



RURAL DEVELOPMENT AND FOOD SECURITY FORUM 2019 VOICES FROM THE FIELD

DECEMBER 2020

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Amarjit Jagap, Maharashtra, India

I live in Maharashtra, India. I completed my agriculture-horticulture studies in 2010. After graduation, I did agri-business management in Pune for 2 years. Then in 2012, I was selected to work at ICICI Bank through a campus placement.

I worked there for a year, but during that time I realized that my agricultural background was a total mismatch to my job at the bank. I was not comfortable working in the bank, so I resigned from my post and left the job. In 2013, I returned home to do farming in Solapur district in Maharashtra, which grows some of the best pomegranates in all of India (and perhaps the world). Our pomegranates have even got a Geographical Indication (GI tag) – which is a known standard around the world and signifies products originating from a particular geographical location. Our products' shelf life is very strong.

When I moved back to my village in 2013, pomegranates were already being cultivated over 1.21 hectares of our land for the past 10 years. However, they used traditional methods for farming; they would just spray fertilizers over the crops and did not use any scientific methods or techniques. While studying horticulture, I started to understand what was going wrong and why farmers could not make enough profits from the produce.

Both my father and mother are farmers working on our own farms. We have a total of 15 acres of land, out of which only 3 acres were reserved for pomegranate farming, the rest was dryland I tried to better understand the problems of our farmers. While we have the best quality of pomegranates in the world coming from our area, why is it not being exported? Why is a residue-free pomegranate not being produced?

I started studying about these factors: in 2013–2016 I figured out a lot of problems. The farmers do not have knowledge about pesticides, they have no knowledge about fertilizers, and they do not know which technologies to use or which certifications to apply for. I realized that if we want to change something on our farms, then everyone must work together.

Having come to this conclusion, I started working on my own pomegranate farm. In 2013, 2014, and 2015, I worked on my farm and started exporting my pomegranate produce to Europe by selling my consignment to a private company for export.

Residue-free farming requires a specific technique to be followed. First, I got my farm certified for Good Agricultural Practices (GAP). After that, I learned about new techniques, including the use and non-use of pesticides or fertilizers; and then I applied those new techniques on my own farm. In those 3 years, I learned all the best practices like how to spray pesticides, which fertilizers to use, learned about which practices have to be followed for the best quality yields and all.

As I was working alone, I faced many problems. If you want to produce residue free crops, the farms next to yours must also be residue-free farms. For the residue-free farms, you can't work alone as the pesticides that they spray on their farms may also reach yours. Otherwise, your sample yields may fail. Thus, I faced a lot of challenges and realized that working alone was not possible. In those three years I also thought about exporting our produce by ourselves. We must make our own brand. The best quality pomegranates are already available in our area. So why don't we all join together and export? We started working together with other farmers.

The Government of India initiated a project promoting farmer-producer organizations (FPOs) in Maharashtra. In 2016, I formed the Green Horizons Farmers Producer Company Limited. When I started my company, there were only 13 farmers working with me, with zero or very little knowledge. They knew even less about FPOs. They did not know the working techniques or how to earn profits, etc. In 2017, 6 out of the 13 farmers gave their pomegranate produce to me and I had my very first consignment ready for export.

After I packed them all, our farmer producer organization exported the first consignment to the Netherlands in 2017. It was also the first time that a Farmer Producer Company from India had exported to Europe since before 2017, only private exporters did that. Our consignment reached Europe in 25 days and that is when my actual export journey started.

When we exported our first consignment in 2017, we faced a lot of issues. We were not aware about the standard timelines; about how much time is required for packing and all or about the custom house agents. Because of this, the consignment reached Europe a little later than anticipated. For every consignment received, they have a marking scheme that rates the exporters on a scale of 1 to 10. We received only 4 marks out of 10 at that time.

For good payment, one should score at least 6 marks. If you score less than 6, then they have certain criteria of payments and rejections; if you score 5, some amount will be deducted out of the set payment and so on. The first consignment that we exported reached late and that is why we scored only 4. Because of the low score, we had to bear a loss of Rs 1,100,000).

I called those five farmers who gave us their produce for this consignment (I had my produce in the first consignment too) and narrated everything to them. I told them that because the consignment reached late, we suffered a loss and all of us will have to bear the loss equally. The loss amount came to be around Rs 200,000 per head. By now these farmers were aware about how the FPOs work. Whatever profits or losses are incurred, they get distributed equally among the members of the institution.

Since I was the one who introduced them to the residue-free farming techniques, they all agreed to divide this loss without saying anything. I was the one who told them that there are a variety of pesticides being used in India, so both organic and residue-free farming are very difficult. I taught these five farmers about proper pesticides or insecticides to use for residue-free farming.

Since I have an agricultural background, every 15 days I used to give them a mixture of organic and normal pesticides that they could use in their farms for spraying. Based on the atmospheric conditions, I used to prescribe the type of sprays that they needed.

I assured them that even though we suffered a loss of that first year, we will do better next year. We will work on the issues and we will export again next year. Out of the 13 farmers, 6 left. The six who incurred losses first year were the ones who didn't leave me.

Others said they didn't like working with me as the private companies gave them money upfront. I was ok with their leaving me as I did not want to hold them up. The following year, I gathered 25 more farmers, and in 2018, we exported four consignments to Europe.

This time, I was fully prepared. I did thorough research about the desired quality of the consignments, norms and certifications, proper marking schemes, and scores and all.

After this research only, I sent the four consignments to the Netherlands. We were very happy that when our first consignment reached the Netherlands we scored 10 out of 10 marks. During that time, the private companies that were exporting used to score 7 to 8 on an average, and we received full marks because we were fully and thoroughly prepared this time. Soon thereafter, the rest of the consignment reached the Netherlands within 10 days, and we scored more or less the same for all of them.

Due to the great scores, I made a profit of around Rs2.2 million in 2018. Out of the 25 farmers, there were 10–12 farmers whose pomegranates were there in the consignment that we sent to the Netherlands. We paid those farmers the full amount that was set aside. In addition to the amount of profit, we gave them Rs10 to Rs15 rupees per kilogram (kg) over and above the fixed rate out of the profit after 2 months. This made our relations better as they liked the profit being shared with them.

Then in 2019, we sent nine more consignments to Amsterdam and we scored great again. At the same time, we joined together with a few vegetable farmers. In 2019, more than 300 farmers are working with us. We also supply to domestic chains like Reliance Fresh, Healthy Harvest, and Big Basket, etc.

I believe that working in a group as an FPO is more beneficial than working alone. Working alone as a farmer in India is not possible because India does not have a very strong infrastructure. Here, the single operator approach is not good; the supply chain is not strong. Input materials like the fertilizers that are needed by the farmers are not of good quality, so the farmers have to be trained on better techniques, etc.

Our company has great tie-ups with the European fertilizer company Yara International. They train us all about the world's best techniques, like which nutrients must be given to the plants and all. We did many changes in our FPO also in these 3 years. Earlier, when we started the company, we didn't realize that to work as a residue-free farmer going forward, we will need to work at the ground level.

Right now, we have five agriculture graduates working with us, who are the children of the farmers working in our company and we pay them. What we do is we map all the 100 farmers engaged in pomegranate farming and we assign each of the five agriculture graduates as Agriculture Technical Officer to a group of 20 farmers in the pomegranate production. They visit the farms every 15 days. They prescribe every technical detail, like how to do water management, which fertilizers or pesticides to use, etc. They write out these details on paper and the farmers simply need to follow these steps. This is absolutely free of cost; we don't charge anything for this service.

After the cultivation is over, our company buys all the produce, packs it, and then we export it to Europe. Last year, we sent four out of five consignments to supermarkets in Germany. Supermarkets in Germany have a different concept of payment for the residue-free goods. It is called Below Limit of Quantification (BLQ). If they don't detect any pesticides presence in the produce, they pay 20%–25% over and above the fixed rate as a reward.

As a result, we earned extra money for the four consignments that we exported to Germany. This is when we realized how much more work we should do. We are now focusing on organic produce as our next goal. We have selected farms and started preparing ourselves with the best practices, which we already launched 2 years ago. Our final study about how to do organic farming with best practices may be released in 2 years, which will include the details about how to make schedules for organic farming or how to produce good organic crops.

I would like to inform you that 60% of our workers are women. Let me explain why. In India, women do more accurate technical work in farms compared to men. Men do not work to that degree of technicality. For residue-free farming, one has to be very accurate and the observations must be done very minutely. For example, if the pesticide has to be administered as 1 milliliter (ml), it must be exactly 1 ml, no more, no less. When women work, they work with utter accuracy. That's why we have more women than men in our company.

They make sure there are no problems for the residue-free goods and our company hence produces better results.



Ganpat Parthe

Maharashtra, India

I work on my own strawberry farms with my family. Everyone in my family, including my sons, my daughters-in-law, my wife and I, have been working together growing strawberries in our farms since 1992. We started growing organic strawberries in the last 4 years only. A part of my farm is now converted into an organic strawberry farm. Nowadays, the demand for organic foods has increased worldwide, which is why my family does organic strawberry farming with me. Apart from these, I do apiculture, beekeeping. I have 200 bee-boxes. I work on the farm myself.

My family, we are all well-educated and we have been working since 1982. Both my sons and my daughters-in-law are college graduates. I am a graduate myself, but all of us work together at our farm.

We also started agri-tourism activities in our farms. It adds to our income as the tourists come directly to our farms instead of visiting the cities. We give them a guided tour of our strawberry farms. They have their meals with us. And we then allow them to pluck strawberries from our farms on their own.

In this way, almost 30% of our produce is sold upfront to the tourists, thus contributing extra income for us and it also reduces our losses. If we go to markets or mandi to sell our produce, we have to bear some transportation loss. The involvement of intermediaries makes up to almost 20% of loss for us. But these losses are cut totally by selling our produce directly to the tourists.

We converted part of our farm for organic production. The good thing about organic farming is it requires nothing special to be done. Though for the first 2 years, the production is low, the third year is the conversion period of the farms, when the yield really starts to grow.

We put boundary crops around our farms so that no harmful insects get inside, and then we buffered it. To protect the crops inside the organic farm from harmful insects, we use sticky and pheromone traps. We do not spray any chemicals on our crops; rather we use organic slurry as manure. We save on expenses by 80%. Our organic products are in great demand from the people in the cities. We receive full payments in advance, and then we deliver 10 to 15 kg (according to their requirement) directly from our farm to the consumers.

We formed a group of farmers growing different crops. Just as some grow strawberries, others grow mulberries, and others grow vegetables. We thought of farming together and we now have a group of 60 like-minded farmers. We registered this group of 60 farmers with the Buycert International Company.

These farmers were hesitant to join us at first because in the first 2 years, while their land is being prepared for organic production, they would lose out on income. We suggested that they could convert only a part of their farm for organic production rather than their entire holding. The farmers now understand that they will get good yield only by the third year when the land is totally neutral.

To make the land neutral, we use the Azotobacter biofertilizer. We make a slurry by diluting cow dung and cow urine. We pack all these and give this natural manure and fertilizers to each farmer and we support them fully at every point. In pre-organic farming days, we had to search for good markets, but now we have total control over it. There are renowned doctors who want to buy our organic produce. They call to ask us if we can deliver a certain volume of our goods and we inform them that we can send no less than 20 kg per delivery. Even then they are happy to place the order. We accept only advance payments and send the goods later, but still they agree.

One thing we always ensure is that there is no cheating at all. All our goods are 100% organic. We pay around Rs 5,000 to Rs 7,000 to the government institutes to get our lots checked every month. These institutes confirm that our goods are purely organic and residue-free. We make our produce residue-free in the first 2 years, and after that we convert them into organic. The land where we grow the produce also becomes neutral slowly and, as I said earlier, it cuts our expenses on insecticides, pesticides, and harmful chemicals.

It is also great fun to do apiculture along with farming. Apiculture has increased our yield between 20% to 30%. This is profitable for us. We have a group of around 1,400 non-agriculture farmers also working with us. The farmers nearby also ask us if they can join us, but we do not allow that as they must first make their fields and produce residue-free and organic in 3 years like we do. Then we do a thorough checking of their farm, and only if they pass these checks, they may join us.

Regular farmers get around Rs 100 per kg for their strawberries while we get around Rs 250 per kg for ours. Our strawberries are extremely perishable and need very good pre-cooling mechanism so that its shelf life gets increased. I have pre-cooling units with a 5-ton capacity for the strawberries already. Our daily production of strawberries is around 100 tons. There is still a need for increasing pre-cooling units by about 20 tons more. The farmers can increase their yield by doing apiculture along with the farming.

If any harmful chemicals are sprayed on the crops, bees do not visit those farms. These bees are a testing mechanism for us. If the farmers try to fool us to pass the checks saying they have organic farms, we do a quick test. I put a bee-box in their farm. If the farm is really organic, the bees go inside the farms, otherwise they do not. These bee-boxes are very important.

The third thing our organization does is apiculture only. We have around 1,900 farmers who are engaged only in collecting honey from the forests. This is the only work they have to do and I work closely with them. Usually, farmers buy land for farming. I have bought about 9 hectares of land recently only for beekeeping. I put my own bee-boxes there.

There are no properties or no wastewater anywhere around this land for about a periphery of 10 km. We collect honey from there and then convert it into organic honey and then sell it. For regular honey, the market rate is around Rs 200 to Rs 300 per kg; for organic honey the rate is Rs 800 to Rs 1,000 per kg, and yet it is in high demand. We guarantee that there are no impurities or mixing in our honey.

As I said, the other thing that we started is agri-tourism. If we do good, other farmers become encouraged to join us. Educated farmers like me started agri-tourism in 2005. Before that, people used to say it won't work, but if you see it now, it's a super hit! Be it Saturday or a Sunday or any holiday, we are beyond capacity and fully occupied with visitors. Our items get sold upfront and we make profits. They are all cash-crops and when farmers get cash on spot, they become happier. Around 350 more farmers joined our apiculture group recently after looking at these profits, and our work goes on!



Indra Gunawan, West Java, Indonesia

I am from West Java, Indonesia and live in Targong Kidul subdistrict, Cibunar village in Garut Regency. I work in a farm and plant rice. I am a member of the farmers' group Mekar Tani 2 in Cibunar village. The farmers in the group have a total of 25 ha that are planted with rice. Every year, the land produces 6.5 tons of paddy. If we had continuous water supply throughout the year, the farm would generate more yield and farmers would be able to earn more.

Indonesia has monsoon and dry seasons. During the dry season, which last for half a year, the farmers do not have income as there is no water during this season and we cannot plant anything. The village leaders built a water reservoir in 2018 to provide farmers with water during the dry season. But the water from this reservoir cannot reach all the farmers.

We do not have the equipment to pump the water, which we need since our fields are located higher than the reservoir. The irrigation canals are not properly maintained and there are leakages throughout the canals; so that the available water cannot reach the fields. While the government has built some structure for irrigation, it does not have a water gate that allows us to control the water.

We do not have enough paddy for our own consumption. Only when there is a surplus after we consume, we sell it. We sell our rice through the *bakul* or an intermediary, who buys it at a rather low price. It is the *bakul* who sells the rice to the market. During the dry season, we cannot plant anything on the field and leave it as it is because we do not have the skills to plant secondary crops. Some of us also lack the financial means to cultivate secondary crops.

In Indonesia, we usually do some crops like maize and chili. Most farmers lack the necessary knowledge for planting a variety of crops; they also lack financing to buy the seeds or equipment to do irrigation by using sprinkler; and they are unable to plant during the dry season. They are also unable to negotiate their selling price and are unaware that they can sell their crops directly in the market.

In my opinion, the government should provide continuous training. For example, there is a training for planting but there is no subsequent follow-up for evaluating if farmers have correctly applied the training. We also really need help on the water issue. It is the main thing. Without water, the farmers cannot plant.



Jit Kumari Yogi, Bardiya, Nepal

I am a poor, smallholder farmer from Nepal. Most farmers like me don't have much land, on an average of not more than 0.321 hectares (ha) each. We work hard, ploughing the fields and planting paddy by availing loans from moneylenders for crop farming. But at harvest time we see no return for our hard work.

Even though we invest in farming, we are disappointed with the marginal return. Moneylenders and traders fix the price of the crop at harvest and we farmers cannot do much about it. Often the return we farmers get from our labor and hard work is just sufficient to pay back the loan to moneylenders. Most of the time, we remain in debt and have to work to pay back loans. Farmers are economically deprived and do not have money. Some farmers have abandoned farming and their farmland has remained barren.

Farmers are facing multiple problems such as lack of seeds, lack of fertilizers, and irrigation. Access to fertilizers, seeds, irrigation, and technical know-how is a must. This may help farmers to uplift their socioeconomic status. The price farmers receive for their crop does not have a floor market price assigned by the government or marketing board so traders can set the buying price as they wish. There should be a support price assigned based on the variety of crop that would ensure a fair return to farmers.

After facing these problems for many years, we decided to form a group of 57 poor, smallholder women farmers. We did not have money at that time. In the beginning, we started working collectively for each other and collected money. The group of 57 women deposited whatever was collected; we started with Rs 10 every month and also collected Rs 10 from each of us during our monthly meetings.

To collect additional funds, we started showing dance performances on some special occasions when someone returned from abroad or when babies are born. We began cleaning streets and cooking food at different functions such as marriage ceremonies. In this manner, we collected more funds and decided to expand further and open a cooperative.

On 22 January 2012 we established the Sustainable Social Women Cooperative (*Deegopan Samajik Mahila Sahakari*). In the first 2 years, we used the money we collected through the same committee. After 2 years of operation, the Himalaya Bank provided us Rs 1.5 million. We bought 12 young cows from Chitwan for 12 members, built cow sheds, each costing Rs 200,000 and provided 12 members orientation on entrepreneurship. From the loan recovered from the first batch of 12 members, we invested in cow and buffalo farming, goat farming, poultry farming, and vegetable farming for a second batch of 12 members. Now, we have 40 groups with a total of 620 women members.

By forming a cooperative, our women members have benefitted very much. The milk production from the cows and buffalos we had purchased increased exponentially in the last year from 20 liters to 400 liters per month. Farmers now sell milk via the cooperative. We also sell male goats. Our members are doing banana farming on about 16 ha. These farmers also sell their products through the cooperative. At the Dashain festival (the biggest Hindu festival in Nepal), we were able to sell 200 male goats. Our aim for the cooperative is for each member to earn Rs 567,000 per year and become entrepreneurs. We are looking for support from organizations.



Javed Iqbal, Nankana Sahib, Pakistan

My farm size is 7 acres (approx. 2.8 ha) and I grow wheat and rice on 3 to 5 acres. I also have fruit gardens consisting of guava, grapes, dates, etc. Generally, my crops are profitable. However, it also depends on changes in weather. Due to climate change, sometimes it is profitable while at other times, I have to bear a loss. For example, during the last week of October 2019, when the rice harvesting was about to start, non-seasonal thunderstorm and hail severely damaged the crops and the farmers had to bear severe losses. Groundwater was unfit for irrigation; moreover, the counterfeit pesticide networks played a role, and because of that farmers suffered a lot. It has been happening in the last 3 to 4 years.

During the peak sowing seasons, farmers faced an artificial shortage of seeds, fertilizer, and pesticides. We have to purchase these at higher rates. There is no government owned facility for purchasing seeds, fertilizer, and pesticides that could maintain proper and continuous supply in the rural areas. Because of these, farmers are being betrayed and unknowingly use counterfeit fertilizer for their crops. Similarly, adulterated seeds are also being sold to the farmers, which is resulting in irregular germination. We do not receive the desired result.

Often, our crops cannot grow to the standard height. I believe the ratio of counterfeit inputs like fertilizer, seeds, and pesticides being used by farmers is up by 70%. The checking committees are conducting superficial spot checks as a formality, just to keep up appearances for the farmers and the community. As far as seeds are concerned, there is no check and balance at all. Higher rates and low-quality inputs, adulterated seeds and fertilizers are adding to the devastation of agriculture.

At the time of sowing, black marketing of micronutrients like zinc sulfate, which is important for the sowing of rice crop, is at its peak. Dealers and sale shops do adulteration of micronutrients, which results in lower yield than expected. Moreover, subsidy system is also substandard; for example, the tags attached with the bags of D.A.P fertilizer are sewed in a way that destroy the card number. This results in non-availability of subsidy, as it has to be pinned in the government help line system.

The machinery for land preparation and sowing is not available when required. This forces farmers to adopt old traditional techniques of sowing, which result in lower yield. In case of wheat, seed sown by drill results in even and complete germination that saves water as well. Broadcasting results in uneven seed placement and only one-third of seeds properly germinate, thus resulting in lower yields. Financial resources of the farmers are low, which restricts adoption of new technologies. Moreover, our soils are saline, while groundwater level is continuously rising. To make the soil fit for crops, a lot of investment is required. That investment is sometimes not available and farmers do not sow at all.

The marketing system is not efficient. Manipulated and incorrect weighing scales are being used by the buyers, thus depriving farmers from receiving their fair share of the price. Monopoly of private village dealers or arhtee (intermediaries) or commission agents is a curse and they do not give the government

rates to the farmers. Farmers do not have any storage facility, where they can store their products and sell at higher prices, demand increases and better market prices can be realized. At the time of harvesting, due to the sale of bulk quantities of product, farmers cannot get the proper price.

The lack of drying facilities at the farm level force farmers to sell their product at the moisture content not desired by the processing units, thus giving them a low price. For example, in case of dates, figs, grapes, if we have solar driers, farmers could get good prices of their products. Sun drying may result in deteriorated quality product. Moreover, grading facility of the products is also lacking at the farm level. It should be available at least at union council level. There is also no production insurance facility available from government side. The government has to initiate actionable steps in this regard.

The subsidy system of inputs is not efficient; it has to be improved so that farmers can get the maximum benefit out of it. Although the subsidy on wheat and fertilizers is available, the absence of coupon numbers (due to sewing and hiding them), it is very difficult to get the proper number that has to be pinned into government helpline or online system.

Government officials respond through the helpline but reject farmer entries with the excuse that the coupon number is not appropriate. All vouchers of the farmers are not considered for subsidy because of errors in the application form as farmers are normally illiterate. There are no clear instructions available for the farmers on how to apply for subsidy. There should be an easier way for it. Moreover, funds for the subsidy are not available at the right time.

The government should:

- (i) Provide storage facilities at union council level to improve farmer's storage of products.
- (ii) Strengthen the financial position of farmers by providing inputs at union council level, which should be recovered from producers.
- (iii) Establish machinery pools at the village or union council levels to be maintained that contains all machinery and equipment required for land preparation, sowing, spraying, harvesting, etc.
- (iv) Implement proper crop insurance policies to avoid losses to the farmers due to the seasonal fluctuations.
- (v) Introduce international price system keeping in view the cost of production of the crops.
- (vi) Introduce value addition of farmers' produce at farmer level.
- (vii) Gypsum of standard quality provided to farmers at subsidized rate at union council level.
- (viii) Construct warehouses at union council level through public-private-partnership.
- (ix) Provide solar-powered tubewell pumps at subsidized rates to the farmers for irrigation purposes.
- (x) Introduce irrigation water storage at farm level.
- (xi) Provide water management system at the subsidized rates.

Generally, farmers are not satisfied with government departments' support to the farmers which need to be improved.



Anna Mariel Valdez, Tarlac, Philippines

I'm 22 and I grew up in Pura, Tarlac. My father has repeatedly tried farming but in the end it did not work out because many problems confronted us. The first problem was the financial aspect. He also did not have enough knowledge about farming. In our area, farming is the primary source of livelihood. However, the farmers' knowledge is not enough. They don't have anyone to help them, and then at the end of the day, they ask themselves, "Is this it? Is this all we can achieve?" "Won't anything change at all?" What they often think about is they are already at the bottom, isn't there anything that can be done to uplift their situation?

I also experienced going to the farm. but my father didn't want to involve me.

In farming, there is an activity called *sikka*. This is an Ilocano word that means "to pull" and has to do with the rice seedlings which are pulled out to be transplanted. I tried it, but my father told me off. He asked me, "What are you doing there? I am working very hard so that I can send you to school." He told me that I could watch so I can see how hard it was. Then I can use that as motivation to study harder. He forbade me from going into farming. People always say that farming is only for the poor but for me, farming is the primary source of livelihood. You cannot live without planting rice. But that's the situation and my parents discouraged me from engaging in farming.

I'm the eldest among four siblings. We are encouraging my brother, the second in our brood, to study. He is not interested in studying nor farming though. I asked him, "What will happen to us?" I have graduated but I'm not yet working. For the time being, I am a chairperson of our barangay's Sangguniang Kabataan (youth council). This is my way of helping the family. Sadly, my brother is not interested in helping out at all.

My father shares 2 ha with my uncle and they farm alternately. Last time though, my father already gave up because we were losing money. When harvest time comes, we don't get enough. When that happens, we have to borrow more money so we just get buried in debt. My uncle did the same—he borrowed money for planting and at harvest time he got very little return. I feel like the money is just moving in circles. There was a time when we were buried in so much debt, we had to borrow money again to get out. We just get buried deeper and deeper into debt.

I graduated with a degree in elementary education. I hope that this year, I can get my license. My parents told me to focus on my career. Even if I'm working for the government through the Sangguniang Kabataan, I still have to work on my career. I can still choose another field, but I have been advised to focus on my career. If I don't become successful here, then I can try another field. As of now, our activities in the Sangguniang Kabataan are mostly tree planting. I don't see any initiative yet in agriculture.

When you ask the youth to join you in the farm, they will go there to take a selfie, take photos. If you ask them, “Would you like to try farming?” they will say, “Why? What can we do with that?” In their minds, farming is just for the poor. They don’t realize that farming is important. Maybe through training, young people can be encouraged. My point is that the youth should be motivated and they should not be discouraged even at a young age to engage in farming. The elders and trainers need to make the youth understand that farming is hard but we still need to learn it as part of our daily lives. We need enough knowledge and skills. The change that needs to happen is not just for the youth but also for the parents who influence their kids as well.

In school we have activities and a subject on agriculture but what I’ve noticed so far is that this subject is often disregarded. That’s what usually happens. When I was in high school, we were asked by our teacher to choose between agriculture or another topic. Our group picked agriculture but we ended up just planting okra and tomatoes.

If our family decides to stop farming, what will happen? Every time we need to cook, we will always buy or depend on others. For example, if we don’t have any income from other sources, it will be a major problem. We will just spend money without any income coming in. Maybe there is a way out; not just by planting rice but vegetables, which can bring in income and also become a source of food.



Cherrys Abrigo, Laguna, Philippines

Sierreza is a zero-waste store and cafe. We built it to support the products of the farmers, specifically, farmers who are underserved, who live in secluded areas like mountains. Most of them are from indigenous communities but it's not exclusive to them. I focused on them since they live in areas that are hard to reach.

Since we are currently supporting organic farming as a livelihood, it helps the health of farmers and the environment. What's nice is the timing was just right since consumers in urban communities are becoming more health conscious. They are now looking for naturally grown products. That demand emerged at the time we put up Sierreza.

One of Sierreza's business strengths is selling organic products. These are not readily available in our market. If they are available, they tend to be expensive. In Sierreza, we make the organic products available to the urban community at a cheaper price. We get the products from the communities and bring it back to Sierreza so the many layers of intermediaries are cut out. The Los Baños community saw that the products were cheaper. We get comments like, "Wow, it's organic and not as expensive as those in the grocery!" "And these even came from indigenous groups!"

The business is growing. I have the education and I can grow it. But there is a bigger need of our fellow Filipinos and I think we can do it. If we're not selfish, it is possible. We have proof of concept with economic viability. Sierreza is already self-sustaining from what it earns. What we earn from the cafe restaurant, in retail, fresh fruits, and vegetable sale, I channel back most of the profits back to the farmers. That's one of the reasons why we were able to continue it.

The funding is only for a year but we are not going on for more than 3 years. The farmers themselves sustained it. They can see and I always make them see the reaction of consumers every time they hear the story. They say, "Really, is it true?" Sometimes we organize farm tours. Customers go to the farm and when farmers see their appreciation that people value them, it gives them a different kind of boost in their self-confidence. It gives them back their pride in what they do. When their kids see this, they are encouraged to join in; now their kids are involved. The small business sustained it. What more if we can grow it bigger? How many more communities can it help?

I also post stories on social media. When people saw that good things were happening to Daraitan farmers, that many were helping out, and more customers were reaching out to us, many farming communities stepped forward. They asked me if I can help them. Two weeks ago, I just came from Polilio island. That was with coconut farmers and their product was coco sugar. They want to get connected to the market. They are not just sellers, they are also partners. That's what they want to be. So many communities approach us but our capacity and funds are also limited.

But if we can share this story with more people, then hopefully more would follow. The concept is here and also the framework. It can be replicated. I'm not about the brand. It's also good if the brand grows, that's better. But if others replicated it then that's much better. There's no monopoly in knowledge and capacity. But if many join hands and help each other, and we know our goal, then we will reach greater things.



Christine Jodloman, North Cotabato, Philippines

I am from North Cotabato and 23 years old. I grew up in a rural farming community. Cotabato is the food basket of Mindanao but it's one of the poorest provinces in the Philippines. It ranked sixth in 2016. I grew up there. I remember when I was a child, on my way to school I could see rice fields, farmers planting *palay* in the rice fields. They were really working hard to plant this *palay*. On my way home, I could see the same farmers going home too with either one to two kilos of rice and with dried fish or canned sardine, all packed together in a plastic bag. They were going home after a long tiring day. I thought it was a normal situation that our food producers buy their own food every day and they don't have decent work because they are tenants.

After harvesting of rice, farmers do other sort of jobs, what we call "manananggalot". They climb coconut trees so they can earn extra money. When I was studying in high school and college, I realized that our food producers should not be hungry and poor. They should have enough food, food security. I studied communication arts in college because I want to help change this narrative of agriculture.

When we say food, there is this sense of wonder and excitement but when we say agriculture, it is not the same. There is a big communication gap between food and agriculture when it actually is the same. Agriculture should be an inclusive and sustainable ecosystem but in the case of the Philippines, it is not. Our food producers are the hungriest and the poorest together with the fishermen.

In college, my thesis was communicating about climate-smart rice varieties to farmers because there is also a challenge in the adoption of innovations. We acknowledge that there are a lot of innovations around but these are not reaching the farmers or are just kept in the laboratories or libraries. They innovations should be out in the field where the problems are.

As I have observed in my survey results, most of the farmers whom I have interviewed were 50 to 60 years old. The average age of a farmer in the Philippines is 57. When I asked farmers during focused group discussions, what they thought about the aging farming population in their community, they said that they were the ones encouraging their children not to be farmers because there is no future in agriculture. That was very sad.

If this narrative continues, our food system and the future of agriculture will be unimaginable. After doing my thesis, I designed a project called PALAY Initiative. *Palay* is the Filipino term for unmilled rice. But *palay* is an acronym for Program Accelerator on Local Agripreneurship for Youth. As I have seen in my research, there should be a business concept in agriculture because agriculture is big business. It should have a heart for the people and the planet.

Growing up in a farm and coming from a family of farmers, I heard a lot of discouragement. My parents told me, "You study hard, you study well. When the time comes you can have this good job." I think they

consider farming more of another thing than a decent job. When I was young, summertime was harvest time. It was one of the most exciting times because when we harvest the rice, there is money. We already associated harvest time with money. We will go to the farm and we would gather *dayami* (rice straw left after rice stalks are cut during harvest). Some *palay* is left there after it is threshed and we would “harvest” that I can harvest as much as half a sack and can sell that for ₱300 to ₱500 and that will be the money I will use for my school supplies.

I strategized to focus on children of farmers like myself. It’s not just about business skills. It’s more about leadership. Technical skills will be useless if you will not make the youth see the purpose of what they are doing. Leadership development is very important and what you can share with the community. And then the technical skills will follow.

Agripreneurship is the combination of agriculture and entrepreneurship. It is wonderful and it offers a lot of opportunities for the younger generation because it diversifies the economic base. As I have observed in the farming community, they use more of the production-based approach, meaning you produce and produce the coconuts without having an assured market for the products. It could be a market-led approach where you start with the market and end with the market. So that we also have the assured market for our products.

We started the project PALAY in 2016. There are 30 of us, all children of farmers. The energy is very high because we can relate to it. We grew up in farms and we know the hardships of our parents. We want to take it to another level. There is this common joke among rural farming communities: “Farmers only know two English words: short and failure,” and all farmers will laugh. When you are a critical thinker, it is not a joke but a sad reality. We Filipinos are a happy people. “Short” and “failure” refer to their harvest, especially the *palay* harvest. They have experienced it so much so they have made a joke about it. But it’s a sad reality.

Redefining agriculture is also important so you can see on my shirt today, “Farming is cool, smart, sexy, and humane” especially in attracting the younger generation. That is why leadership development is very important. Leadership should start first and followed by values formation. Leadership means leading oneself and leading the community. If we just talk about changing the mindset, it’s not an overnight thing. It takes time.

Our name now is not PALAY Initiative but Food Secure Philippines. Secure means sustainable efforts for communities that uplift rural entrepreneurship. We really value entrepreneurship and sustainability for communities because we believe that the future is rural. Farmers and lands in rural communities are full of potential but most of them are idle now. There is a need for continuous learning and improvement to make it more productive.

We focus on entrepreneurship and our vision is sustainable farm-to-fork lifestyle. We value the process from producer to consumer. It is like responsible production and consumption. Our three main goals are: food-secure, healthy, and business-minded communities. That’s why we focus on agripreneurship, and health and nutrition, not just health but mental health. And then business-minded communities.

There is this young farmer. She is the secretary and she is in Thailand for continuous learning as she secured a scholarship in Thailand. She learned so much from PALAY Initiative and Food Secure Philippines that she started her own movement. This is wonderful and inspiring because she is now leading her own community. In North Cotabato, it is actually in Midsayap and she is in Allosa, North Cotabato. She is focusing on conflict-affected areas in North Cotabato. She started this peace and

reconciliation framework, it should start with peace then farming is next. It is like leadership first in food secure Philippines then agriculture. Hers is peace and reconciliation, then farming and she focuses on coffee.

North Cotabato, I think, is the largest exporter of coffee in Mindanao. North Cotabato has very good soil, which is conducive for farming coffee. I think that's very inspiring – leading her own movement. She has a coffee farm now and she has a nursery, which she shares with other farmers. She is already connected with the local government unit to make the program sustainable. Her organization's name is Peace Creed Philippines. We want to start in our province North Cotabato so that it can inspire other young farmers too to start on their own. It's like a model we have. It's provincial. We are all from there.



Enzo Pinga, Laguna, Philippines

Earthbeat Farms is located in San Pablo, Laguna. I was 26 when we started in August 2015. This is not a family business. I founded it myself along with other partners who act more as investors. When we started the farm, we were just leasing the land, we started with one hectare. For vegetables, that was a good enough size to start because the crops that we plant have a high turnover so we are harvesting constantly. We don't have to wait three months before harvest.

The crops that I was trying to plant are things that you cannot find at all in the Philippine market. Some of them consisted of edible flowers, purple beans, or purple corn. These crops were not common so we can market them as something unique with the hope that the chefs or restaurants can set themselves apart as well. Then we shifted to more common, but still high value crops, such as various salad greens, lettuces, arugula, kale, products that people are looking for, different types of cucumber, heirloom tomatoes, etc. In our one hectare, we had up to 10 farmers at a time. Some of them came from provinces such as Quezon or around Bicol, and Camarines Sur. Not all of them came from the area.

At Earthbeat Farms, we are really trying to produce specialty crops for clients in Manila, hotels and restaurants, that kind of thing. We later shifted to more common crops, high value, like salad greens because they are always in demand. After some time, we shifted more to partnering with farming groups from different areas in the Philippines to grow the variety lists that we could offer.

From our end, we are more in the know with what the market needs are and what clients are looking for. This was a way to connect with the farmers and give them a better idea of what to plant and what the market demand is as opposed to just planting whatever they think they can sell. This is not exactly the most efficient way to do things so we shifted more toward that.

The biggest challenges are really number one, the institutional buyers; they just go for the lowest price. They are not really after how the farmer plants or whether it is organically grown or not. That was one of our main challenges and that made it really difficult to get new business. A lot of these big volume traders really undercut the prices. That was a big challenge. We tried to continue working with other farmers as well and also trying to work out a win-win situation for everyone.

I think a lot of people want to do good in the countryside and really like that lifestyle of being away from the city, growing fresh food and working with people on the ground. But what I really like for agribusiness in general to achieve is really to uplift the lives of the farmers. In the end, they are the ones who are growing our food and feeding us, but they always have the short end of the stick.

Farmers risk the most, but they are rewarded the least in this whole food system. They gamble. It's really a gamble when they plant. A storm or some pest could hit them and then that is it. They don't have income for the next few months. We really need to play a bigger role in being conscious about supporting our

growers. Big business and the public sector need to play a more hands-on role in providing the support systems for them to flourish, to not really worry whether they will be able to feed their family or be able to send them to school or not.

We really can put up better infrastructure for them to flourish. In our case, what we are also trying to do is make a shift in the food culture of people. It's easy to do it with individuals, making people aware of how a product or farming methods stand out compared to others and also teaming up with young agripreneurs, farmers, or producer who are trying to do the right thing and getting the collective voice, educating the consumers on how to make better choices and how these choices positively impact the people down the supply chain

I think one thing that could really help is different processing facilities targeting different areas. For example, Central Luzon is a rice growing area; if we could put up processing and storage facilities there so that when farmers have to sell their *palay*, they do not have to sell it right away. They can store it and wait until the prices are favorable for them.

Processing—because farmers are often forced to selling just raw materials, like *palay*—they could increase their income if they can have a stake in a milling facility. The coconut farmers sell the coconuts for copra so there is not much value added. If there is a facility and organizations involved in bringing farmers together, if they can process it into coconut milk instead of copra, and that same facility can package that coconut milk, that could really make a big difference for the farmers.

Before I started Earthbeat, I was building aquaponic systems for communities. We started in Manila. We built systems in Payatas, Las Piñas, and then we moved out to the provinces like Palawan and Bacolod. That got me exposed. We were doing that to address food security and accessibility and that got me exposed to different organic farms in different provinces and seeing the demand. Basically, I saw an opportunity to get into it and it felt like the natural next step after aquaponics and starting an organic farm.

The families in the province were saying, “What can we do with it (the land)?” They tried to do something. I have a friend, who has family land in Tarlac and so he spearheaded rice growing. They were able to produce but when it came to selling, the price at that time was not favorable for them. So they were like, “Let's just scrap it. It doesn't make sense for us to continue it.” It just went back to land being rented out to the farmers in the area. A lot of cases are really very dependent on the location and the type of crop.

I always tell young people that there is a lot of opportunity because it is good and bad; bad because we are so behind in our agriculture, the entire supply chain; the distribution of all the goods, we are terrible at it. It is good because there is a lot of opportunity for people to come in and make a big difference in the right way. I always tell them that there is a big opportunity.

They have to see where their core competencies are so they can make a difference there. Going back to distribution, one of the quickest wins for anyone who wants to get involved is to organize storage and logistics. We are not able to bring the goods where they are needed the most. Come harvest time, there is an oversupply in some areas and there is a drop in prices for those farmers. Other areas, however, need those goods too but there is poor supply and distribution and we are not very efficient about it.



Jojo Romeo Ebron, Bukidnon, Philippines

I am a farmer from Baungon, Bukidnon. I have 1.5 ha planted with rice and potato, and also 20 heads of goat. This is the farm where I work part-time as I also carry out advocacy work for the cooperatives. I am engaged with the Asian Farmers Association. We believe that right now, there is a farming crisis. We believe that there is a problem not only in the market but also with production. I think this is one of our challenges now, not only access to food but also access to healthy and nutritious food. This is the reason why I'm pushing for organic and sustainable agriculture.

Farmers today face a lot of problems. The first is production, access to credit is a major issue as many farmers do not have capital. A lot of them get money for example from usurious lenders, or any relatives or family members they can find. Because of borrowed capital, there is high interest, especially during harvest. Thus, the cost of production is high. The farmer is on the losing end.

In my case, I plant rice; the cost of production is high; during harvest, the buying price is low, especially with the Rice Tariffication Law. A lot of imported rice has entered the country, so the National Food Authority is no longer buying rice from the farmers and the traders are also backing out or offering very low prices to the growers. This is one of the major challenges faced by rice farmers.

I've been a rice farmer for 20 years but I have been raising goats for 2 years. One of the challenges here is how to produce quality meat. The municipality of Baungon is far from the market, so we need a cold processing facility. This is the challenge. Aside from that, the cost of production is also high because these are not ordinary goats; they are hybrids, which cost more.

I got trained on cooperatives when I was young. When I started to farm, I still continued in the cooperative. I became an organizer for the Dairy Goats Farmer Cooperative in our area. We also had a marketing cooperative to help the rice farmers. The new approach we wanted to propagate was cooperative-to-cooperative rice trading. We pooled and consolidated the rice harvest from several farmers' organizations in one vicinity and entered into an agreement with a big cooperative in the area. We supply them and it is the cooperative that buys from us instead of traders from outside.

To overcome challenges faced by farmers, stakeholders must help each other including farmers like us. We are willing to use our own capital for this. We need the government's help in the post-harvest facilities and with equipment and cold storage. That is what the government can do. Of course, we also need to get connected with the private sector. It is not easy to get connected. We need to talk with buyers so we can know the quality they need, the volume required on a consistent basis so that we can continuously supply these. Thus growers, government, and the private sector are three stakeholders that need to work together so there can be changes made in the production and marketing.

Currently we have 25 members in the dairy cooperative and 1,500 members in the rice cooperative in our area. These are the members that helped each other because of the challenges due to rice tariffication. We believe in agro-ecology and I believe that we should not just practice one crop but do multi cropping, such as adding potato, fruit trees, etc. In fact, I also have fisheries so that there is diversified and integrated farming.



Marites Aline Castre, Nueva Ecija, Philippines

I am Marites Aline Castre, a smallholder farmer from Nueva Ecija. Together with my husband, we work on our 2-hectare farm planting onions. In 2015, we had been preparing our land for a month and had already planted onions by borrowing money for inputs and labor. I think our onions were already growing. But typhoon Lando came, it flooded our lands and we lost our onions.

My husband and I could not sleep because we had borrowed money to plant. At that time, we thought, “Our crops have been wiped out. Where will we get the money for repaying the loan now?” My husband said that I should borrow money again. Let’s just take the risk. We already spent close to ₱30,000. Since that was gone, I decided to take a chance and borrowed money again.

I was able to find a source and we planted a new set of crops. This batch of onions grew tall but armyworms hit the crops when our onions were already mature. We thought we had survived and we can now pay back our debts. But the armyworms cleared our crops in only 2 days. We have not paid for what we have borrowed up to now.

Luckily, the person who lent us money was kind-hearted. He told us to pay him next year when we are able to earn from the harvest. The following year, we were able to harvest and it was fairly good so I was able to pay off that debt. And then in 2018, my husband and I planted crops and our capital was about ₱70,000 to ₱80,000. But the farm gate price of onions at harvest was only ₱7 to ₱8 so we were not able to repay the loan again.

Neither my husband nor I are members of any farmer organization or cooperative because attending meetings takes up so much time. We have never approached any bank for an agricultural loan. Instead, we rely on personal loans from financiers in the community. Cash advances were made at the start of the planting season to buy farm inputs (seeds, fertilizer, and pesticides) and to pay for hired labor. Come harvest time, cash advances are deducted from the total sales and the proceeds are divided equally between us and the financier.

With the ₱80,000 we had spent, we only earned ₱24,000. This has been weighing on our minds, especially now that we have to prepare again for the next planting season. We keep wondering from whom can we borrow money again? Who will lend us capital? I asked my husband, what if he plants chili in the meantime. It has lower inputs and maybe we can reduce our costs.

Sometimes, I do laundry for a client three times a week. Then I also do some ironing twice a week. I earn ₱2,000 a week from this work. I save it for the allowance of our two small children. Then if my husband finds work at least twice a week, I save that for our family meals. My husband sometimes works on construction sites. He is at least able to save money to buy the seeds. So even if we grow onions now, we will not be harvesting a lot since we do not have financing.

With what we have experienced in farming, my wish is for at least one of my children to finish schooling so that both of them would not have to fully depend on farming and experience our fate. In farming, you can't expect to get anything back. In other countries, one can get rich from farming. But in Nueva Ecija, with people like me who are poor, only a few can improve their lives.

If we don't borrow money, we have no capital to use in our farms. I wish our barangay would be chosen as a beneficiary of aid coming from the government so that when we plant, we have something to hope for. We hope that we are chosen as beneficiaries, even if it is only occasionally. We have not received anything so far because the priority are the older farmers. They look at us differently. The older farmers matter more.

We feel awkward because we feel that we are the only poor farmers here. The farmers here are all rich. Although farming is the only way of life we have known, our lives were better back then. But with the series of losses in recent years due to natural calamities and low farm gate prices, we have suffered a lot. This is why we are interested to participate in this gathering to be able to share our farming experience and find answers to our farming problems.



Nail Arvin Millo, Tarlac, Philippines

Our family owns about 3 ha of land for farming. We plant rice twice a year. My parents inherited the land from my grandparents. Aside from crops, we also have backyard livestock. My aunt has a piggery. The whole family is involved in farming. When I was young, my grandparents and my father wouldn't allow me to go to the field because they wanted me to study hard. They have this perception that farming is just for those who are not educated, those who do not have formal education. That is why they pushed me to study so we do not have to engage in farming.

People here think that if you are a farmer, you do dirty jobs. It's like an improper profession. My family does not want their children to suffer the problems that they have been facing. They want us to be professionals. They want us to go to offices and not into farming. They want us to go abroad.

One of the problems that all farmers, not just our family, are facing in our country nowadays is climate change and the farmers' resistance to change. Farmers used to have no choice but to do things using traditional methods. Now that we have modern technologies and we train the farmers on how to use them, they do not want to use the modern methods. They just continue to do what they have been doing for years.

However, because of climate change, these practices are now inappropriate given the current challenges. For example, farmers used to be able to harvest 100 to 150 cavans (1 cavan is about 50 kg) of rice on 1 to 2 ha of land. But nowadays, yields have declined from 100 to 50 and even going down to 30 cavans only because of the timing.¹ The farming practices of earlier times that farmers have been doing are inappropriate now. These practices are not responsive to the weather. Farmers have to adjust. But because of their resistance to change, their harvest suffers.

Now, I am in public service. I am a government employee in our municipality, which is the municipality of Pura in the province of Tarlac. I'm currently working as the Labor and Employment Assistant designated as public employment service office manager and also local development officer. We have young people here who want to learn farming but they want to learn the modern way. They do not want farming that's too hot and muddy. Unlike using traditional methods, in modern ways of farming we use harvester, transplanter, and other equipment. Young people nowadays do not want to get their hands and feet dirty.

Training will give the youth and farmers the skills to use machines for farming. As I have said, young people do not want to get themselves dirty. Through that, they will not only learn about modern farming methods; they will also learn about the perfect timing. They will also get more education about farming. The knowledge of farming among the youth is very limited; it is just farming. They don't know how important it is or how vast its scope is. Through training, they will learn more and they can earn more using the proper ways.

As of now, I do not know yet if I would like to go back to farming. Even if I wish to pursue farming in the future, the stigma that farmers have is hard. People will say, “You are already working in a great place, you have a great future ahead of you. Why will you want to return to farming?” But through training and education, I think they will understand more.



Paulina de Afria, Nueva Ecija, Philippines

My husband and I have about 2 ha. We farm the land ourselves but we do hire additional farm laborers when we need them. We are the ones who till the land, spend for it, we do everything. We borrow money from whichever source we can find so that we have capital for the farm. In December, we begin growing onions and harvest after 100 days. After that, we prepare our land again to plant chili. These are the green chili you use in cooking *sinigang* (traditional Filipino sour soup). That's our only source of income.

We don't borrow money from the bank. We just ask our fellow farmers who trust us because they know us. What we do is we tell them early on. "Would it be possible to borrow capital on this date for the onion planting season?" Then they agree. We will buy the seeds. Unfortunately, they cost so much these days. For 2 ha of land, we spend about ₱130,000 because the price of 1 kg of white onions is about 16,000 pesos and there's a short supply. Even we who grow the onions cannot afford to buy any in the retail market. We can only make money from onions when the farm gate price is about ₱50 per kg, but that has never happened.

When we get little or no return from planting onions we have no other option. We get tied down with debt. We get a little from what we can sell from the leftover harvest. Whatever amount we get after harvest, even if it is just ₱100 pesos, it is used to repay our loan because we are afraid that we might not get a future loan if we don't repay. This is what we do even if we get nothing.

I have to then find ways to survive. I sell fish sometimes. I can do any kind of (off-farm) job. My husband does not have any other sources of income. His focus has been on tilling the land.

Starting 2015, we experienced so many challenges. Typhoon Lando led to flooding in our area. Since then, we haven't been able to earn anything. We got buried in debt. There was a time when we were about to harvest the rice or the onions and then we lost everything. That's when we started amassing debt. But those who loaned us money were kind-hearted. They told us to just pay the interest. Until now that is my problem. That was in 2015 and now it is 2019 and I still owe them that money. I had to borrow from someone else to continue planting.

I feel my biggest challenge is how to make enough money to pay back my debts and make a livelihood from farming. We buy expensive seeds, fertilizer, insecticides, and even hire labor; but at harvest time it's always the same, people buy it from us at such a low price. Last year, what we harvested was just priced at ₱12 per kg.

¹ Timing is not the only factor (there is also type of seed, seed quality, pests, and farm inputs, etc). The 30-50 sacks/ha yield is very low, much lower than the Philippines' 2018 average of 79 sacks/ha for dried *palay*.

How will we make a living? Any job that we can find, we just accept, We don't rely on our land anymore. Nothing happens anyway. Absolutely nothing. Even my sons seem reluctant to farm because of our bad experiences. They see that nothing happens in farming. It's very hard since we are the ones who till the land, and we also finance it, and yet we have to look for additional means of earning a livelihood to survive.

We put so much effort into farming but we still remain poor. Is that right? When we were invited here to the meeting at ADB, I said we should go. Maybe something good will happen to us. Maybe we will learn something. I told my sister we should come here.

Anyway, it's all the same at the end. It is so hard to be a farmer. In other countries, farmers are not poor. It's only here in the Philippines. You will see that their lives are good unlike us; we have been struggling so much up to now. We just rely on our land but nothing happens. We harvest onions and we are paid ₱12 pesos. But when the produce arrives in Manila, it is priced at ₱60 to ₱70 per kg.

The most affected with this low price are people like us who till the land under the heat of the sun. It is true that the price of onions goes up, but that only happens at the storage. Those who till the land have nothing. The consolidators who get the onions from us are the ones who get rich. In just a matter of days; they just pass along the produce. They are really the ones who get rich in the process.

The fertilizers are also very expensive and the seeds that we need are not available in Nueva Ecija. We are wondering if there are really no seeds available or maybe traders are hoarding the seeds. That's really our life. I told myself, we were born poor, maybe we will also die poor. It has been many years but things are still the same for us.

What I'd really like to see happen is that when seeds for distribution arrive in our barangay, or there is financial assistance or loan facilities for farmers like us, I hope that we can be included as beneficiaries. We are really farmers, right? Why do they have to make us fill up and sign forms to show that we are really farmers? And when there are benefits for distribution, what happens? We don't receive anything! I am hoping that this situation changes.

Poor people like us have simple joys. I mean, what do we need? Our crops and if somebody can help us with the capital that we can borrow with low or zero interest, that's all. Those are the things we hope for so that we don't need to always look for money. This December (2019) we would again need money to buy the seeds. But if we earn and the price of onions is good for the producers, we won't need to borrow money. We will be able to pay back our old debts.

If we get paid ₱50 pesos per kg and we have 30 kg that amounts to ₱1,500; if we harvest 500 bags then how much would that be? With that amount we can save half and that will be our capital for the next season. We will keep on rolling the money but that doesn't happen because the price is too low for our products.



Reginald Lee, Grow Asia, Singapore

Grow Asia is a multistakeholder partnership platform created by the World Economic Forum and the Association of Southeast Asian Nations (ASEAN) Secretariat for sustainable agriculture. It is focused on small holder agriculture, improving productivity, profitability, and environmental sustainability of farmers and organizations that work with them. We help organizations and farmers access markets, finance, and information.

We do that through our country partnerships at the country level as well as through our regional programs. Grow Asia is a big organization. We are not directly working through farmers but through our partners, who reach the farmers. We like to refer to our-selves as the Grow Asia network, which has over 480 partners around the region and collectively, they are reaching about 1.3 million small holders.

We started in Southeast Asia and are based in Singapore. We are supporting five other ASEAN member states—Cambodia, Indonesia, Myanmar, the Philippines, and Viet Nam. In 2019, we started with a new country partnership in Papua New Guinea, which is the first one outside Southeast Asia.

Specifically, we engage the youth through our digital program. The digital program spans a digital learning series on the latest technology or innovations. We hold “hackathons” to connect innovators and entrepreneurs. Then we have an accelerator program, which tries to nurture the most promising startups and founders. There are other elements—there’s a digital guide, the digital directory that lists digital solutions that are already being implemented in ASEAN. The reason why I mentioned digital is because we see that there’s a lot of interest and attraction from youths in technology. In fact, a lot of the agri-tech founders today, if you look at their profile, a lot of them are very young.

Cropital is based in the Philippines. Noel Amparo founded Cropital when he was 22 years old and they are now reaching almost 100,000 farmers. Cropital is a peer-to-peer lending platform financing small farms directly in the Philippines. For 2 years now, we’ve run hackathons in Singapore. Last year, there was a combination of Singapore and Jakarta to engage the innovators and the entrepreneurs. We see a lot of the participants are fresh from the university, young graduates. They come from business backgrounds, marketing backgrounds, programming backgrounds, data science, machine learning, etc. What they share is passion for food and an interest to apply their skills to make a difference. I think that is how we reach out to make it open to the youth in general.

At least from perspective of the hackathon and the digital program, food is the focus. Not many people can visualize what it’s like working on a farm in the country. They might know the romanticized version of what we have in books and everything but no experience of the reality. Singapore is a food capital in a certain sense and consumers, the youth, can resonate and relate to food—what they consume, what they eat. They are interested in the stories behind that.

They realize of course that most of the time, food comes from the more underprivileged segment of the population and they want to do something to help. When we open the call to run a hackathon or an accelerator, we tend to already attract the people who have an interest in the sector.

We play a facilitation role: for example, there are marketing people and others who just have an IT background. We know that if you want to start a business, you need good complementary skills from people from other diverse backgrounds. We then start to match some of them together – a programmer with a marketing person and so on.

All these make up a much stronger founding team. Speaking from Grow Asia's experience, ideas that came out of the hackathon are still at an early stage; some of the participants really needed a lot of time to work on developing the business model, developing the business relationships with potential partners, etc. That actually brought us to the next stage, the accelerator. That was where we started working a lot more on established agritech start-ups and founders. In that process, we were able to apply more mentorship, a lot more partnership building by introducing them to buyer relationships, supplier relationships, and businesses within the Grow Asia network to encourage them to think about scale for them to scale up their business and look beyond just serving the local market.

In our accelerator cohort, I talked about Cropital, which is part of our accelerator. We also have another peer-to-peer lending platform from Indonesia. We had an Israeli company with a low-cost soil testing kit. We had an Uber for tractors operating from Myanmar. We had a supply chain intelligence platform provider that had people on the ground. They were able to trace intelligently the cocoa beans that were being traded through the supply chains. That is a snapshot of the founders and the companies who are involved in our accelerator.

Speaking about startups, I guess this relates to the challenge faced by youth, which is the lack of connections and market linkages. They are young, they don't have that extensive network yet. I am referring only to agri-tech founders and startups. But what we can really try to do is help facilitate those introductions, the relationship building.

In the Grow Asia digital network, we have sponsors—Corteva, Ferrero, Unilever, Yara. They all have their interests in specific crops, whether it is palm oil or rice. The startup founders, or even in the case of the hackathons, the challenge questions were trying to address a business need faced by these companies. There was a real business interest to see some of the solutions that were generated and brought forward. When some of the winning ideas came or in the case of the accelerator, some of those startups had solutions that can be applied to their business, there was a match. That is a value proposition for the agribusiness that we want them to partner together to create that scale.

I think a lot of rural youth, in general, have their education disrupted whether it is because of poverty or distance to school or conflict in some areas. Because they miss out on the foundational skills of literacy and numeracy, that has a cascading effect of not being able to keep financial records, not being able to assess documents and contracts, not being able to read safety instructions in fertilizers, not being able to operate a smartphone, etc.

If we take the view that technology whether high-tech, mobile technology or general improvements in the way similar to applying new seeds, new tools and techniques, and mechanization, the youth may

not be able to use because of the lack of this foundational skills, then being able to ensure that they get the right education is one key area we must focus on. The positive point is that if the youth bring home something that is useful to the family from school, they are encouraged to keep on going to school. It also shapes the relevance of the curriculum as well in terms of the education.

I have also talked about the ecosystem building part specific to the agritech landscape. This industry is developing very rapidly. I think there is space for creating that enabling environment for more innovations to come, whether it's the top-down clearer framework or guidelines, ease of getting licenses and permits to operate. That helps a lot for those who are more entrepreneurially inclined.



Fatima de Moniz Soares, Manatuto, Timor-Leste

I am 28 years old and come from Manatuto district in Timor-Leste. From a young age, I was really interested in coffee and I wanted to achieve my dream of working in that field. In 2014, after I finished senior high school, I started working at the Cafe Brisa Serena, which is one of the top coffee shops selling specialty coffee roaster in Timor-Leste. I worked there for 5 years as a barista. But I didn't just focus on being a barista, I was given the opportunity to work with farmers, who produce quality coffee in Timor-Leste.

During my work, I learned about quality coffee and why it was important to guide coffee farmers to produce quality coffee. I learned about what goes into making quality coffee and what the farmers are doing to improve it. I also became aware of the challenges farmers face in producing coffee. For 5 years, I worked to understand what the farmers were doing and cooperated with them to improve coffee quality.

In 2018, the Asian Development Bank (ADB) provided support to improve coffee quality in Timor-Leste. They invited experts from Colombia, who helped and guided us in processing from the cherry to the cup. This was a good opportunity for me and for other people in Timor-Leste to learn more about coffee processing and improve the quality of coffee here. The experts brought in by ADB taught us that there are several steps that we need to follow, like picking a good cherry, selecting good water, and the importance of cleaning. It is very hard work.

In some villages, the farmers' house is far from the place where they process the coffee. Some face water supply issues. Sometimes, they don't have enough water to wash the coffee. There is a water supply challenge as well as the effects of climate change. Coffee growers also do not benefit from expert guidance so that they could improve coffee quality. It is also a big challenge for them because sometimes to achieve the desired quality, they need to have good facilities to dry the coffee. But they do not have enough money to buy the things needed to improve the coffee beans.

Thus, I learned that these are the challenges being faced by coffee growers and producers in Timor-Leste: a lack of water supply, the right equipment for the coffee, and funds to modernize the coffee processing centers. Despite these challenges, coffee is one of the main revenue sources for Timor-Leste.

After 5 years, I felt that I had gained good experience and it was time to work as an entrepreneur. I started off by setting up my own coffee shop and named it *Fatima Café*. In this coffee shop, I worked directly with farmers from my district and helped them produce quality coffee to sell to customers through my café. We also collected coffee from other groups who were producing quality coffee, which is how I started working with various coffee growers in Timor-Leste.

When customers taste my coffee they would always ask, “Where is the coffee from?” I would tell them that it is Timor-Leste coffee. I promoted our local growers and producers in my coffee shop and gradually established a marketing opportunity for those I was in contact with. This helped the farmers in marketing their produce. With my coffee shop and linkage with coffee growers I am achieving my dream. If we can secure funding to help farmers get better coffee equipment or improve water supply, then I think it can help them to produce even better coffee and get more income for their children’s education or food security.



Mariano da Costa Alves, Ermera, Timor-Leste

In Timor-Leste, most people call me Ameta and I have worked as a barista for 4 years in a local coffee shop called Café Organic. Fatima and I worked together, and we were among the first baristas of Timor-Leste. I come from a coffee growing region; my family grows coffee and even I have a small coffee farm in my home district. In 2014, when I started working as a barista, my first concern was just to earn money.

After working 1 year as a barista, my director sent me to Bali, Indonesia to learn about coffee. I also went to Japan. I learned that our coffee is not of good quality. In Timor-Leste, farmers do not have any idea about processing high quality coffee. By 2015, I was already thinking about going back to my farm and establishing a small processing center, work with the family and community and show them how to produce high quality coffee. In 2016, ADB supported the Government of Timor-Leste in setting up the East Timor Coffee association. This led to bringing many coffee experts from different countries here to taste the coffee and organize a barista competition.

At that time, I came to realize that coffee is not just coffee. Maybe I can do something with the coffee. In 2017, I started coffee processing with my family. I asked them to do a little bit of processing and I brought that coffee back to the capital, designed a small packaging and then took it back to them and asked, “Can you guess which coffee is this? Whose coffee is this?” They said, “Maybe it’s a foreigner’s coffee.” I explained to them that this is their coffee that they had processed. From that point onward, I started to change their mind about processing coffee. In 2018, I decided to stop working as a barista. I went back to the farm and established the processing center there.

I suggested various ideas and ADB helped the association to organize a training and do a TV show about the coffee in Timor-Leste. And at that time, we entered the coffee festival and my coffee was judged to be the number one quality all over the country. This is indeed amazing because in 2017 I only focused on the local market and by 2018, our family coffee had won the competition.² Many experts and buyers from other countries started visiting Timor-Leste after that to buy coffee. I entered into a partnership with one of my friends, who deals with the high specialty coffee market and who had contacts in New Zealand. People appreciated that we are promoting the number one quality coffee and they ordered the coffee not just for the local market but also for the international market.

One of the challenges I face in the coffee growing community is getting the older generation of growers to improve processing to produce quality coffee. When I talk to them, “Hey, can you do this?” and start doing the process, some of those who understand, say, “Ah, we can do it.” But older farmers ask about the price, “If we do this, then lots of work. How much can we get from that?” If we just provide the low

² Olam International was one of the finalists of the first ASEAN Inclusive Business Awards, which was held in 2017. ADB. “[A Growing Coffee Partnership for Timor-Leste](#).” YouTube video, 3:59. 26 June 2018.

quality, definitely, the price will remain low. I tried to explain to them that what I'm doing is focusing mainly on the specialty coffee market, not just the commercial market. If we do high specialty coffee, then we will get high price.

Maybe I can encourage the young people in Timor-Leste who can come back, especially those who have already finished their studies and don't have any job. Maybe they can come back to the farm and work at the farm and help the community there. In Timor-Leste, we have a problem where young people who moved to the capital to study do not come back to their coffee farms or growing vegetables even though they are without jobs. I want to encourage young people and tell them, "Hey, come on! If we do that, then maybe we can help our people and help raise their income."



Jakhongir Bektashev, Andijan, Uzbekistan

I am the manager of a livestock farm producing milk and cattle that used to be run by the Government of Uzbekistan. We started this farming business in 2006 after privatization by the government. At the time of privatization, there were around 200 cows that are able to produce about 3 to 4 liters of milk per day. We sat down with the owner of the farm and thought about how we can improve the production and create new jobs for people from surrounding areas.

We first decided to get credit and buy new heifers, new cows from European countries. After almost 13 years, we have increased the capacity of the farm. We now have around 2,000 cows. In 2015, we began thinking about diversifying our product line. There is a demand for goat's milk so we also started to produce goat milk and now we have about 2,000 goats.

In 2018, we built a biogas plant on our farm, which helps to decrease damaging the atmosphere by reducing methane coming from cow dung. We currently produce our own gas, up to 1,500 cubic meters per day.

In 2016, we started cooperating with ADB and had an idea of establishing a walnut orchard. In 2018, we decided to again diversify our operations and established the walnut orchard over an area of 415 ha. To achieve this goal, we secured a loan from ADB under the Horticulture Value Chain Development Project (Loan 3471-UZB). One of the challenges we have faced in this orchard project was the unavailability of land near our farm.

Thus, we established the orchard in the desert area of the country in the middle of the Fergana Valley where we live. It's about 80 kilometers (km) away from our farm and mostly sandy. The shortage of water supply and poor soil conditions could not stop us. Now we have not only the livestock farm but multiple operations. We have more than 200 workers. We created employment for 20 new workers and hopefully, after a couple of years, when we start to harvest the new type or variety (Chandler variety) of the walnut, we will start exporting this product also to neighboring countries including the Russian Federation. We are proud to be looking toward a good future for this project.

We must start to think more internationally. We are working for the local market, the local area. But in the future, we will definitely go abroad to export our walnuts. I am hoping to learn about knowledge, tools, techniques on how farmers from other countries are working in this field.

In the Andijan region of Uzbekistan, where we are situated, the biggest challenge is availability of land. Agriculture without land is impossible. Andijan is a very high-density area. It has 1% of the land area of the country but 10% of the population. We started to think of other ways to increase the harvest in small areas. We went to seminars and exhibitions to learn more about the high yielding varieties, which will give

you more harvest, more profit. This still remains a huge challenge. As we decided to grow walnuts in the desert area, we are also helping combat desertification.

The second biggest challenge in most areas of the country is availability or access to financing for new projects and ideas. The local banks are providing credit at very high interest rates. In this case, international banks or financing organizations are doing a better job in my country because they are providing credit at about 6% to 10% annually with a grace period of 1 year.

Local banks charge an interest rate of 26% to 28% annually. Under such circumstances, we are fortunate to have ADB or World Bank and other financing institutions helping us. They are not only helping farmers but the families of these farmers. In our farm, almost 200 people are working. We have to try and provide them with jobs. Some things work in the winter and some work in the summer. We don't want them to go to the Russian Federation for work. We want to keep them employed in our area. This is why business people need financing to diversify, to create new businesses.

There is another big challenge that we face in Uzbekistan; we need experts in different areas. One of the big problems that farmers are facing in my country is lack of modern, scientific knowledge and good farming practices. There is a need for highly educated youth, which have modern knowledge and skills in agriculture.

ADB should also focus on the software part (training) to support farmers in Uzbekistan. There is enough of hardware, including financing or equipment. But now we need more people who can support us in improving our production, who can bring us new techniques and ways to increase yields. We need to build the capacity of our farmers and encourage them to be more open to new knowledge.

Rural Development and Food Security Forum 2019 Voices from the Field

The region's population is expected to reach 4.9 billion by 2030—accounting for over 60% of the global population. Smart rural development, effective agricultural marketing policies, and efficient regulatory frameworks, among others, are critical to spur rural economies and supply sufficient, nutritious, safe and affordable food. More than 400 development practitioners, farmers, women and youth leaders, government representatives, private sector, financing institutions, and civil society gathered at the Asian Development Bank Rural Development and Food Security Forum 2019 to assist developing member countries in responding to farmer income crisis, food security and malnutrition, rural distress and prosperity challenges, and issues in cross-cutting areas such as gender equity, climate change, water and natural resources management, digital technologies, health and food safety, transport, education, and more. This report captures the stories and on-the-ground experiences of farmers, entrepreneurs and young agripreneurs to help prompt leaders to provide active leadership, effective resource stewardship, and promote transformative changes in rural development and food security.

About the Asian Development Bank

ADB is committed to achieving a prosperous, inclusive, resilient, and sustainable Asia and the Pacific, while sustaining its efforts to eradicate extreme poverty. Established in 1966, it is owned by 68 members—49 from the region. Its main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical assistance.

