

Future-Proofing Smallholder Farmers in Selected Communities in the Philippines through Nature-Positive Food Production: Experiences and Lessons

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Experiences and Lessons

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PREFACE

Smallholder farming communities in the Philippines face compounded vulnerabilities, ranging from extreme weather events and climate variability to severe market disruptions like those experienced during the COVID-19 pandemic. For many upland farming households, dependency on expensive synthetic inputs and fragile supply chains has hindered long-term agricultural sustainability and economic stability. Future-proofing these communities requires a deliberate shift toward self-reliance, ecological stewardship, and regenerative farming practices.

This monograph presents the journey, methodologies, key findings, and policy insights from the two-year capacity development project, "Future-Proofing Smallholder Farmers in Selected Communities in the Philippines through Nature-Positive Food Production." Implemented across three distinct upland farming communities—Barangay Pasdong in Atok, Benguet; Barangay Cabua-an in Bayombong, Nueva Vizcaya; and Barangay Concepcion Banahaw in Sariaya, Quezon—the initiative championed agroforestry and organic agriculture as scalable solutions to build socio-ecological resilience.

Central to the project's success was a participatory, community-centered framework. By establishing Multi-Stakeholder Facilitating Teams (MFTs) connecting academic institutions (UPLB, BSU, and NVSU), local government units, and farming groups, the project bridged scientific knowledge with local agricultural practices. Through modular training, hands-on production of organic soil amendments, alternative pest management, community demonstration gardens, and peer-led farmer-to-farmer knowledge transfers, smallholders were empowered to transition from passive beneficiaries to active co-creators of sustainable farming systems.

This material documents the field experiences, community transformation, and practical lessons learned from site-level implementation. It also outlines crucial policy implications —emphasizing multisectoral governance, decentralized extension services, and localized input production—to inform policymakers, development practitioners, academic institutions, and local leaders committed to advancing nature-positive food production. It is our hope that the strategies and insights shared herein will serve as a practical blueprint for empowering and future-proofing smallholder farming communities across the Philippines and beyond.



| BACKGROUND

Smallholder farmers are vulnerable to climate and non-climate stresses. Over the last five years, smallholder farmers have faced challenges brought about by the COVID-19 pandemic. Workie et al. (2020) highlighted that the COVID-19-induced pandemic disrupts the entire food system from primary production to final demand. Landicho et al (2022) reported that access to farm inputs and markets, as well as the transport and marketing of agricultural produce, were among the primary effects of the pandemic on the vegetable-based agroforestry farmers in upland farming communities in the Philippines. This suggests the need to build the capability of the smallholder farmers to produce their own farm inputs, particularly organic soil amendments and organic plant supplements.

Organic soil amendments are materials added to the soil to improve its physical, chemical, and microbiological properties (PNS PNS/BAFS* 40:2016, nd). These include organic fertilizers, organic soil conditioners, microbial inoculants, and organic plant supplements. Organic soil amendments also promote the use and recycling of farm waste materials, reduce farmers' costs on farm inputs,

contribute to healthy soil and environment (Scotti et al 2015; Rashmi et al 2022), and lead towards a circular ecological system. Crop diversification and agroforestry are also among key strategies for climate change adaptation and mitigation and food security (Landicho et al 2016; Baliton et al., 2017; Comia et al., 2017).

These strategies can be considered as nature-positive production systems. Global initiatives such as the United Nations Food Systems Summit emphasize "nature-positive food production," defined as regenerative, non-depleting, and non-destructive use of natural resources. Such approaches prioritize biodiversity stewardship, soil and water health, and include climate regulation, while reducing dependence on synthetic chemicals. As Kaushal et al. (2025) highlight, lowering external inputs through organic and ecological practices not only reduces costs for smallholders but also minimizes adverse environmental impacts.

Two key systems within nature-positive agriculture are organic farming and agroforestry. Organic agriculture prohibits synthetic fertilizers, pesticides, and pharmaceuticals, emphasizing soil fertility management, crop variety selection, and biological or cultural practices that sustain productivity while protecting farmers, consumers, and ecosystems. Agroforestry, on the other hand, integrates crops with woody perennials, livestock, or aquatic resources, combining socio-economic productivity with ecological stability. Both systems embody holistic approaches that align agricultural output with environmental stewardship.

Thus, this capacity development project promoted nature-positive food production, particularly organic farming and agroforestry, to future-proof the smallholder farmers in selected farming communities in the Philippines.

| BRIEF DESCRIPTION OF THE PROJECT

Project Objectives:

“Future-Proofing Smallholder Farmers in Selected Communities in the Philippines through Nature-Positive Food Production“ is a two-year capacity development project that aimed to:

1. Develop the knowledge and skills of smallholder farmers in determining the soil fertility levels of their farms
2. Promote organic agriculture and agroforestry as the main food production system
3. Facilitate farmers’ production of their own organic soil amendments and management of pest control
4. Establish at least one demonstration area in each partner community
5. Produce policy briefs and knowledge products for dissemination to various stakeholders
6. Establish a local multistakeholder partnership in each partner community
7. Expand the model to nearby rural communities

Project Sites:

This project was implemented in three upland farming communities in the Philippines engaged in vegetable-based agroforestry systems: Barangay Pasdong in Atok, Benguet; Barangay Cabua-an in Bayombong, Nueva Vizcaya; and Barangay Concepcion Banahaw in Sariaya, Quezon (Figure 1).

These communities are composed mostly of smallholder farmers whose farming activities were affected by the COVID-19 pandemic (Landicho et al., 2024). More specifically, Landicho et al. (2024) noted that during the pandemic, farmers could not purchase farm inputs due to lockdowns and the unavailability of these inputs. They were able to continue their farm activities through seed exchange with fellow farmers and the use of farm wastes as natural fertilizers.

Hence, the need to future-proof these farming communities to enhance their resilience in times of uncertainties such as extreme weather events, natural disasters, and pandemic.



Figure 1. Location of the project sites

| METHODOLOGY AND ACTIVITIES UNDERTAKEN

This capacity development project is guided by its implementation framework (Figure 2). This framework highlights the need for the formation of a multisectoral local facilitating team comprised of representatives from the local institutions that have significant roles in the development of upland farming communities.These include the local government units through the Office of the Municipal Agriculturist and/or the Municipal Environment and Natural Resources Office, the farming communities, and the assisting state college and university. With the three universities as the catalyst of development in the three project sites, capacity development activities and interventions were implemented, based on the results of the community situation and needs analysis.

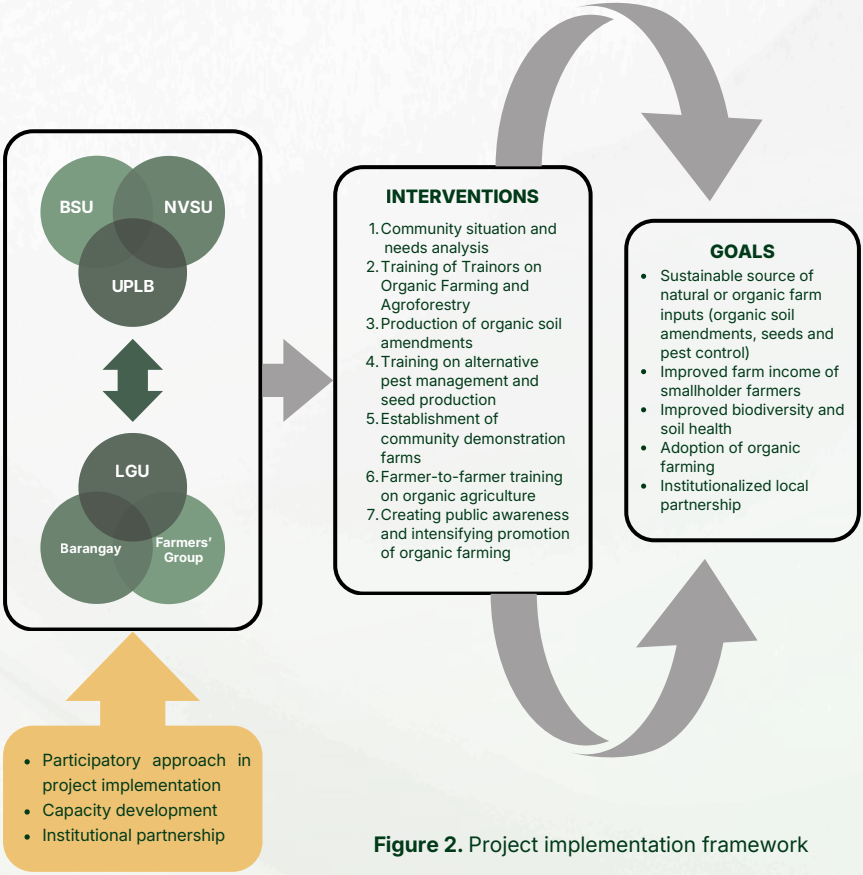


Figure 2. Project implementation framework

Embedded in the project implementation are participatory approaches, which intend to harness the active engagement of the concerned stakeholders in all aspects of project implementation. Hence, the interventions and project activities revolved around capacity development and experiential learning among the smallholder farmers to ensure that they would establish project ownership. This would pave the way for the sustainability of project initiatives.

1 Multistakeholder Orientation

This activity gathered the local stakeholders, including the farmers barangay officials, and representatives from the LGU- MAO and MENRO.The main objective of this activity was to provide an overview about the capacity development project – its objectives, activities, and expected outputs; discuss the project work plan, including the methodologies and approaches; and create the Multistakeholder Focal Teams (MFTs) who would serve as core groups throughout the project implementation.

Case 1 MULTISTAKEHOLDER ORIENTATION IN THE THREE PROJECT SITES

Quezon

The orientation in Barangay Concepcion Banahaw, Sariaya, Quezon involved the representative from the Office of the Municipal Agriculturist and the Municipal Environment and Natural Resources Office, barangay officials, and the farmers from different sitios.





Nueva Vizcaya

Local stakeholders who were present during the Multistakeholder Orientation in Barangay Cabua-an, Bayombong, Nueva Vizcaya include the Office of the Municipal Agriculturist, barangay officials, farmers, and faculty from Nueva Vizcaya State University.

Benguet

In Barangay Pasdong, Atok, Benguet, the multistakeholder orientation was participated by the representatives from the Municipal Environment and Natural Resource Office, Office of the Municipal Agriculturist, faculty members and researchers from Benguet State University, barangay officials, and farmers.



2 Community Situation and Needs Analysis

The project team conducted a capacity assessment to determine the current status of the vegetable-based agroforestry systems, the farmers' socioeconomic characteristics, support services provided to the three upland farming communities, and the biophysical conditions of their farms.

An interview with 299 farmer-respondents and focus group discussions indicated that their mean age is 48, suggesting that the farmers were still in their productive stages; with a mean household size of 6 members, from which only one is engaged in farming. Farming is their primary source of income, where the majority of them have generated an annual farm income of less than 200 dollars. They have limited access to extension and advisory services and are dependent on synthetic inputs. They lack farm production and processing facilities, being small-income earners. Table 1 shows the socioeconomic profile of smallholder farmers in the three project sites.

Mean Age
48

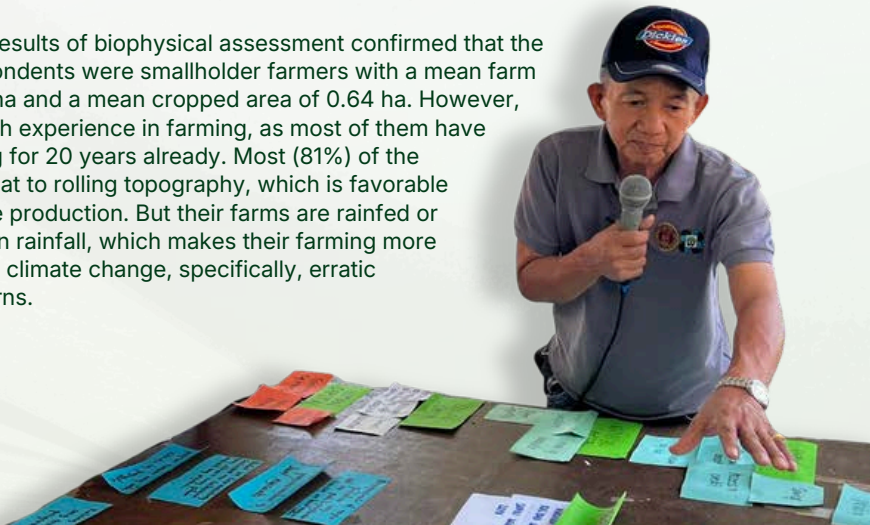
Mean HH Size
5.7

Mean HH in Farming
1

Table 1. Socioeconomic Profile of Smallholder Farmers in the Three Project Sites.

Socioeconomic Variables	Benguet	Quezon	Nueva Vizcaya	TOTAL
Gender				
Male	55%	90%	55%	**61%**
Female	45%	10%	45%	**39%**
Farming as main source of income	99%	94%	100%	**99%**
HH Income				
< ₱10 000 - ₱30 000 ($200-$500)	65%	77%	65%	**74%**
₱31000 - > ₱60 000	35%	23%	35%	**26%**
Access to extension and advisory services	Limited	Limited	Limited	
Dependence to synthetic inputs	68%	70%	60%	**66%**
Farm production and processing facilities		None		

Meanwhile, results of biophysical assessment confirmed that the farmer-respondents were smallholder farmers with a mean farm size of 0.77 ha and a mean cropped area of 0.64 ha. However, they have rich experience in farming, as most of them have been farming for 20 years already. Most (81%) of the farms have flat to rolling topography, which is favorable for vegetable production. But their farms are rainfed or dependent on rainfall, which makes their farming more vulnerable to climate change, specifically, erratic rainfall patterns.



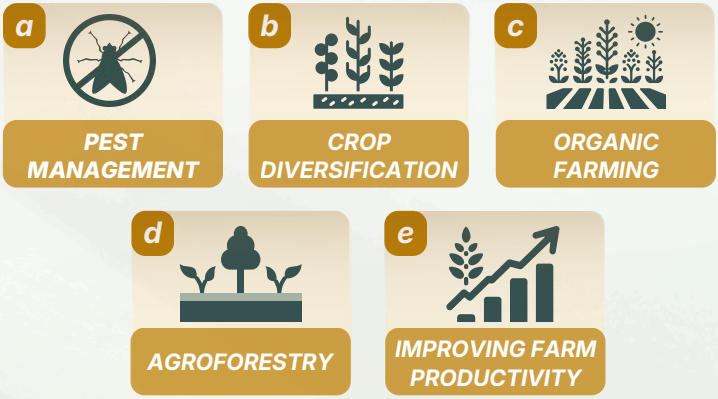
Mean farm size (ha)	Mean cropped areas (ha)	Years in farming
0.77	0.64	20

Biophysical Conditions	Benguet	Quezon	Nueva Vizcaya	TOTAL
Farm topography				
Flat to rolling	66%	96%	82%	**81%**
Source of irrigation for crops	Rainfed	Rainfed	Rainfed	**99%**
Agricultural production system	Vegetable-based agroforestry	Vegetable-based agroforestry	Vegetable and rice-based	

Through focus group discussions, the farmers' capacity was determined using self-assessment. The self-assessment centered on the five community capitals or assets that are believed to be among the determinants of sustainability and resilience. These include: human capital (or the knowledge and skills of the farmers; household members active in farming; and health conditions of the farmers); social capital (or the social relationships particularly the bonding capital or relationships within the community; and the bridging capital or relationships with organizations outside the community); financial capital (which includes savings, presence of credit facilities; household income and income sources); and natural capital (which refers to the farms that they cultivate particularly the size, status of ownership and farming systems; and access to and presence of natural resources such as water source and other natural resources).

The self-assessment was done using the SWOT (strengths, weaknesses, opportunities, and threats) analysis.

Among the training and capacity development needs expressed by the smallholder farmers are the following:



Case 2

FARMERS' CAPACITY ASSESSMENT VIA FOCUS GROUP DISCUSSION



*FGD in **Barangay Concepcion Banahaw, Quezon** revealed that the farmers mostly own their lands, farmers support one another, and they have been receiving support from the government sector.*

However, soils have become acidic, and irrigation has become a serious problem. Farmers' association needs to be reactivated and needs capacity development on alternative production systems such as organic farming.

*FGD in **Barangay Cabua-an, Bayombong, Nueva Vizcaya** highlighted that farmers own their farms and practice alternate cropping. Their farm income, though not high, can satisfy basic needs. They have an existing farmers' association.*

However, the soils have become acidic, and farmers do not have the capacity to determine the fertility level of their soil; farms are rainfed, and crop irrigation is a constraint. Pests and climate change impacts are seen as threats to their agricultural production. They have expressed a need for training on appropriate farming technologies and techniques.







*For farmers in **Pasdong, Atok, Benguet**, they see farm ownership, source of irrigation water, existing farmers' cooperative, and the spirit of collective action as their strengths.*

However, the location of their farms (which are oftentimes on steep slopes), the lack of crop programming, soil conditions, and the lack of communication and participation of some farmers are among their constraints. Hence, they proposed the promotion of crop diversification, training of farmers, additional livelihoods, and promotion of sustainable farming practices.

3 Capacity Development

Training of Trainors on Building Soil Health through Organic Farming

The basic element in crop production is soil. Healthy soils ensure the production of healthy crops. In organic agriculture, however, building soil health is not dependent on synthetic inputs. Instead, it relies on the management practices and the use of natural and/or organic fertilizers.

Ten (10) farmers in each project site were selected as participants based on the following criteria: a) willingness to attend and echo the training to the other farmers within the village; b) active engagement in farming and with developed/cropped areas; and c) equitable representation of men and women farmers, as well as sitios/sub-villages within the project site.

The basic concepts of soil, including its significance in crop production, were discussed as an introductory topic. The different management practices that would improve soil health were also tackled. The participants were also taught how to determine the pH level and soil fertility (N, P, K) using the Soil Test Kit. This handy, user-friendly, and practical tool determines soil pH and N, P, and K status by combining reagents that generate various colors for qualitative assessment. The soil analysis results will provide the basis for applying the appropriate amount of fertilizers









The basic concepts of organic agriculture and agroforestry were likewise discussed. Specifically, the 5Cs of improving soil health were emphasized. These include crop diversification/crop rotation, cover cropping, mulching, composting, and conservation tillage. Crop diversification is the practice of cultivating more than one variety of crops belonging to the same or different species of families in a given area in the form of rotation and/or intercropping. Meanwhile, cover cropping is the planting of crops such as legumes or grasses primarily to manage soil erosion, fertility, water, and weeds, rather than for harvest. These crops are grown during fallow periods to improve soil health and add organic matter

5Cs of Improving Soil Health:

Crop Diversification



Cover Cropping



Conservation Tillage



Composting



Mulching



On-site Production of Organic Soil Amendments

The farmer-trainors were taught how to produce their own organic soil amendments to ensure a continuous supply. In this way, they would not rely solely on the market, thereby minimizing their expenses on external farm inputs. Using the resources found on their farms, the farmers were taught to produce organic plant supplements, such as Fermented Plant Juice (FPJ), using kakawate *(Gliricidia sepium)* as the main ingredient, along with molasses. The mixture shall be harvested after 2-3 weeks. Once harvested, farmers can already apply this to their vegetable crops with a ratio of **10ml:100ml** of water.

Case 3

HOW TO PRODUCE FERMENTED PLANT JUICE (FPJ)?

START HERE

Materials needed:

- ☐ 2kg kakawate leaves
- ☐ 1kg molasses
- ☐ Pail/container
- ☐ White net
- ☐ Brown paper (for cover)

1



Collect kakawate leaves

2



Cut leaves into small pieces

3



Weigh 2kg of cut kakawate leaves and put them in a basin

4



Using hands, mix 1kg of molasses with the kakawate leaves thoroughly until all the leaves are filled with molasses

5



Put the mixture in a net and place in a pail.

6



Cover the pail using a brown paper. Indicate the date of production, and the expected date of harvest (one month after the production) Store at room temperature.

FPJ

Case 4

PRODUCTION OF FERMENTED PLANT JUICE IN BRGY. PASDONG, ATOK, BENGUET

Materials needed:

- ☐ *Banana Trunk*
- ☐ *Molasses*
- ☐ *Knife/ Bolo*
- ☐ *Ballpen/ Pentelpen*
- ☐ *Sunflower Plant*
- ☐ *Pail Container*
- ☐ *Brown Paper*
- ☐ *Chopping board/ wood*

Step 1. Gather and prepare plant materials

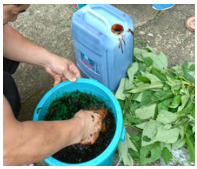



a.) Chop the sunflower plant materials into small pieces




b.) Chop the banana trunk into small pieces

Step 2. Mix the raw materials following a ratio of 2:1
(2kg of plant materials is to 1kg of molasses)

a.) Weigh the needed chopped sunflower plant and molasses then mix it together using a container




b.) Weigh the needed chopped banana trunk and molasses then mix it together using a container

Step 3. Cover and label the container




a.) Cover the container using brown paper then label the dates of production and the expected date of harvest (7-14 days)

Step 4. Harvest the FPJ after 7-14 days




a.) Squeeze the fermented substrates to get the liquid using cloth or net

Step 4 cont.






b.) Transfer the liquid into bottle or any appropriate container, make sure not to tighten when putting the bottle cap. Label the product, and after the required fermenting time, the FPJ is ready for use.

Training of Trainors on Alternative Pest Management and Seed Production

To avoid the use of synthetic pesticides, the farmer-trainers in the three project sites were trained in organic pest management, which focuses on management practices and, to some extent, the use of biopesticides to control pests. Among the management practices are crop diversification, particularly intercropping (planting of companion crops), crop rotation (change of crop species every cropping season), integration of plant species that drive away pests, such as marigold and lemongrass, and integration of plant species that attract beneficial insects, such as cosmos.

The farmers were also taught about the production and use of biopesticides. There is a basket of options for the production of biopesticides, such as the mixture of kakawate and hot pepper; garlic and onion; neem leaves and kakawate extract, and many more.

To ensure a sustainable source of planting materials, the farmer-trainers were also taught about organic seed production. The lecture-discussion focused on the benefits of producing own seeds, how to produce it based on the type of seed or crop variety, flower morphology, and family group of the vegetable crops. It also highlighted the requirements for seed production, such as the ecological requirements, the seed production area, and management practices









Establishment of Organic Community Gardens

The community demonstration farms intend to showcase vegetable production, employing different organic practices. The farmer-trainers trained in organic agriculture took the lead in selecting the site for the demonstration farm. These include accessibility to ensure that other farmers within the community can see and visit the farms; access to a water source; and the willingness of the farmer-owner to employ organic farming practices and share the technology with other farmers.

Case 5

ESTABLISHMENT OF COMMUNITY GARDEN IN BRGY. CONCEPCION BANAHAW, SARIAYA, QUEZON

The farmers established seven (7) plots, which measure 10m x 5m, and are planted to different vegetable crops, employing different management practices as follows:

Crop diversification	• *Each plot is planted to different vegetable crops such as tomato, sweet pepper, okra, mungbean, mustard, bush sitao, cucumber and squash.*
Mulching	• *Kakawate leaves were used as mulch to ensure that the soil would be protected from the direct impact of heavy rainfall and heat; conserve moisture; and, control weed growth*
Use of Organic Soil Amendments	• *The organic fertilizers provided by the LGU-MENRO of Sariaya were used as basal fertilizers. Meanwhile, the Fermented Plant Juice (FPJ) that was produced by the farmer-trainors is being applied as a plant supplements*
Conservation tillage	• *The land area was prepared manually by the farmer-trainers. Carabao was used for plowing. The establishment of the plots was done manually. Periodic cultivation and weeding are likewise done manually.*











ESTABLISHMENT OF COMMUNITY GARDEN IN BRGY. PASDONG, ATOK, BENGUET

The farmers united in establishing a community garden which was alotted by the barangay local government unit.

Installation of fences and wind breakers
- *Farmers installed posts, fences, and garden nets surrounding the land area. Some of the benefits in using nets and installing fences include the protection of plants from physical damage, soil health conservation, mitigation of moisture loss, and protection of plants from animals entry.*

Land Preparation
- *The area was prepared manually using a grab hoe. Weeding was also employed.*

Application of compost
- *Each plot was applied with compost as basal fertilizer. Compost materials available in the area include rice straw and banana trunk among others.*

Crop Diversification
- *The garden was planted with different crops such as purple corn, green onions, kamote, flowering pechay, and pole bean (Aino var.)*

Application of plant supplements
- *Fermented Plant Juice (FPJ) and "Kuhol' Amino Acid are being applied to the crops. Raw materials such as sunflower plants, banana trunks, and 'kuhol' are available in the area.*









Farmer-to-farmer Training on Organic Farming

The first set of farmers who were trained by the project team trained their fellow farmers in the adjoining community on organic farming. The training centered on the concepts and principles of organic agriculture, soil sampling and soil testing using the Soil Test Kit, and the production of organic soil amendments, particularly organic plant supplements such as Fermented Plant Juice.

During the training, the project team observed the level of confidence of the trainors in imparting the knowledge and skills on organic farming to the farmer-trainees/mentees. Similarly, the farmer-trainees were seen as comfortable communicating with the trainors and in clarifying some concerns about the training topic. With the experiences of the trainors, the farmer-mentees were confident that they could also establish their own community organic garden. They have identified their criteria in the selection of the area for the community garden. The area should be: a) accessible; b) far from non-organic farms; c) willingness of the farm owner to showcase organic practices in the farm; d) willingness of the farm-owner to share knowledge with other farmers.











Creating public awareness about organic farming through the OA Festival

As a culminating activity of the project, the OA Festival was organized in the three project sites. This event provided a platform for harnessing the active engagement of organic farmers, local policy makers, and program implementors. Selected organic farmers shared their practices and experiences in organic crop production, production of organic soil amendments, marketing of organic produce, and organic certification. The program implementors at the municipal, provincial, and regional levels, on the other hand, highlighted the enabling policies and support systems in promoting the adoption of organic agriculture in their respective areas.

The OA Festival also provided an opportunity for the different organic farmers' associations to showcase and sell their organic fresh produce and processed products, and promote seed exchange among the organic farmers.













| BEST PRACTICES AND LESSONS LEARNED

1. ***Conceptualizing projects based on empirical data and stakeholder consultation.***

This capacity development project was conceptualized based on the results of the study conducted by Landicho et al in 2022 in the three project sites. The said study determined the impacts of the COVID-19 pandemic on the smallholder vegetable farmers in the three sites and called for enhancing the capabilities of smallholder farmers to future-proof them against climate and non-climate uncertainties, as articulated by the farmers. Before implementing technical and social interventions, the project team conducted a farmers' capacity assessment and community situation and needs analysis.

2. ***Tapping project collaborators from the state colleges and universities helped facilitate the effective and efficient project implementation.***

The project sites' locations necessitate the involvement of technical experts from the locality. Their strategic location with respect to the project sites offers opportunities for periodic project monitoring and the provision of technical assistance and advisory services, and efficient use of resources. Hence, this makes the project implementation more effective and efficient. Furthermore, this can serve as an opportunity for the state colleges to carry out their extension function.

3. ***Institutionalizing sustainability via Multisectoral Facilitating Team (MFT).***

Project longevity depends on social infrastructure. By linking the local government units, barangay officials, farmers' groups, and the academe, the project moves away from being a "temporary intervention" and becomes part of the local governance and support ecosystem. The establishment of MFT for each site not only facilitated the project implementation but also ensured that the project initiatives would be sustained through continued and stronger partnerships among the local government units (through the Office of the Municipal Agriculturist and/or the Municipal



Environment and Natural Resources Office, the state college and university, the barangay officials, and the farming communities). The active engagement of the external organizations may serve as a mechanism to address the issues and concerns confronting the smallholder farmers in the three project sites.

4 ***Prioritizing organic farming practitioners as the primary messengers.***

Farmers are more likely to adopt new technologies when they see proof of concept from their peers. Knowledge sharing from actual practitioners carries a level of"street credibility " that purely academic or external training often lacks.

5 ***Training of farmers via the farmer-to-farmer approach.***

The farmer-to-farmer model breaks down language and cultural barriers. It creates a sustainable cycle of learning where the "student " farmers eventually become the "teacher " mentors, ensuring the skills stay within the community long after the project ends.

6 ***Promoting organic agriculture, particularly the closed-loop system.***

Organic amendments (i.e. compost and liquid plant supplements such as Fermented Plant Juice and Fermented Fruit Juice) are indeed a very timely initiative. In an era of climate change, fluctuating energy prices and high synthetic input costs, organic agriculture is a financial safeguard. By sourcing inputs from farm waste, smallholders reduce their debt risk and environmental footprint simultaneously. Organic agriculture, therefore, is a key strategy for future-proofing our smallholder farmers.

7 ***Promoting organic agriculture, particularly the closed-loop system.***

"Seeing is believing." A demonstration farm serves as a living laboratory where farmers can witness the results of crop diversification and alternative pest management without risking their own entire harvest first.

8 ***Hosting "Organic Agriculture Festivals" in tandem with Policy Forums.***

Conduct of OA Fesal back-to-back with the Policy Forum is an effective mechanism for creating public awareness about organic agriculture, as well as in communicating the experiences of the practitioners, the programs and initiatives of program implementors, and the problems and potential solutions to the problems and issues faced by the practitioners. Linking celebration (Festivals) with conversation (Policy) creates a holistic impact. It builds consumer demand and public awareness while ensuring that the challenges faced by practitioners are heard by decision-makers who can influence local legislation.

9 ***Maintaining a feedback loop that allows for mid-project adjustments.***

No matter how thorough the initial needs analysis, field conditions change. Successful projects are those that allow the MFT to pivot strategies based on ongoing monitoring and evaluation (M&E) results, ensuring the project remains relevant to the farmers' evolving realities.

| POLICY IMPLICATIONS AND RECOMMENDATIONS

1 *Institutionalization of Multisectoral Governance*

The success of the Multisectoral Facilitating Team (MFT) implies that local agricultural policy should not sit solely with the Office of the Municipal Agriculturist. Local Government Units (LGUs) should pass ordinances that formally recognize and fund multisectoral committees. This ensures that even when local leadership changes, the partnership between academia (SCUs), NGOs, and farmer groups remains legally mandated and budget-protected. This requires moving toward "Convergence Budgeting," where environment, agriculture, and education departments co-fund projects like demonstration farms and OA Festivals.

2 *Re-evaluating Extension Service Models*

The Farmer-to-Farmer (F2F) and practitioner-led approach suggests that the traditional model of a government technician simply "delivering" info is outdated. Hence, the need for the following mechanisms:

- **Certification of Farmer-Trainers:** Policies could be developed to officially certify "Master Farmers" as accredited extension service providers. This would allow them to receive government honoraria or incentives for training others, decentralizing the workload of overworked government technicians.

- **Support for Demonstration Hubs:** Instead of centralized research stations, policy should incentivize the establishment of "Community-Based Demo Farms" on private or communal lands, providing tax breaks or utility subsidies to farmers who host these learning sites.

3 *Economic Incentives for "Nature-Positive" Inputs*

Since organic farming is a hedge against the energy crisis and high input costs, policy should reflect this economic reality. This can be done through a shift in the subsidy focus like transitioning government procurement from synthetic fertilizers to supporting the local production of organic soil amendments. In terms ofmarketing, policies can mandate that a certain percentage of food for local government programs (e.g. school feeding programs or relief goods) be sourced from certified local organic smallholders.

4 *Academic-Community Integration*

The involvement of State Colleges and Universities (SCUs) suggests a need to bridge the gap between "ivory tower" research and field application. Funding for state-funded research should be prioritized for projects that start with a "community needs analysis" rather than purely theoretical pursuits.

5 *Mainstreaming Climate and Disaster Resilience*

The lesson on "future-proofing" against climate and non-climate uncertainties (like COVID-19) implies that organic agriculture is a tool for risk management, not just food production. Thus, there should be a policy advocacy for insurance providers to offer lower premiums or specialized coverage for diversified organic farms, which are more resilient to pests and climate shocks. In addition, integration of organic seed banking and on-farm input production into municipal Disaster Risk Reduction and Management plans to ensure food sovereignty during supply chain disruptions.



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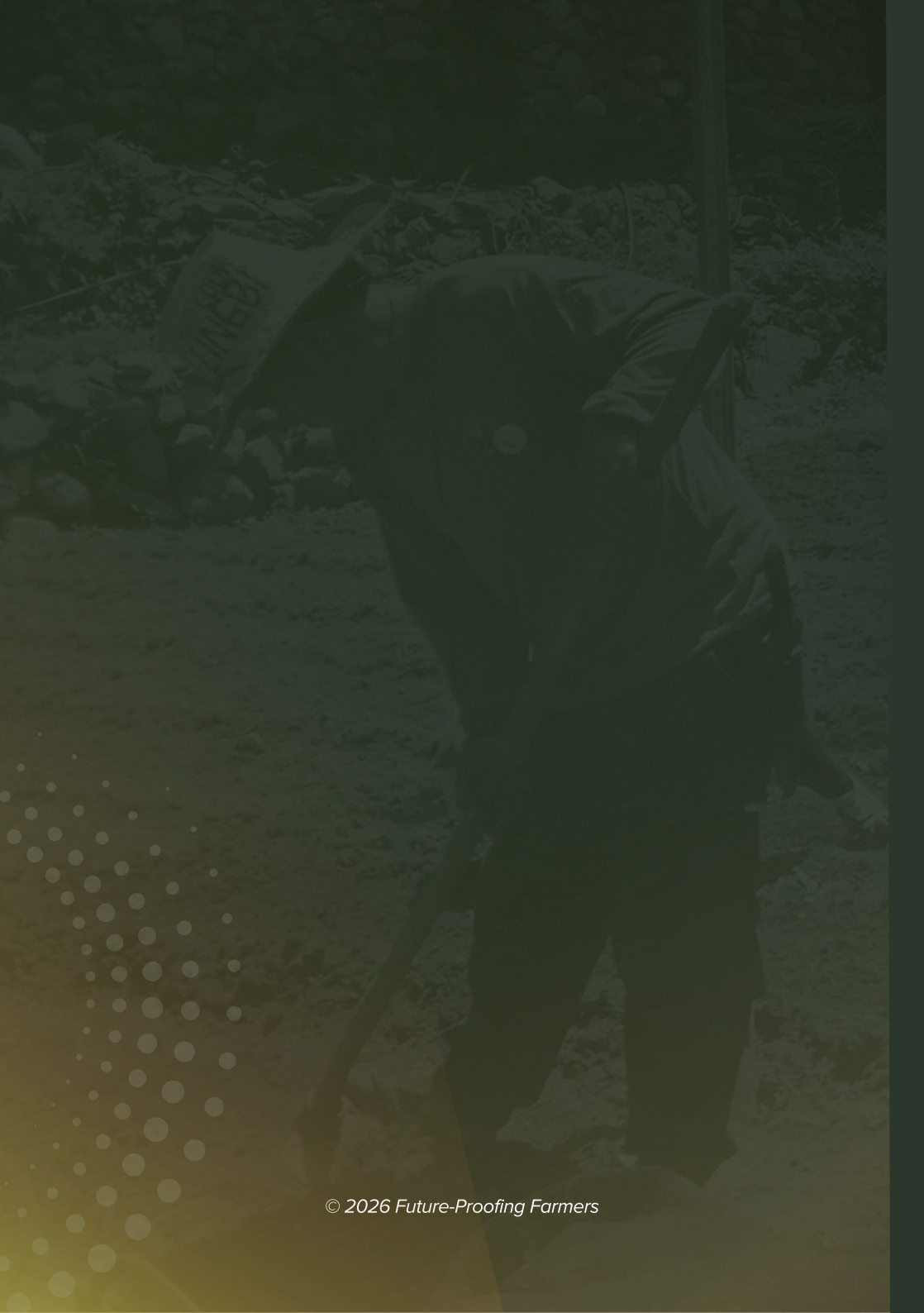
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