RANGER RUSSET: A LONG RUSSET POTATO VARIETY FOR PROCESSING AND FRESH MARKET WITH IMPROVED QUALITY, DISEASE RESISTANCE, AND YIELD


Abstract

Ranger Russet, a new full-season potato variety, was jointly released to growers by the U.S. Department of Agriculture and the Agricultural Experiment Stations of Idaho, Oregon, Washington, and Colorado on May 14, 1991. Ranger Russet was tested in irrigated performance trials in the Western U.S. since 1979. It produces a large yield of high quality, long, russet-skinned tubers that are well suited for baking and processing into french fries. Ranger Russet is more resistant than Russet Burbank to Verticillium wilt, viruses X and Y, leafroll net necrosis, and Fusarium dry rot. It is highly resistant to hollow heart.

Compendio

Ranger Russet, una nueva variedad de papa para la temporada principal, fue entregada conjuntamente a los productores por el Departamento de Agricultura de los Estados Unidos y las Estaciones Experimentales Agrícolas de Idaho, Oregón, Washington y Colorado el 14 de mayo de 1991. Ranger Russet fue probada en ensayos de comportamiento bajo irrigación en el oeste de los Estados Unidos desde 1979. Rinde abundantes tubérculos alargados y rojizos de gran calidad que son apropiados para el horneado.

¹Cooperative investigations of the Agricultural Research Service (ARS), U.S. Dept. of Agriculture (USDA) and the Agricultural Experiment Stations of Idaho, Oregon, Washington, and Colorado. Idaho Agricultural Experiment Research Paper No. 91770.
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Accepted for publication February 4, 1992.

ADDITIONAL KEY WORDS: French fries, reducing sugars, vitamin C, hollow heart, Verticillium wilt, PVX, PVY, uniform trials.
y su procesamiento como papas fritas a la francesa. Ranger Russet es más resistente que Russet Burbank a la marchitez por *Verticillium*, a los virus X y Y, a la necrosis en red del virus del enrollamiento de la hoja y a la pudrición seca por *Fusarium*. Es muy resistente al corazón vacío.

**Introduction**

Russet Burbank is grown on over 75% of the potato acreage in the Western U.S. (2). But growers and processors continue to experience serious losses due to its susceptibility to diseases, such as *Verticillium* wilt, leafroll, and net necrosis, and to heat and moisture stresses, which often result in tuber malformation and internal defects such as hollow heart, heat necrosis, and sugar ends. Although resistance to various pathogens and to environmental stresses has been available in parental stocks for some time, it was necessary to combine these characteristics in a clone with long, russet-skinned tubers and the high internal quality needed for processing and fresh use. Ranger Russet is a result of these efforts.

Ranger Russet was first selected at Aberdeen, Idaho in 1977 as A7411-2. It has been tested annually in replicated performance trials since 1979 and in commercial processing trials since 1987. Its tubers are similar to those of Russet Burbank which is in the pedigree of two of its great-grandparents (A183-8 and A119-1). The pedigree for Ranger Russet is:

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          A183-8(RUS)
          /     \
A139-1    A492-2(RUS)
          |       |
          |       |        |
          |       A119-1(RUS)      ND2475-8
          |       /              /
          |       Norgold Russet
          |       /              /
          |       Butte
          /
Ranger Russet (A7411-2)
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          |
          A6595-3 [A496-4 X]
          |
          |
          |
          A279-7
          |
          |
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          B3200-2
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**Description**

*Plants* — Large, upright to spreading, medium late. *Stems*: Medium thick, green but with light brownish, red-purple pigment in full sun; wings slightly to moderately prominent, up to 2 mm, straight to moderately wavy; nodes not prominent. *Leaves*: Large, broad, medium green, leaflets moder-