



# **SPAMAST FOOD RESILIENCY PROJECT: GULAYAN SA PAMANTASAN PROJECT (GPP)**

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## **1. Implementing Agency:**

- a. Lead Agency: **SPAMAST**
- b. Project Site: **SPAMAST – IATES – Buhangin Campus  
Buhangin Malita, Davao Occidental – Philippines**

## **A. TECHNICAL REPORT :**

### **I. ABSTRACT**

The project on Food Resiliency (Gulayan Sa Pamantasan) is a collaborative project between the Department of Agriculture RFO XI and SPAMAST, wherein vegetable crops are planted in a 500 square meter lot in SPAMAST, Buhangin, Malita, Davao Occidental.

The first season of implementation started on February 24, 2021, and Field Day/Market Encounter was done on May 12, 2021. Although the program has been implemented amid pandemic, there were 11 farmers who actively participated ( 4 male and seven female). A total of 1,305 kgs of Eggplant, Tomato, Bottle Gourd, Lady Finger, Spinach, Cucumber. Most of the produce were distributed, and some were sold to SPAMAST employees. These products were obtained with the assistance from Department of Agriculture and SPAMAST, the training on organic Technology on vegetable production.

### **II. INTRODUCTION**

This Extension Program on Food Resiliency – Gulayan sa Pamantasan is an initiative of the Department of Agriculture Regional Field Office XI (DA-RFO XI) through the Davao Region Research , Development and Extension Network (DARRDEN) and the State Colleges and Universities (SUCs) in the Davao Region.

This program is among the immediate response of DA-RFO XI to the global health crisis due to the COVID – 19 pandemic, which result to the tightening of the food supply. This response is in line with the program “ AHON LAHAT , PAGKAING SAPAT” (ALPAS) Kontra sa COVID -19 or called “Plant, Plant, Plant Program”.

As one of the collaborators in the region, SPAMAST established a 500- square meter area as a demonstration site/ farm for partners (students and farmers) for vegetable production using Good Agricultural Practices (GAP). With vegetable seeds, organic fertilizers and other farm supplies form DA, organic farming technology on vegetable production was introduced to participating partners in the locality through weekly learning sessions and field demonstration.

### **III. OBJECTIVES**

The project aims:

1. Established around 300 – 500 square meter Vegetable Garden – Gulayan sa Pamantasan Project / Urban gardening and
2. Established Nursery Seedbank center as a source of vegetable seeds for stakeholders
3. Conduct training and hands – On demonstration to identified beneficiaries and
4. Conduct of harvest fests 3 -4 months after the program started.



#### IV. REVIEW OF LITERATURE

The Department of Agriculture (DA) will implement nationwide the Duterte administration's "Plant, Plant, Plant Program" or "Ahon Lahat, Pagkaing Sapat (ALPAS) Laban sa Covid-19" program to benefit farmers, fishers and consumers.

"The 'Plant, Plant, Plant Program' will be implemented not only in Luzon, where the enhance community quarantine is being enforced, but also in Visayas and Mindanao," said agriculture secretary William Dar. (Reyes 2021- D.A Spokesperson).

Republic Act (RA) 11511, an amendment to RA 10068 or the Organic Agriculture Act of 2010, seeks to beef up the national organic agricultural program and promote the consumption of organic products by launching a nationwide educational awareness campaign for consumers.

"It is hereby declared the policy of the State to promote, propagate, develop further and implement the practice of organic agriculture in the Philippines that will cumulatively condition and enrich the fertility of the soil, increase productivity and farmers' incomes, reduce pollution and destruction of the environment, prevent the depletion of natural resources, encourage the participation of indigenous organic farmers in promoting their sustainable practices, further protect the health of farmers, consumers, and the general public, save on imported farm inputs and promote food self-sufficiency," the new law read. Bureau of Agriculture and Fisheries Standards (BAFS) 2021.

Fresh vegetables are naturally low in fat, salt and sugar, making them an excellent food choice. Visit the *recipe section* of this website to discover delicious ways with vegetables, provide energy, vitamins, minerals and fiber, and there is growing evidence of additional health benefits from a range of phytonutrients.

Some vegetables contain higher levels of carbohydrates and are often called *starchy vegetables*. These are usually roots and tubers (see *vegetable classifications*) such as potatoes, yams, kumara, taro and sweet corn. Starchy vegetables are higher in energy (kilojoules) because of their carbohydrate content.

Other vegetables are classified as *non-starchy*. Non-starchy vegetables tend to have higher water content and are lower in energy but often richer in vitamins and minerals (Ottles 2014).

Urban and peri-urban agriculture is an industry situated in a town or city that produces and distributes a variety of agricultural harvest, using resources and services of the specific locality (FAO,2008).

Food production in the cities for human consumption is one of the foreseen solutions to the increasing population and food security (McDougall et al.; 2019). In the desperation to these causes, "land clearing and the use of existing croplands are considered to be the main options to increase crop production." However, this has only led to the depletion of biodiversity.

But in urban agriculture, expressly, backyard and communal gardening, where heavy equipment is prohibited and waste reduction is encouraged, an ecological and healthier environment is highly promoted. Urban agriculture encompasses community gardens, urban farms or entrepreneurial gardens, community-supported agriculture and farmers' markets. It positively influences urban sustainability (Bedenik, 2019).

In the basic operational framework for Urban Agriculture of the Bureau of Soils and Water Management, the urgency to include urban-poor requirements for gainful livelihood activities, urban poverty alleviation, and urban home-grown and home-processed medicinal food and vegetables was released. This creates a complementary work area for senior citizens, retirees, and



out-of-school youths; reduce urban residues by converting them into compost and energy resources; and trains the community sectors on various organic farming techniques .

Similarly, the National Anti-Poverty Commission (NAPC) and the International Institute of Rural Reconstruction in 2016 recognized that despite the emerging number of people and communities engaging in backyard gardening worldwide, several modern agriculturists have failed to acknowledge this undertaking (NAPC 2020).

**V. METHODOLOGY**

1. Signed Memorandum of Agreement (MOA) between Department of Agriculture RFO XI and SPAMAST, Project entitled: Promoting Food Resiliency. Among Communities in partnership with State Universities and Colleges.
2. Established at least 500-square meter area intended for Urban Gardening or Gulayan sa Pamantasan Project (GPP).
3. Sent courtesy letter to Barangay Captain of Barangay Buhangin , Malita Davao Occidental, inviting farmers as target partners who are residents in the surrounding area oof the institution particularly with sons and daughters who enrolled in SPAMAST.
4. Conducted learning sessions or meetings with the target farmer-beneficiaries.
5. Conducted Project Launching with Dept. of Agriculture RFO XI (DARRDEN) personnel, SPAMAST Top Management with SPAMAST-IATES Faculty, the Buhangin Barangay Captain, Municipal Agriculture Officer – Malita , and the Provincial Agriculture Officer – Davao Occidental.
6. Conducted hands–on training to the target beneficiaries.
7. Cultural Management Practices were done daily (watering, weeding, establishing trellis, crop protection) in line with the Good Agricultural Practices (GAP) on vegetable production.
8. Field Day & Market Encounter were made during harvest day three months after planting.
9. Gathering data as to harvest (kg.) per commodity.

**VI. RESULTS AND DISCUSSION**

SPAMAST Food Resiliency (Gulayan sa Pamantasan Project - GPP) and the Department of Agriculture Regional Field Office XI through Davao Region Research and Development Extension Network (DARRDEN) signed into a Memorandum of Agreement on the implementation of the said project last December 11, 2020.

A total land area of 500 square meters from SPAMAST – Buhangin Campus was prepared for the Gulayan sa Pamantasan Project (GPP) used by target farmer-beneficiaries.

On February 24, 2021, the Formal Launching of the above-mentioned project was conducted with DARRDEN Personnel, the Municipal and Provincial Agriculturists, the Barangay Captain of Buhangin, Malita Davao Occidental and SPAMAST Personnel were present. Along with the said event, a total of twenty-three (23) farmers (Table 1) underwent training on Good Agricultural Practices (GAP) on the production of organic vegetables.

**Table 1. Number of Target Farmer Beneficiaries Attended and training conducted**

<b>During GPP Launching (Feb.24,2021)</b>	<b>Actual Farmers Participated (Feb. 24, 2021 – May 12, 2021)</b>	<b>Training Conducted (Feb. 24, 2021)</b>
23	11	Vegetable Organic Farming Technology (Good Agricultural Practices)



**Fig. 1 . GPP Launching : Farmers together with DARRDEN Personnel & SPAMAST Faculty**



**Fig. 2 . Farmers during the GPP Launching – planting vegetable seedlings with the 500 sq.m area located at SPAMAST, Buhangin Malita Davao Occidental**

After the project launching, only 11 farmers (Table 1) showed interest and actively performed their daily/weekly tasks in their respective assigned areas intended for vegetable production. The GPP Team conducted weekly monitoring and regular monthly meeting to determine their problem encountered and addressed their concerns immediately.



**Fig. 3, Regular conduct of monthly meeting GPP Team and Farmers**

The reasons for some not being able to participate in the project were due to the pandemic; and did not have enough time for the project due to other priorities, for the family.

The first phase of the project continued with 11 active farmers with the SPAMAST GPP Team who committedly motivate and encourage them to prosper. After two months, farmers started harvesting eggplant, okra, squash, cucumber, bottle gourd (Upo), tomatoes, and kangkong.



**Fig. 4. Farmers conduct regular watering and cultivation to their vegetable crops**



**Fig. 5. After two months farmers started to harvest**







**Fig 6. Harvest Festival**

On May 12, 2021 was the Field Day & Market Encounter with the partner-farmers and participated by the DARRDEN Personnel, SPAMAST Top Management and SPAMAST Faculty & Staff.

Total harvested vegetables in (kg.) from the different projects established in just three months is shown in Table 2. Farmer-partners produced 1,305 kilograms of fresh vegetables in a 500 sq.m area with estimated income based on farm gate price amounting to P 17, 310.00. With this volume of harvest, many residents in the locality were able to have accessed to fresh vegetables and some were delivered to nearby municipality. Food production in the cities for human consumption is one of the foreseen solutions to the increasing population and food security (McDougall *et al.*, 2019).

This gardening also showcased that there is really a possibility to produce healthy food in the home which can suffice the needs of the family and help decrease food insecurity and hunger while providing a reliable cash income to households (Matejowsky, 2013).

**Table 2. Total weight (kg.) and cost based on farm gate price per (kg.) of harvested vegetables (Feb. 24 - May 12, 2021) .**

Vegetable Crops Planted (GPP)	Total Harvested (kg)	Farm Gate Price (per kilo)	Cost (Php)
Eggplant (Talong)	647	15.00	9,705.00
Lady Finger (Okra)	265	10.00	2,625.00
Spinach (upland Kangkong)	198	10.00	1,980.00
Bottle Gourd (Upo)	155	15.00	2,325.00
Cucumber (Pipino)	25	15.00	375.00
Tomato (Kamatis)	15	20.00	300.00
<b>Total</b>	<b>1,305</b>		<b>P 17,310.00</b>





## VII. CONCLUSION AND RECOMMENDATION

The Gulayan sa Pamantasan Project (GPP) showcased that organic vegetable production can be one of the possibilities in ensuring fresh food on the table and with additional income.

The SPAMAST GPP Team will continue to extend technical assistance to farmers-partners who are willing to learn and experience organic vegetable production in their respective yards and farms, More learning sessions and production trainings will be conducted to continuously provide technical know-how to farmer-partners. Home visitation, production monitoring will be conducted to those recipients of vegetable seeds provided especially when travel restrictions will be lifted.

## VIII. EVALUATION

During the Field Day and Market Encounter, farmer-partners expressed their positive views and statements on their experience they obtained from participating in the project. Aside from the ready food and additional income, they helped them a lot in gaining insights on the proper taking care of the plants and some production techniques provided by the GPP Team members from seedling to harvesting. Majority of them showed their commitment and interest to continue what they had started, together with other future farmer-partners which had shown their interest to participate in the next phase of the project. The Barangay officials and Municipal Agriculture Office representative were grateful on the motivation shown by the farmer-partners who are mostly women.

## IX. REFERENCES

1. *Bedenik, N. 2019, Urban Gardening : An Integrative Approach. 9(2019) 2 pp.27-34*
2. *Bureau of Agriculture and Fisheries Standards (BAFS) Online ISSN: 2719-177X Published by the BAFS Information and Communications Team*
3. *FAO, 2008, Urbanization of Food Security in Africa, Paper Prepared for regional conference in Africa, June 16-20, 2008*
4. *Matejowsky, Ty. 2013 . Backyard and Community Gardening in the Urban Philippines : A Case Study from Urdaneta City, Pangasinan*
5. *McDougall et.al, 2019, Small-scale urban agriculture results in high yields but requires judicious management of inputs to achieve sustainability*
6. *Reyes, Noel, 2021 . DA Spokesperson & A/Sec for Communication & Media Affairs*
7. *Öiles, S., & Ozgoz, S. (2014). Health effects of dietary fiber. Acta Scientiarum Polonorum Technologia Alimentaria, 13(2), 191-202.*