

# Gem Russet A8495-1

S. Love, P. Bain, D. Corsini, J. Pavsek, R. Novy, and A. Mosley

Gem Russet is a medium to late maturing, medium to high yielding (Table 1) clone with long tuber type and medium russet skin. It was selected from a cross between A77182-1 and Russet Norkotah (Fig. 1) by ARS workers at Aberdeen, Idaho. Gem Russet was released by the ARS in cooperation with the Idaho Oregon and Washington Agricultural Experiment Stations in 2000.

Gem Russet will be useful for both the fresh and processing markets. It has high specific gravity, excellent fry color from 45° storage, and will often fry

acceptably following 40°F storage. Strengths include excellent tuber shape and appearance, high gradeout, long dormancy, high solids, and good fry color. Weaknesses include fairly late emergence and mediocre yields in some environments and susceptibility to PVY (Table 2).

Although highly susceptible to PVY, Gem Russet shows only mild symptoms which can be masked in many field situations. Because of mild symptom expression, it is sometimes considered a symptomless carrier of Pvy.



**Table 1. Average Yield and Quality Characteristics of Gem Russet and R. Burbank**

Location	Total Yield cwt/A	U.S.		Culls & US # 2	Specific Gravity	Hollow Heart %	Blackspot <sup>4</sup> Bruise	Fry <sup>5</sup> 40° F	Fry <sup>5</sup> 45° F
		No 1's	>12oz -----%						
<b>Idaho<sup>1</sup></b>									
Gem Russet	401	78	15	4	1.088	3	3.1	2.6	1.1
Russet Burbank	389	63	10	20	1.080	6	2.9	3.6	1.8
<b>Oregon<sup>2</sup></b>									
Gem Russet	499	86	20	2	1.085	2	--	--	0.3
Russet Burbank	659	66	13	18	1.082	6	--	--	0.8
<b>Washington<sup>3</sup></b>									
Gem Russet	474	84	17	7	1.079	5	--	--	--
Russet Burbank	636	56	18	37	1.077	12	--	--	--

<sup>1</sup> 32 Trials grown in Idaho, 1986-1999, at Aberdeen, Kimberly, Parma, Raft River, Rexburg, and Shelley.

<sup>2</sup> 8 Trials grown in Oregon, 1998-1995, at Hermiston, Klamath Falls, and Ontario.

<sup>3</sup> 4 Trials grown in Washington, 1989-1995, at Othello.

<sup>4</sup> Blackspot evaluation using abrasive peel method, rated 1-5 where 1 = resistant, 5 = susceptible.

<sup>5</sup> Fry scores rated using the USDA 0-4 scale where 0 = light, 4 = dark.

Tubers stored 2-4 months at 40 or 45° F.

**Table 2. Cultural and Disease Responses of Gem Russet**

CULTURAL		DISEASE	
<b>Utilization</b>	fresh/fry	<b>Early Dying</b>	susceptible
<b>Use Maturity</b>	med-late	<b>Scab</b>	moderately resistant
<b>Herbicide Sensitivity</b>	resistant	<b>PVY</b>	very susceptible
<b>Fertilizer</b>	med-high	<b>Net Necrosis</b>	resistant
<b>Storage</b>	long	<b>Late Blight, Foliar</b>	susceptible
		<b>Late Blight, Tuber</b>	moderately susceptible

Fig. 1. Gem Russet Pedigree

