

VARIABILITY IN PROXIMATE COMPOSITION AND TOTAL SOLUBLE
SOLID CONTENT OF SUGAR PALM (*Arenga pinnata*) SAP
COLLECTED FROM TREES AT DIFFERENT
GROWING SITES IN INDANG

THESIS

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Undergraduate Thesis
Submitted to the faculty of the
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Bachelor of Science in Food Technology



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ABSTRACT

PENOBLAR, JASMINE ANN R. Variability in Proximate Composition and Total Soluble Solid Content of Sugar Palm (*Arenga pinnata*) Sap Collected from Trees at Different Growing Sites in Indang. Bachelor of Science in Food Technology. Cavite State University, Indang, Cavite. April 2015. Adviser: Dr. Fe N. Dimero

This study was conducted at Barangay Daine, Barangay Bancod, Barangay Tambo Indang, Cavite and Cavite State University-Main campus from November 2014 to January 2015. Generally this study was conducted to measure the variability in proximate composition and total soluble solids content of fresh sugar palm sap in Indang.

Proximate composition was determined at the Standards and Testing Division, Department of Science and Technology in Bicutan, Taguig City. Data were analyzed using analysis of variance test and Duncan's multiple range test.

The findings of the study show that the location of palm trees with reference to natural water source has significant effect on the composition of the sap, specifically, in terms of carbohydrate concentration, food energy level and moisture content. The nearer the location the higher the carbohydrates concentration while, in contrary, the nearer the location the lower the moisture content.

No significant relationships were established between location and ash, crude protein, fat and total soluble solids of fresh palm sap. On the other hand, nearness of palm to water source does not significantly affect the ash content, crude protein, fat and total soluble solids of the palm sap. Only carbohydrate concentration and moisture content were found to be significantly related to the location of the palm trees with reference to natural water source.

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An undergraduate thesis submitted to the faculty of the Institute of Food Science and Technology, College of Agriculture, Forestry, Environment, and Natural Resources, Cavite State University, Indang, Cavite in partial fulfillment of the requirements for the degree of Bachelor of Science in Food Technology with Contribution No. 2014-2015-10. Prepared under the supervision of Dr. Fe N. Dimero.

INTRODUCTION

Sugar palm (*Arenga pinnata*), locally known as *irok*, is a multipurpose palm species from which different products from different portions of the tree are utilized as food, fiber and lumber. In the Philippines it has been found along river bank or at any great distance from settled areas in Luzon (Rizal, Cavite, Bataan, Laguna and Tayabas), Polilio, Biliran and Mindanao. (Florido and de Mesa, 2003).

Economically, the sap which is extracted from cut stalk of fully-extended inflorescence with open flowers, is the most important part of the tree. The sweet sap of *Arenga pinnata* can produce a number of food products with vinegar and sugar as the most common. The major component of the sap is sugar which is expressed as total soluble solids in °Brix. Toddy/sap is oyster white in color, has a nearly neutral pH, and has inherently sweet taste.