

duced with seed grain and the field becomes badly infested for the first time. Another method of eradication is to plow lightly as soon as the crop harvested. Harrow and cultivate frequently throughout the autumn to destroy the young seedlings. Grow a hoed crop the following year. The rotation of crops should be modified in the infested fields by dropping winter wheat or for a time. Grass and clover seed should be sown along with the spring wheat or barley.

Vitality of buried seeds, five years.

TUMBLING MUSTARD (*Sisymbrium Sinapistrum*). This is one of the worst weeds in the Northwest Territory, and has recently been introduced into Ontario. Many specimens were found along the railroad track near Guelph and a considerable quantity of it has been introduced on the Massey farm near Toronto, through purchasing a quantity of an inferior quality of western wheat for poultry food.

The plant has a round, bushy nature, and breaks off when mature, near the surface of the earth. It grows from two to four feet high, and branches freely. The plant begins to flower early in the spring and continues to produce flowers, even after the harvest pods have begun to ripen, so that in the fall the whole plant is covered with them. Prof. James Fletcher, of Ottawa estimates by careful calculation that one well-developed plant contains 1,500,000 seeds.

An effective means of eradication is by hand-pulling, when possible, especially about the edges of fields and along roadsides. As it is an annual it can be easily eradicated by cutting with a hoe at the root, before the seed pods have formed and when the plant is still tender.

Good results may be obtained by preparing the ground thoroughly, and planting corn, potatoes, beans, turnips, or any other crop that will pay for thorough cultivation. The place should be watched for three or four years, however, to prevent the growth of plants from seeds that have lain dormant.

SHEPHERD'S PURSE (*Capsella Bursa-pastoris*). This is a winter annual, usually about one foot high. It bears small white flowers, which are crowded near the end of the branches. It has a long, deep taproot and the root leaves form a large rosette of leaves which lie close to the ground and in this state pass the winter. The seeds are borne in little, thin, triangular pods which resemble a purse in shape, from which the name of the plant is derived. This is divided down the center by a partition, forming two cells, each of which contains from ten to twelve seeds.

It flowers and seeds from early spring until winter. The seeds are frequently found as an impurity in grass seed, and it is also spread by birds. The Shepherd's Purse propagates only by seed and it cannot endure clean culture.

The best way to prevent its growth is to cultivate the ground and prevent it maturing its seed.

Vitality of buried seeds, five years.

***PENNY-CRESS, STINK WEED, FRENCH WEED** (*Thlaspi arvense*). No weed gives more trouble in the wheat fields of Manitoba than this, and it is becoming common in many parts of Ontario.

It is an annual and winter-annual, plants being found in bloom when the snow goes, and throughout the season. The plants that have wintered ripen early in June, and others before harvest.

It has a rank smell, dark green, smooth leaves, and clusters of small, white flowers which develop into flat, round, leaf-like pods. A pod contains about a dozen reddish-brown seeds, many thousands of which may be produced by one plant.

Hand-pulling is the best method to adopt when the area infested is small, but if that is not possible the land should be cultivated to cover what

* Specified in Seed Control Act.