



## Coconut shell and its valuable potential uses

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### Abstract

Coconut is a tropical fruit that is widely cultivated in many countries around the world. The fruit has been a source of food and income for many people for centuries. Coconut shells are one of the by-products of coconut fruit, and they are often discarded as waste material. However, coconut shells have valuable potential uses in various industries, such as agriculture, construction, and energy production. This article aims to explore the potential uses of coconut shells and their economic benefits.

### Introduction

Coconut is a versatile fruit that has been used for food, shelter, and various other purposes for centuries. The fruit is widely cultivated in many tropical countries, and it is a significant source of income for millions of people. Coconut shells are one of the by-products of coconut fruit, and they are often considered as waste material. However, coconut shells have valuable potential uses in many industries. In this article, we will explore the potential uses of coconut shells and their economic benefits.

Uses of Coconut Shell: Coconut shells have several valuable uses in various industries. One of the most common uses of coconut shells is as a source of activated carbon. Activated carbon is used in water filtration, air purification, and gas purification. Coconut shells are ideal for making activated carbon because they have a high carbon content and are readily available. In addition, coconut shells can be used as a natural substrate for growing plants, as they are rich in nutrients and have excellent water retention properties.

Coconut shells can also be used in the construction industry as a substitute for wood. They are an eco-friendly alternative to wood because they are abundant and renewable. Coconut shells can be used to make furniture, flooring, and decorative items. They are durable and resistant to pests and decay, making them an excellent choice for outdoor applications.

Another potential use of coconut shells is in energy production. Coconut shells can be used as a biomass fuel to generate electricity and heat. The shells can be burned directly or converted into charcoal, which can then be used as a fuel. Coconut shell charcoal has a high calorific value and burns efficiently, making it an ideal fuel for cooking and heating.



### **Economic Benefits**

The potential uses of coconut shells have significant economic benefits. In many developing countries, coconut shells are considered waste material and are often burned or discarded. By utilizing coconut shells, these countries can create new industries and generate income. The production of activated carbon, furniture, and energy from coconut shells can create jobs and contribute to economic growth.

In addition, the use of coconut shells as a source of energy can reduce dependence on fossil fuels and promote sustainable development. Burning coconut shells for energy production can also help reduce greenhouse gas emissions and mitigate climate change.

### **Conclusion**

Coconut shells are a valuable by-product of coconut fruit with several potential uses in various industries. The use of coconut shells can create new industries, generate income, and promote sustainable development. The production of activated carbon, furniture, and energy from coconut shells can provide economic benefits and contribute to a greener future. By utilizing coconut shells, we can reduce waste and maximize the value of this versatile fruit.

### **References**

- FAO. (2019). Coconut. Retrieved from <http://www.fao.org/economic/est/est-commodities/coconut/en/>
- Kumar, P., Barman, D., & Deka, B. (2019). Utilization of coconut shell for the production of activated carbon: A review. *Journal of Cleaner Production*, 218, 55-72.
- Li, C., Li, H., Yu, L., & Zhang, J. (2019). Coconut shell-based activated carbon for the removal of volatile organic compounds from air and water: A review. *Journal of Environmental Chemical Engineering*, 7(1), 102895.