

## POTATO CERTIFICATION IN IDAHO

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### I. Areas of Production

The production of certified seed potatoes in Idaho has increased rapidly the past two years. In 1951 there were approximately 7,500 acres entered for certification. This figure passed the 30,000 acre mark in 1961. The Russet Burbank variety constitutes about 96% or 29,000 acres. The balance of the acreage consists of Early Gems and Kennebec with a small acreage of White Rose and Pontiacs.

The Idaho seed production has been confined mostly to high altitude and isolated areas which range in elevation from 5,200 to 6,000 feet above sea level. However, in recent years, the certified seed production has been increasing in other areas, particularly on the new irrigation projects. Certified seed is produced in several different areas within the state with the major portion being produced in the southeastern section. The areas may be traced across the state, starting in the southeast corner, and are as follows:

1. Caribou & Bannock Counties -- Grace and Lava Hot Springs area.
2. Teton County -- Driggs, Tetonia, and Victor areas.
3. Fremont County -- Ashton area.
4. Small acreage in Lemhi County -- Salmon area.
5. Butte and Custer Counties -- Arco to Mackay area.
6. Bingham County -- Newly developed area on the desert west of Blackfoot.
7. Small acreage in Blaine County -- Near Carey.
8. Scattered area around Malta, Burley, Rupert, and Twin Falls areas.
9. Valley County -- McCall & Donnelly areas.
10. Small acreage in Northern Idaho.

### II. Standards and Inspection Procedures

Space in this report does not permit all the details of the standards and inspection procedures. Details for certification are included in "Idaho Rules for Certification," which may be obtained from the Idaho Crop Improvement Ass'n., Inc., P. O. Box 2601, Boise, Idaho. The following outline conveys the principal requirements and procedures:

- A. Any lot of Idaho seed to be eligible to plant for certification must be represented in the winter test plots or must be seed stocks that are approved by the Idaho Crop Improvement Association. The tolerance for disease in the plot is 1% Leaf Roll, and 2% Mosaic.

B. Isolation

Potatoes to be eligible for certification must be 100 yards from any other potatoes, including volunteer, which will not pass the inspection regulations. Providing a suitable barrier is present, this distance may be reduced, but in no case shall the distance be less than 100 feet.

C. Field Inspection

1. Two inspections shall be made for each field entered. Additional inspections may be made at the discretion of the fieldman, but will not be made in order to allow growers to rogue fields which will not pass inspection. **FIELDS SHALL BE CONSIDERED READY FOR INSPECTION AT ALL TIMES.** Both fields and bins shall be available for inspection at all times and fieldmen shall be permitted to sample bins for ring rot or other diseases at any time.
2. The fieldman is given authority to refuse certification on any field of potatoes because of the prevalence to a serious extent of any diseases not mentioned herein, of serious insect damage, weeds, or because of any other condition that impairs the seed value or interferes with proper growth or inspection of the potatoes or to withhold certification of any lot of seed potatoes until the winter test plot readings are complete.
3. Fields that show volunteer potato plants will be accepted for certification when the volunteer plants are not found in excess of 5% of the total plants in the field. Volunteer plants shall be considered as part of the field from the standpoint of all factors of inspection including disease percentages, varietal mixtures, disqualifying conditions, etc. Specific requirements are as follows:

(1) First Inspection Limitations:

1. Varietal mixture . . . . . 1.0%
2. Weak plants . . . . . 10.0%
3. Well defined mosaic, leaf roll, spindle tuber or giant hill; singly or combined . . . 2.0%  
(Leaf roll singly not more than .5%)
4. Blackleg . . . . . 2.0%

(2) Second Inspection Limitations:

1. Varietal mixture . . . . . .5%
2. Weak plants . . . . . 5.0%
3. Well defined mosaic, leaf roll, spindle tuber or giant hill; singly or combined . . . 1.0%  
(Leaf roll singly not more than .5%)
4. Blackleg . . . . . 2.0%

D. Disqualifying Conditions

At any regular inspection, additional inspection, or at any time, the presence of the following diseases or insects shall disqualify any field or a lot of seed for certification:

Blackwart, Powdery Scab, Late Blight, Tuber Moth, Eelworm (Nematode), Ring Rot (Bacterial Wilt), Eumartii Wilt.

EVIDENCE OF FAILURE TO REMOVE POTATOES FROM ROGUED HILLS WILL AUTOMATICALLY DISQUALIFY A FIELD. Where EELWORM is found on the farm or in any lot of potatoes grown on the farm, no lot of seed grown on this farm shall be eligible for certification.

E. Cellar Inspection

At the time of the first field inspection, the fieldman shall visit the cellar where potatoes are to be stored to determine if cellar conditions are desirable as a storage place for seed potatoes.

F. Storage

Potatoes eligible for tagging as certified seed potatoes must not be stored, graded or handled in cellars, warehouses or subdivisions thereof in which potatoes that have not been field inspected equivalent to the second inspection, or are known to have Bacterial Ring Rot, Eelworm, Eumartii Wilt, Late Blight, or Tuber Moth are stored or handled.

G. Harvesting and Seed Handling

1. Growers who have fields eligible for certification shall notify the designated fieldman in the district prior to harvest and shall work out with him a satisfactory plan for keeping identity of the potatoes through harvest and storage.
2. Seed potato lots are checked at harvest time into bins and cellars to maintain their identity. A lot is eligible for tags only when this identity is maintained.

H. Bags

Potatoes which have met field and storage requirements for certification to be eligible to tag and seal as certified must be packed in new bags.

I. Foundation Seed

Generally for the Foundation class of seed, the disease tolerance is about half of that for the regular certified with the exception that there is only .2% leaf roll permitted the first inspection and .1% the second. In addition, the potatoes must be planted in tuber units and the minimum isolation is 1,000 feet.

### III. Post-Harvest Testing

At harvest time each grower is required to submit 600 one-drop tubers from the seed stock they intend to plant the following year. The first of November 300 of these tubers are treated with Gibberellic acid (25 ppm) held at 80° to 85° F. for two weeks, and planted at Oceanside, California, the first week of December. These plots are read for diseases about March 5th to 10th. These readings are available if requested on specific growers or seed stocks.

The other 300 tubers are planted in May at the Aberdeen Branch Experiment Station. The Aberdeen plots give a comparison with those conducted in California and afford a pre-inspection view of the seed stocks grown under Idaho conditions.

### IV. Seed Reports

After the potatoes are checked into storage the Idaho Crop Improvement Ass'n., Inc. publishes a directory which lists the names and addresses of all growers who entered potatoes for certification. The directory also shows the acreage entered, the acreage accepted, the acreage rejected or withdrawn, and the virus disease reading for each inspection.

### V. Grades and Tag Information

Tags of blue, red, green or yellow designate the four grades in which Idaho certified may be packed. All grades must meet the requirements for U. S. No. 1 as to wet rot, dry rot, freezing injury, jelly ends, mechanical injury, and bin heating and the maximum tolerance for varietal purity is 1%. Washing, clipping, or trimming is not permitted in any grade. The size range for blue, red, and green tag grades is  $1\frac{1}{4}$  inches in diameter to 12 ounces maximum weight. The yellow tag grade has no minimum size limit but has a 12 ounce maximum.

The blue tag grade shall meet the same standards for U. S. No. 1 in regard to shape and type. For the red tag the potatoes shall not be seriously misshapen or seriously damaged by growth cracks or second growth. The shape and type of the green tag grade is the same as for the blue and red tag grades combined with the following exceptions:

1. Not to exceed two knobs on any one tuber which might break off in normal handling may be permitted, providing such knobs do not cause more than 15% waste of the individual tuber.
2. Not more than 15 percent by weight of the potatoes in any one container may have two knobs of this type.

There is no requirement as to shape and type for yellow tag.

The green tag grade is intended for a field run pack maintaining the original percent of blue and red tag grade. For clarification, if a grower is packing green tag he must sign a statement as to the size range. If the pack is to have a maximum of 8 ounces both the blue and red tag grade over 8 ounces must be removed.

The yellow tag grade is a contract grade between the buyer and seller and has no requirements except those previously mentioned. Yellow tag packs may be extremely rough, misshapen, or dirty or they may be a very good pack consisting of a high percent of blue tag grade. The buyer should always inspect a yellow tag pack before purchasing.