

## Variation in Glucose Content in Andamans Coconut

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### Abstract

Tall and Dwarf palms did not show any significant differences between them in the glucose content of 6-month old tender nut water. The total variation ranged from 2.0% to 6.9%. No correlation was observed between glucose content and different colour groups (types) in Tall palms. Glucose content became generally higher as the nut size reduced from giant to medium, small and micro.

### Introduction

The tender coconut water is a delectable and nourishing drink for all, especially for the sick and convalescent. From time immemorial, seafarers used to carry coconuts with them in the ships' holds to serve as food and drink. The wide spread of coconuts in the uninhabited tropical islands of Indian and Pacific oceans has itself been ascribed to this habit.

In Nicobar Islands, it forms a daily food to the local people and their domestic animals like pig, cow, and dogs.

The sweetness of the water and meat is due to the presence of glucose. While testing the differences in sweetness of tender nut water of coconuts in Andaman and Nicobar Islands, considerable variations were observed for this character between palms of different Tall types in the same tract and also from tract to tract. Hence, the present study was taken up.

### Materials and Methods

Six months old fruits of Tall and Dwarf forms and types of coconut growing under identical conditions and of uniform age at the Government Coconut Plantation at Corbyn's Cove, Port Blair, were used for the study. The glucose content was estimated as given in the Methods of Analysis, A.O.A.C. (Page 289 ; 9th ed. ; 1960), at the Soil Testing Laboratory, Port Blair.

### Results and Discussion

The percentage of glucose content in different forms of coconut varied widely, from 2.0% to 6.9%. There was a tendency for sweetness to increase as the nut size reduced from giant to medium, small and micro (Table 1).

**TABLE 1.** Variation in glucose content of 34 Tall and 6 Dwarf\* coconut palms

% Glucose	Type			
	Giant	Medium	Small	Micro
2.0-2.9	1	4	—	—
3.0-3.9	1	11	7*	—
4.0-4.9	—	10	—	—
5.0-5.9	—	2	1	2
6.0-6.9	—	—	—	1

\*Dwarf Yellow.

Pillai, Sukumaran and Pandalai (1959) estimated the glucose content in 6-month old West Coast Tall coconuts as 3.6%.

There is a common belief that the water of the Dwarf coconut forms of Andamans (locally known as "king coconut") and the soft kernel (known as "Malai") are sweeter than those of Tall types. The study showed that the yellow 'king coconut', which occurs relatively more frequently in the Islands, contains only 3.3% glucose. This value is even less than the 4.0% glucose content of Tall palms.

There is also another school of thought that the colour of the nut has some influence on sweetness of the milk and that palms producing reddish (orange) or yellowish nuts produce sweeter water and tastier kernel as compared to greenish types/varieties. However, data given in Table 2 show no such correlation.

**TABLE 2.** Glucose content in Tall and Dwarf coconuts

% Glucose	Variety/Type		
	Greenish	Yellowish	Reddish
2.0-2.9	5	—	—
3.0-3.9	10	6*	3
4.0-4.9	9	1	—
5.0-5.9	4	—	1
6.0-6.9	1	—	—

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