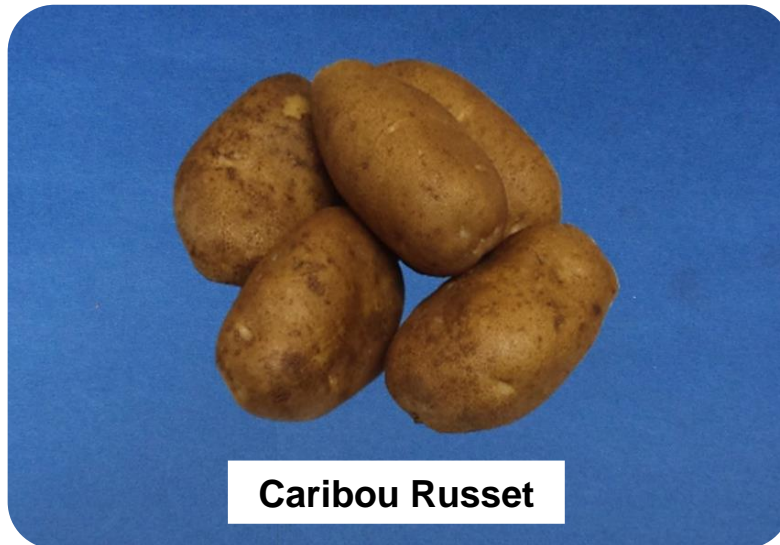


CARIBOU RUSSET (AF3362-1)

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Parentage: Reeves Kingpin X Silverton Russet
Breeder: Dr. Greg Porter, University of Maine

- Dual purpose, processing and fresh
- Long tubers with lightly russeted skin and white flesh
- Very uniform shape and type
- Eyes are shallow and well distributed
- Large plant size with excellent early vigour development and medium-late season maturity (105 - 110 days)
- Smaller tuber set than Russet Burbank but a larger tuber size profile



Disease

- Moderately resistant to scab, though not as tolerant as Russet Burbank, can have some problems with russet scab and elephant hide
- Moderately resistant to verticillium wilt and powdery scab
- Resistant to golden nematode Ro1
- Susceptible to PVY (a symptomless carrier)
- Susceptible to late blight similar to most commercial varieties
- Greater susceptibility to early blight than typically seen in Russet Burbank
- Requires greater attention and application of products that provide additional early blight control
(G. Porter)



Remember: Maintain A Strong IPM Based Foliar Disease Management Program

(G. Porter)

Observations:

➤ Field

- Requires slightly less nitrogen than Russet Burbank (over 6 trials, G. Porter)
- Does not handle excessive and late applications of nitrogen
- Tolerant to metribuzin
- High tolerance to heat and drought stress
- Handles light frosts better than most late season varieties due to its vigorous vines
- Sizes very quickly in the later part of the bulking stage, tuber size profile should be carefully monitored for all market sectors
- Tall and large canopy dictates that vines should be killed 18 to 21 days prior to harvest --allows tubers to mature and avoids skinning

➤ Harvest and Grading

- Moderate to high tolerance to bruising and mechanical handling, slightly better than Russet Burbank
- Low incidence of secondary growth, growth crack, and hollow heart
- Similar specific gravity as Russet Burbank

****Note:** Specific gravity of most potatoes decreases linearly with increased nitrogen rates whereas Caribou Russet shows a slightly flatter response to nitrogen (G. Porter)

➤ Storage

- Use labeled sprout inhibitors as allowed by destined markets
- Much shorter dormancy and more shrinkage at 50°F (10°C) than Russet Burbank (G. Porter)
- Short to mid-term storability (January/February), not a long-term storage alternative for Russet Burbank
- Relatively cool storage temperatures are recommended for “*fresh market*” end use (minimizes sprouting and shrinkage, 38 - 42°F [3.3 - 5.6°C])
- Storage temperatures of 48 - 50°F (8.9 – 10.0°C) are recommended for “*processing*” end use

➤ Consumer Quality

- Baked and mashed scores have been good but boil scores have been inconsistent due to sloughing
- Susceptible to stem-end fry defects though similar to Russet Burbank (*G. Porter*)
- Lighter fry colour from 50°F (10°C) storage than Russet Burbank (*G. Porter*) and slightly darker from 45°F (7.2°C) (*NBDAAF data*)

4-Year Average Production Data from Dryland Variety Trials (2010, 2011, 2015, 2016)

- ❖ Trialled at 180 lbs N/ac and a 10" spacing
- Average total yield 371.4 cwt/acre, 7.5% greater than Russet Burbank
- Average marketable yield 238 cwt/acre, 45% greater than Russet Burbank
- Larger tuber size profile, 48.3% > 2 ¾ inches vs 16.4% for Russet Burbank
- Good tolerance to sunburn, growth crack, and scab
- Good resistance to hollow heart, 2.5% vs 15% for Russet Burbank
- Smoother tuber type, 8.3% rough vs 17% for Russet Burbank
- Smaller tuber set than Russet Burbank (7.0 vs. 9.5)
- Similar specific gravity as the standard (1.0855)

NB Seasonal Average French Fry Colour (2015 & 2016) (Agtron readings)

Table 1: ***Caribou Russet vs Russet Burbank @ 45°F***

Year	Variety	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	AVG
2015	Caribou Russet	87	84	71	75	67	52	48	47	57	65	62.8
2016	Caribou Russet	95	83	85	73	64	68	60	62	66	57	68.8
AVG		91	84	78	74	66	60	54	55	62	61	65.8
2015	Russet Burbank	83	70	72	63	58	56	72	69	70	64	66.0
2016	Russet Burbank	93	79	79	61	75	76	73	75	77	68	73.7
AVG		88	75	76	62	67	66	73	72	74	66	69.8

General Recommendations for Spacing and Fertility

Seed:

- Large seed piece size (2 - 2 ½ oz average if possible), increases stem density
- Narrow in-row spacing (8")
- 150 lbs of N/ac
- Aside from nitrogen, no current information suggests that Caribou Russet requires different nutrient management techniques than other cultivars do based on a soil analysis

Tablestock and Processing:

- Large seed piece size (2 – 2½ oz avg)
- Narrower in-row spacing than Russet Burbank to increase stem density, Maine trial work suggests 10 – 12”
- 180 lbs of N/ac
- May want to lower nitrogen rate for early harvest to help assure high gravity (*G. Porter*)

PVY Control in Caribou Russet

- **Requires aggressive PVY management strategies**
 - Plant seed with the lowest virus level possible, confirmed by post-harvest virus lab testing only
 - Minimize the field year generation planted, an ideal method to minimize PVY inoculum; these lots are less likely to be infected with PVY
 - Effectively rogue seed fields; remove infected plants early, it’s essential for limiting the spread of PVY
 - Regularly apply mineral oil in combination with aphicides
 - Start applications at 30% emergence, it effectively minimizes current season spread
 - Apply 5 – 6 effective aphicides per year
 - Apply weekly (5 – 7 days) applications of mineral oil (2 L/ac) right up to top-kill, essential for impairing the ability of non-colonizing aphids to transmit PVY
 - Early vine desiccation is recommended, reduces the risk of late season contamination and migration of the virus from the foliage to the tubers

****Note:** Applying fewer (5 – 6 times) but more effective insecticides early in the season along with weekly (every 5-7 days) oil sprays (2L/ac) throughout the growing season may be as effective as oil sprays plus a range of lesser effective insecticides later in the season but at a much lower economic and environmental cost (*Dr. Mathuresh Singh*)

Based on information provided by the breeder, trial data collection by NBDAAF and from commercial fields. Observations and results may vary slightly depending on location and crop season growing conditions