YUKON GOLD: A NEW YELLOW-FLESHED, MEDIUM-EARLY, HIGH QUALITY TABLE AND FRENCH-FRY CULTIVAR

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Abstract

Yukon Gold is a medium-early, yellow-fleshed potato cultivar with very good boiling, baking, and French-frying quality. It is not suitable for chips. In Ontario its yield is similar to Russet Burbank's. Plants are susceptible to virus Y and slightly susceptible to virus leafroll but are resistant to mild mosaic. Tubers are moderately susceptible to common scab, Streptomyces scabies.

Resumen

Yukon Gold es una variedad temprana a intermedia, de carne amarilla con muy buenas cualidades para cocción, horneado y papas fritas. No es adecuada para "chips". Su rendimiento es similar a "Russet Burbank" en Ontario. Es susceptible a virus Y y ligeramente susceptible al virus del enrollamiento pero resistente a mosaico moderado. Los tubérculos son de susceptibilidad moderada a la sarna común, Streptomyces scabies.

Introduction

The potato cultivar Yukon Gold was bred and selected within the potato breeding project of the Horticultural Science Department, Ontario Agricultural College, University of Guelph. It has been under test since 1968 as seedling G6666-4Y, mainly in the Province of Ontario but in 1979 it was evaluated in the Prairie Regions Trials.

Yukon Gold was selected from the progeny of a cross made at Guelph in 1966 between W5279-4 and the cultivar Norgleam (1). W5279-4 is a yellow-fleshed diploid hybrid of Solanum phureja and haploid cv. Katahdin and was obtained from the Plant Introduction Station, University of Wisconsin, Sturgeon Bay, Wisconsin. Norgleam is an early, white-fleshed cultivar released by the University of North Dakota, Fargo, North Dakota.

W5279-4 has vigorous plants with upright vine growth and yellow-fleshed tubers of acceptable type. Norgleam is early-maturing, has a good

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yield of smooth, shallow-eyed tubers of excellent cooking quality and has a field resistance to virus Y.

It was felt that there was a need for a good yellow-fleshed potato in Canada for two reasons. First, the continuous requests from the large European immigrant population of central Canada that such a potato be made available because of the perceived superiority of yellow flesh in terms of flavor and texture and second, because the authors believe that there is a place for such a cultivar in Canada's export offering, much of which goes to countries which prefer yellow flesh.

The pedigree is as follows:

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\begin{align*}
\text{Norgleam} & \quad \{ \text{ND457-1} \} \quad \{ \text{Minn. 92.36-5} \} \\
\text{Yukon Gold} & \quad (G6666-4Y) \\
\text{W527-4} & \quad \{ \text{Sebago} \} \quad \{ \text{Minn. 17-2} \} \\
\text{W5279-4} & \quad \{ \text{S. phureja} \} \quad \{ \text{Houma} \} \\
\text{Katahdin (2x)} & \quad \\
\end{align*}
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Description

PLANTS — Growth habit: medium large, upright, little tendency to spread. Stems: purplish for ¾ of height, uppermost ¼ green with faint purplish pigment, not differentiated between nodes and internodes, sparsely pubescent; leaf petioles decurrent as prominent wings 2 mm high on stem, extending to well below next lower node. Nodes: not or very slightly swollen. Leaves: upper surface: moderately shiny, moderate olive green (7.5GY 4/4) (2), strigose-pubescent between veins, densely strigose with scattered, long (2-3 mm) and more numerous short (1 mm) forward-curved hairs on veins; lower surface: matte, moderate yellow green (5GY 5/6), densely fine-pubescent between veins, strigose-pubescent on lateral veins and scattered strigose-pubescent (1-2 mm) on mid veins. Terminal leaflets: distinct, except lowest, which may be partly fused to an adjacent primary leaflet, obovate, weakly acuminate, gradually tapered to base, uniform or oblique, index of width to length 57, shape more or less uniform throughout plant. Primary leaflets: 4 pairs, ovate, acute to weakly acuminate, largest near terminal leaflet, progressively smaller to main stem, on distinct petiolules except one or both of the terminal pair which may be oblique and partially fused to midrib. Secondary leaflets: varying from 2 on lowest leaves to 6 to 8 on upper leaves, mostly in pairs, broadly ovate with acute or weakly acuminate tip and truncate or cordate base. Tertiary leaflets: small, from none on lowest leaves to 20 on mid and upper leaves. Midribs: green with 2 parallel wings ca. 0.5 mm high on upper surface formed by decurrent