

Philippines Postharvest Learning Alliance

Business Forum Report:

“Emerging Opportunities for Postharvest Technologies & Entrepreneurship in the Philippines Rice Sector”

Red Palm Resort
Butuan City, Agusan
Philippines

January 15, 2013

Report prepared by

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**International Rice Research Institute
Los Banos, Philippines**



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IRRI
INTERNATIONAL RICE RESEARCH INSTITUTE

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List of Abbreviations

ADB	Asian Development Bank
BMGF	Bill and Melinda Gates Foundation
BDS	Business Development Services
CEVI	Community Economic Adventures Inc
CRS	Catholic Relief Services
CSU	Caraga State University
DA	Department of Agriculture
DA-RAFID	Dept of Agriculture – Regional Agriculture and Fisheries Division
GF	Grameen Foundation
FBD	Flat bed dryer
FI	Financial institutions
IRRI	International Rice Research Institute
LA	Learning Alliance
LGU	Local Government Unit
MFI	Micro-Finance Institution
NEDA	National Economic and Development Authority
NGO	Non-Governmental Organization
PH	Postharvest
PhilRice	Philippine Rice Research Institute
PNB	Philippines National Bank
RAFD	Reversible air-flow dryer
RDC	Regional Development Council
SDC	Swiss Agency for Development Cooperation

1.0 RATIONALE

The Postharvest Learning Alliance is a multi-stakeholder platform that includes farmers, rice researchers, extension offices, policy-makers, non-governmental organizations (NGOs), and private sector processors and technology providers, all working together to reduce postharvest losses and increase incomes of farmers and other postharvest actors in Southeast Asia. Funded by the Asian Development Bank (ADB) with complementary support from the Swiss Agency for Development Cooperation (SDC), the Postharvest Learning Alliance (LA) has helped farmers verify and pilot improved postharvest technologies for reducing PH losses and increasing the value recovered from farmers' harvests. As next steps, Learning Alliance partners seek to scale out these pilots using sustainable business cases of farmers and other chain actors. This includes building the capacity of actors to develop their own business plans and establish linkages to financial institutions, policy-makers, and other supporting actors.

Specifically, this event builds upon previous Learning Alliance activities that engaged farmers in participatory trials of IRRI Super bags and the development of context-specific business cases for adoption. Other farmer groups have sought to develop business plans for piloting the newly adapted PhilRice reversible air-flow dryer (RAFD) as entrepreneurial farmer-driven business models for mechanically drying paddy and seed (and potentially other crops). This business forum provides a venue for farmers and farmer groups to present their business cases and business plans for adopting improved technology options to: strengthen chain linkages, share learning and create awareness amongst actors, and potentially attract additional financial resources (e.g., loan products, capital investment) and other support for sustainable out-scaling.



Farmer Pedro Serrano and IRRI's Chris Cabardo pose in front of their tarpaulin depicting hermetic storage trials that helped farmers make their own business cases for adoption.

1.1 Event Objectives

- Create awareness amongst financial institutions, policy-makers, and other public and private sector stakeholders about improved postharvest technologies for drying and storage of paddy and seed;
- Help farmers and other PH actors link to loan products and other supporting resources using well-defined business cases and business plans for sustainable scaling out of adoption;
- Identify next steps for additional learning activities and needs to support farmers and Learning Alliance partners foster entrepreneurial business models as the ADB Postharvest Project enters its final year. (Also, facilitate and strengthen these linkages so they may last beyond the timeframe of the project.)

1.2 Participants

Participants came from around Agusan del Norte as well as other regions (Bicol, Bohal, Luzon, Budkinon) in the Philippines for cross-learning and sharing. A total of 51 representatives included financial institutions (7), NGOs (4), private business (6), and public sector research (8), universities and other educational institutions (3), government officers and extension workers (11), and smallholders and farmer groups (10) and local media (2). (See Appendix 1 for Participants List.) The event received local newspaper coverage (See Appendix 2) and Dr. Caesar Tado, PhilRice, was interviewed for radio broadcast.



2.0 AGENDA

The event opened with participant introductions (Trina Leah Mendoza emceed), followed by a brief overview of the PH Learning Alliance and current project status (Alfred Schmidley) as we enter 2013 under a no-cost contract extension until Oct 31. Thus this event very much represents a “handing over” of business model activities to local partners who must now take things forward to scale out pilots further and strengthen linkages between farmers, technology suppliers, and other supporting actors. As such, remaining ADB monies will be used in 2013 for activities led by local partners with IRRI playing a background facilitating role. To date, business model activities with local counterparts have helped farmers develop their own business cases based on participatory hermetic storage trials and helped establish linkages to newly appointed retail suppliers. Local LA partners have also helped farmer groups develop their own business plans for mechanical drying of seed and paddy, using the new PhilRice adapted reversible air-flow dryer (RAFD), one of which is already piloted as a business model by GAMAPA, a community farmers’ group in Budkidnan that used a business plan to access funds (from a local foundation and CRS). Another business plan developed by a farmers’ group in Taguibo will be presented at this event based on these learnings. Hence, this forum allows farmers and local LA partners to present what they’ve done and discuss next steps, needs, and ideas with newly identified financial sector actors, private businesses, as well as with existing PH stakeholders.

The event was divided into a morning session that consisted of: 1) presentations of business cases by farmers for hermetic storage, 2) an update on the mechanical drying business model pilot in Bukidnon, 3) presentation of a new business plan by a Taguibo farmers’ group, and 4) introduction of financial sector actors regarding loan products, services, and possible areas of mutual interest/support. The afternoon session consisted of a Roundtable discussion of issues and ideas followed by a field visit to the PhilRice Research Station in Agusan where the reversible air-flow dryer and hermetic storage were demonstrated, especially to give newcomers a firsthand look at how these technologies work and benefit farmers. (See Appendix 3 for Program Agenda)

3.0 Morning Session

3.1 Farmer presentations: *“My business case for using Super bags”*

The goal of the session was to allow farmers to present their individual business cases for adoption of Super bags as a “go” or “no-go” decision-making tool for continued use and linkage to supporting actors – including local retailers. Four farmers presented their business cases using flyers that LA partners helped them draft based on earlier participatory trials. Local partners then assisted farmers “make” their own business case (i.e., calculate “value created” in terms of cost/benefit) for continuing Super bag use, or not, compared side-by-side to current storage costs/practices using PE bags for seed. These flyers will be updated with interview info into something useable for sharing with others. (See Appendix 4 for farmer business case sample.) In this case, farmer Marilyn Aranas shows a net profit of PhP504 after one season of storing her seed after deducting the cost of 6 Super bags. In the second season, her profit even climbs to PhP1224 as the six SB’s can be re-sued and are already paid for in the first season.



On the heels of these trials, GrainPro has appointed a national distributor, Pacifica AgriVet (PASI), who has 193 retail outlets total, 70 in Mindanao, who now stock Super bags. Mr. Jose “Ting” Gomos, GrainPro’s VP for Sales & Marketing, announced at the end of the session that GrainPro would offer a special “1-plus-1” promotion (i.e., “buy one get one free”) which individual farmers and farmer groups could avail themselves of in order to established commercial linkages to local suppliers. (This is something we can monitor to see if farmers are really willing to go to a retailer and buy Super bags.) During the session, we also learned that farmer Plenio Ortigas recently purchased 10 Super bags from a retailer with his own money following trials overseen by their cooperative. During the question-discussion period that followed, the need for documenting more such examples – to verify our approach - and address “gaps” at this farmer-retailer nexus was flagged as a topic for the afternoon’s Roundtable.

3.2 *“Mechanically Drying Paddy as a Community Business Model,”* Ms. Merlita Piedad, GAMAPA

Ms. Merlita is the operations manager for the contract drying services enterprise piloted by GAMAPA, a community organization in Bukidnon consisting of 60 farmers. Ms. Merlita was invited to present an update on the business model pilot that utilizes PhilRice’s newly adapted reversible air-flow dryer. This was piloted last year using a business plan developed with assistance from LA partners to access funds and guide start-up. The LA also provided technical support for installation and training for operation and continues monitoring. To date, the dryer has been used one season, 95,000 kgs of paddy (4-tons per batch) have been dried, serving 42 marginal farmers

in the community. Ms. Merlita highlighted the process they used and the benefits of the business plan tool which not only helped articulate their business model and access funds but also was used to guide actors in resolving issues related to management and use of the dryer. (See Appendix 5 for Powerpoint slides)

This pilot needs better documenting, including verification of financial data against projections in the business plan – so the business plan can also serve as an M&E and communications tool. Writing up this as a business case study for 2013 for capturing and sharing of lessons was another topic flagged for the afternoon Roundtable.

Nevertheless, it appears farmers are clearly willing to pay for services. Ms. Merlita concluded her presentation saying they wished to access additional dryers and resources to expand their drying capacity (for which their business plan and verified financial data might help!).

Participants raised several questions arose regarding technical matters, drying time, moisture content, and high PH losses in this part of the Philippines where there is little sun and much rain. (This was underscored by the heavy rains encountered in scheduling and holding this event!) PhilRice engineers will also return to the site shortly to assess technical performance of the dryer.

3.3 “Business Plan for Mechanical Drying Services,” Mr. Romy Lasco, President, Taguibo Farmers’ Irrigators Association

This business plan (not yet funded) was developed with lessons learned from the above pilot. Dr. Raquel Balanay, agricultural economist at Caraga State University (CSU) assisted this local farmers’ group develop this plan. The presentation came in the form of a “pitch” by Romy Lasco, President of Taguibo’s Farmers’ Irrigators’ Association. This progressive farmers’ group consists of 100 farm households, is cash positive and carries no debt. Their current business model includes irrigation services (50% of their revenues), production and sale of vermiculture products, and marketing of food products made and packaged by farm households (e.g., coconut honey, turmeric tea, etc.) under the group’s trademark. They now wish to expand into contract drying services. Romy explained that losses due to frequent rains and lack of drying facilities result in losses to farmers of up to 20% in this region. Estimated capital of PhP 750,000 (approximately USD 18,750) is required to set-up the RAFD operation with an expected payback period of 3 years and 3 months based on a loan at 8% interest, their a baseline assumption. The Association is not looking for a 100% loan but willing to utilize their own cash resources and participate in counterpart matching programs under the DA or other institutions and foundations. (See Appendix 6 for a copy of the Taguibo farmers’ business plan.)

A lively discussion followed. One issue may be that the amount of capital required is beyond the scope of traditional micro-finance. There were larger banks (e.g., Land Bank) and investors present. GrainPro’s Mr. Gomos added that their “GrainKeep Centres”, another business model concept under development, would have similar needs in size and scope for such financial products for potential interested actors.

3.4 “Introductions and reflections from foundations, financial institutions, and policy-makers”

MFIs and other financial institutions, policy-makers and individual attendees were invited to present information on the organizations, scope of activities, products and services, and share any insights from the morning’s sessions. Some key points from actors are captured below:

- **Grameen Foundation**: This organization is based in Washington DC, with offices in Hong Kong, Manila, and Jakarta, and Gurgaon (India). GF offers several products to assist institutions access capital markets services and better deliver service the poor. GF is not an MFI, and thus does not lend directly to farmers, but rather assists MFIs, NGOs, and social enterprises to obtain access to capital markets and financing from commercial banks. For example, GF recently helped guarantee a commercial bank loan brokered by Standard Chartered Bank for an MFI in Indonesia. In the Philippines GF has guaranteed a loan brokered by Philippine National Bank (PNB) for USD 5 million to an MFI. However, for larger expenditures and investment in equipment (eg. FBDs) typical MFI portfolios may not be able to cover such items. Thus GF is working on another product, the Pioneer Fund, which might be explored by institutions as an alternative window for postharvest technologies. Other GF products include information services – getting information to farmer, for example, in Uganda, under a BMGF “Community Knowledge Worker program, or through use of smart phones/mobile phone applications. Lastly, GF’s Poverty Measurement Tool may be of interest to institutions to calibrate design of products and services to make sure target groups are being reached (e.g., Bankers without Borders). Thus while GF does not lend directly to farmers, they are engaged in a numbers of areas, taken together, can help institutions and policy-makers service more people more effectively.


- **Rural Bank of Cabadbaran**: This bank grants salary loans, business loans, agricultural loans, commercial loans, and microfinance loans and has local branches in Butuan City and Cagayan de Oro City. Under microfinance, the Bank started motorcycle financing in 2011, before expanding to agricultural financing in June 2012, charging interest rates of 18% per annum. The bank accommodates mode of re-payment around harvesting time when palay is sold by farmers. The typical loan depends on how much land the farmer owns (presumably for collateral), generally PhP 15-20,000 /ha can be accessed. Currently the bank does not have products or services such as loans for equipment like the flat bed dryers at their farm financing loan scheme just started recently.
- **Green Bank**: Established in 1975, Green Bank maintains rural banking operations as a subsidiary of East West Banking Corporation. Opportunities for products, such as farm agricultural and small enterprise loans, are currently under review of management.
- **Cantillan Bank, Inc.**: Established in 1980 in Surigao del Sur, this bank now has 14 branches covering Mindanao, Luzon, and Visayas. This bank has general purpose loans. They have multi-purpose loans for farmers (“Pag Uma” Loan), and also agricultural loans but require secured title assets. Local branches can cater and provide additional details for farmers residing near to their branches.

- **Community Economic Ventures, Inc.** has 30 branches, about 80% of their clients are farmers, though they are extending services to urban areas (RTR, Buenavista, Bayugan) as well. CEVI provides crop loans to farmers for land preparation and other operations based on their overall farm budget plan. Interest rate on such loans is typically 2.5% per annum, lower than private lenders. CEVI selects clients according to financial capacity for re-payment.
- **National Economic Development Authority (NEDA), CARAGA Region** is a highest policy coordinating body regional development of CARAGA and serves as the Secretariat of the Regional Development Council (RDC). NEDA also coordinates with Office of Development Assistance that includes agencies like ADB and World Bank. If the LA or farmer groups are interested to develop a proposal or feasibility study, NEDA can coordinate with these bilateral institutions. Three years ago, NEDA was involved with a project regarding farm-level grain centers that offer similar services like postharvest facilities mentioned. However, we were told this devolved to Local Government Units (LGUs) and NEDA is no longer involved. The RDC is another body that can bring particular interventions and policy-level issues to the national level. The Department of Agriculture (DA) is one member of the RDC. For farmers, the best channel is the DA and the DA can elevate concerns and needs to RDC.

4.0 AFTERNOON SESSIONS

The afternoon culminated in a Roundtable discussion titled, “Loan products, policy support, and future LA activities”. Dr. Caesar Tado (PhilRice) helped moderate and highlighted key issues from the morning sessions for in-depth discussion. Key issues and point from the roundtable are captured below:

4.1 Sustainably helping farmers & other PH actors

- How do we help fill the gap between lack of entrepreneurial skills and needs for “business readiness”. Helping others accessing loans is not enough. They have to be business ready and capable of managing all aspects of their business. Financial institutions will not be interested in postharvest if a proposed enterprise cannot demonstrably translate activities into real profit.
- What other tools can be developed to assist actors in implementing business models. For example, business plan require market analysis and tools such as cash flow projections which are terribly important for a new business. Cash flow is the blood of any business and a major reason why enterprises with potentially successful business ideas fall into trouble. We need to enlist other organizations to help with this who understand business processes.
- Do MFIs or other institutions help farmers and families (including women) with increasing financial literacy, business management training, or other related assistance? Are their community organizations and local educational or vocational institutions that can help?
- Business Development Services (BDS) organizations are one way to support agricultural entrepreneurs. Otherwise how will such technologies and skills be

brought to the farmers due to our limited band-width. BDS is still an approach under development, users for example have to want to pay for services or ways need to be found to make it sustainable.

- In value chain practice, whoever obtains the benefits should bear the cost. Amongst needs for financing in value chains, postharvest is just one part, primarily for large capital expenditures. We should look to spread out the risk. For example, amongst networks of MFIs, various value chain financing is not only for PH but also seed production and many other activities. We need to explore more in the learning alliance to understand such activities amongst these organizations.
- How do we reduce levels of anxiety and risk to actors in postharvest? We need to lower levels of unknowns and risk in doing business. For example, the Learning Alliance provides technical support and backstopping for technologies, as a way of removing a significant degree of risk to entrepreneurs of new adopters of a technology. It also reduces the risk to MFIs, bank loan providers, or other investors, linkages to which need to be better established. Of course, in the end, all business has a component of financial risk that must be borne by the business owners. But partners can help minimize risk and make postharvest investments more attractive.
- GrainPro is seeking to take scaling to the next higher level. At GP, we are negotiating with FIs already. There have been funds allocated to the Phils. One of this is a 30million dollar funding devoted to Mindanao from OPEC. Consider storage facilities as insurance. They are available for loans. There is group of farmers in Pampanga who did the same.
- The Learning Alliance should continue even if the project will end later this year. We must continue our exchanging of ideas and shared lessons about PH technologies and business models, specifically how we can sustainably lessen PH losses. Sustainability is key.



4.2 Learning Alliance Issues

- Is the Learning Alliance a network or a platform? If it's a network, how to expand benefits to wider groups? The Learning Alliance is actually a platform. If there are activities that two partners can do together then they join together and involve others. It is an open alliance. The good thing is that this is a venue where we can plan together. There is no single driver. If actors have a stake and are interested, they can join us. Can we hear from new people here and what activities might be useful and with whom? The goal is to continue and strengthen linkages even after 2013.
- PhilRice has partners like TSPI and ASCII. Can we enjoin them in the Alliance? How do we (continue) to share knowledge if it's a platform? We can approach TSPI and ASCII as new actors to see if the platform is of interest to them. We

(PhilRice) had a project with TSPI a few years back. They are active in financial development programs from seeds to marketing. They do not just provide financing. They provide enterprise development loans. In Tarlac, they've now expanded into 5 provinces. For intermediary financing, they are localized. Maybe we can generate new business models like PH facilities.

- Most capital expenditures will be for equipment. Are there any mechanisms for “debt-for-development swap”? Can the LA lobby to help get the DA out of debt? It is more optimal if private sector can handle financing once the debt is converted into our currency. NEDA is in charge of these systems.

4.3 Extension and Related Materials

- The DA is responsible for extension services. Once technologies are generated and verified, they become part of our extension operations in order to reach out to farmers. Promising technologies generate benefits that are verified by us and captured by farmers. We have websites at the tip of one's fingers to access information about technologies. We implement participatory approaches to learning and creating awareness. Farmers can feedback to us what they really need. Now it's a bottom-up approach, more holistic. We will not come up with something that does not address the farmers' (stated) problems.
- The LA has used a participatory video approach. The video is unscripted. Local partners chose their topics. The videos are aired in local TV. The farmers explain the technology and the benefits they received, and are the ones who actually demonstrate this in the video. How can we use such video approaches to also help capture lessons learned.
- In Bicol, after the video shoot on Super bags, we showed it in the Barangay where it was shot. There farmers watched it, and by word of mouth farmers became curious and then visited Luzentales to see first-hand the seeds stored hermetically in Super bags. The farmers who purchased seed from there returned home and attested to the high quality of seeds from the Super Bag. Hopefully we have a project activity again this year, I included a PH component - nursery and seed bank to my activities. There are many queries regarding SBs and during one congress several LGUs are interested especially the people from disaster risk reduction. So I pointed them to Pacifica Agrivet. The farmer believes his fellow farmer.
- Continuous advertisements are needed because farmers have TVs. Radio plugs are also useful. (But expensive for GrainPro and PASI.) Point-of-sale or demonstration materials can creatively and effectively better target users. One tenet is that it has to be sustainable whatever we do. We should no longer give Super bags away for free. There should be some return to the providers and technology suppliers. The Super bags are now available locally and at the same time on a (limited) promotional one-plus-one program.
- Are the business case flyers that farmer helped develop for us today useful? Is it something we can make in a more useable form for banks, FIs, or others? The flyers can be used to share information with other farmers, but also as promotion. These flyers of farmer business cases are good for project-based assessment of these technologies.

4.4 PH Technologies – More on Super bags and Mechanical dryers

- During our discussion, there seems to be different perceptions amongst actors, for example, some indicated that farmers are reluctant to buy and are waiting for free Super bags, while some farmers commented that they did not know where to get Super bags locally. One farmer, Plenio Ortigas, responded that he recently purchased 10 Super bags for himself with his own money. Another farmer, Pedro, as an individual farmer would also buy and use Super bags (but not a huge volume as he cultivates 0.5 ha). How can we improve the nexus between farmers and local PASI retail suppliers? How do we translate these trials and farmer business cases into sales of Super bags? Do farmers know where they can purchase them?
- Pacifica has 193 branches nationwide and 70 are here Mindanao. Pacifica bought 10,000 SBs in the last 3 months for inventory amongst these retailers. The DA also bought 5,000 SBs per region totaling 80,000 SBs. DA-ARRMM also bought 50,000 SBs.
- Will the SBs not be attacked by rats? Farmer response: when we trialed SBs versus ordinary bags, the latter was damaged by rats. With SBs the smell that attracts rats is lessened and thus this is less of a problem.
- In associations, you can think about how to buy in bulk to reach more farmers. This is better than individual purchases.
- SBs have been hard to find locally, that's why we (DA) purchased SBs. We are continually showcasing benefits of SBs in our station. We are selling them through our station and our clients are farmer seed growers. If they see that the technology works, it's not a question of cost. They will buy. To see is to believe.
- The DA produces registered and certified seeds. There was a time when quality of seed and germination went down. We went from having certified seeds sold at PhP 1600/bag to being downgraded to good seeds sold at PhP 800/bag. We innovated – we inserted Super bags inside ordinary bags as a liner. The farmers clearly saw the dead insects (in the hermetic bags) and were convinced about use.
- GAMAPA farmers group is looking forward to Dr. Tado's visit to our dryer. The business plan is very important. Success and failure can be measured through the BP. Farmers have so many experiences, the problem is how to document. Farmers' experiences are rich and reliable. Videos are a good way to show others and we are open to visits for others to learn. MFIs play an important role in financing. If we have the resources, our farmer community coop can do marketing because the product/service is already in our hands.
- How to better capture lessons and experiences of others who have piloted technologies as entrepreneurial activities? For example, can we better document outcomes from the GAMAPA pilot, and use the business plan tool to help monitor and evaluate business performance against original goals set out in the plan? The tool could also be used to communicate, which is already happening with their customer base and staff, but perhaps be further utilized by other stakeholders for creating awareness of needs and opportunities as a sort of

business case study. This might help GAMAPA (and others) access resources and expand business model piloting and designing scaling out activities in other regions. As PhilRice will return to Budkinon to troubleshoot and monitoring performance of the dryer, this would be a good opportunity to gather additional information about the enterprise in its first year.

5.0 Field Visit

This was followed by a field visit to the PhilRice Research Station in Agusan where their RAFD was demonstrated along with hermetic storage technologies for the benefit of financial institutions and other new actors at this Learning Alliance event. Incidentally, throughout the day it rained heavily, as rains and typhoons are a regular occurrence in Mindanao. This underscored, especially amongst the new financial sector participants and business people who attended, the needs for drying facilities and the difficulties in optimally storing of paddy and seed. These challenges remain as significant opportunities in the Philippines for reducing losses and creating more value from farmers' harvests for a wide range of actors in the postharvest rice chain.



6.0 APPENDICES

APPENDIX 1: Participants List

Business Forum, January 15, 2013, Butuan City, Agusan del Norte

No	Name	Agency	Address	Sex
1	Hazel Alfon	PhilRice	N. Ecija	F
2	Caesar M. Tado	PhilRice	N. Ecija	M
3	Plenio Atega	Sto. Nino MPC	Agusan del Norte	M
4	Antonio Du	DA RFU VII	Cebu	M
5	Priscilla Banban-eg	Mirack Irrigators' Assoc	Agusan del Norte	F
6	Nenita Tolentino	Pacifica Agrivet Supplies Inc	Cagayan de Oro	F
7	Ana Herera	Grameen Foundation	Makati, M.Manila	F
8	Rodel Derecho	Pacifica Agrivet Supplies Inc	Agusan del Norte	M
9	Eminil Dizon	Rural Bank of Cabadbaran	Agusan del Norte	M
10	Cigavent Langit	Rural Bank of Cabadbaran	Agusan del Norte	M
11	Marilyn Aranas	Sto. Nino MPC	Agusan del Norte	F
12	Alman Levi Labo	Green Bank, Inc.	Agusan del Norte	M
13	Cris Lomboy	Grameen Foundation	Makati, M.Manila	M
14	Raquel Balanay	Caraga State University	Agusan del Norte	F
15	Romy Lasco	Taguibo IPM Irrigators' Assoc.	Agusan del Norte	M
16	Justin Robles Rey Anthony	Businessman	Agusan del Norte	M
17	Robles	Businessman	Agusan del Norte	M
18	Jose Gomos	Grain Pro Inc.	Subic	M
19	Marilyn Berondo	Cooperator	Agusan del Norte	F
20	Hermelina Saducas	Cooperator	Agusan del Norte	F
21	Pedro Serrano	Cooperator	Agusan del Norte	M
22	Eusebio Beronilla	Cooperator	Agusan del Norte	M
23	Mila Salamingan	LGU Buenavista	Agusan del Norte	F
24	Jun G. Barong	CFCST Arakan	Cotabato	M
25	Nestor Carin	ARM, Antongalon	Agusan del Norte	M
26	Luz Marcelino	DA-BIARC	Bicol	F
27	Wilson Oriño	Caritas Diocese of Libmanan Cotabato Foundation College of	Bicol	M
28	Joeffrey Habibon	Science and Technology	Cotabato	M
29	Ebbie U. Chan	LGU -Butuan	Agusan del Norte	M
30	Erlinda Sayago	Kaanib Foundation	Bukidnon	F
31	Merlita Piedad	GAMAPAKA Foundation	Bukidnon	F
32	Joriz Elevazo	PAO- Agusan del Sur	Agusan del Sur	M
33	Rhea Abao	RAFID Butuan City Agriculturists'	Agusan del Norte	F
34	Gertrudes Fortun	Office	Agusan del Norte	F
35	Rebecca Atega	RAFID	Agusan del Norte	F

		National Economic Development Authority Region		
36	Emmanuel Gidacan Charleamar	13 Community Economic	Agusan del Norte	M
37	Lumayno	Ventures, Inc.	Agusan del Norte	F
38	Adelaida Dumaboc	Sto. Nino MPC	Agusan del Norte	F
39	John Eric Abon	PhilRice	N. Ecija	M
40	Doris Yap Rochelle Marie	DA-BIARC	Bicol	F
41	Bondad June Anthony	PhilRice	N. Ecija	F
42	Ouano	DA RFU 13	Agusan del Norte	M
43	Ernie Orfiaga, Jr.	News Courier	Agusan del Norte	M
44	Ancala, Ruel	Cantillan Bank	Agusan del Norte	M
45	Daisy Jane Allocod	Cantillan Bank	Agusan del Norte	F
46	Maya Juni	Radyo ng Bayan	Agusan del Norte	F
47	Jonnie Sacote	Landbank of the Philippines	Agusan del Norte	M

APPENDIX 2: Newspaper Article

Mindanao Daily News, January 30, 2013

Daily NEWS **NEWS IN FOCUS** WEDNESDAY
 JANUARY 30, 2013
 Editor: CRIS DIAZ Email: crisguardian@yahoo.com
 Editorial: mindanaodailynews@gmail.com • Advertising: mindanaodaily.ads@gmail.com

Philippines postharvest learning alliance: reducing losses, adding value to farmer's harvest

LEARN. Share. Collaborate.
 "To help small-scale farmers reduce their postharvest losses and adding value to farmer's harvest is another approach for rice self-sufficiency at the end of 2013," Dr. Caesar Joventino Tado said.

The Postharvest Learning Alliance Team conducted a business forum with a theme: "Emerging Opportunities for Postharvest Technologies and Entrepreneurship in the Philippine Rice Sector,"

held at Red Palm Suites & Restaurant, Butuan City dated January 15, 2013.

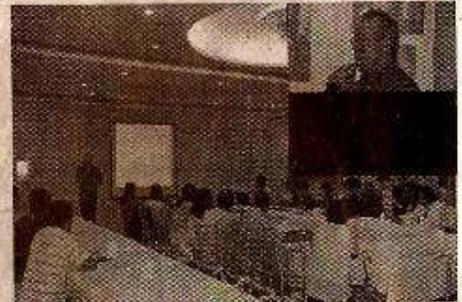
The event was attended by Alfred Schmidtley, Business Model & Value Chain Specialist of IRRI and Dr. Caesar Joventino Tado, Acting Director for Administration of PhilRice, Ms. Rebecca R. Arega and Jane Anthony Ouanoo of DA-RFU-13, cooperative members, farmer leaders, irrigators, local media, and microfinance institutions.

Based on a study from the two established rice research institutions, the International Rice Research Institute (IRRI) and Philippine Rice Research Institute (PhilRice), postharvest losses is one of the major hindrance to attain rice self-sufficiency. Postharvest losses include both physical

losses 15 - 25% in weight and quality losses 10 - 30% in value of paddy. With these identified issues, linkage between postharvest chain actors, technology providers, policymakers and financial institutions are needed.

Thus, the joint intervention of ADB, IRRI, PhilRice and a partnership of DA-RFU XIII through the Postharvest Learning Alliance (PLA) has helped farmers to widen their knowledge and improve their technology options and also building their capacities to be competent agri-preneurs.

The event objectives were to create awareness among microfinance institutions (MFIs) and other financial institutions, policymakers and postharvest actors, and postharvest sector stakeholders about improved technologies and entrepre-



Learn. Share. Collaborate. Alfred Schmidtley, rice postharvest technology expert from IRRI discuss the agenda and objectives of the forum

neurial enterprise opportunities; link loan products and other forms of financial and policy support to well-defined business cases for technology adoption and business plans from farmer groups who have piloted these options for scaling out; and to identify needs and next steps for learning activities and establishment of linkages with Postharvest Learning Alliance partners for supporting entrepreneurial business models and the development of new postharvest enterprise.

As a highlight of the said

event, a roundtable discussion was then conducted for policy recommendations and future learning activities. Field demonstration of mechanical drying and hermetic storage was also done in the afternoon at PhilRice-Agusan. Further, the DA-RAFD 13 also launched its newly produced flip charts about super bags as a guide for farmers to use the said technology.

The continued public-private partnerships will help DA's vision SAPAT na BIGAS, kaya ng PINAS!
 --Rhea C. Abao of DA-13

APPENDIX 3: Program Agenda

0800-0815	Registration	
0815-0830	Welcome and Opening Remarks	Hon. Lawrence Fortun Vice Mayor, Butuan City, Agusan del Norte
0830-0900	“Philippines Postharvest Learning Alliance: Reducing Losses and Adding Value to Farmers’ Harvests”	Alfred Schmidley, Business Model & Value Chain Specialist, IRRI
0900-0930	“My business case for adopting hermetic storage”	Sto. Niño Multipurpose Cooperative and local farmers
0930-1000	Coffee Break	
1000-1030	“Update on Mechanically Drying Paddy as a Community Business Model”	GAMAPAKA and Catholic Relief Services
1030-1100	“Business Plan for Mechanical Drying Services for Farmers”	Taguibo Irrigators’ Association
1100-1130	Introduction to MFI loan products and other financial services	Participating MFIs and financial institutions
1130-1200	Table visits and questions	
1200-1330	Lunch	
1330-1500	Roundtable Discussion: Loan products, policy recommendations, and next steps for future learning activities	All participants and Hon. Angelo S. Calo (Chairman, Committee on Agriculture, Sangguniang Panlungsod)
1500-1530	Coffee Break (and bus ride to PhilRice Research Station-RTR Basilisa, Agusan del Norte)	
1530-1645	Field learning activities: Demonstration of mechanical drying and hermetic storage options for farmers and postharvest enterprises	PhilRice and Pacifica Agrivet/ GrainPro, Inc.
1645-1700	Closing Remarks	

APPENDIX 4: Flyer – “My Business Case for Super Bags,” Marilyn Aranas

Marilyn Aranas

- Farmer
- Chairman, Sto. Nino Multi-Purpose Cooperative, Sto. Nino, Butuan City
- Board of Trustees and Treasurer of P4MP
- Member of Butuan City Organic Fertilizer Producers
- Happily married to a retired US army serviceman
- Has loved farming and gardening since childhood
- Got into farming after 23 years of working in a private trading company



My Farm Enterprise

- Produces rice on 4 hectares of land with organic farming technology
- Plants rice twice a year
- Uses 80 kg of certified seeds per ha, average yield per ha around 120 cavans
- Sells rice (milled at the cooperative) to nearby communities, sells good seeds to farmers who cannot afford buying from accredited seed growers
- Sometimes stores good seeds for 3-4 months for next planting season, but often buys certified seeds from accredited seed growers
- Grains for milling stored up to 5 months

My thoughts after using the Super bag



"I want to use the Super Bags again. I will tell my fellow farmers to use Super Bags in storing their seeds. I hope Super Bags will be made available locally at a farmer-friendly price."

"Using Super Bags will not only bring savings from reduced seed rate, but will enable farmers to plant, harvest, and sell rice on time, to benefit from higher market prices. Super Bags can help farmers store good seeds and not have to worry about government-certified seed programs supplying them. Super Bags can help farmers store their seeds longer and still be assured of good seed germination and a well-timed harvest."

"In addition, storing seeds in IRRI Super Bags prevents losses due to rodents and birds, while seeds stored in ordinary bags was partially eaten by rats and weighed 5 kilograms less."

My Profit Calculation

CURRENT PRACTICE-POLYETHYLENE BAGS

Current Seed Rate	80 kg/ha
Amount of seed used per season	80 kg/ha x 4 ha = 320 kg of seeds
Current Germination Rate	82%
Actual weight of seeds per hectare	65.6 kg/ha (80 kg/ha x 82% germination)
No. of growing seasons per year	2

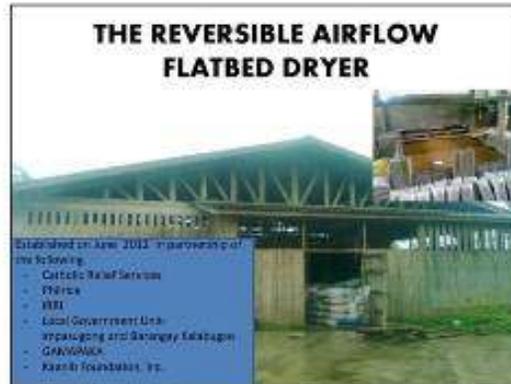
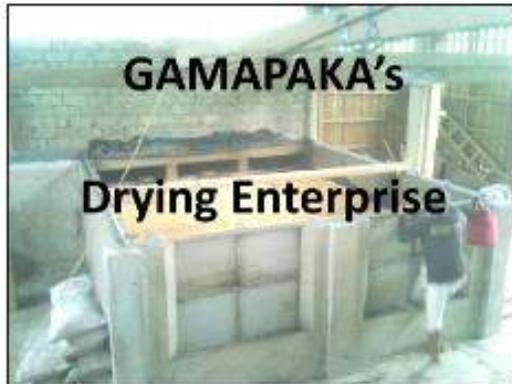
SEED STORED IN SUPER BAGS

Super Bag Germination Rate	94%
Actual weight of seeds per hectare	75.2 kg/ha (80 kg/ha x 94% germination)
New seed rate	69.8 kg/ha (65.6 kg/ha / 94% germination)
Amount of seeds saved	10.2 kg/ha (80 kg/ha - 69.8 kg/ha)
Market price of seeds	30/kg

TOTAL ADDITIONAL PROFIT

Revenue	PHP306/ha
Cost of Super Bag	PHP1,224 (PHP306/ha x 4 ha)
Net profit	PHP720 (PHP120 x 6 Super Bag)
Net profit/Season thereafter	PHP504
	Php1,224

APPENDIX 5: GAMAPAKA Update on drying as a community business model



GAMAPAKA COOPERATIVE

- Gagmay'ng Mag-uuma sa Parokya sa Kalabugao (GAMAPAKA) Cooperative.
- Location- Brgy Kalabugao, Impasugong, Buk.
 - 48 kms from brgy Poblacion
 - 38 kms from national highway
- Registered on October 27, 2009 with the Cooperative Development Authority (CDA).
- Total membership of 60 farmers

- use in drying rice paddy and corn
- dried volume as of Jan. 14, 2013 - is 95,000 kgs.
- no. of farmers availed the services as of Jan. 14, 2013 is 42 farmers

- vol capacity per batch = 4 tons (80 bags of palay)
- drying time = average of 12 hrs (9-16 hrs)
- depends on the initial MC

Comparative Cost

Basis: 4,000 kgs wet palay

	RAFBD	Solar Drying
Labor (6 pax @ 120x3)	240.00	2,160.00
Meals & snacks	-	1,350.00
Drying fee	<u>2,400.00</u>	<u>80.00</u>
	Php2,640.00	3,590.00

APPENDIX 6: Taguibo farmers' business plan slides for mechanical paddy drying enterprise

*Contact Romy Lasco, President, Taguibo Irrigators' Association for unabridged version of their written business plan, mmail: taguiboipmia@yahoo.com

"Sustainable Solutions for Sustainable Farming"

Business Plan for Palay Drying Enterprise

Mr. Romy Lasco, President
Taguibo IPM Irrigators' Association, Inc.

Brgy. Taguibo, Butuan City
Sec. Reg. No. H200100253
Email: taguiboipmia@yahoo.com



Current Product and Services

- **Irrigation Services**
- **Certified high-quality seed**
- **Organic vermiculture products** (vermi-compost, vermi-tea, vermi-castings and worms)
- **Farm family micro-enterprise products** (tumeric tea, ginger tea, coconut honey, maize coffee)
- **Drying platform rental**




Who are we?

- Established 2001
- 98 members strong
- All smallholder farmers from Taguibo Barangay
- Successful track record
- No debt or outstanding loans & healthy cash balance



Mission:
Promote organic farming technologies and practices to preserve human health, protect the environment, and sustainably improve farmer livelihoods.

Proposed New Product: Contract Drying Services

- 4-ton capacity
- Dries palay from 22-26% moisture content to 14% MC for safe storage and milling (11% MC seed)
- 8-10hrs drying time per batch
- Air-flow can be reversed for added efficiency and even drying
- Uses by-products (rice hulls) for furnace fuel (carbon neutral and environmentally sustainable)




Financial & Risk Analysis

Financial

- Php 750,000 capital start-up costs
- Payback period in 3rd month of Year 3 based on loan with 8% interest.

Risk Mitigation

- Technical backstopping, installation, and training on operation and maintenance (PH Learning Alliance)
- 40 members signed up for services in Year 1
- Site to be used for demos & learning activities w/ others

Acknowledgments

We wish to thank these organizations for their support:

- International Rice Research Institute (IRRI)
- Philippines Rice Research Institute (PhRice)
- Asian Development Bank (ADB)
- Office of City Agricultural LGU, Butuan City
- Caraga State University
- Department of Agriculture, Regional Information Office

The Taguibo IPM Irrigators' Association bears all responsibility and risks for this business plan, loan repayment, quality of service, and all other aspects of this enterprise.