

## Report of new cultivar 'INIVIT B-27- 2017 ', NEW SWEET POTATO (*Ipomoea batatas* (L.) Lam.) CULTIVAR BIOFORTIFIED RICH IN VITAMIN A

### Reporte de nuevo cultivar 'INIVIT B-27-2017', nuevo cultivar de boniato (*Ipomoea batatas* (L.) Lam.) biofortificado rico en vitamina A

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**ABSTRACT.** Vitamin A deficiency (VAD) is one of the most harmful forms of malnutrition in the world. The sweet orange mass ( $\beta$ -carotene) is a profitable source of vitamin A. For this reason, in recent years the program of genetic improvement of this crop in Cuba has had among its objectives, the obtaining of cultivars with this character. One of them is the 'INIVIT B-27 2017', which has an intense orange color in its mass.

*Key words:* color, mass, breeding

#### INTRODUCTION

The tuberous roots of orange-mass sweet potato contain significant amounts of  $\beta$ -carotene; approximately 90 % of the carotenoids in this culture are of this type. Currently there is a growing global demand for this type of sweet potato, due to the effectiveness to counteract the VAD.

In 1985, the first cultivar of sweet potato with an orange mass was obtained in Cuba. CEMSA 80-77, which did not have acceptance among the population due to the lack of consumption habits of this type of cultivar. Subsequently, Jewel and Resisto cultivars, both of orange mass, were introduced in Cuba, which became part of the Genetic Improvement Program of this species conducted in the Tropical Viandas Research Institute (INIVIT), which included among its objectives the obtaining orange-colored pulp sweet potato cultivars.

**RESUMEN.** La deficiencia de vitamina A (DVA) es una de las formas más dañinas de malnutrición en el mundo. El boniato masa anaranjada ( $\beta$ -caroteno) es una fuente rentable de vitamina A. Por esta razón, en los últimos años el programa de mejoramiento genético de este cultivo en Cuba, ha tenido entre sus objetivos, la obtención de cultivares con este carácter. Uno de ellos es el 'INIVIT B-27 2017', el cual posee un intenso color anaranjado en su masa.

*Palabras clave:* color, masa, mejoramiento

#### PARENTAL AND PEDRIGREE

Between 2010 and 2016, through reciprocal crossings between both cultivars (Jewel and Resisto), as well as subsequent backcrosses, more than a thousand progenies were obtained, from which, with a simultaneous selection of independent characters, it was possible to obtain a group of genotypes with a high content of beta-carotene, with high yield of tuberous roots and phenotypic stability, among which the sweet potato cultivar INIVIT B-27-2017 stood out.

#### DESCRIPTION OF CULTIVATION

Circularity of the leave: 0.62  
Luminosity of the pulp ( $L^*$ ) = 72.1  
Average area per leaflet: 112 cm<sup>2</sup>  
Skin color of the tuberous roots: red  
Color of the pulp of the tuberous roots: orange  
Number of commercial tuberous roots per plant: 3  
Harvest cycle: 120 days  
Dry matter in tuberous roots: 25.8%  
Potential yield (4 months): 47 t ha<sup>-1</sup>  
Affection by Tetuán (*Cylas formicarius* F.): Moderately tolerant

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