

beneath them and deposit eggs. The virtue of having a smooth surface to the soil becomes readily apparent, and if the ground has been thoroughly cultivated before transplanting, there is no necessity to do further cultivation for two weeks or so. This method is recommended for commercial plantations.

*Weekly Washes.*—If the tar-paper disks are not used, applications of liquids should be applied to the roots once a week. The object of these applications is to destroy the young maggots before they can destroy the plant. It will be recalled that egg-laying is more or less a continuous process during the summer and that the eggs hatch in about a week after being deposited. Solutions of hellebore 2 oz., or pyrethrum 2 oz., each or either to the gallon of water are effective. Dilutions of carbolic-acid or kerosene emulsions may also be applied. These solutions have been found of special value in gardens. Under field conditions they are not practicable, chiefly on account of their expense.

*Autumn Planting.*—This method of growing cabbages and cauliflowers is adopted by many growers to ensure earliness the following year, and is intended that the plants should be able better to combat the effects of root-maggots by the mere fact that the plants are well established in the spring. Growers who follow this method would be well advised to seed a few radishes early in the spring in the open near by, to attract the adult females and thus to act as traps. Experience has shown that the success of these autumn-planted cabbages is altogether dependent on the number of flies present in the spring and the number of plants available on which they are able to deposit eggs.

*Other Remedial Measures.*—There is possibly no insect affecting garden produce that has been the subject of more conflicting evidence in the matter of control than the cabbage-root maggot. Every gardener has applied some form of concoction to combat the maggots in the roots. These applications frequently take the form of solutions of mercury bichloride, tobacco extracts, or patent solutions bought through local supply-houses. Soot, wood-ashes, tobacco powder, lime, and such substances have been applied dry, and often results attending their use have apparently been successful. There is no reason why on a garden scale any mixture properly and frequently applied should not be successful, provided that the mixture has some satisfactory insecticidal value. In a commercial way and under proper control conditions it has been found that the tar-paper disk gives the best and most stable results.

Further information regarding the habits and control of the cabbage-root maggot may be obtained from Bulletin No. 12, Entomological Branch, Dominion Department of Agriculture, Ottawa.

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