POTATO CERTIFICATION IN WASHINGTON STATE

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Certified seed potatoes have been produced in the State of Washington since the 1920's. Originally, much of the seed potato acreage was found around Spokane, down near Vancouver, with sprinklings in the outlying valleys in Eastern Washington, and some up and down the coastal counties of Washington.

For the last several years, practically all of the production has been centered in Whatcom County, which is the northwestern county of the continental United States. It is bounded on the north by British Columbia, on the east by the Cascade Range, and on the south by the Chuckanut mountains which geographically separates it from Skagit County.

For many years seed has been produced in quite large quantities in British Columbia along the Frazier River and on some of the uplands. This area lies just across the Border from Whatcom County.

During the period of 1945 in the California tests our White Rose variety was showing as high as 65% of the acreage with more than 5% virus while the Gems were showing as high as 35% with no diseases. After the introduction of new insecticides, the virus condition in the White Rose improved until in 1950, when 100% of this variety showed less than 3% disease, and 97% of the Gems showed less than 3% virus. By 1952 there was 100% of the White Rose and Gems that showed less than 1% disease. The disease started building up just a little as in 1954 both varieties had 100% with less than 2% disease. In 1958, 100% of the White Rose had less than 2% while there was only 72% of the Gems that had less than 2% disease.

In 1952, 84% of the White Rose showed "0-0" and 95% of the Netted Gems showed "0-0." The crops stayed about the same until 1959 when there was only 42% of the White Rose that showed "0-0" and 7% of the Netted Gem were "0-0." In 1960, we had 74% of the White Rose that showed less than 1% disease, and 45.7 of the Netted Gems showed less than 1% disease. This is for the State as a whole.

In the areas around the perimeter of the State where the growers have made no attempt to control their insect pests, most of them have had high readings and have dropped out of the picture as certified seed potato growers. We have an area in Dayton that was planted for the first time in 1960. They apparently did not have any aphids in that community as the readings came out showing "no disease" at all. This year, however, one plant of Leaf Roll was scored in one of the fields. It looks like a very good area as far as disease is concerned. The amount of potatoes that can be harvested per acre is the limiting factor which may prevent seed growing as an economical enterprise. They dry land farm. If it does not rain, their crop is yielding about four to five tons an acre which is not a very profitable crop.

This year, out of the 126 samples read in the greenhouse, we had 91 of them showing "0-0". Twenty-seven lots showed one plant of disease and four samples showed two plants. Only five of the lots had three plants or more and of these, three lots had more than siz plants of disease or more than 2%.

About 60% of all certified seed produced in the State of Washington goes to California. Much of it is used for Foundation plantings for the production of seed potatoes. The remaining seed is shipped to Oregon, Utah, Idaho, Canada, and Washington.

We test practically all of the lots of certified seed, but not 100%. Fields that are passed in the Fall for certified seed can be shipped as seed without a greenhouse test. The following year, in order to be planted for recertification in this State, it is required that this seed must have been greenhouse tested.

The Othello plots, by and large, did agree with our greenhouse tests on the same seed. With only 300 tubers from the field being tested, we are not always sure that it is too representative. It is possible that there may be portions of the field that would show higher readings than other portions. Insects could have moved in greater numbers to one portion more so than in the other. If our greenhouse samples have been taken properly during harvest, the sample would be quite representative of the crop in the field.

In no part of the country do certified seed growers spend more time and money in trying to properly protect their crops by treating their seed before planting and by religiously dusting or spraying during the entire season. The potato fields are sprayed every ten days from the time they come up until they are killed which requires sometimes, eight to ten applications of insecticides. They are rogued continuously from the time they are large enough to see virus diseases until the potatoes are beat down or killed by spraying. Foundation rating is only used after the greenhouse test.

In addition to the greenhouse tests, samples of all seed lots being planted are required for a field plot test. In the Spring these samples are planted at the Washington State Nursery in Bellingham where we can go into any lot of potatoes being grown for seed in the state and read it for disease. The diseased plants are not removed. The growers and buyers may come there during the entire crop season and view the lots. They are also specially invited to attend the Field Day each year. These plots grown outdoors are probably a more accurate sample than any sample grown in a greenhouse. The same as your Othello plots show a sample of the seed planted, our field plots show a sample of our certified seed lots being planted.

There are some other locations in the State, higher up in the mountains or in the little valleys where seed potatoes could be grown sucessfully. In these areas there is less chance of over-wintering aphids as well as aphids carrying virus migrating, during the growing season. Here seed potato growing could be developed. There is certainly room for an expansion of acreage of the Russet Burbank seed.

When our potatoes are being shipped an inspector writes an inspection report on the lot. A Shipping Permit is required and many have Federal Certificates showing they meet the standard of grade, quality, and condition. None of them are shipped out without meeting the requirements of both the Washington State Permit law and the seed potato regulations.

We issue several reports on the potatoes. First, we print a list of those potatoes entered for certification. In the Fall, a list is made of all the fields passing certification. In the Spring, after the greenhouse testing has been completed, a report is made of the readings. These reports are public information and anyone can receive a copy of any of them by sending a request to the department to have your name placed on our mailing list. At the wish of our growers, we list the actual number of diseased plants rather than percentages.

The potatoes are packed according to a regular set of rules which are printed on each tag. The Blue Tag requirement is seed from 2 - 14 ounces, the Red Tag is 2 - 18 ounces, and the White Tag from 1 to 3 ounces. The Buff Tag can be any size or grade depending on an agreement between the buyer and the seller. The color of the tag has only to do with the quality and condition at shipping time. All three colors of tags could be used on potatoes out of the same hill, depending upon the quality, size, and shape. The Blue Tag is the best and highest quality grade. The minimum size is two ounces, not two inches as are commercial potatoes. The required shape is "not badly misshapen" instead of "fairly well shaped" as for U. S. No. 1. The information as to the quality and condition of the potatoes in the sack is designated by the tag.

Annually, in the State of Washington, there are 600,000 sacks of Russet potatoes needed for seed. We produce only about 120,000 sacks. The market is certainly open to any of you who would like to go to some of these well isolated areas to grow seed.