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Report of new cultivar

INIAP 307: Soybean variety (*Glycine max* L. Merril) in Ecuador

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ABSTRACT

Developed by the National Institute for Agricultural Research (INIAP) through the National Short Cycle Oilseed Program, the variety obtained by PRONAOL during the period 1993-2003, comes from crossing, with the pedigree and was experimentally named as PROMSA line. It is characterized by its good productivity (4.46 t ha_{-1}), resistant to lodging in the upper and lower basins of Rio Guayas (CRG).

Key words: crossing, line, productivity, fluvial basins

INTRODUCTION

Soy is of great economic importance in Ecuador and considered of good quality for the vegetable oils and concentrates industry, as well as in the preparation of balanced feed for animal feed, factors that influence the source of commercial and productive development. However, it is an agricultural product with low production, for which 80 % of the needs of the country's domestic market are imported. The INIAP through the National Oilseed Program has developed new national soybean lines and introduced to examine its characteristics in different areas of the country; leaving the INIAP 307 variety, with high yield, good quality seed, adequate plant height and load, characteristics that influence a favorable harvest.

Origin

This variety was developed by PRONAOL during the period 1993 - 2003, it comes from the crossing AGS-269 x UFV-10, with the pedigree it is 546F2-39-3-2M and experimentally it was named as line 10528. Whose selection of segregators it was by mass method, modified in soy. This demonstrated tolerance to defoliating insects, leaf cercosporiosis, virosis, and moderately resistant to root gall nematode. It is also tolerant to purple stain, mottling and seed cracking.

Morphological characteristics of the plant and legumes (Figure 1)

The hypocotyl and cotyledons are lilac and green respectively

Days to flowering, from 43 to 48 days

Lilac winged flower

Vegetative cycle from 105 to 120 days

Stem with a determined growth habit

Plant and load length with variations of 60 to 78 cm and 14 to 18 cm respectively

Three to eight branches per plant

The Color of the leaves (in the stages: flowering-grain filling) is dark green and its oval shape

Coppery brown pubescence

It presents 40 to 60 legumes per plant

55 to 65 % of legumes contain three seeds

The predominant profile of the pods is straight

Indehiscent pods containing one to three seeds

Seed from yellow to yellowish white and elliptical in shape

Hilium dark brown to light brown

Weight of 100 seeds 16 to 20 g

Oil and protein content of the seed approximately 22.74 and 36.50 % respectively

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Plants in the flowering stage Legume filling plant

Figure 1. Morphological characteristics of the new INIAP 307 soybean cultivar