

## Report of new cultivar INIVIT BM-90, NEW SWEET POTATO (*Ipomoea batatas* (L.) LAM.) CULTIVAR WITH HIGH ANTHOCYANIN CONTENT

### Informe de nuevo cultivar INIVIT BM-90, nuevo cultivar de boniato (*Ipomoea batatas* (L.) Lam.) con alto contenido de antocianina

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**ABSTRACT.** In recent years The Research Institute of Tropical Root and Tuber Crops (INIVIT according its acronyms in Spanish) has obtained a series of cultivars of purple mass with high content of anthocyanin pigments. By way of polycross were obtained the lines that over a period of six years of evaluation and selection, gave rise to the first cuban sweet potato cultivar completely purple mass and desirable agronomic characteristics called INIVIT BM-90. It is very important to have commercial cultivar with antioxidant power because its beneficial to the human health.

*Key words:* crossing, progeny, pigments

#### INTRODUCTION

Traditionally, INIVIT's Genetic Improvement Program (PMG) of sweet potato has been focused on increasing the yield of tuberous roots, precocity, stability, culinary quality, vegetative vigor, dry mass,  $\beta$ -carotene, pest resistance, drought tolerance, in other aspects. Different cultivars are sown in Cuba throughout the year, predominating those of white or yellow mass, in correspondence with the preferences of local consumption of this food. In the germplasm, there is no purple mass genotype, only some with a low proportion (no more than 15 %) in the total color of their pulp or mass. These pigments have multiple physiological functions in the human body, such as the property of eliminating free radicals (antioxidant), antihypertensive and antiglycemic action, among others. In countries such as Japan, China and South Korea, they currently cultivate cultivars with these characteristics in agriculture, whose economic value is three to four times more than those of white or yellow. It is necessary to carry out campaigns to educate the population on the importance of the consumption of this new cultivar because of the advantages it has for human health.

#### ORIGEN

The work was started by selecting a group of cultivars with different degrees of purple coloration in their mass, which were used as progenitors and through the polycrossing route, progenies were obtained, from which the plants with the highest intensity of purple color, as well as other agronomic

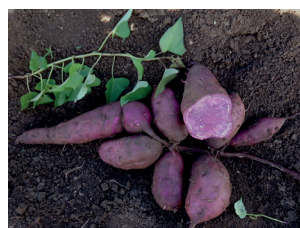
**RESUMEN.** En los últimos años, el Instituto de Investigaciones de Viandas Tropicales (INIVIT) ha obtenido una serie de cultivares de masa morada, con alto contenido de pigmentos antocianínicos. Mediante la vía del policruzamiento se obtuvieron las progenies que en un periodo de seis años de evaluación y selección, dieron origen al primer cultivar cubano de boniato de masa totalmente morada y características agronómicas deseables denominado INIVIT BM-90. Es de gran importancia disponer de un cultivar comercial con alto contenido de antocianinas por su alto poder antioxidante y su beneficio a la salud humana.

*Palabras clave:* cruzamiento, pigmentos, progenie

attributes, yield, vegetative vigor and culinary quality. The selected progenies were used as progenitors, also by means of the polycrossing, repeating that cycle during six years, finally obtaining cultivars with totally purple mass. The selected materials (eight in total) were evaluated for two years in genotype-environment interaction studies at six locations. A clone excelled in these studies due to the intense purple color of its mass, as well as its stability in important agronomic aspects, which was denominated INIVIT BM-90.

#### DESCRIPTION OF THE CULTIVAR

Length of stems: 150-250 cm  
Diameter of stems: 4,5 mm  
Predominant stems pigmentation: green  
Predominant color of tuberous root skin: purple  
Predominant color of tuberous root mass: purple  
Form of the tuberous root: ovoid  
°Brix: high (> 13)  
Dry mass: 27,2 %  
Index of affectation by Tetuan (*Cylas formicarius* F.): low (<3,2 %)  
Harvest cycle: 120 days, Potential yield: 51 t ha<sup>-1</sup>  
Cultivation of sweet potato



**Cultivar de boniato  
INIVIT BM-90**

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