

WEED ERADICATION.*

To combat Weeds one should know their life histories, that is, how they are propagated, the nature of their root systems, when their seeds mature, how long they live, etc. Each weed has its own way of winning in its struggle with the farmer's crops, and its habits must be learned in order to know how to get the better of it.

In studying the life history of weeds they are usually considered in groups or classes according to the length of time they live: as annuals, biennials and perennials.

ANNUALS.

Examples, green foxtail, ragweed.

Annual weeds complete their entire life history in one year. The seeds produced during the late summer or autumn lie dormant in the soil over winter and germinate in spring, blossom, mature their seeds and then die, root and all. Some plants that complete their life-cycle in a year are known as *winter annuals*; the seeds that have matured during the summer germinate in the fall, make a certain growth before winter sets in, complete their development and mature their seeds the next summer.

Annuals may be eradicated from land, however badly infested it may be, through any method by which germination is hastened and the young plants destroyed before they produce seed. The weeds of this class that give trouble in clover seed crops are those whose seeds ripen in the fall, at the time red clover seed matures. They make little growth in the early summer, shooting up unmolested after harvest when other farm work is so pressing, and producing seeds that are returned to the soil to lie dormant until conditions are favourable for their growth a year or more in the future.

To reduce the number of these weed seeds in the soil bare stubbles should have surface cultivation directly after harvest to prevent the further ripening of seed as soon as the grain crop is removed, and to encourage the germination of seeds already in the soil. The young plants that start from the seeds brought to the surface by cultivation may be killed by the harrow or ploughed under. In hoed crops, tillage should be continued late, as it is the plants that bloom and fruit after cultivation has ceased which are most likely to pollute the land. The hoe should be used to destroy late plants after cultivation of the crops becomes impracticable. Any practice that will prevent an annual weed from seeding will reduce and ultimately eradicate it. Fields seeded to clover should be clipped with a mowing machine a few weeks after the nurse crop is harvested to prevent the seeding of autumn weeds.

BIENNIALS.

Example, wild carrot.

Biennials require two seasons to complete their growth, the first being spent in collecting and storing up a supply of nourishment, which is used the second season in producing flowers and seeds. Biennials must be either cut or ploughed down before they flower. Mowing at short intervals in the second year, so as to prevent the development of new seeds, will clear the land of this class of plants; but a single mowing will only induce them to send out lateral branches, which, if not cut, will mature many seeds. Where ploughing is impracticable, such plants should be cut off below the crown of the root.

* Pamphlets containing illustrations and descriptions of the following weeds with suggestions for their eradication may be had on application to the Publications Branch, Department of Agriculture, Ottawa: Ribgrass, ragweed, night-flowering catchfly, green foxtail, black medick, sheep sorrel, plantain, upright cinquefoil.