NEW SWEETPOTATO VARIETIES OF THE PHILIPPINES

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ABSTRACT

New developed sweetpotato varieties NSIC Sp 26 and NSIC Sp 27 were recently released by the National Seed Industry Council (NSIC) of the Philippines. These two sweetpotato varieties were developed by PhilRootcrops, LSU, Visca, Baybay, Leyte and evaluated through its network of cooperating stations in various regions of the country.

Yields of these two sweetpotato varieties surpassed that of PSB Sp 17 and PSB Sp 22 sweetpotato varieties in tons per hectare basis. In terms of dry matter and acceptability taste, these varieties showed higher or comparable values to check varieties. These two varieties also exhibited resistance to scab and weevil.

INTRODUCTION

Sweetpotato (*Ipomoea batatas* L.) is one of the important crop in the Philippines. It is used for food, feed and industry. Since 1978, PhilRootcrops and its network of cooperating stations are continually developing new sweetpotato varieties with desirable characteristics.

OBJECTIVES

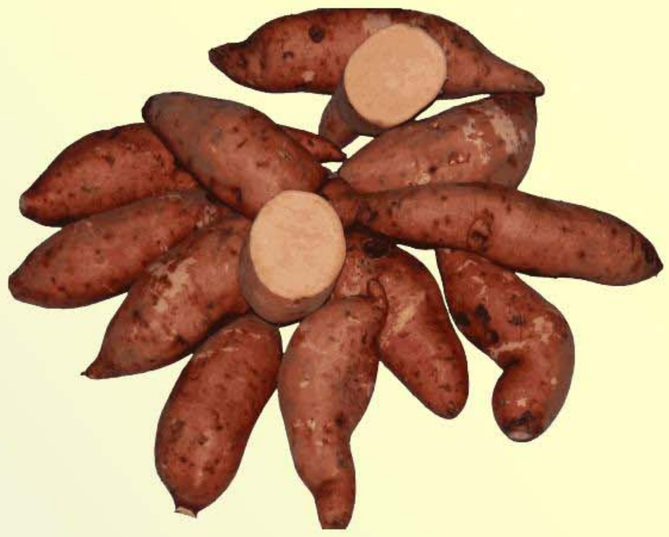
To evaluate the performance of promising sweetpotato genotypes in strategic sites of the country and to recommend to the National Seed Industry Council (NSIC) the release of new sweetpotato varieties.

METHODOLOGY

- New genotypes are developed and evaluated by PhilRootcrops Sweetpotato Breeding Program and breeding programs of cooperating stations.
- From replicated and non-replicated trials, promising genotypes are selected as entries for the regional trials.
- Trials are established in various cooperating stations following a standard procedure.
- Data on yield, reaction to pest and diseases, characterization, dry matter content, sugar, starch, and acceptability are gathered.
- Data gathered are evaluated by the TWG and approving committee of NSIC.
- NSIC release the new variety.

NSIC Sp 26

- Higher yield in tons per hectare compared to the two check varieties.
- Medium dry matter content but high in sugar and starch contents.
- High flavor and general acceptability.
- Resistance to scab and moderately resistance to weevil.
- Recommended for food, feed and industry especially for flour.



NSIC Sp 27

- Higher in yield and starch contents compared to the two check varieties.
- Medium in dry matter content, color, flavor and acceptability.
- Resistance to scab and moderately resistance to weevil.
- Recommended for food and industry especially for Sp fries, SP pickles, Sp wine and jam.

RESULTS

Table 1. Quantitative data of NSIC Sp 26 and check varieties PSB Sp 17 and PSB Sp 22 from year 2001 to 2003 cropping season.

	New Variety	Check Varieties	
Varietal Characteristics	NSIC Sp 26	PSB Sp 17	PSB Sp 22
Tuber skin color	white	light red	purple
Tuber flesh color	white	yellow	yellow
Growth habit	spreading	spreading	spreading
Foliage color	purplish green	green	purplish green
Root shape	rounded	elliptic	elliptic
Tuber yield (t/ha)	14.62	13.92	11.61
Dry matter content (%)	34.07	29.78	34.27
Starch (%, wet basis)	15.94	15.22	16.51
Sugar (%), wet basis)	3.88	3.38	3.69
Sensory qualities			
Color	6.89	7.10	7.27
Flavor	7.68	6.29	7.38
Acceptability	7.86	6.52	7.52
Pest reaction			
Weevil	MR	MR	MR
Scab	R	R	MR

Sensory evaluation scale of 1 to 9: 1 dislike and 9 like extremely
MR = Moderately Resistant R = Resistant

Table 2. Quantitative data of NSIC Sp 27 and check varieties PSB Sp 17 and PSB Sp 22 from year 2002 to 2004 cropping season.

	New Variety	Check Varieties	
Varietal Characteristics	NSIC Sp 27	PSB Sp 17	PSB Sp 22
Tuber skin color	brownish orange	light red	purple
Tuber flesh color	yellow orange	yellow	yellow
Growth habit	spreading	spreading	spreading
Foliage color	purplish green	green	purplish green
Root shape	elliptic	elliptic	elliptic
Tuber yield (t/ha)	13.42	12.17	10.64
Dry matter content (%)	31.71	29.75	35.56
Starch (%, wet basis)	19.27	15.99	19.23
Sugar (%), wet basis)	3.47	3.57	3.58
Sensory qualities			
Color	7.35	6.90	7.41
Flavor	7.10	7.01	7.46
Acceptability	7.10	6.20	7.40
Pest reaction			
Weevil	MR	MR	MR
Scab	R	R	S

Sensory evaluation scale of 1 to 9: 1 dislike and 9 like extremely
MR = Moderately Resistant R = Resistant S = Susceptible

ACKNOWLEDGEMENT

Cooperating Stations Responsible for the Conduct of Trials:

IPB, Los Banos, Laguna
AES-ROS, Tabaco, Albay
TCA, Camiling, Tarlac
NPRCRTC-BSU, La Trinidad, Benguet
ISU, Echague, Isabela
BES, Gabi, Ubay, Bohol
UPLBCA, La Carlota, Negros Occidental
USM, Kabacan, North, Cotabato
NOMIARC, Malaybalay, Bukidnon

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