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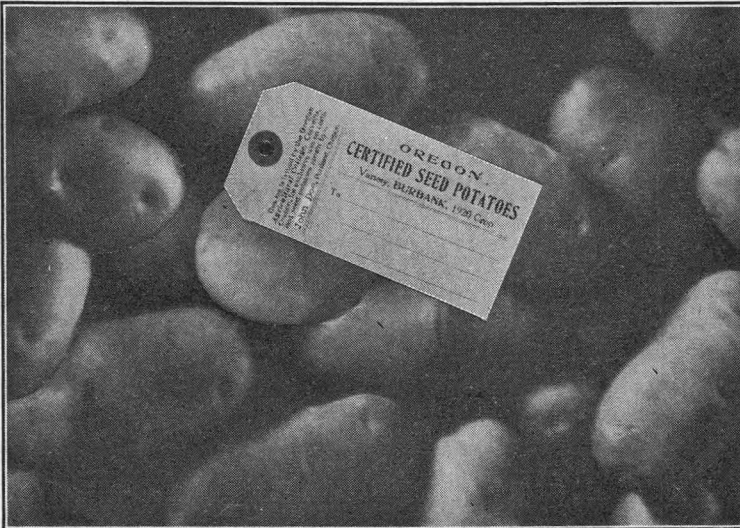
Seed Potato Certification for 1922

By

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Potato inspection and certification work is conducted by the Extension Service of the Oregon Agricultural College. The purpose is two-fold: (1) to carry out educational work promoting standardization of varieties, better methods of production, and better yields, and to establish sources of good seed of standard varieties; (2) to secure for



men specializing in potatoes, to the extent of producing seed of better quality, recognition of their superior seed stock. Such seed stock usually brings an increased price of from 25 to 100 percent.

Basis of Finance. The general educational work relative to the importance and plan of potato-certification is conducted as a regular extension activity at the expense of the Extension Service. This phase

of the extension work should be enlarged upon rather than diminished. Field and bin inspections are made the basis of tours and field meetings to familiarize growers attempting certification as well as other producers in the neighborhood with the varietal characteristics, the identification of diseases, methods of roguing, proper rotation of crops, hill selecting, and other general practices associated with high-class potato production. County agents are locally in charge of the project and should know of the location of all fields entered for certification and of sources of certified seed within the county.

The grower, achieving certification, pays a reasonable fee for a part of the actual cost of inspection since the expense of making three trips to each field passing certification requirements is rather high.

The need for potato-certification work may be emphasized by the 1921 average acre yield of potatoes for Oregon of 90 bushels as compared with 288 bushels for the state of Maine. Of some 288 growers entering for certification, twenty-two achieved the distinction of growing potatoes good enough to meet certification requirements.

The total number of potatoes passing certification requirements is less than 5000 bushels, whereas the State annually uses from 400,000 to 500,000 bushels for seed. The local demand, which so far has never been satisfied, together with the strong demand from other states, is so great that there is no danger of over-production of certified stock.

RULES AND REGULATIONS

Growers should read these carefully.

(1) **Entrance Requirements.** Any grower, responsible company, or bona-fide association of Oregon having seed potatoes of a desirable variety may enter fields for certification.

(2) **Minimum Acreage.**—There shall be no minimum acreage entrance requirements. Growers having less than an acre may enter if other conditions are met.

(3) **County Limitation.** Before certification work will be conducted in a county, application must be presented covering a total of not less than ten growers or not less than twenty acres. This county limitation is necessary because of the high expense of visiting an individual grower in a county.

(4) **Application.** Fields may be entered for inspection by turning in an application blank and the application fee. These blanks may be secured from the county agent in each county and are turned in through his office. Counties without agents may secure blanks from the Extension Service, Oregon Agricultural College, Corvallis, Oregon, the signed blanks being returned directly to the Extension Service. As an indication of intention on the part of the grower to carry out certification work, an application fee for \$1.00 must accompany the application blank.

(5) **Fees.** After payment of the application or entrance fee of \$1.00, no fees are charged for field inspection. A fee of five cents a bushel is charged for all potatoes meeting certification requirements at the time of the bin inspection. Fees, together with the deposit for tags, are due at the time of bin inspection and must be paid before a certificate can be issued to the grower.

(6) **No Entrance Fee for Boys' and Girls' Club Members.** Boys' and Girls' Club members entering less than one acre of potatoes when grown under regular project supervision are not charged the entrance fees, but when the acreage exceeds one acre the customary entrance fee is charged.

(7) **Tags.** All certified potatoes should be labeled with an official certification tag bearing the name of the certifying agency, the grower's name, postoffice address, the variety of potatoes, etc. Tags are printed and furnished at cost by the Extension Service in quantities agreed upon by the grower and the inspector. When certified potatoes have been grown for a seed company or are to be marketed through an association they may be certified in the name of the company or association when agreed upon by persons interested.

(8) **Field Inspections.** Growers are urged to join the inspector at the time fields are being examined. Weak, diseased, and off-type vines are pointed out. The grower is instructed to dig these plants and remove them from the field at once. Many pota-

to diseases spread from plant to plant, and unless roguing is done promptly, the disease may spread extensively in the field. Failure on the part of the grower to rogue in the manner and at the time directed will result in the rejection of the field for certification.

(9) **Sorting for Bin Inspection.** The grower must sort the potatoes before bin inspection. All potatoes of other varieties and any that are rotten, cut, stabbed, bruised, or otherwise mechanically injured; those that are pointed at the end, bottle necked, rough, or otherwise not symmetrical; and those weighing less than two ounces must be sorted out before they can be certified. Potatoes passing certification requirements will be tagged by the inspector or his representative.

(10) **Method of Inspection.** Usually two field and one bin inspection are made. The first field inspection, made about blossoming time, indicates to the inspector the presence of varietal mixture and disease that appears early in the season. The grower at this time is expected to provide the inspector with information as to seeding, handling of soil, and other items desired.

Fields not passing any inspection will not be considered further except by special request.

The second field inspection is made shortly before the vines ripen and late developing diseases are noted.

The bin inspection is made preferably not less than one month after harvest to determine upon the presence of disease and insect pests, trueness to varietal type, and accuracy of sorting to meet certification requirements.

WHAT THE GROWER SHOULD DO TO CERTIFY

Land. He should use new ground or land that has not been in potatoes for at least four years. Preferably, on old land, the potatoes should follow a legume or grass meadow crop. It is useless to attempt certification on land that has recently been in potatoes.

Seed. Preferably certified seed should be used. All seed, certified or not, should be carefully selected to smooth, symmetrical tubers, and it is better to avoid seed showing stem-end discoloration.

Seed Treatment. All seed should be given the corrosive-sublimate treatment described in Oregon Agricultural College Experiment Station Circulars 24 and 25.

Blossom-end Seed Pieces Best. When in doubt about the presence of wilt, blossom-end pieces, which have less of that disease, should be planted by themselves.

Remove Sick or Diseased Plants. When any plant in the field appears diseased, dwarfed, or otherwise unhealthy, it should be immediately dug out and removed from the field regardless of whether an inspector has been there or not.

Wilted Plants. Any plant showing evidence of wilt should be dug out of the field. It is often a good plan to dig the plants on each side of it. This is especially important if hills are closer than two feet, as the disease spreads through the soil.

Sort at Digging Time. At the time of digging, all tubers that are rotting, damaged, cut, off-type, misshapen, non-symmetrical, or otherwise unsound and those weighing less than two ounces should be rigidly sorted out.

STANDARDS FOR CERTIFICATION

All potatoes certified by the Oregon Agricultural College shall in the judgment of the Inspector or the Potato Certification Board conform to the following standards:

(1) **Varietal Purity.** Seed stock containing a mixture with other varieties shall not be eligible for certification unless the hills representing such mixture are dug at blossoming time or staked at blossoming time and removed by the grower prior to the harvesting of the crop. The presence of 5 percent of mixture at the time of any field inspection will disqualify for certification.

(2) **Variety Classification.** Potatoes shall be named by their group name, with the exception of certain well marked varieties.

(3) **Type, Condition, and Appearance.** All potatoes must conform to variety type and shall be reasonably uniform, symmetrical, smooth, and free from cuts, stabs, bruises and similar blemishes.

(4) **Size.** Two ounces shall be the minimum size. There is no requirement as to maximum size. Exclusively large potatoes are not considered the most desirable seed stock.

It is recommended that potatoes be sorted to sizes considered suitable to market requirements.

(5) **Cultural Conditions.** Fields shall not be accepted for certification if they are so weedy or the vines so injured by insects or other factors that satisfactory inspection is made difficult. Extremely poor soil conditions, uneven or weak stands, and similar conditions may disqualify.

FREEDOM FROM DISEASE AND INSECT PESTS

The following amounts of disease will disqualify seed stock for certification:

A. Vine Diseases—field inspections

1. 5 percent of the plants showing well defined curly dwarf, leaf roll, mosaic chlorosis, or spindle sprout singly or in combination.

2. 5 percent of the plants affected by wilt or blackleg.

3. 10 percent of the plants affected by a combination of any of the above-mentioned diseases.

4. A majority of the plants showing a serious infection of late blight.

5. An amount of heavy *Rhizoctonia* infection sufficient in the judgment of the inspector to be considered serious.

In order that fields having less than the above-stated amounts of disease may be eligible for final inspection, all weak or diseased hills, with the exception of those attacked by late blight, shall be removed as directed by the inspector after any and before the next field inspection. Any such plants remaining after the last field inspection must be removed before the crop is harvested.

B. Tuber Diseases—bin inspection

1. More than 8 percent light infection or 2 percent deep infection with wilt diseases.

2. Wart, powdery scab, eel worms, and larvae of the potato tuber moth in any amount.

3. Serious infection with *Rhizoctonia* (black scurf), and common scab. A small amount of light infection with these diseases will not disqualify.

4. All bin rots shall be removed and the potatoes shall be practically free from the late blight.