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“Helping Indonesia to Grow”

AMARTA

Quarterly Report of Project Activities and Achievements

Quarter One, 2008

October 1 – December 31, 2008

Project Management

Monitoring and Evaluation

The following progress was made this quarter against the nine indicators that have been approved by USAID:

1a. Number of additional hectares under improved technologies or management practices

In quarter one 2009, AMARTA added **12,392 hectares** under improved technologies through implementation of value chain interventions including the following: Rubber (1,656 hectares), Cocoa (8,562 hectares), Coffee (1,089 hectares), Vegetables (70 hectares), Tropical Fruit and Flowers (1,015 hectares).

1b. Number of additional units of animals, fish, and other aquaculture products under improved technologies or management practices

In quarter one 2009, AMARTA added **24,625 units** under improved technologies through implementation of value chain interventions, including the following: Aquaculture (24,060 fingerlings), Seaweed (526 lines), Beef Livestock (39 cows).

2. Number of producer organizations, water users associations, trade and business associations, and community-based organizations (CBOs) receiving USG assistance

In quarter one 2009, AMARTA assisted **154 associations** and farmer groups through implementation of value chain interventions, including the following: Vegetables (1 organization), Tropical Fruit and Flowers (134 organizations), and Regional Agribusiness and Competitiveness Alliances (RACAs) (19 organizations).

3. Number of agriculture related firms benefiting directly from USG supported interventions

AMARTA implemented activities in new partnership with **6 agriculture firms**, including:

- Teluk Sahabat Takengon
- Top One Diesel
- CV. Merpati Mas
- PT. Hasbar Engineer
- CV. Amjas Sejati
- Toko Kedai Nunukan

4. Number of individuals who have received USG supported short term agricultural sector productivity training

AMARTA conducts training programs to provide knowledge on best agricultural practices in an effort to improve local farmer's harvesting capacity and to meet international standards. In quarter one 2009, **15,424 farmers (12,708 men (82%) and 2,716 women (18%))** participated in agribusiness trainings, including the following: Rubber (247 participants), Cocoa (12,669 participants), Coffee (236 participants), Vegetables (131 participants) Tropical Fruit and Flowers (1,692 participants), Seaweed (218 participants) and Regional Agribusiness and Competitiveness Alliances (89 participants).

The training has resulted in improved overall yields and post harvest handling practices, increased quality, and increased sales for farmers as illustrated in many sections of this report.

5. Percent change in value of international exports of targeted agricultural commodities as a result of USG assistance

The following exporters reported significant increases in export values compared to last year's quarterly sales, total exports totaled **\$12,455,794**:

Coffee Aceh, PT. Gajah Mountain Coffee: export value increased 100% or \$375,250

Cocoa Bali, PT. Big Tree Farms: export value increased 157% or \$73,085

Cocoa South & Southeast Sulawesi, PT. Olam Indonesia: export increased 79% or \$4,421,453 compared to last year

Cocoa West Sulawesi, UD Tunas Jaya: export increased 100% or \$6,186,039

Cocoa South Sulawesi, Palopo and Luwu District, PT. JBP Armajaro: export increased 20% or \$1,259,600 compared to last year

Seaweed: export value increased 100% or \$140,367

6. Percent change in value of purchases from smallholders of targeted commodities as a result of USG assistance

Impacts of USG assistance have produced additional positive results in the value of purchases from smallholders compared to last year's purchases in the quarter. Total purchases from smallholders totaled **\$11,409,823**:

Coffee Aceh, PT. Gajah Mountain Coffee: value of purchases increased 100% or \$285,000

Cocoa Bali, PT. Big Tree Farms: value of purchases increased 100% or \$123,254

Cocoa South & Southeast Sulawesi, PT. Olam Indonesia: value of purchases increased 84% or \$ 3,595,592 as the average cocoa price increased from Rp 16,051,- in

2007 to Rp 18,956,- per kilogram in November 2008. Actually, in terms of tons procured from farmers, the value of purchases increased 46% or 2,078 tons this quarter.

Cocoa West Sulawesi, UD Tunas Jaya: value of purchases increased 100% or \$6,186,039

Cocoa South Sulawesi, Palopo and Luwu District, PT. JBP Armajaro; value of purchases increased 25 % or \$ 1,136,083 due to average cocoa price incremental from Rp. 15,000,- in 2007 to Rp. 19,883,- per kilogram in November 2008. In terms of tons procured from farmers, the value of purchases decreased 12% or 553 tons this quarter

Seaweed in Gorontalo: value of purchases increased 100% \$ 83,078

Flowers in Berastagi: value of purchases increased 100% or \$777

7. Number of new technologies or management practices made available for transfer as a result of USG assistance

AMARTA activities have introduced **9 new technologies** or management practices available for transfer to farmers this quarter, including:

Seaweed: Bigger seed

Vegetables: Sterilization process of seedling media soil for broccoli; new composition of seedling media for broccoli; application of plastic row cover for strawberry plants; and farm management / farm record keeping, and eight varieties of broccoli seeds

Cocoa: VSD pruning and control practices, established collecting Center in farmer's groups

Banana: Cultured banana seeds

8. Number of additional surveillance and/or control systems in place for agricultural threats

AMARTA has introduced **3 surveillances and/or control systems** this quarter that serve to detect and/or protect crops from harm such as:

Seaweed: Polyshiponia (Ehipite); junk weed and control system for gently agitating lines

Cocoa: Pheromone trapping

9. Number of public private partnerships formed as a result of USG assistance

This quarter, AMARTA activities have not established any **public private partnership** to enhance agribusiness interventions.

AMARTA Grants Program

In the fourth quarter, AMARTA released one new grant for horticulture activities in West Java, supporting CV Bimandiri, a local company working with farmers to supply high quality vegetables to modern retail outlets in Jakarta. The grant approved for this project was \$12,664 and will be used to build a small packing house in Cipelah Village,

Garut-West Java equipped with the necessary equipment to more effectively pack fresh produce in order to decrease post-harvest handling damage.

Also during the quarter, AMARTA continued managing 16 active grants valued at \$992,056. Some grantees have proposed extending the duration of the projects due to project sites located in remote locations with poor infrastructure, and in some instances due to inclement weather. AMARTA is addressing these requests on a case-by-case basis and will determine the most effective way to ensure all of the grantees have sufficient time to complete their required goals while balancing timely implementation.

AMARTA also received proposals requesting both financial and technical assistance from cooperatives who are interested in institutional strengthening, including the following:

- The Centra Atsiri Toraja Farmer's Group in South Sulawesi requested AMARTA support to develop their traditional farm of Andelen
- Ariganata Cooperative requested AMARTA support in supporting coffee farmers in Central Aceh

AMARTA will consider these proposals and determine possible opportunities for assistance and collaboration.

AMARTA Quarterly Implementation

During the quarter, a number of activities were delayed due to uncertainty of AMARTA's budget ceiling. AMARTA worked closely with USAID in order to ensure that all essential activities continued without interruption, and ultimately USAID sent a request to decrease the total budget by \$1.2 million. AMARTA is preparing a modified work plan and budget response for submittal to USAID by January 5th, 2009.

Partnerships and Policy Advocacy

Network and Partnership Development

Network with Secretary General of the Ministry of Agriculture

At the request of the Directorate General of the Ministry of Agriculture, AMARTA conducted a workshop titled "AMARTA Introduced Innovation: Technology Packages, Comparative Performance, and Collaboration for the Future" in the Ministry of Agriculture's main office on November 7th, 2008. The workshop was attended by 44 participants, including AMARTA CTO Anna Juliastuti, and other representatives from USAID and Directorate Generals within the Ministry of Agriculture. Emphasis was placed on defining successful AMARTA initiatives and soliciting government support in replicating pilot projects with financial and human resources.

Coordinating with USAID-Indonesia

On November 12th, AMARTA technical staff met in the USAID Jakarta office with Mr. Lawrence Paulson, an Agricultural Development Officer for the USAID EGAT/AG Washington Office on assignment to assist the Mission in developing a new 5-year (2010-2014) strategic plan in agriculture and agribusiness. AMARTA briefed Mr. Paulson on program design, progress, and achievements, as well as general issues of agricultural development in Indonesia. As a follow up, AMARTA COP, David Anderson sent him information on expanding agribusiness activities beyond 2009.

AMARTA also met with Mr. Keith Luse at the USAID Jakarta office, Senior Professional Staff Member for the Committee on Foreign Relations, United States Senate, working for Senator Richard Lugar, who visited Indonesia to review food security issues in the country. The Mission asked AMARTA assistance in answering Mr. Luse's questions and supplying the necessary data and information.

Regional Agribusiness Competitiveness Alliance (RACA): Establishment and Activation

Empowering the Karo Horticulture Community

On October 14th, the Karo Horticulture Community (MHK) alliance formed by AMARTA visited the office of The B Commission of Karo District Parliament and the newly elected Head of the Department of Agriculture, Mr. Jenggi Surbakti. The Alliance submitted a proposal to create an Input Supply and Transfer Technology Committee, as well as coordinating follow up actions, to the Commission B of the Karo Parliament who promised to include asphaltting the central production agriculture road in Tanjung Barus Village in the 2009 budget.

On November 26th, MHK hosted an on-air interactive extension program broadcasted by a popular local radio station named *Ersena*. During the event, MHK introduced itself, explained that the alliance was born in December 27th, 2007 with full support from USAID – AMARTA, and will focus efforts on policy advocacy as a bridge between horticulture farmers and the government. Listeners enthusiastically participated in the show inquiring about AMARTA's assistance in citrus and some other horticulture commodities and requesting additional assistance in their villages.

Banana-based RACA, Talun Kenas, Deli Serdang, North Sumatera

AMARTA held training for the Banana Community of Deli Serdang, titled "Writing Proposals and Policy Memoranda Session Two" from October 21st - 23rd in the District Hall, Talun Kenas Village. The training was attended by all of the alliance members, and facilitated by a team of three instructors from the University of North Sumatera. The event was the second part of a series after the initial training conducted in September 2008, in order to empower leaders of the alliance in policy advocacy, particularly in asking for financial support from the government. As part of the training, participants wrote concrete proposals that were reviewed and ultimately submitted to the relevant government agencies.

Partnership with the Government of Tabanan Regency

On May 23rd, AMARTA and the Tabanan Government co-hosted the official launching of the Tabanan Cocoa Community Alliance or AMARKATA (*Aliansi Masyarakat Kakao Tabanan*) at the Tabanan Regent Office. Through the Office of Forestry and Estate Crops Services, the Tabanan Government agreed to support AMARKATA. The Tabanan Government has revised its budget accordingly to accommodate the AMARKATA request for support. In fiscal year 2008 the Government of Tabanan provided three cocoa dryers with a value of Rp 84 million for AMARKATA. The Vice Regent who officially launched the initiative also promised to provide continuous support for the new organization.

The official declaration of AMARKATA on October 27, 2008 was attended by the Vice Regent of Tabanan District, Tabanan District Forestry and Estate Crops officials, local cooperatives, trade and industry organizations, regional development agencies, university staff, and representatives of some farmer organizations in the region. The declaration was also attended by farmer's group's leaders who were trained in cocoa cultivation techniques by AMARTA. Wayan Suarma, the head of AMARKATA, expects that the organization will have a significant impact on government policies linked to the cocoa value chain. In addition, he also expressed his gratitude to the Forestry and Estate Crops Office of Tabanan District for accommodating the construction of solar dryers for three farmer's groups proposed by AMARKATA.

The launching ceremony was followed by a workshop on "Efforts to Improve AMARKATA's Institutional Capacity in Cocoa Development". The discussion focused on quality and how prices are defined including wet and fermented cocoa beans that are purchased by PT Bening. Issues discussed also included the availability of cash for farmer's groups who operate cocoa processing units for fermentation. AMARKATA also formulated a program matrix covering different issues affecting cocoa, such as: Infrastructure, agro-input use, determining appropriate and applicable agricultural technologies, appropriate processing facilities, and market access. Further Training on how proposal writing was held on December 19th-20th 2008, focused on improving the AMARKATA management board's skill and capacity, particularly in proposal writing.

"The construction of solar dryers is very useful for farmer groups, particularly those who produce fermented cocoa beans. As proposed by AMARKATA, the government will assist farmers in using applicable methods for drying in achieving better quality. This solar dryer is a new technology for cocoa post-harvest handling and should be replicated in other places."

Ir. Putu Budiasa, MMA- The head of Section for Plantation Product Processing, Estate Crops Services, Tabanan Regency

Aquaculture

Grouper Nursery and Grow Out Development in Loh Mbongi

During the quarter, grantee PT Karamba continued major renovations in rehabilitating and upgrading grouper hatchery and nursery facilities. Construction of six new additional concrete hatchery tanks and the nursery building, including the plumbing for both facilities, was completed, as well as new concrete live feed (rotifer) tanks. A new generator was also installed and is running properly to maintain a constant supply of electricity.

The final structural work will be completed in January 2009, providing full production in order to meet the goal of producing 20,000 healthy humpback grouper fingerlings per month. PT Karamba is planning to install a new filtration system that will include a new UV system, different sizes of sand filters, and carbon active devices in order to prevent disease and virus outbreak. Ten more fiberglass nursery tanks will be produced and delivered to Loh Mbongi Facility in early January. A final check of the nursery tanks plumbing will be completed after all the fiberglass tanks are installed. PT Karamba is prioritizing completion of the filtration system and equipment in order to operate at full capacity and meeting the standards of the Indonesian Fisheries Department.

While the construction continues, PT Karamba is still producing high quality fingerlings. Optimal production is limited by space until all of the construction is finished; however significant improvements in technique for brood stock maintenance have resulted in higher quality and quantity of eggs, allowing harvest time to increase from three days to eight days.



New hatchery building completed



Part of the 20,000 6cm fingerlings produced

Village Based Net Cage Pilot Program in Warloka Village

PT Karamba and Warloka fishermen continued to develop best practices for the grouper grow-out operation. Fresh water bathing and cleaning nets are being utilized to decrease stress on the fish. Along with correct feeding, this method has been proven to help fish grow faster and lowers the mortality rate, even during inclement weather apparent in the rainy season. Currently, fish growth is high and weight is increasing rapidly. Next quarter, PT Karamba will deliver more fingerlings once the weather improves, most likely in the third week of January.



Healthy fingerlings bathed and cleaned

Rehabilitating Shrimp in Aceh

During the quarter, AMARTA worked with grantee PT Aceh Windu Lestari on completing and operating the testing laboratory. All of the equipment, including: the PCR system, auto clave, microscope, oven, and incubator were installed, while chemicals and glassware were also provided. The two key staff and their assistants responsible for operating the laboratory commercially were trained by the vendor on using the equipment properly, and also trained by AMARTA's aquaculture consultant on selecting appropriate samples, tests, and analysis.



The PCR installed and ready for use

PT Aceh Windu Lestari also provided one hatchery facility that was renovated into a quarantine station; this new facility will provide high value overall support to the project. As part of the cost sharing contribution AMARTA demands from grantees, the quarantine station will be used as a training facility for targeted beneficiaries during the next quarter.

On December 11, the laboratory was officially inaugurated and opened for commercial use. The ceremony held at the laboratory was attended by local government officials, NGOs, hatchery and shrimp pond businessman, local journalists, and other stakeholders. During the ceremony, AMARTA also took the opportunity to introduce the project, socialize the laboratory services, and present a training session to discuss shrimp pond issues with beneficiaries. During his opening speech, Mr. Razuardi a represent from the Bireuen Bupati's office mentioned that this laboratory and its services will be a valuable local economic resource since the region has at least 5,000 hectares of productive shrimp ponds. The local government also emphasized their commitment to support the rehabilitation of aquaculture in the area.



The new laboratory opens for business



Tour of the quarantine center

In the next quarter, AMARTA will continue to supervise the staff to ensure they efficiently operate the laboratory, as well as providing technical assistance in best aquaculture practices such as sustainable and eco-friendly production methods for grow-out farmers and hatchery businessman. PT Aceh Windu Lestari will organize a number of prawn hatcheries in the area of Aceh, (Sigli and Bireuen) to cooperate in collecting and maintaining black tiger prawn parent stock that is free from viral contamination and can be certified for sale to farmers.

Livestock

AMARTA grantee Puskud NTT continued providing training and technical assistance to the 20 participating farmer's groups in West Timor who are engaged in cattle breeding activities. Funds were provided for 300 cows, unfortunately six of those cows have died, however Puskud has replaced those six cows and added an additional 54 from their own funds to bring the total to 354. The breeding program produced a total of 56 calves, 36 are still alive and in good health- a 64% survival rate which is significantly higher than other programs in Indonesia

according to leading experts. All of the remaining cows are pregnant and Puskud expects births by April 2009.

During a visit by AMARTA from November 9-11, a number of recommendations were made to enhance the project including: 1) Improving the artificial insemination procedures as necessary to supplement natural birth, 2) preparing additional food for the dry season when very little food is available, 3) improving the water supply for heifers and calves-including the possibility of constructing a water pipe scheme, 4) organizing a field day for farmers and government agencies to replicate the project, and 5) developing a breeding center with cows and bulls that have proven genetic records.



A mother and new calf in Kupang, West Timor

In addition to monitoring five of the farmer's group's sites, AMARTA also met with the Governor of NTT, Dr. Frans Leba Raya, where AMARTA COP, David Anderson, explained AMARTA's objectives and projects in NTT and stressed the need for replication of successful pilot projects by the government. The Governor thanked AMARTA on behalf of the community and noted that he wants to promote beef cattle in West Timor. The Vice President of Indonesia told the Governor that NTT needs to become the leader in livestock cattle production. If the AMARTA model is successful he is willing to support and extend efforts. AMARTA also met with Amirudin Pohan of BPTP, where David Anderson requested assistance in helping to disseminate new technology to farmers. AMARTA requested that BPTP visit the 20 locations with 354 cows to see how AMARTA and Puskud developed the innovative package. Finally, AMARTA visited the Dinas in Kupang to meet with Dr. Maria Geong. Discussions included the threat of diseases



AMARTA COP, David Anderson, stands with the Governor of NTT and others helping to promote cattle production in West Timor

impacting livestock; AMARTA and Puskud noted that all cows are free of brucellosis and are blood tested for diseases and then vaccinated.

During the next quarter, AMARTA will continue to ensure that calves are born healthy and proper feeding and maintenance are provided to calves and heifers. In addition, further efforts will be made to work with the government in providing resources and supporting replication of the breeding project.

Bio-fuels

AMARTA's pilot program in bio-fuels continues assisting farmer's groups in the villages of Legu and Uluwae, on the island of Flores, to experiment with technologies that can substitute jatropha oil for fossil fuels. The jatropha seedlings that were planted in Legu are growing very well. Farmers there are currently being trained to prune their plants, which will increase yields and keep the plants short, so they are easy to harvest. In Uluwae, the plants are growing slowly, due to the cloudy, cold weather in the area.



A jatropha plant after pruning, showing re-growth of branches

In Legu, the first harvest is expected in February 2009; this will coincide with the harvest from the existing hedges and wild plants in the area. In Uluwae, the first harvest will be limited, due to the small size of the plants.

The farmer's group in Uluwae is making arrangements to purchase jatropha seed from a nearby village with wild plants at lower altitude. Also, dynamos to generate electricity have been installed in each location. These will be operated on jatropha oil, as soon as a sufficient quantity of seed has been harvested.

Cocoa

AMARTA Sulawesi Kakao Alliance (ASKA) Training Program Overview of Basic Training Activities (September-November 2008)

The third cycle of Basic Training for 350 farmer's groups- approximately 8,750 cocoa smallholders- began in August 2008. The decline in productivity linked with Vascular Streak Dieback (VSD), trunk kanker, and black pod (*Phytophthora sp.*) has been so severe that production declines have dropped to below 200 kgs per ha per year in some locations. The Indonesian Government has responded by declaring a \$150-200 million,

three year rehabilitation and replanting program. Approximately 8-10 months prior to this declaration, the AMARTA team identified and conveyed the extent of the issue to key stakeholders- particularly ASKINDO- who upon consultation and confirmation with its industry members, began to lobby for government support. During this time, AMARTA prepared a strategy and technical materials with input and comment on the recommended interventions from world experts on VSD and Phytophthora sp and government stakeholders to enhance the ASKA training.

Since that time AMARTA has led the way in developing and producing training materials to support farmers, as well as introducing a small scale training program in one of the most heavily affected areas- Mamuju District, West Sulawesi. A specialized training program was initiated in the last week of September, with approximately 60 farmer's groups (FGs) from Mamuju receiving training in cocoa garden evaluation, analysis, and technical aspects linked with replanting and rehabilitation efforts.

Due to the specific training activity for Mamuju District beginning in September 2008 a total of 290 FGs continued with the regular Basic Training Cycle 3. The previous three months training activities spanned a variety of topics across the three provinces and included: 1) frequent harvesting and sanitation, 2) pruning, 3) fertilizing- theory and application with a strong recommendation to use organic alternatives, 4) understanding and controlling pests and diseases, 5) appropriate storage and sorting of beans, 6) cocoa pod splitting and drying techniques, 7) defining cocoa bean quality, 8) cocoa clinic, and 9) harvesting technology and pod sorting. Topics vary from location to location and are synchronized with local seasonal growing conditions. Those attending ASKA farmer-field school training not only included participating cocoa farmers, but also a range of other stakeholders like non-ASKA farmers, local NGOs, government officials, as well as ASKA private partners PT. Olam Indonesia and PT. JBP-Armajaro.



Cocoa clinic for women in PT Olam's buying station

In South Sulawesi, a total of 80 FGs were involved in Basic Training Cycle 3, 10 FGs from Pinrang and 70 FGs from North Luwu District. AMARTA targeted a total of 2,000 participants in both districts, with the actual number of participants attending training above 93% of the target. The exception being the second week of September 2008 linked with religious holidays and elections in some areas where training was postponed.

In West Sulawesi, 120 FGs (approximately 3,000 farmers) participate in the ASKA program, with 60 FGs from Polewali Mandar (Polman) and Mamuju District respectively. A total of 3,059 participants received training in the first and second week of

September. Following the first general topic, FGs in West Sulawesi attended different training activities with new modules in Mamuju. More than 98% of the 1,500 targeted participants attended training.

In Southeast Sulawesi, 150 FGs or approximately 3,750 farmers participated in basic training, with 80 FGs from Kolaka and 70 FGs from North Kolaka Districts. In total the number of participants attending the fortnightly sessions averaged over 100% of the expected 3,750 participants. A total of nine different topics were taught to cocoa smallholders and other stakeholder in September.

Table 1. Number of participants of ASKA Basic training in Cycle 3

Month	Week	Topics	Attendance			
			Male	Female	Total	
September 2008	1 and 2	Harvesting technology and cocoa pod sorting	1,784	237 (12%)	2,021	
		Pests and Diseases	2,999	479 (14%)	3,478	
		Fertilizing	2,740	549 (17%)	3,289	
	Total		7,523	1,265 (14%)	8,788	
	3 and 4	Cocoa pod splitting and drying techniques	1,756	288 (14%)	2,044	
		Frequent harvest and sanitation	3,024	473 (14%)	3,497	
		Defining cocoa bean quality	1,196	329 (22%)	1,525	
	Total		5,976	1,090 (15%)	7,066	
	October 2008	1 and 2	Cocoa bean sorting and appropriate storage	1,949	307 (14%)	2,256
			Cocoa clinic	747	114 (13%)	861
Defining cocoa bean quality			843	173 (17%)	1,016	
Frequent harvest and sanitation			1,173	318 (21%)	1,491	
Harvesting technology and cocoa pod sorting			1,469	211 (13%)	1,680	
Total		6,181	1,123 (15%)	7,304		
3 an 4		Cocoa clinic	3,629	778 (18%)	4,407	
		Cocoa pod splitting and drying techniques	871	117 (12%)	988	
		Defining cocoa bean quality	405	95 (19%)	500	
		Harvesting technology and cocoa pod sorting	687	72 (9%)	759	
		Pests and Diseases	636	114 (15%)	750	
Total		6,228	1,176 (16%)	7,404		
November 2008	1 and 2	Cocoa bean sorting and appropriate storage	1,426	215 (13%)	1,641	

	Cocoa clinic	536	64 (11%)	600
	Defining cocoa bean quality	233	17 (7%)	250
	Frequent harvest and sanitation	131	100 (43%)	231
	Harvesting technology and cocoa pod sorting	2,012	477 (19%)	2,489
	Pests and Diseases	1,684	322 (16%)	2,006
	Total	6,022	1,195 (17%)	7,217
3 and 4	Cocoa clinic	875	109 (11%)	984
	Cocoa pod splitting and drying techniques	3,248	699 (18%)	3,947
	Harvesting technology and cocoa pod sorting	116	125 (52%)	241
	Pruning	1,665	343 (17%)	2,008
	Total	5,904	1,244 (17%)	7,180

Follow-Up Training Activities (September-November 2008)

As the first cycle of basic training finished in December 2007, ASKA technical assistance continued with follow-up training for 116 FGs or approximately 2,900 farmers located in three districts in South Sulawesi (Luwu, North Luwu, and Pinrang Districts), two districts in Southeast Sulawesi (Kolaka and North Kolaka) and one district of West Sulawesi (Polewali Mandar). Implementation of the follow-up training focused on several topics including garden evaluation and cocoa tree revitalization, controlling pests and diseases, and preparing organic fertilizer and use of natural pesticides.

In South Sulawesi, 56 FGs or approximately 1,400 farmers participated in the follow-up program, 26 FGs from North Luwu, 20 FGs from Luwu, and 10 FGs from Pinrang District. Five topics were delivered to attendees comprising more than 90% of the 1,400 target participants each month. Unfortunately, a number of participants could not attend training as a result of damage to cocoa gardens after heavy rain, which resulted in flooding and water logging particularly in Malangke, Mappideceng, and Masamba Sub-districts (Luwu). The other issue impacting attendance was the discovery of a large gold deposit in Bombana District, Southeast Sulawesi. It was estimated that upwards of 20,000 people flooded to the area to look for gold, including some ASKA farmers.



In Southeast Sulawesi, 50 FGs or approximately 1,250 farmers began follow-up training activities

A women's FG practices pruning techniques in Pinrang

in the province, with 40 FGs from Kolaka and 10 FGs from North Kolaka Districts. Participants continued enthusiastically learning about cocoa garden management during the three months, as 100% of the 1,250 target attendees were present.

In West Sulawesi, 10 FGs or about 250 farmers from Polewali Mandar District were involved in ASKA follow up training with approximately 92%, of the anticipated 250 cocoa farmers targeted participating.

Table 3. Number of participants of ASKA Follow up training in cycle I

Month	Topics	Attendance		
		Male	Female	Total
September 2008	Garden evaluation and cocoa tree rehabilitation	1,410	280 (17%)	1,690
	Controlling pests and diseases	723	327 (31%)	1,050
	Total	2,133	607 (19%)	2,740
October 2008	Garden evaluation and cocoa tree rehabilitation	417	183 (31%)	600
	Preparing organic fertilizer	1,765	408 (19%)	2,173
	Total	2,182	591 (21%)	2,773
November 2008	Monitoring and evaluation on cocoa garden	1,722	414 (19 %)	2,136
	Preparing organic fertilizer and natural pesticides	362	178 (33%)	540
	Total	2,084	592 (22%)	2,676

SustaIndonesia Kakao Alliance (SKA) - Smallholder Training in Bali

The first cycle of SKA Basic Training was conducted for 40 FGs in Tabanan District, Bali and was completed in June, 2008. A total of 12 training topics were taught to farmers from four sub-districts (Selemadeg Barat, Selemadeg, Selemadeg Timur and Penebel). Following a positive response, SKA training was extended to Jembrana District under a second cycle of training. The training implementation involved 40 FGs (approximately 1,000 farmers) from two sub-districts, Pekutatan with six villages and Mendoyo with nine villages. The first training session included socialization and basic concepts and began on August 22nd with baseline surveys fielded during this session. Cocoa garden evaluations began in the second week of September 2008 and were attended by 1,016 participants consisting of 997 farmers, 19 village leaders from local governments, and local agricultural extension agents from Jembrana District. The participatory approach and interactive learning process used by AMARTA trainers encouraged farmers to implement techniques directly in their fields and share their experiences with colleagues.

“We were very glad to join in the SKA cocoa training program delivered by AMARTA. We had actually already participated in previous cocoa trainings programs but the techniques we learned from AMARTA were different. AMARTA focuses on the practical aspects on the technologies trained. Direct participation in the SKA study gardens is the best technique we have seen as we ‘learned by doing’. We also liked the current training since AMARTA field trainers invited extension workers to conduct training.”

Mr. I Gede Putera, Chairman of Langun Udiana Sari Farmer’s Group, Yeh Sumbul Village, Jembrana

In an effort to access export markets and build better partnerships, AMARTA introduced PT Bening/ Big Tree Farm to SKA farmers. The topic of export quality standards was discussed by PT Bening staff at their facility, with 1,022 participants attending this session. Presentation of training materials explaining how export cocoa beans are defined and measured enabled farmers to better understand the specific quality criteria necessary for exporting. During the training, farmers were encouraged to measure the quality of their own cocoa beans and determine the price for the samples. In addition, the farmers were also invited to observe and experience the fermentation process conducted by PT Bening at the Center of Cocoa Production Unit (CCPU), which also allows farmers to learn and see a range of other important post-harvest handling practices, including the use of solar dryers, sorting, grading and handling of dried beans, and appropriate storage techniques.

LPSMAK Field Visit to Bali

From October 29th-31st, AMARTA facilitated a short field visit by members of Amungme Kamoro Community Development Foundation (LPSMAK), a social and economic development organization sponsored by Freeport, Timika District, Papua) with the aim of learning how AMARTA trains cocoa farmers and works with the private sector. The delegation was led by John Nakiaya, Executive Secretary of LPSMAK, and other members, Matheus Adadikan, Leonard Piry, Mathias Katagame, and Yohanes Arwakon. The group visited SKA FGs in Jembrana and Tabanan Districts. Discussions between LPSMAK representatives and cocoa farmers from Sumber Urip and SA Amerta FGs involved numerous topics at the study gardens and continued to community halls where the enthusiasm and positive response impressed LPSMAK, as members noted how devoted the FGs were to the program. On the second day, LPSMAK visited AMARTA grantee, Big Tree Farm’s CCPU to learn the role of the private sector in the program, including fermentation practices and defining export quality standards for cocoa beans. The delegation also visited a smallholder’s fermentation processing facility in Buana Mekar , Angkah Village, Tabanan District.

“Smooth cooperation among local people [FGs], the government, and AMARTA in Bali is very exciting to learn about. The program in Bali is extremely well run and improving the welfare of farmers. In the future, local people of Timika should be here to learn much more about these relationships since we hope AMARTA can replicate successes for LPSMAK.”

Mathias Katagame, member of LPSMAK

Tabanan Regent Visits Cocoa Farmers in Kolaka District, Southeast Sulawesi

In an effort to increase and strengthen the capacity of local government officials and cocoa farmers, AMARTA facilitated a comparative study tour to Kolaka District, Southeast Sulawesi. The goal was to provide information about the application of cocoa technologies recommended by AMARTA to FGs, as well as enabling direct observation of the cocoa production systems and introducing the partnership between PT Olam Indonesia and local farmers. Twelve participants, including: The Regent of Tabanan, Mr. N. Adi Wiryaama, the Secretary of Tabanan, Head of Estate Crops, Head of Development Planning Board, agricultural extension workers, and cocoa farmers attended the study tour from November 13th-16th. On November 14th, the Regent and other participants visited a PT Olam buying unit, and spoke with members of the Subur Jaya FG and Sipatuo FG study gardens, in Ladongi Sub-district. Discussions were held between the visitors and local farmers about their experiences with transparent purchasing and higher prices received for better quality beans graded at the buying unit of PT Olam. Listening to Sulawesi farmer's experiences convinced the Regent to adopt new technologies introduced by AMARTA, such as: Side grafting and pruning techniques, sanitation, propagation techniques, and usage of solar dryers that will be extensively developed in Tabanan District.

“This is the first time I practiced pruning cocoa trees and I will now prune my own cocoa trees in Tabanan and show farmers how to control diseases and improve production. The lessons I learned in Sulawesi will assuredly help improve cocoa in Tabanan.”

N. Adi Wiryatama, Regent of Tabanan

International World Cocoa Foundation (WCF) Workshop in Hamburg, Germany

Simon Badcock, AMARTA Senior Commodity Advisor, attended the 14th WCF Workshop in Hamburg between October 8th and 9th. The theme of the workshop was “Strategies and Practical Measures for Transforming the Cocoa Sector”. Mr. Badcock was invited to present a paper at the Profits Intervention Forum where he discussed an analysis of: *Exploring increased Profits for Smallholder Cocoa Farmers in Private-Public Partnerships: Opportunities, Challenges, and Lessons Learned from AMARTA Program Interventions in Indonesia*. The presentation was well attended and well received by participants. The workshop also enabled the opportunity to meet with key AMARTA private sector partners including Kip Walk (Blommer Chocolates) and Gerry Manley, Chris Brett, and Saurib Mehta (Olam International) with fruitful discussions held with respect to progress, opportunities, and next steps in fostering cocoa production in Indonesia.

International Cocoa Conference in Bali

AMARTA technical personnel attended the 2008 Indonesian Cocoa Symposium with the Theme: “Accelerating Plantation Revitalization for Achieving Sustainable and Improved Cocoa in Agroindustry”, organized by the Indonesian Coffee and Cocoa Research Institutes (ICCRI) in Denpasar, Bali on October 28th-29th. AMARTA had a stall at the

symposium with considerable interest in the training program, posters, training VCDs, and other activities being conducted in Sulawesi and Bali. Simon Badcock provided a brief paper titled: *Socio-Economic and Technical Impacts of AMARTA Extension Methods in Central Cocoa Producing Areas of Sulawesi* at the meeting, which was well received.

Solar dryers and farmer study gardens

Solar dryer training and construction continued to extend and develop in other ASKA program locations, though with a range of different modifications including size, design, and material used. Seventy eight solar dryers have been erected across eight districts of South, Southeast, and West Sulawesi, 56 of which were replicated by cocoa farmers of Kolaka District, Southeast Sulawesi. Following positive response and feedback from farmers and stakeholders, recently AMARTA supported 50 solar dryers for 30 FGs in Polewali Mandar and North Luwu, and 20 solar dryers for groups in North Kolaka.

Overview ASKA farmers daily data tracking results

Daily data tracking of farmers assisted in the ASKA program in monitoring cocoa farmer's achievement in production, quality, and income per individual. A total of 320 randomly selected farmers from all the FGs of Cycles 1 and 2 provided information on selling dried cocoa beans to exporters or local traders between January and August 2008. Daily data tracking results showed improvements after intensive basic training for six months, including:

- Improved access to market – By August 2008, a total of 72% of farmers accessed export markets compared with 7% in June 2007.
- Increased Production - 44% in West Sulawesi, 37% in South Sulawesi, and 27% of farmers in Southeast Sulawesi have seen an increase in 2008 production compared to 2007.
- Improved Cocoa Quality - 48% of farmers are now achieving appropriate bean count, 35% moisture content, 47% waste, and 40% mould according to various export based quality standards.
- Improved price per kg – There was a significant trend for farmers receiving a higher price when selling to exporters. On average, the total increase in price across the eight month period was Rp 4,768 per kg, however for those farmers who initially sold to local traders and then changed to sell to exporters the average increase in price per kg was Rp 5,624- a premium of between 20-26% directly linked to improved quality of cocoa, market access, and price transparency.



Farmers selling cocoa to an exporter

Training Films Receive Praise

Positive responses and feedback for cocoa garden management and appropriate post harvest handling training VCDs have been received, not only from AMARTA targeted smallholders, but also national, provincial, and district estate crops officials. In addition, AMARTA partners like PT Olam Indonesia, UD Tunas Jaya, and PT JBP Armajaro, and research institutes have responded favorably to the smallholder films. Following the widespread positive response and tied with the increasing severity of the crisis currently affecting the Sulawesi cocoa sector, AMARTA has produced a technical package and approach to the massive challenge facing the industry in the form of rehabilitation or replanting. An important contribution will be the production of a second film series which focuses on cocoa garden evaluation, rehabilitation, and replanting. The video will be completed and distributed in the next quarter.

Coffee

Arabica Coffee

AMARTA is supporting the activities of the Specialty Coffee Association of Indonesia (SCAI), which now has 56 members from all segments of the industry. The largest segment continues to be exporters, followed by farmer's cooperatives and retailers. The seven coffee cooperatives that have joined the association represent 8,050 members. SCAI members export or roast 50% of Indonesia's total Arabica coffee, worth \$101 million per year.

An important goal of SCAI is to continue increasing the quality of Indonesia's Arabica coffee. In addition to physical attributes like absence of defects and good flavor, traceability is a key component of quality. Importers are willing to pay more for coffee

if they can be sure of its origin. To increase traceability, SCAI is working in three areas, with financial and technical support from AMARTA:

1. Educating coffee farmers, government staff and the private sector about Indonesia's new Geographical Indications (G.I.) law. A G.I. is a kind of intellectual property right, collectively owned by farmers, processors and government from a given area. Famous examples of G.I.s are sparkling wine from Champagne and coffee from Columbia. Coffee producers in Bali recently formed the first G.I. in Indonesia. Producers in other origins are interested in emulating this example.
2. Developing maps of all the Arabica production regions in Indonesia. This activity has never been completed before and these maps can serve as the basis for developing G.I.s. They can also be used for internal monitoring and to promote Indonesian coffee at trade shows and other events.
3. Producing "Type" samples of coffee from each region to educate importers and roasters about the flavors of coffee from different origins.

In the first phase of this program, workshops on Geographical Indications and mapping have been held in Eastern Java (Jember), Flores, Lake Toba (Sidikilang and Lintong) and Medan. A total of 150 participants attended the five workshops, with farmers accounting for 43% of the total. In January and February, the final workshops will be held in Aceh, Sulawesi, and Papua.

In recognition of its role in the development of G.I.s, SCAI was asked to present its activities at a meeting organized by the Directorate General for Intellectual Property Rights and the World Intellectual Property Organization (WIPO), which took place in Bali from December 10th to 13th. One hundred and fifty two people attended this workshop, including many high ranking government staff from Bali and Jakarta.

In November, SCAI hosted a visit for five coffee importers from the U.S. and Europe. These buyers traveled to Lake Toba, Takengon and Toraja, visiting SCAI members in each area. These buyers are interested in working with Indonesian cooperatives and exporters to improve quality, and are currently finalizing significant export orders.



Geoffrey Watts from the US sampling parchment coffee in Toraja, Sulawesi

AMARTA Coffee Grantees

AMARTA continued to monitor and support its two grantees in the coffee sector, PT. Gajah Mountain Coffee in Aceh and C.V. Lion Lestari in Flores, both of whom are SCAI members. The cooperatives working with both companies have completed their applications for Fair Trade certification, and are now awaiting inspection.

Between October and December, P.T. Gajah Mountain Coffee purchased 142.5 tons of coffee from the Gayo Mountain Cooperative. PT. GMC sorted and graded the coffee using the equipment purchased under the AMARTA grant. The company exported 19 containers of coffee during the quarter, with a total value of \$ 375,250. This is a 100% increase over the same quarter of 2008.

Brocap trap to combat Coffee Cherry Borer

The Coffee Cherry Borer (CCB) is a major coffee pest in Indonesia. AMARTA and its partners have distributed 1,000 Brocap Traps to 150 farmers in Sidikilang, Toraja and Aceh to capture CCB. Collection of data on the performance of the traps continued through December. The results of this data will be presented to farmers in a series of trainings scheduled for early 2009.

High Value Horticulture

Strawberry Program in Rancabali-Bandung

Efforts continued on the “Red-Ripe Strawberry” activity that began in November 2008. AMARTA trained farmers on covering strawberry plants using a thin transparent plastic sheet to protect them from damage that can reduce yields by 50%. The easy to use system covers the fruit during severe rain, and can simply be rolled up when the weather is mild. It is a simple and inexpensive technology that only costs about Rp. 1,500 per meter of strawberry planting row.

Two buyers have agreed to purchase ASGITA Red Ripe strawberries: Lotus Distribution and Amazing Farm companies who are willing to purchase the fruit at double the current market price for common strawberries, Rp 20,000 per kg compared to Rp10,000- essentially increasing farmer’s income by 100% as described in the table below:

Common Strawberry		Red-Ripe		
Grade	Farm Gate Price (Rp/kg)	Grade	Brand Name	Farm Gate Price (Rp/kg)
A	12,000	A	Big Red	21,000
B	8,000	B	Just Right	16,500
C	5,000	C	Baby Sweet	11,500
Un-graded	waste	D	Processing raw material	6,000



“Red Ripe” strawberry harvest



Covering strawberry plants

Support From Local Governments and Universities

The strawberry program received enthusiastic support from the Bandung Local Government, including the Regional Agricultural Service. Padjajaran University, using funding from the regency, has provided business training and cooperative management to growers. The Bandung local government also provided cold storage resources worth Rp 130 million, plus an additional Rp 120 million in support totaling Rp 250 million. The LPM-UNPAD (Lembaga Pengabdian Masyarakat-Universitas Padjadjaran or Social Service Institute of Padjadjaran University) also contributed around Rp 50 million for the ASGITA institutional development training program. AMARTA is also working with these partners on ensuring the project is sustainable.



ASGITA cold storage facility



BAPPENAS, USAID, and ASGITA discuss future strategies

BAPPENAS and USAID Field Visit

From December 1st – 3rd, three staff from BAPPENAS chaired by Mr. Nono Sutarno and Ms. Dina Syarif from USAID visited Rancabali, observing AMARTA’s “Red-Ripe” sites. They also visited Dinas Pertanian and had a general discussion on the future of AMARTA-Dinas collaboration, while Ms. Syarif also visited AMARTA’s broccoli program demonstration plots in Lembang-Bandung.

During the visit, ASGITA explained its agribusiness activity to the delegation and the Deputy Head of Dinas explained its program and collaboration with AMARTA and LPM-UNPAD. Both ASGITA and Dinas Pertanian were very appreciative of the USAID-AMARTA contribution towards Bandung horticultural development and are hoping that the AMARTA program can continue to broaden its commodity coverage. In response to this proposal, and after observing AMARTA's activities more closely, Mr. Nono of BAPPENAS commended AMARTA for its efforts.

ASGITA's Red-Ripe Strawberry Displays

In commemoration of The World Food Day, Indonesia conducted a food and agriculture product exhibition in Bandung from December 1st-4th. Dr. Anton Apriantono, Indonesian Minister of Agriculture, visited the ASGITA display and requested that the excellent quality of the "Red-Ripe" Strawberry program expand and consider adding processed strawberries. Similar appreciation came from Mr. Achmad Heryawan, the Governor of West Java, when he visited ASGITA's stand as mentioned in *Tribun Jabar Daily Newspaper* on December 3rd.



Dr. Anton Apriantono, Minister of Agriculture, visits ASGITA's display



Mr. Agus, one of ASGITA's Chairmen explains the "Red-Ripe" Strawberry program to the Governor of West Java

Broccoli Program in Lembang-Bandung

The results of the August 2008 broccoli harvest using tray based nurseries showed 10% of the crop still infected. AMARTA surmised that the disease persisted due to inappropriate crop rotation; many farmers still insist on growing broccoli without rotation, while transplant sanitation is also a problem. In order to address these issues, on November 2008, AMARTA demonstrated the improved nursery technique of steaming transplant media. The seedling operation was also sanitized and set up on wire to promote root pruning, hardening off, and prolific seedling growth using proper transplant trays. As a result of this initiative farmers will continue to improve their yields and fight common diseases that can be treated with basic technical assistance.



Wire net and bamboo tray foundation

If the club root diseases can be eliminated anticipated total production of the 1 ha farm over three harvests will increase by around 50% to more than 2,000 kg, resulting in an additional Rp 8 million of revenue (based on current farm gate prices ranging from Rp 3,000-5,000 per kg). Total production costs are only Rp 3.7 million, providing a substantial profit for participating growers. Additional practices of crop rotation and heavy liming will be used in demonstration plots that drastically reduce the existence of *Plasmodiophora brassicae* fungus (club root) in the soil.

Bimandiri Pack-House Expansion in Garut

Anticipating the widely held belief that Garut will become a major vegetable production area replacing Lembang, Bimandiri Company is expanding its pack-house in Garut. AMARTA is supporting this effort by providing a Rp 120 million grant for establishing a pack-house and renovating grading equipment. This activity started in December 2008 and is scheduled to be completed by February 2009. The expansion is expected to increase Bimandiri's procurement from local farmers from the current 2.5 tons to 6.5 tons per day within three years and, more importantly, link more small farmers into the high value urban markets.



Before renovation...



After renovation

Establishing the West Java Agribusiness Action Group (WJAAG)

The formation of the West Java Agribusiness Action Group (WJAAG) is a result of complaints by growers, agribusiness stakeholders, and government officials that there is insufficient exchange of communication and information regarding agribusiness opportunities and challenges. The information and communication gaps include a lack of crop production mapping, prices and business opportunities, access to financial services, and government advocacy support to develop a strengthened enabling environment. AMARTA is collaborating with Padjadjaran University's Social Service Institute LPM-UNPAD who invests in-kind support of providing a meeting room, equipment, and staff for organizing events, while AMARTA contributes technical assistance and other resources.

After a series of meetings it was agreed that the WJAAG will conduct discussions every month with a focus on different agribusiness topics. It was also suggested by the founding members that WJAAG should focus on credit for agribusiness as a key goal. In January 2009, WJAAG will invite experts and practitioners on credit to present credit options.

Increasing Karo Citrus Farmers Capacity Through Sustainability Training

A total of 15 villages received follow-up training at the citrus field schools in Barus Jahe, Tiga Panah, Berastagi, Kabanjahe, and Munthe with a total of 464 male farmers and 174 female farmers participating. As a result of the ongoing technical assistance, AMARTA's evaluation determined field production increased 9.5 tons per ha and increased farmer's income by an average of Rp 28.5 million per ha, or Rp 3,000 per kg. In addition, collaboration between FGs has helped establish seven new branches of the Indonesian Citrus Society and Bukit Maju Bersama Citrus Cooperative,. The new cooperative is developing capacity to facilitate the sale of high quality production supplies, while also providing consulting services to farmers on good agriculture practices, such as: Managing soil, controlling pest and diseases, and preparing organic fertilizer. The cooperative anticipates earning between Rp 1-3 million per day in revenue. AMARTA and KSU MJI are in the process of securing a loan from Bank Mandiri in Medan to increase working capital for distribution to cooperative branches in each village where it is active.



Female farmers discuss citrus practices during training

“It’s more than I expected, I am motivated to tend to my orchard, and I believe in one year my citrus trees will have normal production again.”

Mr. Ngamanken Pelawi, citrus farmer from Karo District who nearly abandoned his orchard after four years of declining production and losses of Rp 42,000,000

1st and 2nd Cycle of Citrus Training of Trainers (TOT) in Karo Regency

In conjunction with the Indonesian Citrus Society of North Sumatera, AMARTA conducted the first and second cycle basic training of trainers (TOT) from October 27th -30th where a total of 35 participants attended. Efforts continued with the second cycle from November 24th-27th where 30 participants learned skills in order to provide additional assistance to local FGs on the following topics: Identifying and correcting soil problems, controlling pests and diseases, pruning trees and fruit, creating organic fertilizer, and post harvest handling. A total of 91 FGs participated, including 1,242 (60%) male and 378 (30%) female. The participants of the TOT trained and encouraged other farmers by sharing their successes in implementing good agriculture practices (GAP). In addition to increasing their knowledge the trainers also motivated the participants- both goals must be reached together since many farmers have lost their motivation in citrus farming due to the high cost of production and lack of guidance resulting in poor yields. AMARTA has achieved tremendous success in citrus production, increasing quality, income, and yields, as well as rejuvenating once barren land in North Sumatera.



TOT participants in the class and in the field

“Thank you USAID and AMARTA for revitalizing my citrus trees and my life. I feel more confident in myself and can finally buy food and clothing that my family needed.”

Ms. Saten Ginting, citrus farmer in Karo District who increased revenues by 150%

Transforming the Berastagi Carrot Farmer's Group into the Karo Carrot Agribusiness Association

AMARTA continued providing training and technical assistance for 150 carrot farmers from five carrot FGs on production techniques in Berastagi. The villages of Merdeka, Basam, Sukadame, Singa and Gongsol- covering 37 ha of fields- have seen dramatic improvements resulting in increased yields from 1,500 kg per ha up to 3,000 kg per ha, and prices increased from Rp 1,000 per kg up to 1,500 per kg. The overall impact was based on selecting improved seed, better soil, and using organic fertilizer. On November 11th, Berastagi carrot FGs established the Karo Carrot Agribusiness Association, a cooperative that will continue to collaborate with AMARTA for the remaining nine months of activities, and continue supporting members well beyond that time, based on reinvesting profits into the organization. One critical objective is promoting local carrot varieties to compete with imported carrots from China.

Double Row Banana Technology in Deli Serdang Continues to Thrive

In order to build on the numerous successes of the double row banana technology, AMARTA collaborated with the Deli Serdang Agriculture Department in a three day training activity for selected farmers at the AMARTA demonstration plot. The training covered: Seed preparation, utilizing the double row system, pest and insect control, de-flowering, de-leaving, and harvesting techniques. From October through December 13 FGs from three villages, cultivating 162 ha of banana trees, attended trainings, including 102 females (35%) and 188 males (65%). In November, AMARTA provided a complete set of spraying equipment to the banana cooperative as a demonstration tool for controlling fungi using organic fertilizer.



Training in the prototype nursery



Spraying machines used for training on organic fertilizing

Harvesting AMARTA's Double Row Demonstration Plots in Deli Serdang

Beginning in October 2008, AMARTA's double row demonstration plot in Negara, Kuta Jurung and Biru-biru produced a total yield in Negara Village of 288 bunches with 1,800 hands, sold at Rp 4,500 per hand. The plot in Kuta Jurung Village harvested 184 bunches with 1,086 hands, sold at Rp 5,000 per hand, while Biru-biru harvested 43 bunches with 220 hands, sold at Rp 4,500 per hand. Compared with traditional growing

practices where farmers only produced 250 bunches per 1,000 population, AMARTA's demonstration plot doubled production to 2,000 bunches per ha, increasing yields by 100% due to higher density of planting and implementing good agriculture practices.



Harvesting and transporting bananas in Biru-biru

Floriculture

Replanting Chrysanthemums Cuttings in AMARTA's Prototype Greenhouse in Berastagi

After completing the chrysanthemum field day in September 2008, where participating FGs netted Rp 5 million in profit selling all of the flowers in one day, the farmers planted new seedlings for the second season on October 15th. The profits were reinvested in replanting new varieties delivered from Bogor. AMARTA STTA, Benny Tjia, also donated 5,952 cuttings for the project. All of the new varieties were planted in pots providing a critical opportunity to reuse the high quality cuttings in future seasons. In addition to traditional cut flowers, AMARTA has also introduced chrysanthemums in pots and several new leafy flowers, which are new to Berastagi flower markets and will differentiate their products from competitors.



Potted planting material being prepared by trainees



Second cycle of chrysanthemums

Rubber

Clone purification and Certified Budwood Gardens for Provision of Improved Planting Material in South Kalimantan

Between November 18th-24th, AMARTA's clonal nursery rubber component, in collaboration with the Indonesian Rubber Research Institute (IRRI) Getas, facilitated clonal purification of 1.55 hectares including 10,128 rubber trees in smallholder nurseries at Bentok Darat, Kait-kait Lama, Kait-kait Baru and Martadah Villages, South Kalimantan. AMARTA, Bridgestone, and the provincial estate crops agencies have been working together on this pilot project to help smallholders develop rubber nursery businesses that will provide high quality clonal materials in the market, for which there is high demand, but ongoing uncertainty regarding the quality of materials. Clonal purification is the most important activity in order to certify that the bud eyes produced are pure per the clone labeling.



IRRI Getas at the Sutijab budwood garden

As a result of this clonal purification process, smallholder rubber nurseries have an average purity of 96.5%. Based on the IRRI Getas's experience, this result is the highest clonal purity that has ever been produced in inexperienced nurseries. To provide a comparison of the purity of the bud wood gardens supported by AMARTA-Bridgestone, similar results were obtained by three senior nurserymen from Tanah Laut District, South Kalimantan. This is a great success and ultimately impacts the demand for rubber throughout the region. The results are superior to a private run estate in Central Kalimantan as graded by IRRI Getas, an astounding feat considering the resources and capacity of the farmers.

Table 1. Results of clonal purification for AMARTA-Bridgestone bud wood gardens

Village	Name	Area (ha)	Date of planting	Clone	Identified (no. trees)			Purity (%)
					Pure	Mix	Total	
Kait-kait Baru	Sutijab	0.03	Mar-08	PB 260	368	32	400	91.30
Kait-kait Baru	Sutijab	0.07	Mar-08	PB 330	437	33	470	92.45
Kait-kait Baru	Suwardi	0.1	Sep-07	PB 260	995	5	1,000	99.50
Kait-kait Baru	Muyanto	0.37	Mar-08	PB 260	1,968	32	2,000	98.37
Kait-kait Baru	Suwardi	0.19	Mar-08	PB 330	843	7	850	99.17
Martadah	Mardji	0.37	Mar-08	PB 260	2,417	93	2,510	96.15
Bentok Darat	Sutarjo	0.2	Mar-08	IRR 39	1,500	0	1,500	100.00
Bentok Darat	Sutarjo	0.08	Mar-08	PB 260	500	8	508	98.40
Kait-kait Baru	Katimin	0.06	Mar-08	PB 260	275	25	300	90.91
Kait-kait Lama	Supandi	0.08	Mar-08	PB 260	584	6	590	98.97
Total		1.55	Total		9,887	241	10,128	96.52

Training on Clone Identification

In an effort to enhance rubber nursery smallholders in South Kalimantan, AMARTA facilitated training on clone identification. Training was held in Kait-kait Village where thirty five participants and three extension agents from BPP Bati-bati attended a session on identifying characteristic of clone details. Participants eagerly joined discussions and demonstrations; farmers in order to learn and explain to buyers what type of clone they supply, while extension agents noted that they improved their knowledge to assist other farmers.

Market Access for Rubber Planting Material in South Kalimantan

Karya Mufakat, a FG from Bentok Darat Village supported by AMARTA, has been selling their rubber planting materials to GAPKINDO since May 2008. In November 2008, they provided 10,000 rubber planting materials in polybags ordered by GAPKINDO, and sold 75,000 budded stumps at a price of Rp 1,100 per unit. In addition, they signed a contract with PT DAI SALUM, the winner of the Government of Indonesia tender to supply 25,000 units of rubber planting materials.



Mr. Sutarjo, the head of Karya Mufakat FG monitors planting material distribution

Rubber Disease found in West Kalimantan

AMARTA helped identify white root disease, pink disease, Fusarium and tapping panel dry diseases in the rubber plantation at Pana and Bereng Bekawat Village, Sanggau District, West Kalimantan. White root disease can reduce production up to 50% and destroy many trees. AMARTA will facilitate training and technical assistance on treating the rubber disease next quarter, per consultation with USAID.

Coordination with South Kalimantan Local Government

On November 21st, AMARTA visited Mr. Ir. A. Yuliani, the Chief of Estate Crop Services in Tanah Laut District, who complimented ongoing efforts and noted that the AMARTA program is strongly supported by the government, particularly in clone purification efforts and following up on the results through re-grafting and cutting impure trees.

“I also want to thank AMARTA and Bridgestone for facilitating TRUP certification for rubber farmers in our area and explanting the importance of clone purification. After so many years of doing things wrong, I am happy to finally be doing things right.”

Mr. Sugeng, a rubber farmer from Bentok Darat Village, South Kalimantan

Seaweed

AMARTA is assisting farmers to begin and expand existing seaweed production at two locations in Northern Sulawesi, Lemito in Pohuwatu District and Kwandang in North Gorontalo District. This program is implemented in conjunction with the Makassar-based NGO, SEAPlant Net, which is providing technical assistance and planting material.

AMARTA and SEAPlant staff are now working with 39 FGs – 15 in Kwandang, 14 in Anggrek (near Kwandang) and 10 in Pohuwato. The 390 farmers in these groups sold a total of 83 tons of seaweed during the reporting period, worth approximately \$83,000. Sales would have been higher; however farmers in both areas are reinvesting for the future by replanting a significant portion of their harvest. This will increase production in coming months. About two thirds of the harvest will be processed for domestic markets, with the remaining one third bound for the export markets. A total of 142 farmers received training over the past three months on a variety of subjects, including:



A farmer removing silt from his crop

- Choosing appropriate farm locations for maximum growth
- Selection, proper size, planting, and maintenance of propagules (seed plants)
- Proper method of agitating production lines to remove silt
- Construction of bamboo rafts to anchor production lines in calm areas
- Proper care of plants to avoid “ice-ice”- a condition that occurs when the growing tips die back, due to high temperatures or lack of water exchange
- Improved methods for drying seaweed

Farmers in Lemito Bay have experienced crop losses due to illegal fishing. The illegal fishermen use poisons and explosives, which are detrimental to seaweed farms and nearby reefs. To halt this activity, 10 seaweed farmers have formed a monitoring committee called POKMASWAS, to document and report illegal fishing to the relevant government authorities. This group presented itself to the Marine and Fisheries Affairs Department (DKP) in October and received strong support. DKP promised to fund POKMASWAS operational costs in next year’s budget.

In April 2008, AMARTA and SEAPlant staff discovered a new variety of seaweed growing in Kwandang Bay. Since then, AMARTA has been conducting research on this variety, documenting its growth rate and suitability as a source of kappa carrageenan. The new variety, which farmers call “kulit buaya” or crocodile skin, could have national application as an alternative to the Tambalang variety, which was imported from the Philippines in the 1980s. To date, the research has shown that the kulit buaya has a similar growth rate and carrageenan content to Tambalang.



The green Kulit buaya shown next to the brown Tambalang variety

“Growing seaweed now allows me to easily fulfill my family’s needs. For example, it has paid for my daughter’s elementary school fees and uniform.”

Mr. Kadus, seaweed farmer from Gorontalo

Papua Agriculture Development Alliance (PADA)

Kokonao

Ice Factory and Fish Production

The ice factory is fully functional with ice production occurring eight hours per day, and the operation now has a full time manager from the Maria Bintang Laut Cooperative. The factory is operated by two full time technicians from the local community that received training from AMARTA. The Cooperative continues to adjust the price of the ice, as well as the price of fish in Timika in an effort to break even on all costs associated with the facility. Currently, the cooperative purchase and stores an average of one ton of fish per week before making shipments to customers in Timika, including regular buyers PT. Pangansari and the Timika Community Hospital. Fortunately, the price of fish in Kokonao experienced a 20% increase from previous prices as the price of Baramundi fish rose from Rp 10,000 to Rp 12,000 per kg, while the price for mixed fish, other than Baramundi, rose from Rp 8,000 per kg to Rp 10,000 per kg. In October, the Cooperative spent Rp 34,734,500 (\$3,150) to purchase fish from local fishermen in Kokonao and the surrounding villages, providing substantial income for the fishermen and their families.



Fishermen selling fish and buying ice at the ice factory in Kokonao

In order to assure the operational reliability of the ice plant, PT Freeport Indonesia has purchased two 60KVA diesel generators as a backup electricity supply for the plant, essentially guaranteeing a fail-safe operation. Officials from Amungme Kamoro Community Development Foundation (LPMK) have visited the Kokonao ice plant and are requesting PADA assistance to possibly replicate this pilot project in at least two more coastal villages using LPMK funding.



Fish purchased and cleaned by members of the Cooperative

Fiberglass Boat Construction

An additional 200 kg of fiberglass materials were purchased by AMARTA in Jakarta and have been delivered to Kokonao. The additional supplies will be used to further train local beneficiaries and support the creation of the fiberglass boat building enterprise. The goal is to encourage local villagers to open small shops and put their new skills into action, creating new jobs and another income source. The training program for 25 participants was completed in June 2008. Fifteen participants are considered trained in fiberglass handling procedures and partially in the concept of building molds for different fiber articles. The mold for small boats is completed and three boats have been produced by the training participants. Furthermore, holding tanks for fish in the cool storage area have been produced by the trainees. The mold construction for the large wooden boat will continue next quarter.



Building fiberglass molds

Transport Boat Construction

Work is underway to redesign the propeller and change the gearbox of the transport boat to increase speed. Currently, the boat consumes 30-35 liters of fuel per trip and takes seven hours to go from Kokonao to Timika, an inefficient trip considering that other boats usually take less than four hours. The longer trip will affect the quality of the fish delivered. Up to now the delivery of fish has been conducted by a longboat belonging to the Kokonao Catholic Parish. The provision of this boat has solved a major impediment to regular and reliable delivery of fresh fish to the Timika market, creating more demand for this high value fish. In addition, PADA is utilizing a local boat builder to



Ongoing construction of the seven meter boat for Agimuga

construct a seven meter boat for use by the Agimuga community to transport products to the Timika market.

Soft Shell Crab Production

Trade activities are planned for January 2009. Once trade begins, two-day training in the technical procedures and initial guidance for the operators of the pilot operation site will be held. Future extension of this component will be completed by private family-based operators with marketing sponsored by the Cooperative. This activity will be women based enterprise, thus providing opportunity for more villagers to participate in the seafood marketing opportunities. It is expected that the increase in production and supply of high value soft shell crab will have a significant impact on women's income, usually resulting in a higher level of savings and wiser expenditure of income.

Wamena

Wamena Coffee Development

On December 11, the Estate Crops Department in Jayawijaya Regency hosted a ceremony to officially inaugurate the first shipment of 12-tons of Arabica coffee from the Baliem Valley for export. Present at the event was the Head of Regency of Jayawijaya, the Provincial Head of the Estate Crops Department, Provincial Head of the Trade and Industry Department, The Provincial Head of the Cooperative Department, the Jayawijaya Regency Head of the Estate Crops Department, and the other government officials from the Jayawijaya Regency. The export quality coffee was purchased throughout the year by the Baliem Arabica Cooperative, supported by PADA with equipment for the processing unit in Jagara, technical assistance, and funds to purchase and process the coffee. The Estate Crops Department of the Jayawijaya Regency contributed Rp104,000,000 (\$9,450) to the Cooperative to help pay for transportation and coffee buying, while the Cooperative Department of Jayawijaya Regency provided Rp 20,000,000 (\$1,800) to the Cooperative to run the processing unit. As a result of this initiative, the pilot project has received government funding to replicate the successful initiative, as well as a promise to continue to provide public funding for the benefit of coffee farmers throughout the Baliem Valley.



Sorting Baliem Blue export coffee beans in Jagara Village, Wamena

The 12 tons of processed green coffee was transported by air to the town of Jayapura and is currently being stored in the warehouse provided by the government, awaiting inspection from PT. Menacom who will verify quality for Starbucks Corporation. The

final approval of the quality and shipment of one container of Papua Arabica coffee is expected to take place in January 2009. The Cooperative is waiting for the next harvest season at the end of the year to continue coffee buying activities in order to fulfill the



Packing coffee in Wamena for export

shipment of 36 tons of processed coffee to the marketplace. The processing facility at Jagara currently produces up to 1 ton of green coffee daily.

PADA provided funding to begin the process for organic certification, which is expected to be finalized in the next quarter. Additionally, training has begun to qualify the Cooperative for Fair Trade Certification that will provide added value to the coffee for export.

Moanemani

Moanemani Coffee Development

The AMARTA-PADA project collaborates with the Cooperative Santo Isidorus of the Catholic Church Diocese, to create the management system and appoint personnel to assist in the project. The Cooperative is currently purchasing coffee from the farmers, and the processing facility has been set up including a new generator to run the unit. In January the Cooperative will provide village level coffee buying and quality control training and technical assistance. Also, the processing of coffee will begin in January.



A coffee farmer in Moanemani

Didimus Tebay is in charge of the coffee processing facility and with the help of two extension workers will direct quality control and organic certification to help map the coffee producing areas and determine the volume of coffee production available. Socialization will take place to inform the farmers about the benefit of joining the Cooperative and to encourage all Arabica coffee farmers in the Kamu Valley region to become members.

Agimuga

Road Construction and Pig Production



During the quarter, the reconditioning of the 12km supply road between Aramsolki and Kiliarma was completed. Currently, there is a government project taking place to improve and pave the road and to widen it from 2m to 5m. AMARTA will coordinate with government officials regarding this project. The two km extension road from the main route to the pig pen was also completed and construction of two new bridges continues to

The reconditioned supply road between Aramsolki and Kiliarma

progress efficiently. A material and equipment list has been created for the new pig pens and the construction will begin in January 2009.

Rice Production

Two rice hullers donated by CV. Lion Lestari were delivered and installed in Agimuga along with two hand tractors and one trailer provided by AMARTA. The renovation of the building for the rice processing unit was completed this quarter and a test run of the rice processing unit was conducted successfully. Rice planting continued and additional farmers have joined the initiative as five new plots have been cleared for rice planting in Aramsolki Village. A medium sized, four-wheel drive John Deere farm tractor was purchased by AMARTA and was delivered to Timika. Construction of a trailer to move the tractor is ongoing and will enable final transportation to Agimuga.



Rice patties coming into bloom

Government Coordination

AMARTA-PADA facilitated a trip for LPMK to Bali from October 29th-31st, where LPMK representatives learned how AMARTA trains cocoa farmers and works with the

private sector, as well as to Flores and West Timor from November 17th-21st to see coffee, biofuels, and livestock pilot projects on those islands. LPMAK was impressed with the working style and results achieved by smallholder farmers, and are interested in developing an alliance with PADA for future work in Papua.

AMARTA Indicators for Quarter 1 (October - December 2008)

INDICATORS		Aqua culture	Natural Rubber	Cocoa	Coffee	Beef Livestock	Vegetables	Tropical Fruit & Flowers	Biofuels	Seaweed	RACA	Total
Number of additional hectares under improved technologies or management practices as a result of USG assistance	Actual 2007	-	-	4,215	-	-	-	1,137	-	-	-	5,352
	Actual 2008	-	535	20,803	7,200	-	665	2,161	40	-	-	31,404
	Q1 2009	-	1,656	8,562	1,089	-	70	1,015	-	-	-	12,392
	Target 2009	-	800	5,000	5,982	-	495	2,132	60	-	-	14,469
Number of additional units of animal, fish and other aquaculture products under improved technologies or management practices as a result of USG assistance	Actual 2007	-	-	-	-	-	-	-	-	-	-	-
	Actual 2008	14,140	-	-	-	300	-	-	-	2,203	-	16,643
	Q1 2009	24,060	-	-	-	39	-	-	-	526	-	24,625
	Target 2009	60,000	-	-	-	190	-	-	-	14,500	-	74,690
Number of producer organizations, water user associations, trade and business associations, and community-based organizations (CBOs) receiving USG assistance	Actual 2007	-	-	150	-	-	-	9	-	-	-	159
	Actual 2008	5	18	900	301	16	120	70	2	15	110	1,557
	Q1 2009	-	-	-	-	-	1	134	-	-	19	154
	Target 2009	5	46	900	114	6	28	77	2	15	80	1,273
Number of agriculture related firms benefiting directly from USG supported interventions	Actual 2007	-	-	3	-	-	-	4	-	-	-	7
	Actual 2008	11	10	13	16	2	16	10	1	2	24	105
	Q1 2009	-	-	2	4	-	-	-	-	-	-	6
	Target 2009	10	27	-	31	-	27	6	-	-	34	135
Number of individuals (men and women) who have received USG supported short-term agriculture sector productivity training	Actual 2007	-	-	10,100	-	-	957	579	-	-	-	11,636
	Actual 2008	322	445	31,459	7,500	275	915	2,512	718	148	994	45,288
	Q1 2009	142	247	12,669	236	-	131	1,692	-	216	89	15,424
	Target 2009	1,030	1,230	21,500	2,690	300	1,270	6,305	500	200	4,500	39,525
Percent change in value of international exports of targeted agricultural commodities as a result of USG assistance	Actual 2007	-	-	-	-	-	-	-	-	-	-	-
	Actual 2008	-	-	119	100	-	-	-	-	100	-	106
	Q1 2009	-	-	112	100	-	-	-	-	100	-	104
	Target 2009	56	-	30	71.0	-	6	-	-	50	-	43
Percent change in value of purchases from smallholders of targeted commodities as a result of USG assistance	Actual 2007	-	-	-	-	-	-	-	-	-	-	-
	Actual 2008	100	-	89	100	-	-	87	-	100	-	95
	Q1 2009	-	-	620	100	-	-	100	-	100	-	230
	Target 2009	175	8	30	73	100	47	23	-	100	-	70
Number of new technologies or management practices made available for transfer as a result of USG assistance	Actual 2007	-	-	5	-	-	-	5	-	-	-	10
	Actual 2008	24	14	23	13	1	23	28	3	5	-	134
	Q1 2009	-	-	2	-	-	5	1	-	1	-	9
	Target 2009	1	-	-	-	-	-	-	-	-	-	7
Number of additional surveillance and/or control systems in place for agricultural threats	Actual 2007	-	-	-	-	-	-	-	-	-	-	-
	Actual 2008	6	2	1	3	1	-	1	-	1	-	15
	Q1 2009	-	-	1	-	-	-	-	-	2	-	3
	Target 2009	-	-	1	-	-	-	-	-	-	-	1
Number of public-private partnerships formed as a result of USG assistance.	Actual 2007	-	-	2	2	1	-	-	-	-	4	9
	Actual 2008	2	3	4	4	1	2	1	1	-	-	18
	Q1 2009	-	-	-	-	-	-	-	-	-	-	-
	Target 2009	-	-	-	1	-	-	-	-	-	-	1