BELRUS: A NEW RUSSET SKIN POTATO VARIETY, COMBINING HIGH QUALITY, PEST RESISTANCE, AND ADAPTATION TO THE NORTHEASTERN UNITED STATES AND FLORIDA

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Abstract

BelRus, a new russet potato variety, is medium late in maturity and adapted primarily for the Northeastern United States and northern Florida. Tubers are long, smooth and moderately flat with a heavy russet skin. Eyes are shallow and immediately adjacent skin is, for the most part, nonrussetted in the Northeastern U.S. Industry speaks of the BelRus there as the "white eyed russet." BelRus is slightly higher in specific gravity than 'Russet Burbank', has a superior flavor when baked, and yields excellent french fries and flakes. Glycogalactoloid content of BelRus is quite low, being about 2 mg/100 g fresh tissue. BelRus is immune to virus A and tuber net necrosis; highly resistant to tuber heat necrosis, northern root knot nematode (*Meloidogyne hapla*), and the pinkeye bacterial disease; moderately resistant to scab, Verticillium wilt, leaf roll and potato virus Y. It is not resistant to either late blight or early blight, or viruses M, S, and X. Necrotic spotting of the foliage occurs following periods of high temperature and extended drought. BelRus has demonstrated high tolerance to bruising and storage rots incurred during harvest and handling. Shrinkage in bulk storage has been minimal. BelRus is recommended to be planted at about 25 cm (10 inches) in-the-row on 90 cm (36) rows with about 215 kg (180-200 lbs/acre), N₂/ha in-the-row.

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Resumen

BelRus, una nueva variedad de papa de piel “russet”, es de maduración intermedia y adaptada al nororiente de los Estados Unidos y el norte de Florida. Los tubérculos son largos, lisos y moderadamente aplanados con una piel del tipo “russet”; de ojos superficiales con la piel adyacente inmediata al ojo, del tipo no “russet”, mayormente de ocurrencia en el noreste de los Estados Unidos. La industria la llama “russet” ojo blanco. BelRus tiene ligeramente más peso específico que “Russet Burbank”, tiene un sabor superior cuando es horneada y rinde papas fritas y hojuelas de excelente calidad. Su contenido de Glycoalcaloides es bajo (2 mg/100 g. tejido fresco). Es inmune a virus A y necrosis en net del tubérculo; altamente resistente a necrosis de tubérculo por calor, nematodo del nudo del norte (Meloidogyne hapla) y enfermedad bacteriana del ojo rosado; moderadamente resistente a la sarna (Streptomyces scabies), marchitez por Verticillium, enrollamiento de las hojas y virus Y. Es susceptible al tizón tardío y temprano, virus M, S y X. Punteado necrótico sobre el follaje ocurre luego de periodos de alta temperatura y largas sequías. Esta variedad ha demostrado alta tolerancia al daño y pudrición incurrido durante la cosecha y manipuleo de los tubérculos. Arrugamiento del tubérculo durante almacenamiento a granel es mínimo. Se recomienda sembrar esta variedad a 25 cm. (10 pulgadas) entre plantas y 90 cm. (36 pulgadas entre surcos y aplicando al surco alrededor de 215 kg (180-200 lbs/acre) de N₂/ha.

Introduction

BelRus, a new russet potato variety adapted to the Northeastern United States and northern Florida, was released May 11, 1978, by Agricultural Research, Science and Education Administration of the United States Department of Agriculture and Agricultural Experiment Stations of Florida and Maine. It is the first long russet potato variety released which shows excellent adaptation to the Northeastern United States.

BelRus was evaluated under the pedigree B7147-8. It was selected from the cross W245-2 x Penobscot. W245-2 was developed by Dr. William Hoyman and was selected because of its oblong-shaped russet tuber and good fertility. Penobscot (2) was selected primarily because of its high solids content and resistance to the leaf roll virus.

In the development of BelRus, the breeding and seedling tuber production was done at the Beltsville Agricultural Research Center (BARC). Webb and Wilson made the initial B7148 family progeny selections and did the subsequent seed increases and preliminary horticultural evaluations on Chapman Farm, Presque Isle, Maine. They conducted the preliminary seed spacing, nutrition, and preliminary and advanced yield trials and quality evaluations on Aroostook Farm, Presque Isle, Maine. Frank did the fungal