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2005

POSTHARVEST CHARACTERIZATION AND SENSORY EVALUATION OF THE INTRODUCED FHIA AND LOCAL SABA VARIETIES OF BANANA

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APRIL 2005

POSTHARVEST CHARACTERISTICS AND SENSORY EVALUATION OF THE INTRODUCED FHIA AND LOCAL *SABA* VARIETIES OF BANANA

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SUBMITTED TO THE FACULTY OF THE GRADUATE SCHOOL,
CAVITE STATE UNIVERSITY, INDANG, CAVITE
IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF

DOCTOR OF PHILOSOPHY
(Crop Science)

00003146

Postharvest characteristics and sensory evaluation of the introduced FHIA and
634.772 V66 2005
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April 2005

ABSTRACT

VIDA, EDNA DELAS ALAS, Postharvest Characterization and Sensory Evaluation of the Introduced FHIA and Local *Saba* Varieties of Banana. Ph. D. Dissertation. Doctor of Philosophy in Crop Science, major in Horticulture. Cavite State University, Indang, Cavite. April 2005. Adviser: Dr. Arnulfo C. Pascual.

The morphological, physico-chemical and physiological characteristics of the introduced FHIA varieties from Honduras was compared to the local Saba variety at harvest and during ripening. All the banana varieties were considered for cooking purposes. The varieties showed similarities and differences in all aspects of characterization. Of the three varieties that were compared to Saba, the FHIA 3 manifested the best resemblance to the Saba variety. The former variety showed similarities in terms of bunch description, angular fruit, blunt-tipped apex, pattern in respiration and ethylene production. Although the panelists have already developed the taste for the local Saba, both as boiled and unboiled, the general acceptability for FHIA 3 did not differ significantly. Saba was superior to all varieties in terms of fruit weight, fruit girth, fruit volume and pulp thickness, making it the firmest. FHIA 3 had the thickest peel. FHIA 23 had the heaviest bunch which could be attributed to the considerable number of hands and number of fingers per hand. The pulp moisture content was highest with FHIA 23 during the harvest and ripe stages. Conversely, the highest dry matter content was seen in FHIA 21 at both stages. The peel color changed from

green to yellow in all varieties. However, it took only five days to ripen for the FHIA 23, seven days for Saba and FHIA 21 and nine days for the FHIA 3. The very thick peel of the FHIA 3 contributed to the delay in the ripening. The titratable acidity of the FHIA 3 was highest after harvest, but this trend shifted to the FHIA 23 at the ripe stage. There was no traceable amount of total soluble solids when all the bananas were still green, subsequently becoming highest in the FHIA 3 after ripening. The starch index pattern, indicating starch content, was most pronounced in the Saba and FHIA 21. The climacteric rise in respiration was fastest with FHIA 23, which was paralleled by the sudden upsurge in ethylene production. With regards to the best varieties for banana chips and catsup production, it was remarkable to note that FHIA 21 was more preferred than the Saba. The hard quality of the chips from the Saba made it inferior to FHIA 21. Corresponding to this is the results obtained from the sensory evaluation of banana catsup. The product made from FHIA 23 was most preferred, due to its good mouthfeel, taste, as well as for exhibiting darkest red color. It was also note that the FHIA 23 catsup had thick consistency.

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INTRODUCTION

Banana (*Musa spp*) is considered as the most important fruit crop in the country in terms of volume of production and export earnings. In 2003, the Philippines exported 1,829,000 MT, with a total value of US$333 million Fresh on Board (Statistical Yearbook, 2003). In fact, it ranked 5th in global production in CY 2002 with India, Ecuador, Brazil and China on the top of the list (Faylon *et al.* 2003). The Philippines is the only Southeast Asian country that made it to the top five major suppliers of banana in the world. From the country's total banana production (1991 to 2001), 50 percent are consumed as fresh, 35 percent are processed for food and 15 percent for waste (Eusebio *et al.* 2002).

Banana production is a source of income and employment in the countryside with more than 5.6 million smallholder farmers dependent on it (Calderon, 2000). About 80-90 percent of the total hectarage are cultivated by small growers using *Lakatan, Latundan* and *Saba* as a component of the farming system. The exportable cultivar, Cavendish, is grown under the corporate farming scheme.

It could be noted that there exists a remarkable difference in the production, postproduction technologies and management systems between the corporate and the small hold banana farms (Faylon, 2003). The corporate production system caters to the strict requirements of the export market. The enterprise is capital-intensive and production practices are applied at optimum levels and quality and yields are high (Valmayor, 1989).