester) is the most effective form to use and is recommended. The sodium salt is the least effective form on wild garlic, and the amine form is intermediate. Care must be taken not to let the spray drift, or vapors from it get to valuable plants. To reduce possibilities of spray drift, use a coarse spray (not a mist) at a low pressure (less than 35 pounds). If you do not know what plants may be susceptible to 2,4-D injury, try to find out before using 2,4-D ester. White clovers may be stunted in their growth but usually recover satisfactorily. Do not use 2,4-D on clovers that have been planted recently, or on alfalfa.

The rate of 2,4-D acid equivalent to use is governed to a large degree by the crop on which it is used, temperature, and other factors. To get reasonably good results with 2,4-D on wild garlic, the weather should be warm and the spray applied when a warm period is forecast for the area in question. Best results will be obtained if the temperature rises above 60° F. and 80 to 100 gallons of spray are used per acre to assure thoroughly wetting the plants. Very little control will be obtained if the weather is too cold, or if it rains before the spray has a chance to dry on the plants.

Calibrate the sprayer to determine how much liquid is being applied per acre at a given pressure and rate of speed. Include in this liquid the correct amount of 2,4-D for best results. Suggestions on the calibration of sprayers are provided in a separate leaflet.

Do not use a weed sprayer for spraying insecticides and fungicides on susceptible plants, such as grapes, vine crops, tomatoes, tobacco, cotton, and many others. It is almost impossible to remove all traces of 2,4-D from a sprayer, especially if the tank is made of wood. It is safer to have a separate sprayer for controlling insects and diseases. For cleaning out large sprayers with metal tanks, directions will be sent on request.

GRASS-LEGUME PASTURES. Hay and pasture legumes are sensitive to injury and may be destroyed by heavy applications of 2,4-D. Ladino and white clovers are more tolerant than alfalfa, sweet clover, red clover, alsike clover, crimson clover and vetch. Applications of as little as 1/4 pound of 2,4-D per acre may reduce the stand of susceptible legumes by as much as 75 percent, or more when the plants are small. Therefore, only the spraying of established pastures is advised.

It is a common practice to treat pastures in which ladino and white clover are prevalent. Some loss of legumes is to be expected. Early spring treatment is likely to cause less injury to the legumes than treatments made later in the growing season. Considerable curling of the plants and reduced grazing is to be expected. Recovery of the clover will be more rapid under favorable growing conditions of good fertility and moisture.

On ladino-orchard grass or white clover-blue grass pastures, it is suggested that the wild garlic be mowed or grazed closely in November, December, or early January, and an application of 2,4-D at the rate of 1 to 1 1/2 pounds per acre be applied in late February, or the month of March, during a period of warm weather. Put it on as early as possible so that the clover can recover during favorable growing conditions which follow but not when it is so cool that the chemical cannot be absorbed by the garlic.

GRASS PASTURES OR GRASS SEED CROPS. Where there is little or no clover in a grass pasture, the quantity of 2,4-D used can be increased and the kill of garlic will be improved. On orchard or fescue grass seed crops, the rate used can be quite high. Increasing the fertility of the soil with nitrogen will aid in giving better control of garlic. In these situations, from 2 to 3 pounds of 2,4-D acid equivalent per acre has been found to be very effective. Apply before the seed stalks begin to joint when the weather is warm.

Following two years of fertilizing orchard grass as a seed crop and spraying it with 2,4-D at the above rate, so little wild garlic remains that it may not be advisable to spray again. Grass seed yields and germination are not affected by the spray, and the garlic problem is practically eradicated.

SMALL GRAINS. Aerial bulblets and seeds of wild garlic often get into small grains at harvest and cause the grain to heat and spoil in storage. To prevent bulblets from forming, use 2,4-D ester at 1/2 pound of the acid equivalent per acre. This low rate will not give an effective kill of wild garlic, but it will prevent aerial bulblets from forming. Apply after the plants have fully tillered, or stooled, but before they begin to joint. The temperature should be near 60° F. for best results.

LAWNS. In lawns and about the premises, extreme care should be exercised not to get the 2,4-D ester spray on, or near, susceptible plants. An effort should be made to purchase the low volatile ester type of 2,4-D to reduce chances of injury to other plants. Use the spray between January and the middle of March at the rate of 1 1/2 to 2 1/2 pounds per acre when the temperature is near 60° F. Compressed air sprayers are usually used for spraying weeds about the home. Do not use a 2,4-D sprayer for insecticides or fungicides.

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