



AC05153-1W

Pedigree: A91814-5 x Chipeta

Developers: Colorado State University and
USDA-ARS

Plant Variety Protection:

Seed Availability: San Luis Valley Research Center

Incentives for Production

- ★ Processing potential
- ★ High solids
- ★ Early maturing

General Characteristics

Usage: Chipping

Plant: Medium-small vine size, semi-erect plants with white flowers

Maturity: Early

Tubers: Round tubers with white skin and white flesh. Tubers are resistant to blackspot bruise, growth crack and second growth.

Yield Potential: Medium (avg. 364 cwt/acre) and 67 % of US No. 1 tubers

Specific Gravity: High (1.091)

Detailed data summary for AC05153-1W.

Variable	# Trials	Mean	Range	
Total Yield (Cwt/A)	5	342	301-376	
Yield US #1 (Cwt/A)	5	228	161-277	
% US #1	5	65	51-74	
Yield >10 oz (Cwt/A)	5	15	10-22	
Yield <4 oz (Cwt/A)	5	110	75-137	
% External Defects ¹	5	1.4	0.1-3.5	
% Hollow Heart ²	5	0.1	0.0-0.3	
% Stand	5	97	96-99	
Emergence Uniformity	5	3.6	3.3-3.8	
Vine Vigor ³	5	3.5	3.0-4.0	
Stems/Plant	5	4.9	4.1-5.7	
Vine Size ⁴	5	2.5	2.0-3.0	
Vine Type ⁵	5	2.8	2.3-3.0	
Vine Maturity ⁶	5	1.7	1.0-2.8	
Blackspot ⁷	Bud End	11	4.6	3.9-4.9
	Stem End	11	3.9	2.1-4.7
	Average	11	4.3	
Weight Loss ⁸	11	4.6	3.5-6.7	
Dormancy ⁹	11	88	77-113	
Enzymatic Browning ¹⁰	11	3.2	2.0-4.4	
Specific Gravity	12	1.091	1.085-1.099	
Chip Color ¹¹	40	12	4.0	32.5-4.5
	40R	12	3.0	1.0-4.0
	50	12	2.3	1.5-4.0
	50R	12	2.2	1.0-3.5

Refer to footnotes on next page.

Footnotes for Table on previous page:

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