

# Consumers' Buying Behavior on Coconut Palm Sugar

Grace D. Buencillo

Associate Professor III , Agri-Business Department, Institute of Agricultural Technology and Entrepreneurial Studies  
SPAMAST, Malita, Davao Occidental, Philippines

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**Abstract:** Coco sugar has been known for its many medicinal or pharmaceutical benefits, as it is used in controlling diabetes and obesity. Consumers' buying behavior on coco sugar had to be established to guide farmers, producers and entrepreneurs. Descriptive research was employed through interview of 390 respondents. Data were analyzed using mean and percentage. Results revealed that the consumers were less aware on the information, health benefits, and utilization of coco sugar because majority had no source of information about the product. They showed moderate willingness to consume coco sugar due to its high price. However, majority were willing to pay at P250 per kilogram, packed in smaller quantity to make it more affordable. Majority of the consumers intend to utilize coco sugar as sweetener for beverages, though at present they are non-consumers. The product needs intensive promotion to be known to consumers and gain market share.

**Keywords:** coco sugar, consumer buying behaviour.

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## I. INTRODUCTION

### A. Rationale

Coconut or *Cocos nucifera* is a member of family of Aracaceae (palm family) [1]. It is known as "niyug" in Luzon, "Lubi" in Visayas and Mindanao [2]. It is arguably the most used plant on the earth in terms of number of utility of its products and was the foundation of vegetable oil production. Coconut trees produce many non-food raw materials for high-value products and basic food products including coconut sugar with coconut sap as the main ingredient [3]. Coconut sap, the sweet exudate from the tapped unopened spathe or inflorescence of coconut, is one of the best food products to consider because of its many uses. It could be marketed as an alcoholic drink locally known as 'tuba' or coconut wine; as vinegar; or as 'lambanog' or distilled wine; and as coco sugar or sweetener [4].

Moreover, the Philippines has been regarded as the diabetes "hotspot" since 3.71M Filipinos suffered from diabetes [5]. These people need food supplement that would help in controlling diabetes and obesity. The coconut sap has a very low glycemic index which helps regulate high blood pressure and sugar metabolism. It is a potent antioxidant for overall immune system protection, cardiovascular and respiratory health [6]. Because of its health benefits, market for coconut sugar palm is increasing in the local as well as outside the country. The increasing growth of demand for coconut palm sugar triggers producers to engage in coconut sugar production. There are promising market in different countries in the US and parts of Asia [7]. Contemporarily, there is a dearth of literature on the consumers' buying behavior on coconut palm sugar that would inform farmers, producers and businessmen on the awareness and attitude towards the product. Further, SPAMAST will embark on the production of coco palm sugar through its research development division, thus, making the study results significant and beneficial.

### ***B. Objectives of the Study***

Consumer buying behavior is an important information for marketers and entrepreneurs to help them blend the marketing mix suited to a particular product. This study was conducted in order:

1. To determine the level of consumer's awareness regarding coconut palm sugar, in terms of:
  - a. Information about the product;
  - b. Health benefits; and
  - c. Utilization.
2. To determine the attitude of the consumers towards coconut palm sugar in terms of/towards:
  - a. Consumption; and
  - b. Price.

### ***C. Significance of the Study***

The information gathered from this study could be used in evaluating the consumers' awareness and buying behavior for coconut palm sugar, hence, design appropriate marketing programs. Moreover, data gathered can be of great help to coconut palm sugar producers and those who are planning to engage in coconut palm sugar production. Data generated can be useful to future researchers as reference.

## **II. METHODS**

### ***A. Study Area***

The municipality of Malita is the capital of Davao Occidental – the youngest and newest province in the Philippines being proclaimed only in 2016. It is situated in southern Mindanao. The major crop of the province is coconut, followed by banana, mango, rice, corn, etc. In 2010 census, Malita has a population of 109,568 people in an area of 883.37 square kilometers (341.07 sq mi).

### ***B. Research and Sampling Design***

Descriptive research design was used in the study. The study attempted to describe the consumers' awareness and attitude towards coconut palm sugar.

Random sampling technique was employed. Sample size was determined employing a quota of 30 respondents per sitio. The sitios of Barangay Poblacion, Malita, Davao Occidental were determined. There were a total of 390 respondents from 13 sitios. Respondents of the study were the household heads.

### ***C. Data Collection and Analysis***

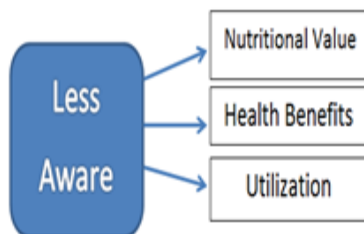
Data were gathered through conduct of interview among the household heads using a researcher-made interview guide. A five-point Likert scale was used on the level of awareness of the consumers, as follows: 5-highly aware; 4 – aware; 3- fairly aware; 2- less aware; and 1- not aware. Attitude of the consumers towards consumption also used 5-point Likert scale with 5- very much willing; 4- highly willing; 3- moderately willing; 2- less willing; and 1- not willing. The interview-guide underwent checking by experts. It was pre-tested to determine its validity and reliability. Data were analyzed using descriptive statistical tools such as percentage and mean.

## **III. RESULTS AND DISCUSSION**

### ***A. Awareness on the Product***

The consumers were less aware on the nutritional value of the coconut palm sugar. They were less aware that coconut palm sugar has less fructose, had lower glycemic index (GI), nutritional value as to protein, sugar, fat, energy and carbohydrates with mean values of 2.39 to 2.26. On the other hand, the consumers were less aware of the health benefits of the product. They were less aware that coconut palm sugar balance blood sugar, supports gut health, can be used as sweetener in food products, prevents colon cancer, strengthens immunity, prevents obesity, enhances lipid (fat) metabolism, and prevents fatty liver disease with mean values of 2.49 to 1.88. The consumers also showed less

awareness on the utilization of coconut palm sugar. They were less aware that coconut palm sugar can be used as beverage sweetener, medicinal/pharmaceutical, sugar alternative, preservatives, bakery and pastry products, and jams/marmalades with mean values of 2.49 to 1.89. This attunes to result of previous study that consumers are not very familiar with the ecologically-grown products in the market [8].



**Fig.1: Level of awareness of the consumers on coconut palm sugar**

**B. Source of information**

The low awareness of the consumers on information about coconut palm sugar, its health benefits, and utilization can be attributed to the fact that most of them had no source of information (62.82%) about the product. There were 16.41% who informed through friends, 12.05% got information from radio, (5.38%) got information from their relatives, and 3.33% were informed through the internet. The main barrier to increase the market share of organic food products is the consumer information [9]. This is proven with the result of the current study. Since majority of the consumers had no access to information about coconut palm sugar, their level of awareness on coconut palm sugar were also low.

**Table 1: Sources of information on coconut palm sugar among household heads in Malita, Davao Occidental, Philippines**

PARTICULARS	f	%
None	245	62.82
Friends	64	16.41
Radio	47	12.05
Relatives	21	5.38
Internet	13	3.33

**C. Attitude Towards Consumption**

Knowing the health benefits of coconut palm sugar, the consumers were asked if they are willing to consume it. Results revealed that the consumers were moderately willing (MW) to consume coconut palm sugar even though they knew its health benefits which obtained a mean of 3.43.

Given the hypothetical price for coconut palm sugar ( $\geq$ P250), the consumers were asked as to their willingness to consume. It was revealed that given the price, the consumers were moderately willing (MW) to consume a coconut palm sugar which obtained a mean of 2.91. This conform to previous studies that there are some consumers who are not willing to try consuming organic products even after they heard the benefits because of its price [10] and that consumers perceived organic products as rather expensive [8].

However, a positive attitude can be gleaned among the consumers since more than half were willing to pay at P250 per kg of coconut palm sugar (52.56%), whereas, 47.44% were willing to pay less than P250 per kg. According to previous study, some groups of consumers have positive attitude towards organic products, and they exhibit increased willingness to pay higher prices for these products [8].

In terms of packaging, majority of the consumers preferred sachet or in small quantity (68.46%) to make it more affordable. On the other hand, 31.53% preferred plastic bottles containing 250g (rather than 500g or 1kg) to make it more affordable and secured because of its container.

Further, the consumers were asked on how they will utilize or use the coconut palm sugar if they will buy. Majority stated that they intend to use it as sweetener for beverages (63.85%), few intend to use it as medicinal or pharmaceutical purpose (33.85%), sweetener for cakes, breads, cookies, etc. (1.28%), and 1.26% intend to use it as sweetener for jams and marmalades.

Finally, of the total number of respondents, majority were non-consumers (95.90%) of coconut palm sugar. It was further revealed that those who consumed coconut palm sugar used it as beverage sweetener (3.08%) and same percentage (0.51%) used it as sweetener for jams and marmalades as well as sweetener for cakes, breads, cookies, etc.

**Table 2: Attitude of consumers towards coconut palm sugar in Malita, Davao Occidental, Philippines**

PARTICULARS	1	2	3	4	5	MEAN	DES
<i>Towards Consumption</i>	0	10	219	146	15	3.43	MW
<i>Towards Price</i>	0	136	157	95	2	2.91	MW
						<b>f</b>	<b>%</b>
Max. price willing to pay							
P250/kg						205	52.56
<P250/kg						185	47.44
Preferred Packaging							
Sachet						267	68.46
Plastic bottles (250g)						123	31.53
<i>Towards Utilization</i>							
Intention for Use of Coconut Palm Sugar							
beverage sweetener						249	63.85
medicinal or pharmaceutical purposes						132	33.85
sweetener for cakes, breads, cookies, etc.						5	1.28
sweetener for jams and marmalades						4	1.26
Current use of coconut palm sugar							
None (non-consumers)						374	95.90
beverage sweetener						12	3.08
sweetener for jams and marmalades						2	0.51
sweetener for cakes, breads, cookies, etc.						2	0.51

#### IV. CONCLUSION

There is a huge market for coconut palm sugar but the product needs intensive promotion to increase awareness of the prospect consumers, thereby, increasing market share of the product. This can be done through conduct of consumers' education campaign in a form of fora cum distribution of IEC materials. A well-blended marketing mix is important to suit the buying attitude of the consumers, especially on its price, promotion and packaging.

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