



### **Columbine Gold**

**Pedigree:** A99331-2R/Y x COA99261-1RY

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

**Plant Variety Protection:**

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

### **Incentives for Production**

- ★ Medium yield potential
- ★ Very early maturity
- ★ Resistant to internal and external grade defects

### **General Characteristics**

**Usage:** Fresh market specialty

**Plant:** Small-medium vine size, semi-erect plants with dark purple flowers

**Maturity:** Very early

**Tubers:** Oval tubers with dark purple skin and yellow flesh. Tubers are resistant to blackspot bruise, growth crack, second growth and hollow heart.

**Yield Potential:** Medium (avg. 34; cwt/acre) and 66 % of US No. 1 tubers

**Specific Gravity:** Medium (1.072)

Detailed data summary for Columbine Gold.

Variable	# Trials	Mean	Range	
Total Yield (Cwt/A)	5	329	267-389	
Yield US #1 (Cwt/A)	5	214	135-299	
% US #1	5	64	48-81	
Yield >10 oz (Cwt/A)	5	15	4-43	
Yield <4 oz (Cwt/A)	5	115	69-171	
% External Defects <sup>1</sup>	5	0.1	0.0-0.5	
% Hollow Heart <sup>2</sup>	5	0.0	0.0-0.0	
% Stand	5	96	93-98	
Emergence Uniformity	5	3.3	3.0-3.8	
Vine Vigor <sup>3</sup>	5	2.8	2.5-3.0	
Stems/Plant	5	3.6	2.8-4.4	
Vine Size <sup>4</sup>	5	2.1	1.5-2.5	
Vine Type <sup>5</sup>	5	2.8	2.5-3.0	
Vine Maturity <sup>6</sup>	5	1.0	1.0-1.0	
Blackspot <sup>7</sup>	Bud End	6	4.9	4.6-5.0
	Stem End	6	4.6	4.1-5.0
	Average	6	4.8	
Weight Loss <sup>8</sup>	6	3.8	2.6-5.3	
Dormancy <sup>9</sup>	6	81	71-95	
Enzymatic Browning <sup>10</sup>	6	3.3	2.6-4.0	
Specific Gravity	6	1.072	1.068-1.074	
Fry Color <sup>11</sup>	Harvest	6	1.0	0.0-2.0
	Storage	6	0.8	0.0-1.0
Fry Texture <sup>12</sup>	Harvest	6	2.3	1.0-5.0
	Storage	6	2.3	1.0-5.0

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.