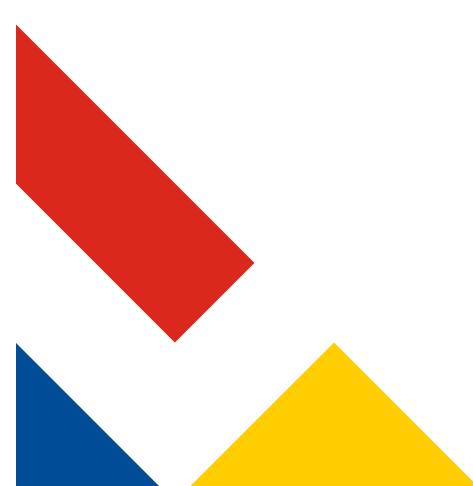


WASHINGTON
FFA ASSOCIATION



Potato Evaluation Career Development Event Handbook

Revised 2022



Purpose & Objectives

Purpose

The purpose of the Washington FFA Potato Evaluation Career Development Event is 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

Objectives

The Potato Evaluation Career Development Event provides the opportunity for the participant to:

- Demonstrate his/her ability to give oral reasons on the placing of ten potatoes
- Grade potatoes according to the U.S. grading standards
- Rank plates of seed potatoes according to the grading standards.
- Identify common potato diseases and defects

Event Rules

*****If there are any questions or issues, the State FFA Advisor will make the final decision.*****

- The team will be composed of five members with the top four scores counting towards the team score.
- It is highly recommended that participants wear FFA Official Dress for this event.
- Any participant in possession of an electronic device in the event area is subject to disqualification.
- All instructors must remain and help with the event until results are declared or their team shall be eliminated.

Event Format

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, and blemish ID.

The CDE coordinator is responsible for securing competent judges and overall organization and operation of the event. Industry professionals should be used to official the CDE. Washington State Department of Agriculture inspectors or horticulture inspectors should be used for grading officials wherever possible. Instructor committees may be used for seed judging officials if necessary. Other event personnel may include runners, tabulators, group leaders, and timekeepers.

In early fall the CDE Coordinator should set-up a meeting with the WSDA/Potato Commission to align grading standards. Email any new grading guidelines to the FFA State Advisor no later than October 15th. The State Advisor will share via the WAAE listserv/WAFFA website.

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.

Equipment

Participants must provide:

- Two No. 2 pencils
- Clean, notes free clipboard

Team Activities

There is no team activity component to this event.

Individual Activities

SEED POTATO 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.

POTATO GRADING

Written

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

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. A time limit of two minutes will be allowed for giving oral reasons. Students will be cut off at exactly two minutes.

BLEMISH IDENTIFICATION

There will be 10 specimens with obvious blemishes students will be asked to identify. The blemishes listed will be representative of the blemishes listed on the sheet included in this handbook. The same blemish may be used on multiple samples.

Activities	Individual Points	Team Points
Grading - Written	400	1600
Grading - Oral	100	400
Blemish Identification	100	400
Seed Potatoes	100-200	400-800
<i>Total Points</i>	<i>700-800</i>	<i>2800-3000</i>

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

INDIVIDUAL

1. Oral Reasons
2. Blemish ID

TEAM

1. Oral Reasons (Total of top four count scores)
2. Blemish ID (Total of top four count scores)

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*)
- <https://www.ams.usda.gov/grades-standards/potatoes-grades-and-standards>
- https://www.ams.usda.gov/sites/default/files/media/Potato_Standard%5B1%5D.pdf

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 paring 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.

SUGGESTIONS FOR DEVELOPING SKILL IN GIVING ORAL REASONS

In giving oral reasons for grading a potato as “Grade No. 1,” reasons should include the size (diameter or weight), shape, appearance, waste due to defects or blemishes, and if it is true to variety. In stating reasons for grading as “Grade No. 2,” but the student should include the size (diameter or weight) and waste due to defects or blemishes. In giving reasons for grading as “Grade Cull” it is not necessary to mention shape or appearance, the size should not be included except when the specimen is under 1 ½ inches. Students should state the reason for culling.

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.

Shape Categories Terms

Very Well Shaped
Fairly Well Shaped
Not Well Shaped
Grossly Misshapened

Size Categories Terms

>2” in Diameter
1.5”-2” in Diameter
<1.5” in Diameter

POINTS ON A POTATO JUDGING CARD

- Freedom from disease
- Uniformity
- Trueness of variety type
- 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

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

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.

AFNR Content Standards

This is sample text here.