

Analysis of Shelf Power of Snake Fruit Varieties at Room Temperature

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ABSTRACT

Snake fruit is a horticultural plant that has many enthusiasts and cultivators in Indonesia. There are many varieties and post-harvest storage methods for snake fruit. This research used 3 varieties of snake fruit, namely pondoh snake fruit, bali snake fruit, and keras snake fruit, which were stored at room temperature. The research method uses descriptive analysis to draw conclusions regarding important points in the research. This research shows that when storing 3 varieties of snake fruit at room temperature, the condition of the snake fruit skin has a big impact on shelf life, because thicker snake fruit skin is more susceptible to physical damage and fungal or bacterial infections. The results of this research bali snake fruit show that it has the longest shelf life at room temperature, around 12 days until spoilage, pondoh snake fruit 9 days, and keras snake fruit 6 days. This is because bali snake fruit has thicker skin than the other two snake fruit.

Keywords: Snakefruit Varieties, Storability, Room Temperature

INTRODUCTION

Snake fruit (*Salacca zalacca*) is a tropical plant that grows on Java, Sumatra and the southern part of the Indonesian archipelago. Snake fruit is also a horticultural plant which is widely cultivated in gardens and agriculture (Noviyanti, 2021:433). Snake fruit is also classified as a non-climacteric fruit, namely fruit that can only be harvested if it is truly ripe on the tree. Generally, snake fruit harvesting can only be done twice a year.

Diverse varieties and supported by relatively affordable prices, snake fruit has many fans. Indonesia's good environmental conditions, namely tropical and subtropical climates, make the growth and development of snake fruit plants suitable for planting in Indonesia and many farmers cultivate them. Providing good storage of snake fruit is an important and influential factor during the post-harvest stage (Trisnawati, 2004:76).

There are many ways to store snake fruit, including storing it in a refrigerator or just at room temperature. Usually snake fruit that is stored in the refrigerator has mostly had its skin peeled and snake fruit that is still skinned is stored only at room temperature. This is because snake fruit that is still skinned does not require much water content to prevent rotting. Consumers are more interested in snake fruit that is still skinned compared to snake fruit that has been peeled. Therefore, this research aims to find out which type of snake fruit lasts the longest when stored at room temperature.

METHOD

This research used 3 varieties of snake fruit, namely pondoh snake fruit, bali snake fruit, and keras snake fruit. This variety was chosen because pondoh snake fruit and Bali snake fruit are widely available on the market (Adirahmanto, 2013:124), and keras snake fruit is a local snake fruit native to Jombang. The three snake fruit varieties are adjusted to a uniform maturity level. The tool used in this research used a clear plastic box to hold snakeheads during observation. Fruit samples stored at constant room temperature were placed in clear plastic boxes, protected from exposure to direct sunlight and monitored periodically every day. Also observations include changes in variables (weight, texture and color) as well as sensory evaluation of aroma (Santosa, 2011:28). The data obtained from this research was analyzed descriptively, the important points were observed, then conclusions were drawn.

RESULT AND DISCUSSION

Table 1. Observation results of salak varieties at room temperature

Day	Pondok Snake Fruit	Bali Snake Fruit	Keras Snake Fruit
1	Weight: 58 gr Color: shiny brown Texture: hard, thin skin	Weight: 32 gr Color: dark reddish brown Texture: very hard thick skin	Weight: 51 gr Color: shiny brown yellow Texture: hard, thin skin
2	Weight: 58 gr Color: shiny brown Texture: hard, thin skin	Weight: 32 gr Color: dark reddish brown Texture: very hard thick skin	Weight: 49 gr Color: shiny brown yellow Texture: hard, slightly soft
3	Weight: 58 gr Color: shiny brown Texture: hard, thin skin, slightly soft flesh	Weight: 31 gr Color: dark reddish brown Texture: slightly soft	Weight: 47 gr Color: slightly dark brown Texture: very soft
4	Weight: 57 gr Color: brown Texture: increasingly soft	Weight: 29 gr Color: deeper brown Texture: shoots start to become mushy	Weight: 46 gr Color: intense Texture: partially rotten top
5	Weight: 56 gr Color: slightly dark brown Texture: starting to become soft	Weight: 28 gr Color: deeper brown Texture: shoots are more mushy	Weight: 45 gr Color: deep black Texture: partially rotten, watery, slightly foul smelling
6	Weight: 54 gr Color: dark brown Texture: mushy	Weight: 27 gr Color: slightly darkened Texture: mushy	Weight: 44 gr Color: pale black Texture: very soft, watery and slimy
7	Weight: 53 gr Color: dark Texture: snake fruit skin is wrinkled, very soft	Weight: 26 gr Color: slightly darkened Texture: mushy, slightly dry skin	
8	Weight: 53 gr Color: dark Texture: partial rot of shoots	Weight: 26 gr Color: dark Texture: dry, wrinkled, soft	
9	Weight: 50 gr Color: black Texture: foul, watery, and slimy	Weight: 25 gr Color: dark Texture: soft, wrinkles more	
10		Weight: 24 gr Color: dark Texture: soft, wrinkles more	
11		Weight: 24 gr Color: black Texture: more watery	
12		Weight: 22 gr Color: black Texture: rotten, slimy, more watery	

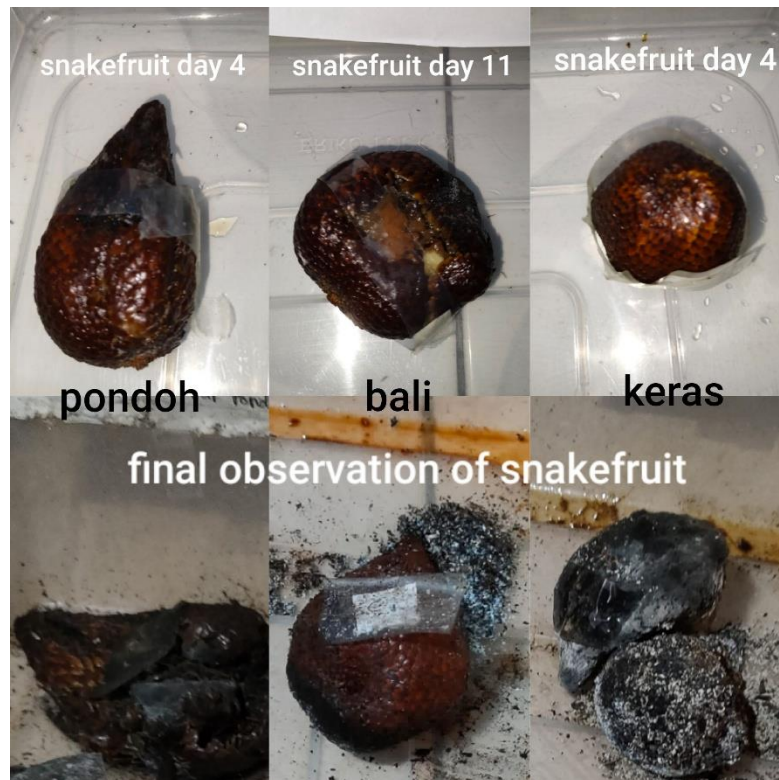


Figure 1. Observation results during the early and late stages of snake fruit

The results of the observations showed changes in variables during the storage period at room temperature, namely weight, color and texture (Kusmiyati, et al, 2018). During the shelf life of the three varieties (pondoh snake fruit, bali snake fruit, keras snake fruit) every day there are signs of decay. Characterized by heavy shrinkage, a continuous change in color to dark, as well as a change in texture from fresh to shriveled/wrinkled/soft (rotten). Salak rot starts from the skin and often occurs at the pointed tip of snake fruit and then spreads to the entire surface of the fruit (Jamaludin, 2018).

Of the three varieties (pondoh snake fruit, bali snake fruit, keras snake fruit), bali snake fruit tends to maintain its shelf life texture longer than pondoh snake fruit and keras snake fruit. Bali snake fruit has a shelf life until completely rotten for 12 days, and pondoh snake fruit 9 days, while keras snake fruit only has a shelf life until completely rotten for 6 days. This is because keras snake fruit has a thinner skin thickness than pondoh and bali snake fruit. Also has a higher potential for infection with microorganisms. Meanwhile, pondoh snake fruit has a skin thickness that is thicker than keras snake fruit but thinner than bali snake fruit. It is also more susceptible to physical damage and fungal or bacterial infections. And bali snake fruit has thicker skin, which is more resistant to disease and rot.

CONCLUSIONS

The storage time for snake fruit until it rots at room temperature has different results, depending on the type of variety. The snake fruit variety has a shelf life of 12 days, pondoh snake fruit has a shelf life of 9 days, and keras snake fruit has a shelf life of only 6 days. This is based on the fact that the thickness of the skin of each snake fruit is different, and snake fruit which has thicker skin lasts longer during the shelf life than snake fruit which has thin skin. When stored at room temperature, the condition of snake fruit skin greatly influences its shelf life, because thinner snake skin will be more susceptible to physical damage and fungal or bacterial infections.

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