

# VALUE ADDITION THROUGH HIGH QUALITY COCONUT HUSK BASED PRODUCTS – MARKETING STRATEGIES, PROSPECTS AND EMERGING COIR PRODUCTS

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## Abstract

With the world's increasing awareness on environmental issues, there is now a very strong trend towards the use of natural fibers, rapidly replacing synthetic and mineral fibers in many product applications. Among the natural plant fibers, coconut fiber is the cheapest and one of the most abundant, with still processing and future abundant additional supply possibilities among countries which still burn coconut husks as wastes. As the use of coconut fiber in many applications in construction, agriculture, and in the manufacture of various goods, particular attention is being given to coconut fiber or coco fiber dust properties which make them ideal for certain specific product applications. Different varieties of coconut husks, materials gathering systems, and methods of processing result to different product qualities. The different variation in quality of produce by different manufacturers eventually contributes to their ability to compete in the world market. Companies which develop coir products which replaces synthetic products are becoming popular in the world market. While it has been usually in developed countries where manufacture of coir end-products occurs, there has been gradually an increasing trend in coir producing countries in the manufacture of coir based products for added value and increased competitiveness.

## 1. Introduction

Up to the middle of the 20<sup>th</sup> century, natural fibers were being used in a very wide variety of goods used in everyday life. They were indispensable raw materials for manufacturing and construction industries all over the world.

In the early 1960's, a severe decline in natural fiber production has began with the advent of lighter, cheaper, more colorful, and stronger synthetic fibers, which replaced natural fibers in almost all manufactured commodities.

Recent concerns on the environment in the late 1990's have renewed interest in the use of natural fibers. A lot of manufacturers are looking into production of environmentally friendly products using coconut fiber, the cheapest among the fibers in the world today.

In the past, it is the developing countries, which monopolized the manufacturing technologies of natural fiber products. They have generally outpaced us in research and product development. It is really a wonder why these countries, devoid of coconuts, should have monopolies research and development in coconut fiber technologies.

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But as displayed by our very small company, we can graduate from being just raw material suppliers and move to producers of secondary products:

### **1.1. Some interesting examples are the following:**

The traditional products of rubberized mattresses and furniture such as car seats are taking another resurgence. It is in constant development utilizing the springy characteristics of coconut fiber, which makes it a lot durable than foam. This is the reason why car seat manufacturers want their mattress fibers mixed with at least 25% of bristle fiber. They also want their fibers as long as possible for easy machine handling and needle punching, and without pith or hard and large particles because they cause stoppages or needle breakdowns.

#### **1.1.1. Geotextiles and Erosion Control Materials**

One of the interesting developments in the coconut fiber industry is the development of erosion control nets and coconut fiber geotextiles and erosion control products.

This interesting development is due to two main characteristics of coconut fiber: its ability to absorb water twice its weight, and its durability against decay. Its capacity to absorb water not only protects the ground by making the water flow on the string of the nets but also make it support the growth of plants. Its durability against decay makes it a suitable material for geotextile because it allows full vegetative growth for more than two years in tropical conditions and more than five years in tropical countries before it starts to decay.

Because coir materials are natural fiber, it suit very much the bio-engineering methods of construction designed to put back the vegetation in environmental rehabilitation techniques.

#### **1.1.2. Heat Insulation and Sound Proofing**

That coconut fiber is light and bulky seems to be a disadvantage because of transport cost problems.

These characteristics however is caused by microscopic cellular structure of the coconut fiber which has many microscopic holes or wall partitions making its surface area very large. Combined with its non-heat conducting lignin composition, coco fiber makes an excellent insulation and sound proofing material. To reduce its flammability, it is sprayed with Borax or white cement.

The difficulty of disposal of glass wool and other synthetic or mineral materials have made the construction industry in advanced countries to seriously look at coconut fiber materials as insulation material. Recent studies of sick buildings have also traced the causes of sickness to synthetic or mineral insulation materials as causes for the induced sickness. There is therefore a very strong interest in using coconut fiber as the insulation or sound proofing material of the very near future.

### **1.1.3. Agricultural and Horticultural Applications**

Because of the microscopic holes in the fiber and coco peat, which induces microbial growth in the soil, coco peat and coconut fiber is regarded as one of the best soil conditioners in the world.

It is not a fertilizer in the fact that it decays very slowly and does not immediately become plant nutrients. Because of its very high water holding capacity, it is able to hold fertilizers from being washed away and releases them to the plants slowly. It also save the farmer watering costs.

The greatest effect of the cocopeat in the soil is a marked increase in microbial activity, which is very beneficial to the plants. Because of its lignin composition, it is decaying very slowly and stay in the soil for a long time, further enhancing the high organic matter content required by many crops, and its soil enhancing capabilities.

### **1.1.4. Industrial Filters and Smell Removal**

Like charcoal, the high surface area of coco peat and fiber makes it ideal for filters and smell removal agents.

Many countries are now using coconut fiber and cocopeat to filter out heavy metals from water, and toxic elements from waste water.

They are also utilized not only as urine absorber as animal bedding but also as smell remover from animal pens and poultry projects.

### **1.1.5. Desert Rehabilitation and Saline Water Applications**

Our company is at present working with the Chinese government in the use of cocopeat and coco fiber materials in desert rehabilitation and Middle East companies to establish mangrove plants in desert shorelines using seawater.

## **2. Competitiveness and More Added Value through Quality**

The future calls for mass production and use of machineries for coconut fiber using both manual and mechanical means of production.

As the products of coconut fiber becomes varied and sophisticated, quality standards are gradually being set up.

To our experience, customers pay a higher premium for better quality products.

For distant countries like us in the Philippines and hampered by high shipping costs, our only chance to compete is having good quality products and development of new product ideas for marketing.