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Report of new cultivar

"Tula" a new Cuban potato cultivar (*Solanum tuberosum* L.) for French fries

"Tula", nuevo cultivar cubano de papa (*Solanum tuberosum*, L.) para el procesamiento industrial

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ABSTRACT: The potato cultivar "Tula" from crossing "Atlantic" x "12-9-95" was obtained in the 2004-2005 season at the National Institute of Agricultural Sciences, after 12 years of evaluation and characterization according to the Cuban potato breeding scheme. Clone 23-4-05 from population 19 was selected and named as cultivar "Tula". This has excellent agronomic and industrial quality characteristics: quick closing of canopy in field, light green foliage and vigorous stems. Moreover, this is semi-late and resistant to *Phytophthora infestans* under field conditions and moderately resistant to *Streptomyces scabies*. Their tubers are uniform with yellow skin, pale yellow pulp, with eyes of medium depth, high content of dry matter and a medium yield of 32.4 t ha^{-1}, with more than 90 % of commercial tubers.

Key words: breeding, processing, disease resistance, dry matter content.

RESUMEN: El cultivar de papa "Tula" proveniente del cruce "Atlantic" x "12-9-95", fue obtenido en la campaña 2004-2005 en el Instituto Nacional de Ciencias Agrícolas, luego de 12 años de evaluación y caracterización, según el esquema de mejoramiento de papa cubano. El clon 23-4-05 de la población 19 fue seleccionado y nombrado como cultivar "Tula". Tiene excelentes características de calidad agronómica e industrial. Cierre rápido de follaje en campo, follaje verde claro, tallos vigorosos. Además, es semi-tardío y resistente a *Phytophthora infestans* en condiciones de campo y moderadamente resistente a la sarna por *Streptomyces*. Sus tubérculos son uniformes con piel amarilla, pulpa amarillo pálido, con ojos de profundidad media, alto contenido de materia seca y un rendimiento medio de 32,4 t ha^{-1}, con más del 90 % de tubérculos comerciales.

Palabras clave: mejoramiento, procesamiento, resistencia a enfermedades, contenido de materia seca.

INTRODUCTION

The potato (*Solanum tuberosum* L.) is the fourth most important crop in the world and it is very useful as food for its different uses both for fresh consumption and for industrial processing. Potato processing is growing rapidly in developed and underdeveloped countries and potato chips are gaining popularity.

Cuba is quite limited in the potato processing industry, since the fried potato (chips and baton) in Cuban markets is supplied mostly from imported products and only very few from national industries. The significative amount of imports could be due to the lack of availability of suitable genotypes and low quality chips produced by national industries.

One of the objectives of the Cuban Breeding Program is to select cultivars for the potato chip industry.

ORIGIN AND DESCRIPTION

"Tula" is a product of the Potato Variety Breeding and Development Program of the National Institute of Agricultural Sciences. Result of a hybridization between Atlantic x 12-5-95 parents carried out in the 2004-2005 season (Figure 1).

Cultivar characteristic data of the cultivar, collected during 2014-2016. Growth habit: erect; stems: green; average height: 0.50-0.60 m; leaves: medium green; flower color: violet; vegetative period: mid-early (90 days);

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Resistant to foliar *Phytophthora infestans* infection (grade 3), *Streptomyces scabies*: medium resistant (grade 2); tuber shape (Figure 2): round; skin color: yellow; flesh color: pale yellow; eyes: intermediate depth; dry matter: high (19-20 %) and potential yield: 35 t ha^{-1}.

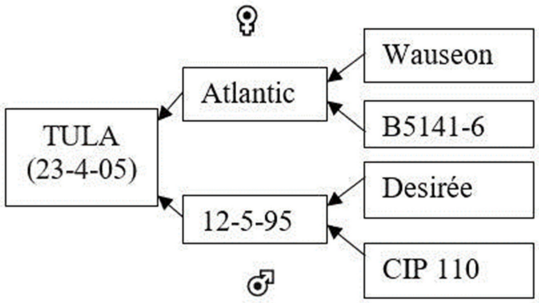

Figure 1. Pedigree of “Tula”.

Figure 2. New cv. “Tula”: tuber shape and colors.