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IN A BLADE OF GRASS AND A GRAIN OF RICE: SUSTAINABLE AGRICULTURE AND PAPER MAKING

garden



Betty More, executive
director of KATAKUS

The barangay of Katipunan in Panabo City, 40km north of Davao City, is one of the region's largest producers of banana and coconuts. Less common knowledge is that the tall cogon grasses that serve as backdrop of the Panabo landscape, often dismissed as useless, can also be parlayed into a source of income.

Gifts from grasslands

For the past decade, the women of Panabo organised by the Kababayen-an Alang sa Teknolohiya nga Haum sa Kinaiyahan ng Kauswagan (KATAKUS), an NGO committed to science and technology for social development, have been turning out handmade paper from chopped cogon grass and banana bracts. The paper is then crafted into stationery, photo frames, decorative boxes and an assortment of gift and novelty items distinct for their rich texture (because of the *cogon* and banana bracts), and their meticulous ethnic, floral and nature designs. These are on sale in the malls of Davao City, and

even in the frequented eagle reservation park in the neighbouring baranagay of Malangos. (See story on the *Philippine Eagle Foundation* on pages 3 to 8.)

The women engaged in papermaking are members of the Kababayen-an sa Katipunan Alang sa Kalamboan. The papermaking project bagged “2nd Best Product Award” in the 1996 Canada Fund Trade Fair and Exhibit in Manila. More recently, the group was awarded 1st place at the regional level, and 3rd place at the national level, of the government-sponsored search for “Best Practice in Community-Based Training and Enterprise Development Implementation.”

The papermaking enterprise takes place in a shed at the entrance to Katipunan, which is convenient for the women as this is just near their homes. It provides regular employment to 12 women and three youths in the community, although in cases of big orders, the women in the neighbouring barangays are also mobilised. The women’s weekly output is about 400 sheets, from which they earn PhP500 (Cdn\$12.50) to PhP700 (Cdn\$17.50) a week. This is aside from the additional income earned from the gathering of materials — cogon and banana bracts — by the other family members, including the men.

Back in Davao City, in the office of Katakus, four students and three women convert the paper into an array of gift and stationery items, for which they are paid on piece basis. The students earn PhP100 (Cdn\$2.50) each, which serve as school allowance.

While modest, the women said, the money from the paper-making project has allowed them to provide for their children’s needs in school, unlike before when for want of money for something as basic as a footwear or uniform, a child ended up fined for not complying with the requirements.

The income also assures the families of food on the table. Before the project, the members engaged in *palay* and coconut farming and were always in debt.

One woman recounts that the income from paper making now allows her to buy an extra pair of panties and brassiere that she keeps in stock. “For so long, I couldn’t replace even these most basic pieces of clothing,” she said. “They’re like a spare tire.” Her companions laughed.

Always wet

Each step in papermaking is time- and labour-intensive, from chopping and cooking the grass and banana bracts, to washing these repeatedly, to pressing and drying these. The community realises this. Some women still prefer to work as plantation workers in the vast plantations surrounding Katipunan. “They say we’re

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Real leaves and flowers are used for the detail in the cards and other stationery items made by the women of Katipunan, Panabo City.



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always wet,” said the apron- and boots-clad women. “For about the same money, perhaps less, they, on the other hand, expose themselves to the dangerous fertilisers and pesticides used in some plantations.”

The women’s participation in the project and, consequently, their additional income, have also translated to a degree of gender parity. The men are less resistant to sharing household chores responsibilities such as child minding and meal preparation. When the women’s work stretches into the night, some even bring their wives supper.

The women have found that credit from the sari-sari stores is also much easier.

Because KATAKUS deliberately integrated gender sensitivity into the capability-building and training sessions with the organisation, the women also have a better understanding of themselves and their role in community building. Their paper venture has been featured a number of times on television, a significant boost to their confidence. No longer shy with their thoughts and suggestions, the women have become barangay officials or leaders of the cooperative in their community. They recently managed to convince their barangay officials to allocate a share of the barangay’s budget to fix their shed.

“Paper-making is hard work,” says Veronica Mahinay, the chair of the women’s group. “You need much patience and diligence, but as long as we persevere, this will enable us to meet our family’s needs.”

For Betty More, executive director of KATAKUS, the most immediate lesson of the papermaking project is that technology does not have to be especially sophisticated or expensive for this to redound to the people’s welfare. “My reminder to the women is for them to look around their surroundings. They will see that there are plenty of resources around them that can be tapped. With creativity

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and innovativeness, these resources can be maximised for their benefit,” she said as she gathers in both arms a roll of the freshly made blue paper Betty’s office will ship to Japan.

Betty used to be the regional coordinator of a gender and development institute based in Manila. When the programme in Davao closed, Betty and her colleagues in Mindanao set up KATAKUS.

The organisation’s network of inventors and scientists helped design the dryer, beater and presser used by the paper making enterprise so that these are women-friendly. “With the traditional dryer, you have to be tall or stand on a stool. And the traditional presser takes a lot of energy to use,” Betty said. The group’s presser and beater, on the other hand, have a handle that one can lift up or down to manoeuvre the machines easily.

Indigenous technologies

In two other barangays of Panabo, Kauswagan and Consolacion, KATAKUS is carrying out with the women a sustainable agriculture and food sufficiency programme also supported by Canada Fund for Local Initiatives in 1996, and then again in 1998. The project required that KATAKUS first engage the entire community in a stocktaking of the farming technologies used, before the concept of sustainable agriculture could be introduced.

Of course, in persuading the farmers to abandon chemical farming, a demonstration farm was necessary. On a 300-square-meter plot, KATAKUS illustrated to the farmers the techniques and benefits of green manuring, mulching, manure and urine application, the use of liquid fertilizer, natural farming technologies, rice intensification system and the indigenous knowledge system. In the upland areas, the additional technologies introduced were alley cropping, and the application of organic fertilisers on banana, corn and coconut. “You can’t force people to change by just telling them what they should and shouldn’t do,” Betty explained. “They must experience it.”

The strategy began to take root. The farmers slowly noticed the changes. Immediate was the loss of the headaches. “The men were saying that the reason why they went drinking immediately after spraying chemical inputs in the farm is that they were always dizzy. A little alcohol helped put them to sleep,” Betty said. “Others said they were always trembling, and the alcohol would help them relax. But when they stopped using chemical inputs, the headaches and tremors went away.”

Remarkable too were the improvement in their skin and the rejuvenation of nails that exposure to chemicals had eaten away.



The papermaking machinery was especially designed with the women’s smaller and shorter physiques in mind.

Farmer Maria Baylosis, whose intuitively scientific methods led to her becoming a trainer for a national organization of farmers and scientists.



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In addition to the benefits to the family's health, the women realised that in halting the use of chemical inputs, there was more money for food, the children's schooling and the other basic needs. The men, on the other hand, noted the bigger coconut yields. "The copra meat is also thicker," one farmer said.

Together with MASIPAG, a national organisation of farmers and scientists engaged in organic farming and genetic conservation, KATAKUS introduced the farmers to the use of traditional and improved traditional rice varieties that are chemical-free. The farmers now produce their own seeds as planting material, which again means less expense than in the time of chemical farming.

A seed dispersal of fruit trees including *calamansi* (native lemon) not only resulted in additional income from the fruits, but also in the adequate supply of Vitamin C for the family. Whenever the family would have *kinilaw* (fish salad), a child is simply asked to step out and pick some *calamansi*.

No more half-filled rice

For the women, pride comes from the emergence of a farmer scientist, Maria Baylosis, who, from continuous innovations in her farming methods, eventually became a member and trainer of MASIPAG. "I never expected I will get this chance to go around the country and give training to other farmers," Maria said.

Maria is also the group's caretaker of the seeds of more than 100 traditional and improved traditional rice varieties.

"We no longer bothered to buy sacks to put the rice in," Maria said. "We knew our entire harvest would go to the traders (as payment of their debts for the chemical inputs)." The farmers were left with only *ulon-ulon*, the half-filled rice.

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“And even so we would still be in debt,” Maria said. Today, the full harvest belongs to the farmers.

One of Maria’s important discoveries was how to maximise the use of carabao urine as growth enhancer. Because the carabao is a breathing and moving source, there is no way to determine when to stand by a carabao and be ready to collect its urine. Maria observed the carabao for a full week and realised that like humans, carabaos tend to urinate a few minutes after their feet get wet when they step into a puddle or bathe in the pond.

So, today, Maria can schedule her tasks. She allows the carabao to dip into a puddle or pond, then coaxes it back to higher ground and waits for the carabao to urinate. Only then will she let the carabao complete its bath. She also devised a system of bamboo pole for urine storage.

The orientation in gender and sexuality that KATAKUS conducted with the women and men in the communities improved marital relations. One of the most significant lessons to the women is that they could initiate intimacy with their partners. “We were told before that this couldn’t be done,” said Lily Doroja, Maria’s friend, “or we were just too shy. We’d send silly signals to our men such as bang the plates until they almost broke, but they still couldn’t get it.” The women are straightforward with their signals now.

Work with KATAKUS also led to “Bantay Banay” (literally, Household Watch) to monitor and handle incidents of domestic violence and other forms of violence against women in the community.

Technology does not have to be cold, expensive or destructive. As the papermaking venture in Katipunan and the sustainable agriculture programme in Kauswagan and Consolacion show, in the right hands, technology will fit into the people’s contexts and serve their needs while staying in harmony with the environment.

The sustainable agriculture project reiterated the soundness of indigenous organic farming technologies in growing bananas, a major product of Davao region.



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