9th INDES 2020

LIMITLESS MIND:

EMPOWERING INNOVATION THROUGH VISUALIZATION

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ABSTRACTS BOOK

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D-EGG HOLDER

Rosmalia Ibrahim, Hasya Farwizah Hilfina Rosli, Wong Ye Shiow and Hoong Dao Chuan

SMK Kamarul Ariffin Labis, Johor.

E-mail: kelabinovasisemekar@gmail.com

ABSTRACT

Labis, Segamat area is popular with durian. We can notice that durian trees are standing everywhere at Labis. When durian seasons, almost all the residents will throw the durian peels around Labis such as beside the road or farm, even in the drains you can find the durian peels. This problem not only will cause the breeding of mosquitoes and flies, but also will emit the unpleasant ordor and carbon dioxide gas into atmosphere, so it may cause the other feel inconvenience and also influence everyone around Labis. Besides, the non-perishable paper or plastic egg holder are face in the same problem, some residents in Labis usually will just throw them beside the road or outside the house, so it may defame beautify of environment and Labis's reputation. Hence, the aim of this innovation is to reduce and tackle the problem of throwing durian peels anywhere and also reuse the durian peels to produce the new things. The name of this product is D-EGG HOLDER. It is a eco-friendly egg holder that made of durian peels. Durian peels contains cellulose and the fibres found in durian peels are rough and tough so its suitable to become an egg holder. The ingredient we used to make D-EGG HOLDER is plastic egg holder. It needs to be made into pulp by refining, soaking, and grinding. The resulting pulp will be filtered to filter out excess water. Wet pulp will be pasted onto a plastic egg holder to build shape. Only RM10.00 was required for this to make the filter. As a result of the innovation, the pulps are rough and can be made to egg holder. Although that is hard to build the shape of it, this is worthy to try. This egg holder is biodegradable and non-perishable. In conclusion, D- EGG HOLDER can be made from durian peels and reduce the disposal of durian peels. It can also replace plastic or paper egg holder in daily life.

Keyword: durian peels, D-Egg holder

1. INTRODUCTION

We made this product because Labis is popular with durians. We realized that some irresponsible people like to throw away durian skins all over the places. When durians skin reacts with bacteria for decomposing process naturally, it will release carbon dioxide gas and an unpleasant smell. Durian skins also collect stagnant waters, and it will be a breeding ground for mosquitoes. So, we got the idea to reuse the durian skins. At the same time, we found that the usage of plastic egg holders is increasing in Malaysia because many people are using plastic egg holders which are difficult to dispose and unbiodegradable. From that, we got an idea to innovate a biodegradable egg holder.

1.1 OBJECTIVE

To reuse the disposal of durian skin. Decrease dengue cases. Avoid odour in the environment caused by discarded durian skin. Minimize the releases of carbon dioxide. Reduce the usage of plastics and papers as egg holder. To create 100% biodegradable egg holder.

2. METHOD

Firstly, collect durian skins. Then, cut out the durian fiber (white durian skin only). After that, soak the durian skins for a day to soften it. Then, cut the durian fiber into a small piece and grind the durian fiber with a little of water with a blender and blend it till the chunks of fiber turn into paste consistency. Next, the durian fiber is filtered using a filter until it will be a smooth as sponge. Finally, make D-Egg Holder by using moulds and filtered the durian skin fiber. Dry it under the sun for 3 days.

3. RESULT

D-Egg Holder can be shaped, strong enough to hold eggs, tough and non-perishable.

4. ARGUMENT

D-Egg Holder is light weight, 100% biodegradable, tough, organic, eco-friendly and able to use indoor, semi-outdoor and outdoor.

5. CONCLUSION

D-Egg Holder will help to reduce the disposal of durian peels. It can also decrease dengue cases. D-Egg Holder will be able to minimize the releases pf carbon dioxide. Lastly, we hope D-Egg Holder can avoid from the usage of plastics and papers. We also hope D-Egg Holder will be used by egg suppliers in Johor district.

6. FIGURES

Durian peel that decomposes naturally will release carbon dioxide into environment. Figure 1 show that the atmospheric carbon dioxide and earth's surfaces temperature was increasing from 1880 to 2019. Durian peel also will collect stagnant water that will be place for mosquitoes to breed. Figure 2 show that Johor is second highest with dengue cases in Malaysia from 31 December 2018 until 12 February 2019. Because of that, we got an idea to reuse the durian peel and make it into a biodegradable pot. Figure 3 show the weight, height and diameter of our D-planting Pot.

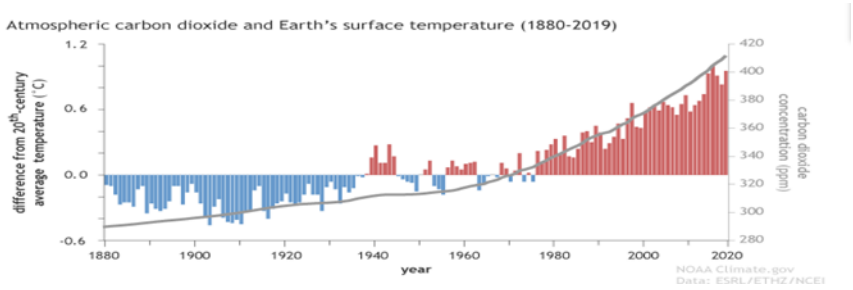

Figure 1. Global Temperature and CO_2

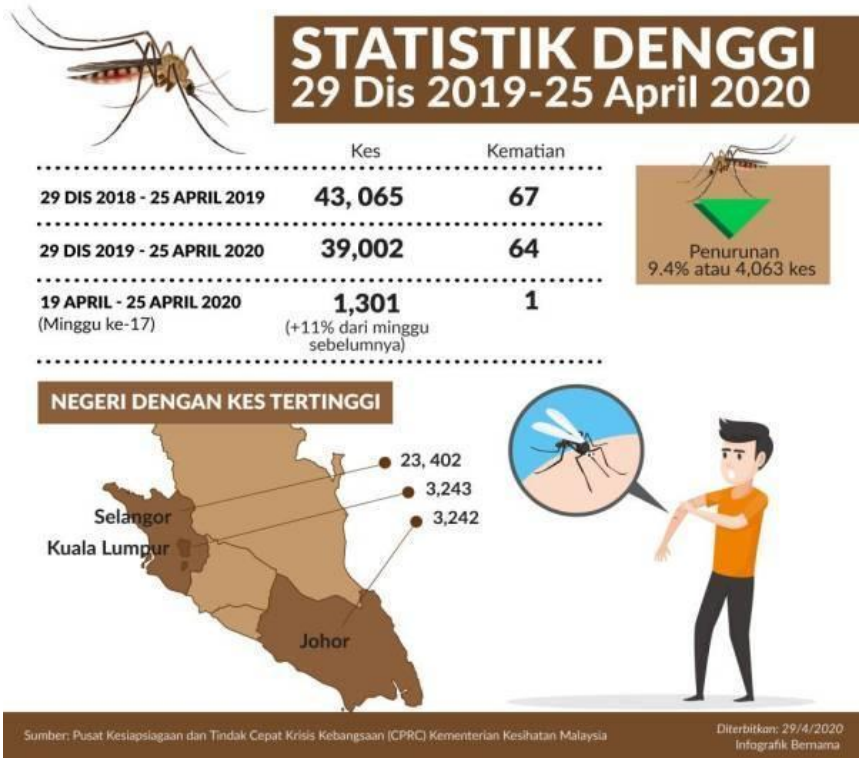

Figure 2. Dengue Cases Statictics

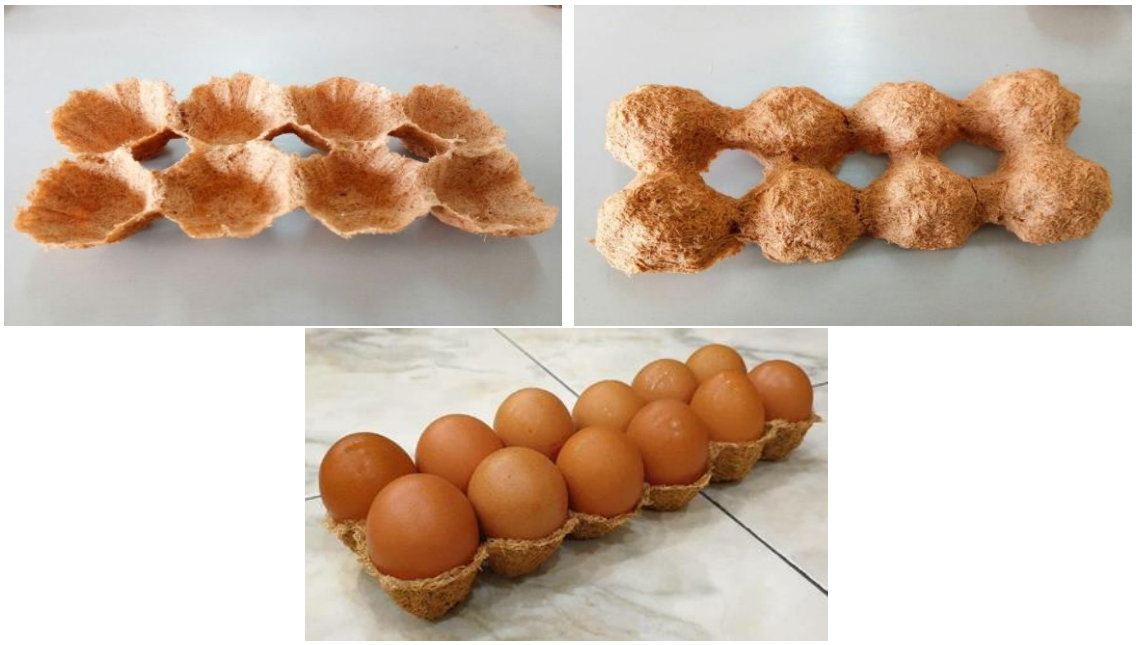

Figure 3. D-Egg Holder

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Tel: (+605) 374 2093/2453 Faks: (+605) 374 2299

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Sekian, terima kasih.

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