TIMELY CONTROL OF GARDEN PESTS

To most people the control of garden diseases and insects consists entirely of spraying or dusting. However, this is not true, for the use of poisons is but one of several methods of controlling these pests.

GOOD GROWING CONDITIONS are necessary to assist plants in repelling attacks by diseases and insects, and to enable them to recuperate rapidly after pest injury. This includes the destruction of old diseased plant refuse and the proper fertilization and cultivation of the garden. The destruction of plant refuse is important to reduce the carry-over of disease organisms and insects. Clean up and destroy such refuse as diseased carrot tops, celery leaves, cull fruits and vines of tomatoes, cucumbers, and other crops. It is much more practical to add humus to the home garden in the form of farm yard manure than to plow under diseased garden refuse. It is of particular importance to gather and burn or otherwise destroy the leaves and fallen fruit of grapes, and the shriveled fruits or brown-rot mummies of peach and plum, and the leaves and heavily spotted canes of raspberry, etc. Early destruction of plant refuse is, of course, the most desirable.

Follow a carefully planned rotation so that plants of the same family will not be grown in the same part of the garden in succeeding years. Many plant diseases attack all members of the same family; for example, cabbage, kale, collards, cauliflower, brussels sprouts, and radish belong to the same family.

GOOD SEED AND PLANTS are essential to success. Seed should be purchased from a reliable dealer. Western-grown bean seed is free of bacterial blight and anthracnose. Plant only "certified" Irish potatoes.

RESISTANT VARIETIES will help solve many of your problems. Marion Market, Wisconsin All Seasons, and Wisconsin Hollander No. 8 are cabbage varieties resistant to yellows. Rutgers, Marglobe, and Pritchard are excellent wilt-resistant tomatoes. Virginia Savoy and Old Dominion are resistant to spinach blight. Yellow-skinned varieties of onions are usually more resistant to rot than are white onions.

If plants are purchased, be certain that they are disease-free and vigorous and do not show any dead or rotten spots. Home-grown plants are usually the safest to use.

To do a thorough job of controlling insects and diseases, you should first do everything in your power to bring about the best possible growing conditions along the lines outlined above. U.S.D.A. Miscellaneous Publication No. 525 and other material in the hands of your county extension agents will give you further information on these points. Even after you have done these things, there will be certain pests which will have to be controlled by other means, such as spraying and dusting.

SPRAY OR DUST

Sprays are usually more effective and cheaper than are dusts; however, dusting is more convenient and much quicker. A good knapsack sprayer or hand duster is essential in the home garden. The rotary-type duster is best; however, a cheap plunger-type hand duster may be used in the small garden. Applying poisons by shaking the dust onto plants from a sack is not recommended. It is very wasteful of materials, does not give adequate coverage to the undersides of the leaves, and, especially in the case of the Mexican bean beetle, is ineffective.

RULES FOR SUCCESSFUL SPRAYING OR DUSTING. There are four fundamental rules for spraying or dusting, all of which are important if success is to be attained.

1. Start Early. Don't wait until serious injury has been done.
2. Use the Right Material. The material must control the pests without injury to the plants.
3. Be Thorough. Cover the entire plant.
4. Keep at It. Spray or dust often enough to obtain control.

MATERIALS. Rotenone (derris, cube, etc.) is the best all-round insecticide for the home garden. It is more satisfactory than other insecticides for controlling the Mexican bean beetle, the cucumber beetle, cabbage worms, and many other troublesome insects. As a dust, use rotenone at 3/4% concentration, or if a spray is preferred, use 10 level tablespoonfuls of 5% rotenone to 3 gallons of water. A 20% sabadilla dust is better than rotenone dust for the control of Harlequin cabbage bug, squash bug, and green stinkbug. In most cases, it is best to use ready-prepared dusts. Follow the manufacturer's directions for the application of these materials.

For the control of aphids or plant lice, use nicotine sulfate (Black Leaf 40) at the rate of 1½ teaspoonfuls to 1 gallon of water; or 3% nicotine dust. A cubic inch of soap per gallon will improve the spray. A home-made tobacco spray can be prepared by soaking a pound of tobacco trash in a gallon of water for 24 hours and spraying with the resultant solution.

CUTWORMS: Cutworms may be controlled by using paper collars around the stems of the plants at setting. About an inch of paper should be below the surface of the ground and from 1 to 2 inches above the surface. Cutworms may be controlled also with poison bran bait made by mixing 5 pounds of dry bran, 1/4 pound Paris green, 1/2 pint of cheap molasses, and sufficient water to make a crumbly mash. This bait should be scattered lightly about the garden late in the evening. (Grasshoppers and slugs can also be controlled by this method.)

DISEASES: Sprays or dusts to control disease should be applied as a preventive before any disease appears. Copper compounds are usually preferred to sulfur for use on vegetables, except on snapbeans for mildew control. Follow directions given by the manufacturer of the product used.

A new dust material, available this season, is very effective in controlling most of the leaf-spot diseases and insects of the home garden. It contains 5% metallic copper and 3/4% rotenone. This dust will effectively control leaf spots and leaf blights on vegetables and flowers and most of the common garden insects such as the Mexican bean beetle, the cucumber beetle, potato beetles, cabbage worms, and the young stages of aphids or plant lice. If purchased in 50-pound bags, this material is inexpensive; in smaller quantities, however, it is slightly more expensive.

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