CULTURAL CHARACTERISTICS OF RAMBUTAN PLANT (NEPHELIUM LAPPACEUM L.) THROUGH MORPHOLOGICAL APPROACHES IN ACEH PROVINCE

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Abstract

Rambutan (Nephelium lappaceum L.) is a tropical plant belonging to the lerak-lerakan family or in the Sapindaceae family. The purpose of this study was to obtain a variety of characteristics of Rambutan plants that grow cultivated and wild in Aceh Province. This research was conducted in July - August 2020, the sampling location was carried out in cultivation in the Seruway, Aceh Tamiang and Rambutan areas growing wild in the Jambo Keupok Village Area, South Aceh. The research was conducted using an exploratory method, namely tracing the presence of plants in the research area. Results The morphological characteristics of rambutan are very significant in cultivated and wild rambutan plants in the form of stems. It appears on tree types (round, ovoid and imperfect) on leaves. very significant between leaves and fruit in cultivated plants with average taste (Very sweet, Sweet, Sour, and Very Sour) and in the color of the flesh with a very striking difference in color (transparent and faded, transparent clear and white.

Keywords*: Characteristics, Morphology, Rambutan Plants, Cultivation, Natural, Aceh.*

1. INTRODUCTION

Aceh Province is known to have high biodiversity. This is due to the existence of the Gunung Leuser National Plant (TNGL) area. The results of these studies indicate that biodiversity is very high (Rahmawati and Hayati, 2013. Navia et al,.2019. Navia et al. 2020; Ritonga et al. 2020).

Rambutan (Nephelium lappaceum L.) is a native plant originating from Indonesia, the spread of rambutan in Indonesia is in Sumatra, Java and Kalimantan (Kuswandi,. 2014).

Rambutan is a tropical plant belonging to the lerak-lerakan family or in the Sapindaceae family. Rambutan plants often grow naturally or cultivated. Rambutan fruit is classified as an exotic fruit, the increasing market for rambutan is one of the cultivated plants because it has promising potential in trade (Duchlun,. et al. 2006).

One of the ways to fulfill these needs is plant breeding by modifying cultivation (Astuti,.et al. 2007) so that there are significant differences between cultivated (awake) and natural or wild plants. High plant diversity will support the preservation of biodiversity in a wide environment. Rambutan plants that are intentionally planted or grown because of the appropriate environment make a study of plant diversity necessary so that the results of the study can become one of the databases that can be used as information on the diversity of Rambutan plants from Aceh Province. The purpose of this study was to obtain the diversity of characteristics of Rambutan plants that grow cultivated and wild in Aceh Province.

2. RESEARCH METHODS Research sites

This research was conducted in July - August 2020, the sampling location was carried out in cultivation in the Seruway, Aceh Tamiang and Rambutan areas growing wild in the Jambo Keupok Village Area, South Aceh. The necessary tools such as a camera, a tongue-in-law plant description guide, a voice recorder, and writing instruments. The material needed in this research is Rambutan plants. The research was conducted with an exploratory method, namely tracing the existence of plants in the research area and interviews which aimed to collect secondary data through structured questions to the community, all answers

were recorded and analyzed descriptively (Najira *et al*,. 2020).

3. RESULTS AND DISCUSSION

Morphological Characteristics of Cultivated and Natural Rambutan Plants

Based on the results of observations of the morphological characters of the genotype of rambutan plants, there are several types of rambutan plants planted with cultivation, namely rambutan garuda, and Lebak Bulus in the research location in the garden owned by farmers in the Seruway area, Aceh Tamiang. and the genotypic characters of rambutan plants that grow naturally in the forest, namely Tai Kucing and Gading rambutan, in the research location in the Keupok Jambo Forest, South Aceh. The morphological characteristics of each cultivar of rambutan are shown in table 1:

Table 1: The morphology of cultivar plants of rambutan that grows culturally and naturally:

Character	Rambutan Plants			
	Garuda	**Lebak Bulus**	**Tai Kucing**	**Gading**
Tree Type	Not perfectly round	Round	Egg Round	Rounded
Heading Form	Rounded	Tapered	Oval	Tapered
Rod Circumference	47 cm	58 cm	45 cm	30 cm
Tree Height	3.5 m	5 m	8 m	9.2 m
Stem Surface	Rough	Smooth	Very rough	Rough
Branch Density	Rarely	A little bit rare	Very Meeting	Enough Meeting
Stem Color	Whitish Chocolate	Whitish brown	Light Brown	White chocolate
Leaf top surface color	Dark green	Dark green	Light green	Dark Green
Leaf Density	Little Meeting	Rarely	Rarely	Quite Rarely
Leaf growth direction	Exit	Into the	Into the	Into the
Leaf Stalk Conditions	Flat	Tapering up	Down	Tapering Down
Leaf width	6.5 cm	3 cm	7 cm	8.2 cm
The shape of the tip of the leaf blade	Pointed	Rounded	Tapered	Pointed
Leaf base shape	Oval	Oval	Round	Egg Round
Leaf Margins	Flat	Equally	Equally	Wavy
Fruit Shape	Oval	Round	Oval	Rounded
Fruit stalk length	1 cm	4 cm	0.8 cm	1 cm
Fruit Hair Shape	Straight	To the right	Straight	Straight
The color of the fruit stalk	Chocolate	Green	Light brown	Dark green
Fruit diameter	12 cm	5 cm	7 cm	6 cm
Fruit Weight	2 ounces	1.2 ounces	3.7 ounces	4 ounces
Fruit Skin Thickness	10 mm	8 mm	3 mm	3,4 mm
Fruit Skin Color	Bright Red	Faded Red	Kunguan red	Light Yellow
Fruit aryl thickness	A little thick	Thin	Pretty Thick	Very thick
Fruit Flavors	A little sweet	Sweet and Sour	Very Acidic	Simply Sour
Fruit Seed Width	1.3 cm	1.5 cm	1.7 cm	2 cm
Seed Skin Color	Chocolate	Dark White	Brownish white	Dark White


a
b
c
d
e
f
g
h
i

Figure 1: a. Garuda Rambutan Tree, b. Garuda Rambutan Leaves, c. Garuda Rambutan Fruit, d. Lebak Bulus Rambutan Tree, e. Rambutan Leaves Lebak Bulus, f. Rambutan Fruit Lebak Bulus. g Tai Kucing Rambutan Tree, p. Tai Kucing Rambutan Leaves, i. Tai Kucing Rambutan Fruit, j. Gading Rambutan Tree, k. Gading Rambutan Leaves, and l. Gading Rambutan Fruit.

Based on observations of the morphological characters of the stems, leaves and fruit of cultivated and wild rambutan plants in the form of stems, it will be seen in round, ovoid and imperfectly round tree types, the leaves will be seen in the type of leaf density of cultivated plants which has intense density whereas The wild leaves have a very significant distance between the leaves, and the fruit in cultivated plants has a sweet taste, while the wild rambutan has a sour taste. The flesh of the fruit also has very detailed differences in cultivated rambutan and wild rambutan.

Morphological Characteristics of Rambutan Meat

Based on the results of observations, the morphology of the rambutan flesh was quite different between the colors of the cultivated and wild rambutan flesh. The difference in flesh is very significant which can be seen directly from the observation that can be seen in Figure 2:

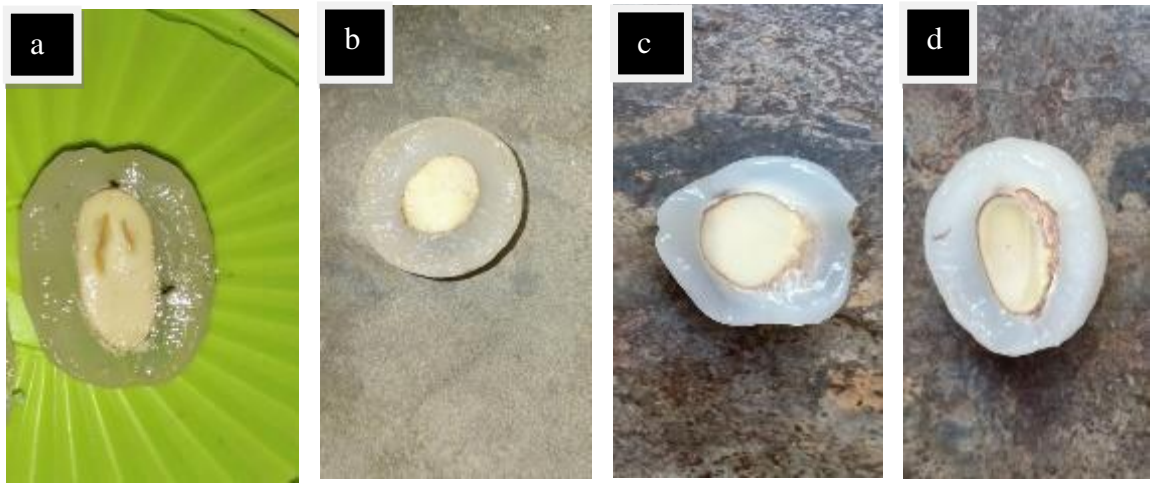

Figure 2: a. Rambutan Garuda, b. Rambutan Lebak Bulus, c. Rambutan Tai Kucing, d. Rambutan Gading.

Based on observations from rambutan plants, the meat on rambutan garuda and lebak bulus which are cultivated plants has a very transparent and faded appearance due

to stable environmental factors compared to rambutan tai Kucing and ivory. Rambutan tai Kucing also has a more transparent color than rambutan ivory (white), besides the shape of rambutan tai Kucing is smaller than ivory rambutan the community also has a different way of rambutan tai Kucing itself has a smaller size people can eat the seeds directly from rambutan tai Kucing is because it has a structure that is softer and slippery than other rambutan.

4. CONCLUSION

Four cultivars of rambutan were observed, two of which were cultivated and the other grew wild. Results The morphological characteristics of rambutan are very significant in cultivated rambutan plants and wild in the form of stems. very significant between leaves and fruit in the flavored rambutan plant (very sweet, sweet, sour, and very sour) and in the color of the flesh with a very striking color difference (transparent and faded, transparent clear and white).

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