



### **Fortress Russet**

**Pedigree:** AWN86514-2 x A89384-10

**Developers:** Colorado State University and USDA-ARS

**Plant Variety Protection:** PVP No. 201500349

**Seed Availability:** San Luis Valley Research Center

### **Incentives for Production**

- ★ High yield potential
- ★ Resistant to PVY
- ★ Excellent processing potential
- ★ Low acrylamide content

### **General Characteristics**

**Usage:** Dual purpose with fresh and processing potential

**Plant:** Large vine size, semi-erect plants with white flowers

**Maturity:** Medium

**Tubers:** Oblong tubers with medium russet skin and white flesh. Tubers are resistant to second growth, hollow heart and shatter bruise.

**Yield Potential:** High (avg. 500 cwt/acre) and a high percentage of US No. 1 tubers (83%)

**Specific Gravity:** High (avg. 1.099)

Detailed data summary for Fortress Russet.

Variable	# Trials	Mean	Range	
Total Yield (Cwt/A)	7	500	435-545	
Yield US #1 (Cwt/A)	7	415	377-457	
% US #1	7	83	77-91	
Yield >10 oz (Cwt/A)	7	105	74-148	
Yield <4 oz (Cwt/A)	7	75	32-118	
% External Defects <sup>1</sup>	7	1.7	0.3-3.5	
% Hollow Heart <sup>2</sup>	7	0.0	0.0-0.2	
% Stand	7	97	94-100	
Emergence Uniformity	7	3.4	2.8-4.3	
Vine Vigor <sup>3</sup>	7	3.7	2.5-4.8	
Stems/Plant	7	3.7	2.1-6.3	
Vine Size <sup>4</sup>	7	4.4	3.0-5.0	
Vine Type <sup>5</sup>	7	3.1	3.0-3.5	
Vine Maturity <sup>6</sup>	7	3.1	3.0-3.5	
Blackspot <sup>7</sup>	Bud End	8	4.6	3.8-5.0
	Stem End	8	4.4	3.7-5.0
	Average	8	4.5	
Weight Loss <sup>8</sup>	8	2.3	1.4-2.8	
Dormancy <sup>9</sup>	8	94	82-132	
Enzymatic Browning <sup>10</sup>	8	2.8	1.4-4.6	
Specific Gravity	8	1.099	1.090-1.104	
Fry Color <sup>11</sup>	Harvest	8	0.8	0.0-2.0
	Storage	8	1.1	0.0-2.0
Fry Texture <sup>12</sup>	Harvest	8	3.9	3.0-5.0
	Storage	8	4.0	3.0-5.0

Refer to footnotes on next page.

**Footnotes for Table on previous page:**

- <sup>1</sup> Percent external defects based on the proportion of the total sample weight with significant defects.
- <sup>2</sup> Percent hollow heart calculated as follows: (Weight of tubers >10 ounces with defects/total sample weight) x 100.
- <sup>3</sup> Vine vigor is rated on a 1 to 5 scale, with 5 indicating very vigorous vines.
- <sup>4</sup> Vine size is rated on a 1 to 5 scale, with 5 indicating very large vines.
- <sup>5</sup> Vine type is rated on a 1 to 5 scale, with 5 indicating very upright vines.
- <sup>6</sup> Vine maturity is rated on the following basis: 1=very early; 2=early; 3=medium; 4=late; and 5=very late.
- <sup>7</sup> Blackspot was rated on a 1 to 5 scale, with 5 indicating no discoloration.
- <sup>8</sup> Tubers were stored at 45F for approximately 3 months.
- <sup>9</sup> Days from harvest to first visible growth. Tubers were stored at 45F.
- <sup>10</sup> Degree of darkening rated at 60 minutes after slicing tubers lengthwise. Rated on a 1 to 5 scale, with 5 indicating no discoloration.
- <sup>11</sup> Chip color was rated using the Snack Food Association 1-5 scale. Ratings of  $\leq 2.0$  are acceptable. Reconditioned samples were stored at 60F for three weeks. Fry color was rated on a 0 to 4 scale, with 0 being the lightest or best color. Color ratings of  $\leq 2.0$  are acceptable.
- <sup>12</sup> Fry texture was rated on a 1 to 5 scale, with 5 indicating the cooked flesh was dry and mealy and 1 representing a soggy, wet texture.