

the necessary skill and knowledge. In testing for purity, the sample submitted is first thoroughly mixed in a miniature machine used in all such laboratories, and then a small quantity is taken. But before this a careful record has been made in order that there may be no danger of confusing any two of the many thousands of samples that come from all parts of the Dominion. After a thorough mixing, a portion of the sample is taken, the portion being judged by means of laboratory scales which measure with the greatest nicety. The laboratory sample thus taken is then handed over to one of a number of clerks whose business it is to pick out all other seeds than those which the sample is supposed to contain. This work is done with such completeness that when it is finished the weed seeds are all identified and the exact number of each kind is known. This work is done by women. The skill acquired by these clerks is wonderful, yet, as seed for Canadian farms comes from every part of the world, weed seeds are often encountered which the clerks cannot identify. The Branch has among its officers a botanist whose knowledge of many languages enables him to consult the books on his specialty from every part of the world. In the place from which it comes, a given weed may be little harmful, being kept in check by climatic conditions or by the struggle for survival carried on by other plants. But give it a new habitat and it may spread rapidly and destructively. This being the case, it is of vital importance to identify every newcomer amongst the thousands of seeds that appear on the table of the seed testers and to warn farmers as to the conditions under which the intruder is likely to flourish and give trouble.

The majority of the samples sent in for these tests are of grass and clover seeds. In the great seed markets of the world, Liverpool and Hamburg, these seeds are graded just as wheat is graded in Winnipeg. The Seed Branch also works on established grades, and in case of doubt as to

how a given sample should be graded, the matter is referred to a board of three experts, one being the head of the Branch, the Seed Commissioner.

In connection with this work of detecting weeds and guarding the country against their introduction and spread, there are many lines of usefulness for the Branch's operations. One of the most widely known is in the publication and distribution of what is known as "the Weed Book," or, to give the exact title, "Farm Weeds." Every agricultural society, every public or separate school that has a library, every municipal council and hundreds of representative farmers have been furnished free with this volume which conveys knowledge concerning all the weeds which endanger Canadian agriculture at this time. This is the handsomest and most elaborate publication ever put out for popular use by the government and the demand for it has been tremendous. A second edition, enlarged and improved, has recently been turned out and thousands of copies have already been distributed. Another way in which the public are informed as to noxious weeds is by cabinets of bottles containing the seeds of all the weeds legislated against under the Seed Control Act, each sample labelled with the popular and botanical names. These are furnished to seed houses throughout the Dominion as a guide to these dealers in promoting the purity of the goods they handle. Smaller cabinets illustrative of the more dangerous weeds have been exhibited by the Branch at a number of the leading fairs, and arrangements are now about completed for the distribution of similar cases to many educational institutions. This work is by no means small. For, though there are far more weed seeds in the country than anybody wishes to have, yet, when it comes to actually collecting in quantity the seeds of every weed that the farmers are to be warned against, there are endless difficulties to be overcome. The collecting of these seeds is a part of the