

HORTICULTURE

Vegetable Seed Investigations

E. D. Eddy at Ottawa Winter Fair

I would like to refer briefly to the work being done by the Seed Branch in investigating the germination qualities of the field root and garden seeds sold on the Canadian market. This work, which has been carried on for three years, was started with a view to determine to what extent the claim that vegetable seeds of low vitality were being sold in Canada was justified, and to collect data for the purpose of framing a satisfactory amendment to the Seed Control Act regulating the seed trade in respect to vitality. During the last three years samples have been collected from all part of the Dominion by seed inspectors and sent to the Ottawa seed laboratory, where they have been tested for germination. Some of these seeds were taken from bulk lots but most of them were papered goods as it is generally in the latter class that the poorest quality is found. A summary of the results with some of the principal kinds of seeds tested is given on the chart. The first column of figures represents the number of samples of the different kinds of seeds tested during the last three years. The second column gives the average germination of the samples tested, the third column the standard germination recognized for good seed of the various kinds, and the last column the percentage of samples below two-thirds the standard germination.

RESULTS OF INVESTIGATION

Kind of Seed	Number Samples Tested	Average Germination	Standard Germination	P. below % Standard
Beans	140	78	90	16
Peas	127	87	92	17
Cabbage	270	75	93	14
Radish	300	85	95	9
Carrot	299	80	90	10
Turnip	275	80	95	13
Parsley	43	51	65	30
Cucumber	235	82	90	3
Musk melon	48	84	90	5
Water melon	60	75	90	13
Squash	67	73	90	22
Pumpkin	30	62	80	23
Citron	30	79	92	10
Onion	243	67	90	29
Tomato	141	79	90	13
Parsnip	151	79	90	13
Salsify	39	60	85	46
Cauliflower	68	79	90	7
Field corn	122	69	95	5
Sweet corn	164	79	95	17
Spinach	55	48	90	73
Lettuce	235	82	90	6
Pepper	32	42	70	35
Leek	25	51	90	48
Beet	204	146	160	13
Mangel	11	148	160	15

Speaking generally, it may be said that the seedsmen of Canada are supplying vegetable seeds of good vitality, but a glance at the fourth column of the table will show that there is still considerable low grade seed being sold. In fairness to our most reliable seedsmen, it should be stated that the fourth column is made considerably larger than it otherwise would be by the samples from a few wholesale dealers who appear to make a practice of sending out cheap seeds of low vitality, so that the average of the samples from the more reliable dealers is considerably higher than the general average here given.

VEGETABLE SEED TRADE

The amendment to the Seed Control Act will make it illegal to sell seeds of any quality, the vitality of which is not up to at least two-thirds the standard recognized for good seed, unless the percentage germination is marked on every bag or package containing such seeds. The fourth column of the chart will indicate the extent to which the trade in vegetable

seeds will be affected. The standard of germination for cereals, timothy and clover seed is 95 per cent., so that the minimum percentage germination for seeds in these classes will be 64 per cent.

TO RAISE THE STANDARD

But while the trade in vegetable and field root seeds is on a fairly satisfactory basis so far as vitality is concerned, even the most careful seedsmen are always in danger of being supplied with comparatively poor seed through unfavorable weather conditions during the ripening period, or through some other cause, and the purchaser should safeguard himself against the possibility of partial crop failure through sowing seed of low vitality. Many farmers have found by experience that heavy losses have been sustained in this way and it is best to use every precaution to prevent them.

The quality of the field root and vegetable seeds sold in Canada could be considerably improved if the farmers would insist upon having, and be willing to pay for, the best obtainable stock. Practically all of our stock is imported, but we do not get the best seed, which is that grown by specialists under inspection, because the seedsmen claim that they cannot get parsons for high class seed in competition with inferior stock grown by farmers without responsible inspection, which of course can be sold at a much lower price. It is therefore possible for us to obtain goods of a much higher standard, not only in regard to vitality but also true-ness to type, if we could get our seedsmen to undertake that we want seeds of the first quality and are willing to pay for them. This should be the first step toward general improvement in the trade. Then every farmer or market gardener should test himself against possible loss by purchasing his seeds early and testing them for vitality before sowing. This can easily be done by making tests at home, a lot of which is between pieces of moistened blotting paper or flannel cloth, keeping the seeds at the temperature of an ordinary living room. This will give approximate results, or the farmer may have the tests made in the seed laboratory at Ottawa, free of charge.

Niagara District Fruit Growers

At the meeting of the Niagara Peninsula Fruit Growers' Association, held at St. Catharines this month, a resolution was introduced to the effect that a systematic and comprehensive census of the area and acreage of the various fruits grown in the district be taken with a view to arriving at a definite estimate, from year to year, of the probable output, and that with this end in view the assistance of the Dominion and Provincial Agricultural Departments be solicited. This was carried.

President Bunting praised the Board of Railway Commissioners for the attention paid to the complaints against the transportation companies. A letter was read from Secretary Cartwright of the board to the effect that a decision in regard to the complaints would soon be handed out. On motion of Mr. Robert Thompson of this city, and Mr. J. W. Smith of Winona, the committee on transportation was urged to press for a decision against the rates and conditions in connection with the carriage of fruit by express companies. The resolution also called attention to the advantage of securing an order compelling the companies to put all the distributing centres in the west on the same basis.

The association decided to hold institute meetings in the district. Arrangements will be made for meetings at Fonthill, Stoney Creek, Grimsby, Beamsville, Jordan, Winona, St. David's and St. Catharines.

Christmas Trees from Canada

Editor, Farm and Dairy.—The following is a clipping from the *Toronto Telegram* regarding shipping Christmas trees from Canada to the United States:

"New York, Dec. 17.—The price of Christmas trees and holly has gone



A Handy Spraying Outfit for Small Orchards

With this rig small plantations of trees and bush fruits can be sprayed conveniently. It is useful also in the field and garden. Note the platform around the barrel for standing on when trees are too tall to reach top from the ground. The outfit illustrated is used by Mr. R. J. Messenger, Bridgetown, N. S.

up this year at a surprising rate. The reason assigned by some of the dealers in the holiday green, is that the supply in the Catskills, which has hitherto been sufficient for this city

and the surrounding country, has fallen to such a degree that it became necessary to import trees from Canada for the festive season. This means a cost of from \$6 to \$8 a carload for import duty alone as well as extra transportation. New York uses from 100 to 125 cars of Christmas trees each year and this year the price will range from 25 cents to \$25 a tree. Spruce trees cannot be used, as cutting them is forbidden by the Forestry Bureau, as they grow into good lumber. Balsam trees, however, amount to much are the principal variety sold as Christmas trees now.

We as people are standing in our own light when we allow such a trade to be carried on—thousands of fine, young spruce are taken every year. The writer some years ago while in the Algoma district, saw some of the destruction carried on by those engaged in this business. Where suitable young trees were not available, large ones were cut down and the tops only were taken. They worked a wholesale destruction of fine young spruce and other evergreens which should be stopped. Surely the Department responsible is aware of the harm being done. Then why is it permitted?

Farm and Dairy is at present engaged in a praiseworthy campaign for reforesting. We know it will gladly help to bring about some legislation to prevent this wholesale slaughter of our young forest trees.—W. J. Stevenson, Ontario County, Ont.

In fighting Canada thistles, it should be remembered that the adoption of a three or four year rotation in which is seeded clover for one year and this followed by a hoe crop, is the easiest and quickest way to handle this one time formidable foe.

Potash Means Profit

Every Farmer, Market Gardener and Fruit Grower, who has not already done so, should test the truth of this statement by using Potash this year. No better resolution can be made for the New Year.

Potash is an absolutely Indispensable Ingredient of a Complete Fertilizer and may be obtained from all leading Fertilizer Dealers and Seedsmen in the highly concentrated forms of

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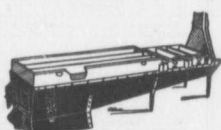
If there is no dealer in your locality who handles Fertilizers, write us and we shall advise you where you can get supplies. For the benefit of dealers and others requiring Potash in Car Load Lots, we would mention that our Head Office has established a Sales Agency at Baltimore, which will sell such quantities at Considerably Reduced Prices.

Write us for particulars and Free Copies of our Bulletins including:—"Fertilizers: Their Nature and Use," "Fertilizing Orchard and Garden," "The Potato Crop in Canada," "The Farmer's Companion," etc., etc.

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