

COIR FIBER

Big Returns from Coconut

KAAGAP Development
Multi-purpose Cooperative

The topography and climate of Agusan del Sur and its abundance of coconut trees have made the production of ground nets from coco coir a thriving community enterprise.



ENVIRONMENTAL IMPORTANCE

Coconut fibers are woven into ground nets—also called geonets. These are used for erosion control, foundation wall drainage, waste-water collection in landfills, leak detection and methane gas collection, filtration, and roadway and pavement drainage, among others.

A cooperative in Agusan del Sur is making it big in coconuts.

The Kaagap Development Multi-purpose Cooperative (KAAGAPMuCo) earns from coco vinegar, virgin oil, syrup, flour, charcoal briquettes, organic fertilizers, and coir woven into ground nets, or geonets.

This processing project of the cooperative was a product of a collaborative work of the Department of Trade and Industry (DTI), the Department of Agrarian Reform, the Philippine Coconut Authority (PCA), and the Provincial Government of Agusan del Sur.

The coconut husks are turned by KAAGAPMuCo into geonets, which big mining firms in Surigao del Norte and del Sur, the Department of Public Works and Highways, and tourism resorts use to arrest soil erosion.

From only 10 members a decade ago, KAAGAPMuCo's membership has surged to 678, each making Php 200 a day from the geonets. It generates a whopping Php 4.06 million in aggregate monthly income, excluding those from other products.

The geonets are likewise used in ground rehabilitation and greening. "The soil also gets fertilized as the geonet decomposes," KAAGAPMuCo General Manager Maximo Robles Jr. explains.

"[Geonets] are turned into fish nets, and there are those used for upholstery and high-end decorative purposes," Robles says of the other uses of geonets.

Monthly, the cooperative's production base in Hubang, San Francisco town produces up to 1,000 rolls of geonets, each measuring 50 meters long, a meter wide, and about 30 kilos in weight. The spacing of the mesh as measured in inches varies per roll.

A half-inch geonet mesh sells for Php 4,250 per roll, 1-inch Php 3,000, 1.5-inch Php 2,000, and 2-inch Php 1,700.

For erosion control, the steeper the slope, the smaller the spacing is required.

"The benefits from geonet production are truly significant. It's really heartwarming to realize just how much our cooperative is able to provide the community with decent jobs," Robles adds.

The high demand for geonets is partly driven by Agusan del Sur's topography, with two mountain ranges on its eastern and western sides sloping into an elongated valley and the Agusan River in the middle flowing from north to south into the Butuan Sea.

With a climate of heavy rains almost throughout the year, the province is predisposed to landslides, making the government require the use of geonets.

The tensile strength of geonets enables it to trap the topsoil and keep the nutrients intact until it eventually decomposes to become an additional fertilizer.

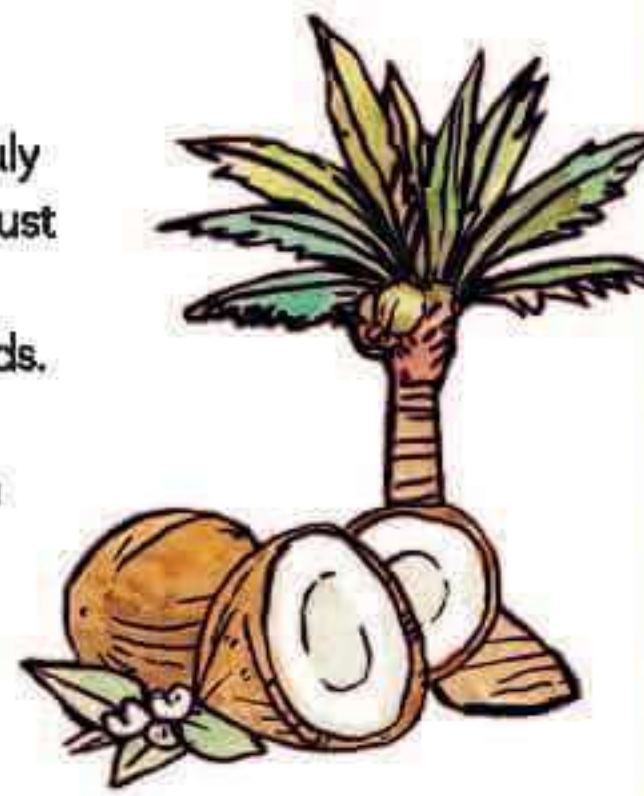
Geonet production has become very successful since the PCA facilitated the KAAGAPMuCo in gaining various grants.

DTI has also provided the cooperative with a Shared Service Facilities (SSF) project, which includes a decorticator, twining machines, and weaving equipment.

But as the market expands, so does the competition. A Japanese version made of biodegradable plastic material costs 20 percent less.

Nonetheless, the cooperative is confident of overcoming the competition through cost-efficient methodologies, with the help of DTI and the Department of Science and Technology.

"Here in the cooperative, there's no such thing as big or small. Everybody works hard. Everyone rises together," Robles says of the symphony of cooperation that they have attained in the use of coconut coir.



DID YOU KNOW?
Coconut trees can survive up to 100 years.

COOPERATIVE GROWTH
From top: Aside from geonets, they also produce other products like vinegar, virgin coconut oil, syrup, charcoal briquettes, and organic fertilizers. All of these come from the omnipresent coconut trees in the province. KAAGAPMuCo has given livelihood opportunities to the members of the community from the very beginning. Starting with just 10 members, the cooperative now has 678 active members, and is still growing.



GIVING BACK TO THE COMMUNITY
KAAGAPMuCo has been a partner in poverty alleviation, giving decent jobs to the members of the community. Their employees are able to earn a minimum of Php 200 per day to help their families.

HOW DTI HELPED

Under DTI's Shared Service Facilities (SSF) project, KAAGAPMuCo was granted Php 5 million worth of twining machines and weaving equipment to cope with the growing market demand for geonets.



A Guide to Making Geonets

- 1 Extract the fibers from the coconut husk and soak them in water for 24 hours before putting them in decorticating machines for the removal of unnecessary elements.
- 2 Set aside the coconut dusts and other wastes for subsequent use in making organic fertilizers.
- 3 Twine the decorticated fibers into ropes.
- 4 Weave the ropes into mesh according to any of the four spacing standards as may be specified by the client. Make each roll of geonet at 50 meters long and a meter wide.
- 5 Roll the finished geonet and store it in the warehouse in preparation for delivery and installation.