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Production and Marketing Strategies of Pineapple Growers in Calauan, Laguna, Philippines

¹ Ryan Jay V Acula, ² Rommel Octavius R Nuestro, ³ Mark Allan L Flores, ⁴ Jayson N Olayta, ⁵ Charmyne V Sanglay

^{1, 2, 3, 4, 5} Laguna State Polytechnic University, College of Agriculture Siniloan, Laguna, Philippines

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Corresponding Author: Ryan Jay V Acula

Abstract

Pineapple holds significant economic importance in the Philippines due to its widespread cultivation, prominent export position, and favorable climate. As a leading producer and exporter, the country makes a substantial contribution to the global market. This study primarily focused on data collection concerning the production and marketing system of pineapple in Calauan, Laguna, Philippines. The descriptive research design was used in the study covering the quantitative data gathered from fifty-two (52) pineapple growers utilizing checklist-based questionnaire. The study revealed that production of pineapple was established for more than 10 years in a one to two hectares of land generating an approximate income of PhP 100,000.00 to PhP 200,000.00 annually. Most common pineapple cultivar planted was Smooth cayenne or Hawaiian cultivars. Data revealed that the production systems undertaken by the pineapple growers in Calauan, Laguna were grown in a free draining loam soil applied with inorganic fertilizer every two months and regular weeding

was done. Harvesting was done manually to maintain the quality of fruits. Direct marketing of pineapple showed helpful to the growers for easy generation of income after harvesting. Common preference on Calauan pineapple was based on its sweetness regardless of its size and mostly bought by the buyers and consumers in farm gate level. Pricing of pineapples were based on its size considering its class. Promotion and sales of pineapples were based on direct selling and wholesale and on cash basis. The study identified several challenges low demand of product, low supply of product, lack of planting materials and pest and diseases. To address these challenges, the study recommended that pineapple growers may explore biotechnologies through government intervention to increase the number of planting materials and production of quality pineapple. It also recommended that pineapple growers may attend training's and seminars regarding marketing, bookkeeping and post-harvest for value adding technologies that will help to increase the income.

Keywords: Production Systems, Marketing Strategies, Pineapple, Pineapple Growers, Hawaiian Cultivars

Introduction

Pineapple (*Ananas comosus*) is a tropical plant with edible fruit and the most economically significant plant in the family Bromeliaceae. According to Ubi *et al.* (2005)^[9], the pineapple plants are drought tolerant and well adapted to the tropical sandy soils with pH ranging from 4.5 to 6.5. The plants are propagated from suckers or from the crowns, which grow on top of the fruit. It is one of the most important commercial fruit crops in the world available throughout the year. Pineapple production in 2011 constituted more than 19 million MT (metric tons) (FAOSTAT 2013). The pineapple is indigenous to South America, where it has been cultivated for many centuries. The introduction of the pineapple to Europe in the 17th century made it a significant cultural icon of luxury. Since the 1820s, pineapple has been commercially grown in greenhouses and many tropical plantations. Further, it is the third most important tropical fruit in world production. In the 20th century, Hawaii was a dominant producer of pineapples, especially for the US; however, by 2016, Costa Rica, Brazil, and the Philippines accounted for nearly one-third of the world's production of pineapples.

Pineapples and their products are the third largest export of the country, after banana and coconut oil. The Philippines produces around 2.7 million metric tons (MT) of pineapples annually with over 66 thousand hectares (ha) of area planted (PCAARRD, 2023). In 2022, the volume of pineapples produced in the Philippines amounted to approximately 2.91 million metric tons,

reflecting an increase from the previous year. This was equivalent to around 44.94 billion Philippine pesos in production value. The Philippines was the biggest pineapple producing country globally in 2021, next to Costa Rica and Indonesia (Balita, 2023).

Pineapple cultivation has had the greatest impact on the market and that has increased world production in the recent decades in all tropical and subtropical areas. It is one of the crops that best adapts to these environmental conditions (Jeronemo, *et al*, 2023). The challenges faced by the industry include low yield due to poor production efficiency, high incidence of pests and diseases, and high postharvest wastes and losses. The available technology, machineries and facilities are also inadequate to support production and processing of fruit during peak season (PCAARRD, 2023).

Calauan is known to be the home of the sweetest pineapples in Southern Luzon, or perhaps even in the country as a challenger to Bukidnon’s finest harvest. As the town’s pride in agriculture stands a giant pineapple monument at the town plaza, a symbol of its people, products and its lands. As a 3rd class municipality in Laguna, one can say there is not much to see or to go to. To glance on the history and what Calauan was, there has been much change since the days of the infamous Mayor Sanchez and the tragedy. Today, the people together with the municipal government continue to build the opportunities in Calauan. One of the many things which commemorates and celebrated for was the Pinya Festival. This festivity is celebrated every May since its first celebration back in 1999. The festival showcases and promotes businesses and agricultural products especially pineapples that are grown and seen in Calauan. Not only does this celebration build up the agricultural sector but also the talents and creativity among the youth through its street dance competitions, games and programs for the week-long festivity.

This study aimed to determine the production and marketing strategies of pineapple growers in Calauan, Laguna. Further, problems encountered and solutions applied by the pineapple growers were covered to craft intervention that will increase their income.

Methodology

Descriptive method of research technique was use in this study. This is appropriate method to use since the study was concerned in the production and marketing strategies of pineapple growers in terms of production, marketing, and problems encountered by respondents. Purposive sampling technique was use in determining the respondents of the study. The respondents of the study were 52 registered pineapple growers from Brgy. Perez, Mabacan, and Imok, Calauan, Laguna. To collect the data needed a checklist-based questionnaire was used to determine the production and marketing practices undertaken by the respondents as well as the problems encountered. Data was consolidated and tabulated to present the quantitative figures.

Results and Discussion

The municipality of Calauan in the Province of Laguna is well-known to its pineapple production in CALABARZON Region. Based on the data presented in Table 1, revealed that pineapple growers were engaged in the industry for more than eleven (11) years with annual income ranging from PhP 100,000.00 to PhP 200,000.00. Pineapple production was cultivated and managed in 1 to 2 hectares of

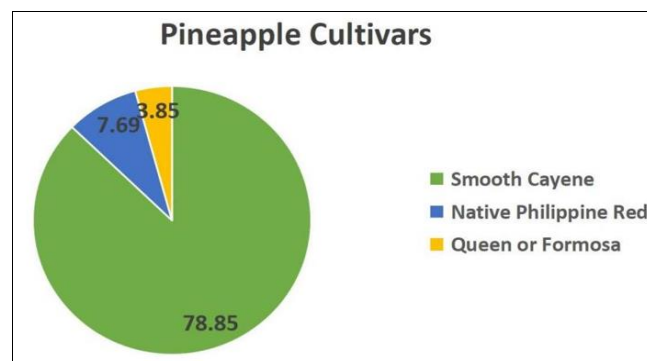
land.

Table 1: Production information of pineapple production in Calauan, Laguna, Philippines

Particulars	Frequency	Percentage
Period of Engagement in Pineapple production		
Below Five (5) years	3	5.77
6 to 10 years	9	17.31
11 years and above	40	76.92
Annual Income		
Less than 100,000	9	17.31
100,000 – 200,000	27	51.92
201,000 – 300,000	10	19.23
More than 301,000	6	11.54
Farm Size		
Below 5,000 sqm.	6	11.54
1 hectare – 2 hectare	43	82.69
2 hectares and above	3	5.77

Production Practices of Pineapple Growers in Calauan, Laguna, Philippines

The variety of pineapple that farmers used in production was shown in the Fig 1. Data revealed that majority of the pineapple growers planted Smooth Cayene cultivars (78.85%), followed by Native Philippine Red (7.69%) and the least were Queen or Formosa (3.85%).



The preferred type of soil that most of the farmers (96.15%) used in cultivation was free draining loam which suitable in the municipality. Pineapples thrive in well-drained, sandy-loam soils with pH level between 5.0 and 6.0 and as well as rich in organic matter that helps plants grow healthy by providing essential nutrients and aiding in water retention (AgriFarming, 2024). Good drainage is essential because poor drainage leads a weak root system, which make the plant more susceptible to root (Department of Agriculture, 2012).

Common practices of pineapple growers in Calauan, Laguna in terms of selection of planting materials were based on its fast growing characteristic. It is shown that most of the farmers used slips (78.85%). Pineapple slips were mostly chosen as planting materials because it is fast fruit producer that can be produced in 18 to 24 months compared to other planting materials. Also, pineapple growers viewed this as cost-effective due to slips are a more suitable way to propagate pineapples because they require less initial investment in terms of seed costs and can be harvested from the same plant repeatedly.

Fast growing planting materials were most preferred by the pineapple growers in which they used rooting hormones for its growth and development as stated by 50% of the respondents. Accordingly, pineapple growers are using

alpha naphthalene acetic acid (ANAA) and aloe vera extract based on the training provided by the municipal agriculture office. On the study of Puspitorini (2016)^[8], cow urine concentrations of 25% and Rootone F 100 mg provides best results in stimulating the growth of shoots pineapple stem cuttings. It is also emphasized that the effect of natural hormone were better than the shoots without given hormone. On the experiences of pineapple growers in Calauan, Laguna, data showed that forty-two (80.77%) of the respondents are using inorganic fertilizer which was applied every 2 months after planting. The common commercial fertilizer used by the pineapple growers are urea, ammonium sulfate and complete fertilizer applied through side dressing. Studies conducted by de Souza Ribeiro (2019)^[4] results showed that the effect of K frequencies applied through fertigation on pineapple yield and fruit physical-chemical quality was more pronounced in comparison to the effect of N applications. Monthly potassium fertigations, followed by four applications throughout the crop cycle, provided the greatest increase in fruit quality, allowing higher values of fruit mass, yield and pH.

In terms of weeding management, most of the respondents (76.92%) undertake weeding through manual or hand weeding. This activity was done regularly to avoid competition on nutrients and as well as sunlight. On the other hand, pest management undertaken by the pineapple growers were utilization of commercial pesticides. Moreover, in terms of disease management, common practices undertaken by the pineapple growers were the removal of infected plants (84.61%), burning of infected plants (11.54%) and the least is utilizing chemical control (1.92%) and no solution undertaken to resolve the disease (1.92%).

Marketing Strategies of Pineapple Growers in Calauan, Laguna, Philippines

Marketing strategy is essential for guiding your efforts, achieving your business goals, and staying competitive in a dynamic marketplace. Direct selling is exhibiting substantial growth in sales revenues and number of salespeople involved (Bráulio, 2003)^[2]. In the case of pineapple growers of Calauan, Laguna, the most preferred marketing strategy was direct selling with a weighted mean of 5.00 which was interpreted as very helpful. Respondents preferred the wholesaler channel despite low profitability. Quick cash was the major factor in the selection of marketing channels (Campita, *et al*, 2022)^[3].

With the emerging trends in technological advancement, social media plays a vital role in marketing the farm produce to the consumers. On this context, pineapple growers in Calauan, Laguna utilized social media as mode marketing channel rated with 1.96 which they considered as unhelpful. Most popular marketing channel selected by pineapple smallholder farmers was the farmer's market and the least selected marketing channel was restaurant and online selling (Nahar, *et al*, 2020)^[7]. All other strategies were rated 1.00 interpreted as very unhelpful namely: Paid media marketing, email marketing, referral program and point of purchase marketing.

Table 2: Marketing strategies preferred by the pineapple growers in Calauan, Laguna

Marketing Strategies	Weighted Mean	Verbal Interpretation
Social media marketing	1.96	Unhelpful
Paid media marketing	1.00	Very Unhelpful
Email marketing	1.08	Very Unhelpful
Direct selling	5.00	Very helpful
Referral programs	1.00	Very Unhelpful
Point of purchase marketing	1.00	Very Unhelpful

Marketing Attributes

With the morphological characteristics of pineapple which is highly perishable, this has triggered the local growers to market their produce directly to the consumers and rely on the middleman. Marketing practices involves the reasons for choosing the type of buyers, basis in determining the quality of fruit, reasons for product rejection, price monitoring, and distribution and negotiation (Galvez, 2019)^[5]. Reflected on Table 3, marketing of farm produce were sold to the consumers based on their farm-based standard in terms of 4Ps of marketing. Common practices of product standard set were sweetness, size and taste in terms of itchiness. Most of the respondents sold their products by its sweetness (80.77%) regardless of its size with only (19.23%).

Marketing attributes in terms of place to market the produce, 92.31% of the respondents preferred to sell the fresh harvest pineapple in their farms. Farm gate selling of pineapples are sold at cheaper price compared to other market outlets and in addition, very few buyers were able to buy from the farm gate due to poor feeder roads going to the farms unlike the farmers who are near the roads, the travelers especially people from urban who pass by their farms and buy their pineapples (Kayitesi, 2011)^[6]. However, respondents reported that selling at the farm gate does not incur transport cost where farmers have to transport their pineapples to the markets which is more expensive to most of the farmers. Another advantage was that farmers are able to get money for the immediate needs of the household.

Price and pricing of farm produced were based on two categories, (1) single pricing and (2) varies on sizes. Most of the respondents (67.31%) sell their produce on single pricing particularly on wholesale basis while 32.69% sold the product depending on size ranging from PhP 20.00 to PhP 50.00. This price was set by the growers in such that their product be sold in short period and avoid spoilage. Promotion of pineapple products were based on contact buyers or by "word of mouth". This promotional strategy viewed by the respondents more effective based on their experience.

Problems in Production and Marketing System

Data on Table 3 shows the problems facing pineapple production by pineapple growers in the study area. Discussion with the growers during the focus group discussion, it revealed that most of 92.31% of the respondents stressed that the primary problem they encounter are low demand of pineapple in the locality and insufficient supply of pineapple fruits (90.38%). This

problem was associated due to inadequate planting materials. Farmers said that they cannot get enough planting material that would plant their whole prepared land for pineapple production hence they have to buy other planting materials from other farmers which are mostly infected by diseases. This was reported by 86.54% respondents during individual interview with the farmers. Definitely if the pineapple sector was to perform to every ones expectation the availability of enough and good planting materials would be considered as a starting point as this ultimately has an impact on the quality and yield of pineapple.

Table 3: Problems encountered by the pineapple growers in Calauan, Laguna

Problems	f* (n=52)	Percentage
Diseases or pest	45	86.54
Climate change	3	5.77
Inadequate planting materials	45	86.54
Low supply of product	47	90.38
Low demand of product	48	92.31
High levels of competition	11	21.15

*multiple responses

Pointing out with the above problem is the pineapple disease which was found to be caused by unhealthy (diseased) planting materials and poor farming practices. This was mentioned by 86.54% respondents as the constraint of small scale farmers which has resulted in decrease of pineapple yield. This was followed by insufficient land for pineapple production. Moreover, this problems leads to the low level of competitiveness of the farm produced to a larger market as emphasized by 21.15% of the respondents. Further, pineapple production in Calauan, Laguna were affected by climate change according to 5.77% respondents.

Conclusion

The results indicate that most pineapple growers in Calauan, Laguna utilized the common practices in farming acquired from their ancestors applied with new technologies from research and other agencies that helped them increase their production and harvest farm produced pineapples as well. Also, pineapple growers chose to direct market their pineapple produce because it allows for better potential profit margins compared to selling with intermediaries. Due to small quantities of farm production, they can manage to sell it directly to the customers. This enables the farmers to set the price, in which they have more control over the price and therefore, small farms can be profitable. Besides, farmers receive instant feedback from the customers on their products which allows them to improve their business through this input and increase farm profitability. These days, smallholder farmers had to get courageous to survive in the stiff competition.

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