

Farm Business Operations in Bongabon, Philippines: Status and Challenges

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Abstract:- Agriculture is Nueva Ecija's primary industry, which has become the Central Luzon Food Bowl and Rice Granary. Rice, corn, onion, garlic, melon, and mango are direct agricultural products. This paper aims to describe the status and challenges encountered among selected farm owners in Bongabon, Nueva Ecija in the Philippines. The study assessed the status and challenges of farm operations regarding the marketing, technical/ production, management, and financial aspects. The descriptive method was used in this study. The study used research methods for data collection purposes, such as open-ended questions, survey questionnaires, and interviews. The study was carried out in Bongabon, Nueva Ecija, with the following barangays: Lusok, Sitio, Calisitan Curva, Tugatog, and Larcon. Forty (40) farmer owners were selected as the respondents of this study. As to the status of farm operations in the marketing aspect, the study revealed that farm products were sold to direct buyers with lesser selling expenses than in a sales agent. In the production aspect, the farm owners were still in the traditional farming method, but only a few were modern. Inbred type of seed was more preferred by the farm owners in rice farming, while red onion seed was chosen in onion farming. Wheel tractors and rotavator were used for the cultivation of land and means of transportation. In the management aspect, farmers usually hire four farmworkers to do tasks such as fertilizing and spraying pesticides. In the financial part, farmer-owners sourced capitalization from their savings, lending institutions, and cooperatives. As to problems encountered, the study revealed that flood, lack of water system, an outbreak of insect and pests, and plant diseases affected the quality of output in the marketing aspect. While the failure of machinery and equipment, which resulted in repairing expenses and increasing the cost of farm inputs, is the main problem encountered by the farm owners in the production aspect. Skills of farmworkers were the main problem when it comes to the management aspect. Farm owners' financial problems were insufficient

capital, rising input costs, limited government support, high interest on collateralized loans, limited credit institutions offering agricultural loans, unpaid loan balances, and bankruptcy. It is recommended that the government should continue to concentrate on improving support programs for the competitiveness of the farming sectors regarding inputs and production methods, farm-to-market roads, trading centers, training programs, financial assistance, and access credit to farmers.

Keywords:- Farm, Farm Business, Agriculture, Business, Status, Challenges.

I. INTRODUCTION

In the Philippines, in particular, sustainability is a global issue in terms of crop production. As an agricultural country, the Philippines has 13 million hectares allocated to agricultural land, where 6.1 million hectares are extremely suitable for agriculture (Carating, Fernando, Abrina, & Tejada, 2010). As announced, the share of the Philippines' organic area is 52,500 hectares compared to traditional farming, organic agriculture yields more profits (Maghirang, et al , 2011).

Due to increasing population, urbanization, migration, aging of the agricultural community, etc., demographic change impacts future food supply (Bhandari & Mishra, 2018). Similarly, political, cultural, economic and social developments affect farmers and their families who also work on the farm (Gregorio, 2019). Farming is a game of chance, and while we don't know what's going to happen tomorrow, we never know when the natural calamities will happen (Bautista, 2020). Farming is considered to be a company operated by family members, including elderly parents. They could finish secondary school and college degrees among the younger farmers (Tolentino, 2015).

Farmers use their small fields to plant different crops. The other crops were planted directly after the previous ones were harvested. Crop production can contribute to high productivity by making more cultivated land productive, so sustainability in food supply can likely be assured. Farmers' capacity is checked by seasonal changes in temperatures, precipitation, marketing conditions, and labor (Harwood, 2019).

Farmers are encouraged to accept mechanical power for productivity and agriculture efficiency (Paman et al, 2013). The use of technology such as Quick Response (QR) code smartphones is built for farm activity monitoring (Caicong, et al 2016) while robots are designed for manpower replacement can do multitasking and more effective farm activity can result in accurate tasks (Kushwaha, et al , 2016).

Community initiatives by NGOs have enabled private organizations to improve the country's agricultural sector through various extension services (Digal & Placencia, 2019).

According to the Philippine Statistics Authority (PSA), the highest number of farms in Central Luzon was shared by Nueva Ecija, also the largest among the provinces. In the third quarter of 2020, agricultural production increased by 0.7 percent. This was due to the rise in the production of crops and fisheries. The main crops grown in cities and municipalities are rice, corn, onion, and tomatoes (A. Dilao, 2019). Palay was the region's main temporary crop. Tubers, roots, and bulbs were the next big temporary crop (PSA).

Therefore, this study seeks to describe the current status and challenges of farm business operations in Bongabon, Nueva Ecija, Philippines. Specifically, it sought to define farm owners' profile in terms of age, gender, status, etc., the marketing, production, management, and financial aspects of the situation and challenges of farm operations.

STATEMENT OF THE PROBLEM

This study was conducted to describe the status and challenges encountered among selected farm owners in Bongabon, Nueva Ecija in the Philippines.

Specifically, the study sought to answer the following questions:

- 1. How may the profile of the farm owners be described in terms of:**
 - 1.1 age;
 - 1.2 gender;
 - 1.3 marital status;
 - 1.4 number of children;
 - 1.5 educational attainment; and
 - 1.6 other business as a source of income?

- 2. How may the status of farm business operation among selected farm owners be described in terms of:**

- 2.1 marketing aspect;
- 2.2 technical/ production aspect;
- 2.3 management aspect; and
- 2.4 financial aspect?

- 3. What are the challenges encountered by the farm owners in terms of:**

- 3.1 marketing aspect;
- 3.2 technical/ production aspect;
- 3.3 management aspect; and
- 3.4 financial aspect?

- 4. How may the findings of the study be used as bases for a recommendation?**

II. METHODOLOGY

For data collection purposes, the researchers used many research methods, such as open-ended questions, survey questionnaires, and interviews. The research employed the descriptive research method. To obtain the necessary information, descriptive studies in which researchers communicate with respondents can require surveys or interviews. The descriptive approach involves determining information about variables rather than individuals, according to Sivella (1988-1998). She added that this approach is used to measure the present phenomenon without researching why it occurs. This research was carried out in the following locations: Barangay Lusok, Barangay Sitio, Barangay Calisitan Curva, Barangay Tugatog, Barangay Larcon, Bongabon, Nueva Ecija. The overall respondents to the study were forty (40) farm owners. The researchers under non-probability sampling used convenience sampling. The respondents were chosen in the convenience sampling based on their convenient accessibility and proximity to the researcher. A convenience sample consists of individuals that can easily be met.

III. RESULTS AND DISCUSSION

3.1 Respondent's Profile

Most of the farm owners belonged to ages 35-54 years old. The majority were males, married, and having children of two (2). The majority only achieved a high school diploma. They solely sourced income from farming.

3.2 Status of Farm-Business Operation

3.2.1 Marketing

The primary products of the farm owners were onions and rice. Majority preferred onions for farming. Onions generated more income than rice farming. Farm products were sold to direct buyers with lesser selling expenses rather than in a sales agent. Onions were sold at P30-34 (\$0.63-\$0.71) per kg, while the rice was priced at P13-P15 (\$0.27-\$0.31) per kg. All

were cash transacted. Marketing plays a role in rural growth by fostering an environment of entrepreneurship and creativity, attracting agricultural visitors, and promoting new types of agriculture. (Gale, 1997).

3.2.2 Production

The farm owners were still in the traditional planting method in farming, but only a few were modern. The farm owners preferred inbred type of seed in rice farming, while red onion seed, as less expensive, was selected in onion farming. Wheel tractors and rotavator were used for the cultivation of land and means of transportation. The study conducted by Q. Zhang, 2016, presents various styles of precise farming technologies suitable for large-scale mechanized agriculture, highly automated mechanized community-based production, and fully mechanized farming practices commonly seen in emerging economic regions.

In watering the crops, the farmers sourced it from the irrigation. Rice farmers watered their crops daily. Meanwhile, onion farmers watered crops every twelve (12) days. The farmers applied fertilizers thrice every cropping season. The brand “Urea” was the most preferred fertilizer among the farmers. Favorable irrigation views by farmers include irrigation for insurance against drought, an increase of crop yields, higher wages, food security, and poverty reduction (Nonvide, 2018). The farmers preferred the application of fertilizers after watering the crops. The brand “Brodan” was used mostly as a pesticide. It takes 101-110 days for the farmers to harvest rice crops while 111-120 days for onion crops. Most farmers use rice reaper or “halimaw” in harvesting crops, while others were still in the manual harvesting method. In onion harvesting, it is still done in manual method. Closer cooperation between farmers, local officials, extension agents and providers of agricultural services, as well as the practical expertise of farmers in irrigation and mechanization, could improve program involvement (Nahayo, et al, 2017).

3.2.3 Management

The farmers hired four (4) farmworkers, at the most. Farming requires other tasks like fertilizing and spraying of pesticides. Hired farmworkers were paid daily. They were also given free meals and snacks. Understanding farmers' satisfaction is essential not only for evaluating people's well-being but also for agricultural productivity, as occupational satisfaction can influence a farmer's incentive to invest and reveal output constraints (Agarwal & Agrawal, 2017).

3.2.4 Financial

The farmer-owners sourced capitalization from their savings, lending institutions, and cooperatives. Agri-loans were available at P50,000 (\$1,041) to P120,000 (\$2,500). Innovations to finance agriculture, especially for developing world farmers, include transparent and efficient future contract payment systems, smart crop disaster insurance, and microfinance opportunities for under-served communities that can expand from subsistence loans to investments (Maitra,

2017). Cost of production per hectare in rice farming ranged from P30,000 (\$625) to P45,000 (\$937.50) while in onion farming ranged from P45,000 (\$937.50) to P124,000 (\$2,583). The farmers earned P20,000 (\$416.66) to P49,000 (\$1,020.83) per hectare on rice while P20,000 (\$416.66) to P109,000 (\$2,270) per hectare on onion.

3.3. Problems Encountered by the Farm Owners

3.3.1 Marketing

The farmer-owners experienced problems in terms of output quality. Low quality of rice and onions were caused by flood, lack of water system, an outbreak of insect and pests, and plant diseases. In terms of pricing, the price of *palay* is low due to rice importation, while the outbreak of insects, pests, diseases, and the presence of imported onions keeps the prices of the local onion low. In the study of Dilao, 2019, the critical problem faced by farmers is insect attacks.

3.3.2 Production

The farmer-owners experienced machinery and equipment failure such as a generator, water pump, sprayer, and hand tractor. Farmers also incurred repair expenses. The increase in the cost of farm inputs such as insecticides and pesticides, various seeds, and water systems was also a problem in farm production. The presence of birds, snails, black bugs, and rats pests that damage rice crop, while armyworms and leaf miners caused headaches to onion farmers. A common disease that farmers faced in rice farming was Tungro. White rot, downy mildew, purple blotch in onion were common diseases to onion farmers. A natural disaster like typhoons, when hit the community severely affected crop production based on the experiences of the farmers. Investments leading to increased adoption of productivity-enhancing technologies could have a far more significant effect on sales intensity for smallholder farmers than attempts to increase sales intensity could have on productivity (Benfica, et al, 2017).

3.3.3 Management

The farm owners encountered problems in hiring farm workers, particularly skills in operating machines and other equipment. In the study conducted by Gesesew, 2016, due to unsafe handling practices and their use, contamination and poisoning for farmers are highly documented from the evaluation of previous pesticide exposure awareness, attitudes and experiences, and related health problems among farmers.

3.3.4. Financial

Insufficient capital, increase in the cost of inputs, limited government support, high interest on collateralized loans, limited credit institutions offering agricultural loans, unpaid loan balances, and bankruptcy were financial issues faced by the farm owners. Farm owners seek financial institutions for additional capitalization due to an increase in farm production cost, increase in personal and family expenses, and lack of personal savings. According to the Center for Integrative and Development Studies of the

University of the Philippines, the smallholders need financing for agriculture. At the same time, banks are penalized for inadequate lending to the agricultural sectors. According to Obrimah, 2017, the efficacy of agricultural financing policies in achieving farm production and productivity improvements can be improved by benchmarking farmers' financing needs as a function of farmers' characteristics, such as the size of the land experience lack of crop insurance.

IV. CONCLUSIONS AND RECOMMENDATIONS

Nueva Ecija is recognized as “The Philippines Rice Granary” while Bongabon, as one of the province's municipalities, is considered the country's onion capital. Thus, farming has become the primary source of livelihood for Novo Ecijanos. Agriculture has not been an easy job for farm owners. Challenges are there. Farmers have concerns for support in marketing, production, management, and financial. The government should continue to improve support programs for the competitiveness of the agricultural sectors regarding inputs and production methods, farm-to-market roads, trading centers, training programs, financial assistance, and access credit to farmers. As one of the most disaster-prone countries globally, the government's action programs, should also help farmers resolve the consequences of a natural disaster like typhoons. Likewise, low premium crop insurance may help foster financial stability among farmers, allowing them to continue production despite extreme weather conditions, pests and diseases.

Continuous research and development in the field of agriculture are significant. Therefore, new and improved discoveries on inputs and production methods can contribute to agricultural products' future development.

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