



WASHINGTON STATE

POTATO JUDGING

CAREER DEVELOPMENT EVENT

A Special Project for the Washington FFA Foundation

IMPORTANT NOTE

Please thoroughly read the Introduction Section at the beginning of this handbook for complete rules and procedures that are relevant to all Washington FFA Career Development Events.

I. PURPOSE

To prepare students who plan to engage in the grading of potatoes, the raising of potatoes, or a related occupation as a career. Potato judging and grading events are used in instructing individuals in a better understanding and appreciation of the various grades and varieties of potatoes. The event consists of grading 100 potatoes, giving oral reasons for the grading of ten potatoes, and placing two to four classes of seed potatoes.

II. OBJECTIVES

1. The student will demonstrate his/her ability to give oral reasons on the placing of ten potatoes.
2. The student will grade potatoes according to the U.S. grading standards.
3. The student will rank plates of seed potatoes according to the grading standards.

III. RULES

1. Eligibility: students must be FFA members currently enrolled in agriculture education.

2. Levels of events are local, district, and state.
3. Event location and time may be found in the State FFA Calendar.

IV. CONDUCTING THE EVENT

A. Team Make-up

1. The event will consist of a five member team.
2. Eligible participants in the Washington State Potato Judging Career Development Event will be students who are regularly enrolled in agriculture education during the calendar year, have a planned course of study, or who are still in high school but have completed all the agriculture education offered. When selected, participants must be active members of a chartered FFA Chapter and the National FFA Organization.

B. Event Personnel

The superintendent is responsible for the overall organization and operation of the event. Other event personnel include runners, tabulators, group leaders, and timekeepers.

C. Registration Procedure

Contestants will report for instruction to the event superintendent at the time, date, and place listed in the State FFA Calendar. An entry fee per team may be charged for use in purchasing pennants. All instructors must remain and help with the event until results are declared or their team shall be eliminated.

V. EVENT FORMAT

1. Classes or Sections

a. Seed Judging

Seed judging shall consist of at least two classes and not over four, and at least one-half of the classes shall be Russet. Other classes shall be picked by the superintendent in charge from commercial varieties. No off varieties will be allowed in the judging classes. If two classes other than Russet are judged, they shall not be of the same variety.

b. Grading

There will be 100 specimens selected by the judges and prepared for written grading. Liners will be eliminated if possible. Each potato will be numbered. They will be judged in the like manner by the judges. Grading will be U.S. #1, U.S. #2, and culls. Off varieties should be marked as culls.

Oral grading will consist of ten potatoes graded orally in the presence of the official judge, with ten points allowed for each potato graded. A maximum of five points will be allowed for the grades and five points for the reasons given for placing the potatoes in that grade. The judge will give either zero or five points on grade and any figure between zero and five inclusive for reasons.

2. Judges

Horticulture inspectors should be used for grading officials wherever possible. Instructor committees may be used for seed judging officials.

3. Activity or Procedure

Fifteen minutes shall be allowed for each class judged and 15 minutes for each 50 potatoes graded. A time limit of two minutes will be allowed for giving oral reasons. Students will be cut off at exactly two minutes.

VI. Contest Scoring

a. The following chart gives the point break down for the event:

<u>Divisions</u>	<u>Points</u>
Graded 100 Russet potatoes	400
Blemish ID	100
Oral reasons on 10 Russet potatoes	100
Judging seed potatoes:	
Minimum two classes	100
Maximum four classes	200

b. Performance evaluation materials and references may be found in the Appendix of this manual.

VII. TIEBREAKERS

If ties occur, the following events will be used in order to determine award recipients:

1. Oral Reasons
2. Blemish ID

VIII. REFERENCES

This list of references is not intended to be inclusive. Other sources may be utilized and teachers are encouraged to make use of the very best instructional materials available. The following list contains references that may prove helpful during event preparation.

Potato Grading/Judging Manual

Washington State Potato Commission

108 Interlake Road
Moses Lake, WA 98837

<http://www.potatoes.com/>

Quincy Potato Judging (District CDE)

SUGGESTIONS FOR DEVELOPING SKILL IN DETERMINING CORRECT GRADE

Definitions of Terms

1. “Fairly well shaped” means that the potato is not so pointed, dumbbell shaped, or otherwise ill-formed so that its appearance is materially affected.
2. “Soft rot or wet breakdown” means any soft, mushy, or leaky condition of the tissue, such as slimy rot, leak, or wet breakdown following injury or sunscald.
3. “Damage” means any injury or defect which materially detracts from the appearance of the individual potato or the general appearance of the potatoes in the container, or which cannot be removed without a loss of more than 5 percent of the total weight of the potato. Loss of outer skin (epidermis) shall not be considered as damage unless the skinned surface is materially affected by very dark discoloration. Any of the following defects or any combination of defects, the seriousness of which exceed the maximum allowed for any one defect, shall be considered as damage:
 - a. Dirt, when the general appearance of the potatoes in the container is more than slightly dirty or stained, or when individual potatoes are badly caked with dirt or badly stained; or other foreign matter which materially affects the appearance of the potatoes.
 - b. Second growth or growth cracks which have developed to such an extent as to materially affect the appearance of the individual potato or the general appearance of the potatoes in the container.
 - c. Air cracks which are deep, or shallow air cracks which materially affect the appearance of the individual potato or the general appearance of the potatoes in the container.
 - d. Shriveling, when the potato is more than moderately shriveled, spongy, or flabby.
 - e. Sprouting, when more than 10 percent of the potatoes have sprouts over $\frac{3}{4}$ ” long.
 - f. Surface scab which covers an area of more than 5 percent of the surface of the potato in the aggregate.
 - g. Pitted scab which affects the appearance of the potato to a greater extent than the amount of surface scab permitted, or causes a loss of more than 5 percent of the total weight of the potato.
 - h. Rhizoctonia, when the general appearance of the potatoes in the container is materially affected or when individual potatoes are badly infected.

4. "Diameter" means the greatest dimension at right angles to the longitudinal axis. The long axis shall be used without regard to the position of the stem (rhizome).
5. "Serious damage" means any injury or defect which seriously detracts from the appearance of the individual potato or the general appearance of the potatoes in the container, or which cannot be removed without a loss of more than 10 percent of the total weight of the potato. Any one of the following defects or any combination of defects, the seriousness of which exceeds the maximum allowed for any one defect, shall be considered as serious damage:
 - a. Dirt, when the general appearance of the potatoes in the container is seriously affected by tubers badly caked with dirt or other foreign matter which seriously affects the appearance of the potatoes.
 - b. "Cuts," when both ends are clipped or when more than an estimated one fourth of the potato is cut away from one end or when the remaining portion of the clipped potato weighs less than 6 ounces.

Other cuts which seriously affect the appearance of the individual potato or which cannot be removed without a loss of more than 10 percent of the total weight of the potato.
 - c. Shriveling, when the potato is excessively shriveled, spongy, or flabby.
6. "Mature" means that the outer skin (epidermis) does not loosen or "feather" readily during the ordinary methods of handling.
7. "Bright" means practically free from dirt or other foreign matter, and that the outer skin (epidermis) has the attractive color normal for the variety.
8. "Well shaped" means the normal shape for the variety and that the potato is not pointed, dumbbell shaped, excessively elongated, or otherwise ill-formed.
9. "Injury" means any defect which more than slightly affects the appearance of the individual potato or the general appearance of the potatoes in the container, or which cannot be removed without a loss of more than 2 percent of the total weight of the potato.

In developing skill on the part of the student in determining the grade of potatoes that are near the border line between grade No. 2 and a cull due to the percent of waste, it may be necessary to pare several specimens, weighing each specimen both before and after pairing to determine percentage loss.

In potato grading contests, the individual potato will be graded as a unit and upon its merit. Decision must be made on waste from paring the potato as a whole rather than any scheme of carving the potato to enable grading up on the carved specimens. Students will be allowed to use a sizing instrument in class work only to determine whether the diameter meets the requirements. In using the sizing instrument, do not attempt to force the potatoes through the holes. A potato that drops through easily is under that size, while one that touches has the same diameter as the hole in sizing instruments and would be considered as meeting this requirement for the grade.

GIVING ORAL REASONS

In giving oral reasons for grading a potato as "Grade No. 1," reasons should include the size, shape, appearance, and waste due to defects or blemishes. But in stating reasons for grading as "Grade No. 2," it is not necessary to mention shape or appearance, but the student should include the size and waste due to defects or blemishes. In giving reasons for grading as "Grade Cull" the size should not be included except when the specimen is under 1 ½ inches.

Frequently a student simply states "Grade No. 1" without giving any reason. The student in this case would be graded five points out of the possible ten points. Sometimes the student states "Grade No. 1 – meets all requirements." The student's grade on this would be five points for giving correct grade and two points for reasons, or a total of seven points out of the possible ten points.

SAMPLE OF CORRECT WAYS IN STATING REASONS

These reasons would score ten points each provided the grade and the reasons given were accurate.

1. Grade No. 1 – Sufficient size, and has no defects which will detract from the appearance or which will cause more than 5 percent waste.
2. Grade No. 2 – Sufficient size, and has shape defects which will cause more than 5 percent waste, but less than 10 percent waste.
3. Grade No. 2 – Sufficient size, slight touch of indistinct greening. No other defects producing as much as 10 percent waste.
4. Grade Cull – Less than 1 ½ inches in diameter.
5. Grade Cull – Growth cracks causing more than 10 percent waste.
6. Grade No. 2 – More than 1 ½ inches but less than 2 inches in diameter and has no defects that cause waste.
7. Grade Cull – One end of potato affected with soft rot.
8. Grade Cull – Second growth producing over 10 percent waste.
9. Grade No. 2 – Sufficient size, wire worm injury causing less than 10 percent waste.

POINTS ON POTATO JUDGING CARD

Freedom from disease
Trueness of variety type

Uniformity
Freedom from mechanical or
other injury

Potato Judging

Name: _____

Chapter: _____

Contestant No.: _____

POTATO GRADING A

Please put an "X" on the grade of potato.

Number			
1	1	2	C
2	1	2	C
3	1	2	C
4	1	2	C
5	1	2	C
6	1	2	C
7	1	2	C
8	1	2	C
9	1	2	C
10	1	2	C
11	1	2	C
12	1	2	C
13	1	2	C
14	1	2	C
15	1	2	C
16	1	2	C
17	1	2	C
18	1	2	C
19	1	2	C
20	1	2	C
21	1	2	C
22	1	2	C
23	1	2	C
24	1	2	C
25	1	2	C

Number			
26	1	2	C
27	1	2	C
28	1	2	C
29	1	2	C
30	1	2	C
31	1	2	C
32	1	2	C
33	1	2	C
34	1	2	C
35	1	2	C
36	1	2	C
37	1	2	C
38	1	2	C
39	1	2	C
40	1	2	C
41	1	2	C
42	1	2	C
43	1	2	C
44	1	2	C
45	1	2	C
46	1	2	C
47	1	2	C
48	1	2	C
49	1	2	C
50	1	2	C

Judges Name

Judges Signature

Date

Potato Judging

Name: _____

Chapter: _____

Contestant No.: _____

POTATO GRADING B

Please put an "X" on the grade of potato.

Number			
1	1	2	C
2	1	2	C
3	1	2	C
4	1	2	C
5	1	2	C
6	1	2	C
7	1	2	C
8	1	2	C
9	1	2	C
10	1	2	C
11	1	2	C
12	1	2	C
13	1	2	C
14	1	2	C
15	1	2	C
16	1	2	C
17	1	2	C
18	1	2	C
19	1	2	C
20	1	2	C
21	1	2	C
22	1	2	C
23	1	2	C
24	1	2	C
25	1	2	C

Number			
26	1	2	C
27	1	2	C
28	1	2	C
29	1	2	C
30	1	2	C
31	1	2	C
32	1	2	C
33	1	2	C
34	1	2	C
35	1	2	C
36	1	2	C
37	1	2	C
38	1	2	C
39	1	2	C
40	1	2	C
41	1	2	C
42	1	2	C
43	1	2	C
44	1	2	C
45	1	2	C
46	1	2	C
47	1	2	C
48	1	2	C
49	1	2	C
50	1	2	C

Judges Name

Judges Signature

Date

Potato Judging Seed Classes

Name: _____

Chapter: _____

Contestant No.: _____

Class 1		Class 2		Class 3		Class 4	
1-2-3-4		1-2-3-4		1-2-3-4		1-2-3-4	
1-2-4-3		1-2-4-3		1-2-4-3		1-2-4-3	
1-3-2-4		1-3-2-4		1-3-2-4		1-3-2-4	
1-3-4-2		1-3-4-2		1-3-4-2		1-3-4-2	
1-4-2-3		1-4-2-3		1-4-2-3		1-4-2-3	
1-4-3-2		1-4-3-2		1-4-3-2		1-4-3-2	
2-1-3-4		2-1-3-4		2-1-3-4		2-1-3-4	
2-1-4-3		2-1-4-3		2-1-4-3		2-1-4-3	
2-3-1-4		2-3-1-4		2-3-1-4		2-3-1-4	
2-3-4-1		2-3-4-1		2-3-4-1		2-3-4-1	
2-4-1-3		2-4-1-3		2-4-1-3		2-4-1-3	
2-4-3-1		2-4-3-1		2-4-3-1		2-4-3-1	
3-1-2-4		3-1-2-4		3-1-2-4		3-1-2-4	
3-1-4-2		3-1-4-2		3-1-4-2		3-1-4-2	
3-2-1-4		3-2-1-4		3-2-1-4		3-2-1-4	
3-2-4-1		3-2-4-1		3-2-4-1		3-2-4-1	
3-4-1-2		3-4-1-2		3-4-1-2		3-4-1-2	
3-4-2-1		3-4-2-1		3-4-2-1		3-4-2-1	
4-1-2-3		4-1-2-3		4-1-2-3		4-1-2-3	
4-1-3-2		4-1-3-2		4-1-3-2		4-1-3-2	
4-2-1-3		4-2-1-3		4-2-1-3		4-2-1-3	
4-2-3-1		4-2-3-1		4-2-3-1		4-2-3-1	
4-3-1-2		4-3-1-2		4-3-1-2		4-3-1-2	
4-3-2-1		4-3-2-1		4-3-2-1		4-3-2-1	

Scoring only

Class 1 Class 2 Class 3 Class 4 Total Score

Potato Judging Potato Blemish

Name: _____

Chapter: _____

Contestant No.: _____

Place the number of the sample next to the blemish name.

- | | |
|----------------------|-------|
| 1. Rhizoctonia | _____ |
| 2. Water Scab | _____ |
| 3. Pitted Scab | _____ |
| 4. Soft Rot | _____ |
| 5. Dry Rot | _____ |
| 6. Nematode | _____ |
| 7. Wire Worm | _____ |
| 8. Mechanical Damage | _____ |
| 9. Rodent Damage | _____ |
| 10. Sun Burn | _____ |
| 11. Cellar Green | _____ |
| 12. Foreign Object | _____ |
| 13. Hollow Heart | _____ |
| 14. Black Heart | _____ |
| 15. Second Growth | _____ |
| 16. Subject to Break | _____ |
| 17. Rough Break | _____ |
| 18. Freeze Damage | _____ |
| 19. Caked Dirt | _____ |
| 20. Growth Crack | _____ |

Potato Judging Oral Reasons

Name: _____ Chapter: _____ Contestant No.: _____

Specimen	Grade	Reasons	Total
	0 or 5	0 to 5	0 to 10
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

Grand Total _____/100

2 minute time limit to grade and give reasons.

5 reasons per potato unless it is a cull. 1 reason needed for culls.

Dock 5 points if not in Official Dress (Outdoor Official Dress is acceptable)

- This is off the total score.