

DESCRIPTION OF WEED SEEDS FOUND IN CLOVER SEED.*

WITH NOTES ON THEIR RELATIVE PREVALENCE.

Of every one hundred samples of Canadian-grown red clover seed examined at the Ottawa Seed Laboratory, about fifteen are rejected, thirty grade No. 3, forty No. 2, and fifteen No. 1. The following weed seeds are most commonly found and occur in the number of samples indicated: *Noxious weed seeds*: Ribgrass 60, ragweed 35, docks 30, catchfly 25, Canada thistle 10, stickseed 3, wild carrot 3; *other sorts*: green foxtail 65, pale plantain 40, lady's thumb 35, lamb's quarters 30, black medick 25, yellow foxtail 15, sheep sorrel 15, sweet clover 15, common plantain 10, mayweed 10.

Ragweed (*Ambrosia artemisiifolia* L.) seed occurs in three conditions in clover seed, (see illustration page 7). 1. Pear-shaped, $\frac{1}{2}$ to $\frac{1}{4}$ of an inch long, the apex long and tapering to a sharp point, often with a circle of sharp teeth pointing toward the apex. 2. Outer covering removed, showing a smooth brown, inner cover. 3. With the inner covering removed revealing the greenish white, nearly round inside. Only one quarter of the hulled seeds are counted in determining the number of impurities in seed.

In its natural condition ragweed seed is larger than clover seed, but in threshing, the hulls are removed and the greenish hulled seeds are almost identical in size with the clover.

Stubble land where this weed is prevalent should be shallow-ploughed directly after harvest, or, if seeded to grass and clover, the autumn growth should be clipped with a mowing machine within two weeks after the grain crop is cut. As the plant is such a late seeder, hoed crops require special attention occasionally after general cultivation is discontinued. Lands badly infested should be put under a three-year rotation of crops, with prompt and thorough cultivation or mowing in early autumn after the crops have been removed.

RIBGRASS or buckhorn (*Plantago lanceolata* L.), $\frac{1}{10}$ inch long, chestnut brown and highly polished, boat-shaped with rounded ends. In cleaning, it turns on end and goes through the same size perforation as red clover. Many of the smaller seeds may be separated from clover by the 4 by 24 woven wire sieve. The larger seeds cannot be removed by sieves in ordinary cleaning machinery. The plant often lives for a number of years, and, as it seeds freely, spreads rapidly in fields not under cultivation; easily suppressed by hoed crops and short rotation.

Docks (*Rumex species*), including Curled Dock (*Rumex crispus* L.) Bitter Dock (*Rumex obtusifolius* L.) and Clustered Dock (*Rumex conglomeratus* Murr). The seeds are very similar in appearance, $\frac{1}{2}$ inch long, shaped like miniature beech-nuts. The prevalence of docks in meadows is due to sowing contaminated grass and clover seeds. Land worked under a short rotation of crops is never badly infested with docks. When the soil is soft after continued rain they can be pulled from meadows and pastures.

Night-flowering Catchfly (*Silene noctiflora* L.), round kidney-shaped, $\frac{1}{20}$ inch in diameter, covered with cone-shaped tubercles; grayish-brown in colour; seeds difficult to separate from grass and clover seeds, especially from alsike. Even slightly infested fields should be ploughed up and worked under a short rotation of crops. Hand-pull to prevent seeding and consequent rapid spread of the weeds. Sow only pure seed.

* The descriptions of the weed seeds and much of the information on weeds contained in this pamphlet have been taken from "Farm Weeds of Canada" by Geo. H. Clark, B.S.A., and James Fletcher, LL.D., F.R.S.C., F.L.S.