

EFFICIENCY AND AGRIBUSINESS MANAGEMENT OF CASSAVA PRODUCTION IN UTHAITHANI PROVINCE

Supanee Cheenaphet

Department of Agribusiness Administration,
Faculty of Business Administration and
Information Technology,
Rajamangala University of Technology Suvarnabhumi,
Thailand

Abstract

This study has a purposed to 1) study the influent factors on business management of cassava production among the grower; 2) to study the comprehensive system for business management of cassava production and; 3) to study the efficiency of the management of cassava production. The research study reveals that most of cassava growers are male at their age between 41-50 years old with married status and elementary school level of education. Most of them had a member family around 4-6 people and do main occupation as a farmer or peasant with 6-10 years experience of cassava growing. The grower gains knowledge of cassava growing among the group of grower whereas the labor was from their own family in a number of 1-3 people. The study of grown area factor showed that most of the cassava grower had the planting area between 11-20 rai and had the ownership on the growing area. The natural rain as a water resource yet the amount of water was sometime insufficient. The study of capital factor showed that most of the cassava grower used their own capital together with loaning from a financial institution that was bank for agriculture and agricultural co-operatives where the fertilizer is sometime used, mostly chemical fertilizer together. The study of production activity reveals that most of cassava grower had a chance to select an area of cassava growing and choose mainly on the category of cassava for the area to be growth if possible. The planning of cassava growing is based on the weather in each season whereas would consider mainly about the condition of the area. The range of planting was around 1-30 cm per each unit together with the academic method of growing. A way to reduce the spread of pests was done by crop rotation. The yield per unit area was calculated some time as frequently as checking of the quality of production. Most of growers sold raw product without keeping productivity. The study of managing marketing activities reveals that most cassava growers search for information on market source and price as a regular basis. The grower collected the information from the merchants and sold the product by themselves. Most products are to be sold at store where the price was by merchants. Most purchasing was done in cash. The study of financing activities showed that cassava grower estimated the cost in cassava regularly. The grower did not calculate cost of family labor. Revenue was estimated to grow cassava by 2 sometime and result was match with the estimation in sometime. The record of income account in cassava was conducted by sometime and purchasing equipment was done in cash. The study of human resource management activities finds that most of cassava growers calculated the amount of labor by sometime like a period of work. The study of efficiency on cassava business management of growing found that 93 cassava growers earn profit from the sale 12,135,761.72 THB in total which is equal to 4,709.41 THB per rai.

Keywords: Efficiency, Agribusiness Management, Cassava

1. Background

Cassava or tapioca is the most important crops in the world, apart from wheat, corn, rice, and potato. Cassava is also the largest source of carbohydrates in the tropics, especially in the countries in Africa and South America. In Asia, Indonesia and India are the most producers of cassava. Annually, the average yields of cassava are 60% for human food, 27.5% for animal feed and 12.5% for other uses. In Thailand, cassava is the 4th exported plant, beside from rubber, cane and rice. There are many products made from cassava such as 45-50% is made for tapioca chip and tapioca pellets and 50-55% is made for tapioca flour. Thailand has exported the most cassava products in the world. The tapioca pellets is mostly exported to European Union countries (such as the Netherlands, Spain, Germany and Portugal), South Korea, and Japan. For the tapioca flour is generally exported to Japan, Hong Kong, United States, Malaysia, Singapore, and Taiwan, respectively (Department of Agriculture, 2012). The average yields of cassava products have been increasing in the past 3 years. This trend is in accordance with the demand of cassava, according to the growing of feed industry. Cassava product is replacing corn, which the price is quite high. Moreover, there is a need on tapioca flour for the many manufactures, such as food, paper, and artificial sweetening agent. Additionally, as the price of cassava products is slightly declined, this is the reason for ethanol producers to make use of cassava (Department of Agricultural Extension, 2012).

The Free Trade Agreement, under the ASEAN Economic Community (AEC), will provide a positive benefit to Thailand. Thailand has a potential to import and export cassava product in ASEAN. Thailand has the most market share, when comparing to other competitive countries such as Vietnam and Indonesia. Furthermore, the cost of production is relatively low and there is a sustainable development of 3 technology to produce and process tapioca such as starch industry (Prachachat Business Newspaper, 2012). Uthaitani province is the place where there is a lot of cassava farmer's community. Cassava can be grown in dried area, provide high profit, and has low cost of production when compared to other plants. All part of cassava, from leave to root, can be made for human and animal feed and a lot of products. This research, therefore, aims to study the influent factors on agribusiness management of cassava production among the growers, the comprehensive system for business management of cassava and to find the efficiency of this business management. The expected outcome will be benefit for cassava farmers to develop and add value of cassava products.

2. Relevant theory and research

Factors of production are referred to all the materials which will be produced for goods or services, according to the demand of the consumers. Factors of production are divided into 4 aspects, including land, labor, capital and entrepreneurship. Business management is the process for planning and control, which aims to achieve the maximize profit. Business activity is rather complex. Businessman needs to pay attention and coordinate all the activities smoothly and those activities will provide the best benefit to the company. Business activity includes, as follows;

1) Production activity is the process of production goods and services. The activity covers the selection of place for production, location of factory, installing of infrastructure, material purchasing, process of production, and storage. All these activities aim to produce good quality of products, and have the adequate cost and optimal production.

2) Marketing activity is the process to transfer goods and services into the marketplace and consumers. The objective of marketing is to help consumers to get the most satisfaction and raise the profit to the company.

3) Financing activity is important as the basic structure for the business. Businessman needs to know about finance. If they do not have this kind of knowledge, it may cause adversely effect to the business. Millet (2001) provided the view on the efficiency, which means operation, or works that make people satisfy and get the benefit from that work.

4) Simon (2001) gave the opinion that to notice the efficiency of work, we need to consider the relationship of input and output. Katz & Kahn (1997), the theorists who studied the open system, found that the efficiency is defined as an important component of effectiveness, and can be measured from the inputs compare to the outcomes. Uthai Hiranto (1982) gave the definition of efficiency in the business field as the management of gaining or losing the profits. Siriwan Sereerat et al. (1998) provided the meaning of efficiency in term of the capability to achieve the goal by spending low cost as possible. In other words, the efficiency is how to manage the limited resource for the most benefit.

3. Methodology

The research purposed to study the efficiency and the business management of cassava from 93 cassava growers in Lansak district, Uthaitani province. The questionnaire was a tool. The data was analyzed by using statistical program. To find the efficiency of the management of cassava business, the formula was used to calculated, presented below;

Total Revenue = Product quantity (Ton) x Sale price (Baht/Ton)

Total Cost = Fixed cost + Variable cost

Net profit = Total Revenue – Total Cost

4. Discussion

4.1 The influenced factors on business management for cassava growers include 3 dimensions, as follows; The study on human resource factor found that the most cassava growers were male, 65 persons (69.89%). 28 persons of them were 41-50 years old (30.11%). Most of them were married, 73 persons (78.49%). Almost half of them graduated from elementary school (53 persons, or 56.99%). 48 persons had around 4-6 family members (51.61%). Almost all of them were farmers for their main occupation (87.10%) and worked as employees for their minor job (62.36%). Almost one third (37.63%) had experienced on growing cassava for 6-10 years, and 59 persons (31.55%) got knowledge to grow cassava 5 from the cassava growers. 79 persons (84.95%) had their own 1-3 workers who were family members, and 87 persons (93.55%) had hired for working in the farm in temporary. For the grown area factor, we found that 37 cassava growers (39.78%) had 11-20 Rai for growing cassava.

Half of them had their own land (55.91%). 71 growers had the fertile soil in the moderate level (76.34%). Most of the growers (64.51%) used the natural rain water. Moreover, 57 growers (61.29%) had a problem concerning the amount of water is sometimes insufficient. For the capital factor, the study showed that half of them (53.76%) had their own capital and took a loan from financial institution. 30 growers took a loan from Bank for Agriculture and Agricultural Co-operatives. 74 of them (80.43%) used chemical fertilizer, and 52 growers (55.91%) used for sometimes. 50 growers (53.76%) did not use pesticide, and 24 of them or 36.92% used Glyphosate (the name of pesticide). Most of them (72 growers, or 53.34%) used tractors in the farm. 4.2 The study on the cassava comprehensive business management had 4 areas, including; The study of the management on production activity showed that 69 growers (74.19%) had a chance to select the land used for growing cassava. If the growers got that chance, 41 growers (45.56%) would also consider category of cassava. 82 growers (88.17%) had a plan to grow cassava. 39 growers (47.56%) applied the information on the weather in each season to be a plan. 17 growers (42.50%) used a schemed plan by considering the landscape and 53 growers (56.99%) did not. 56 growers (60.22 %) set the range of each cassava plant 1-30 centimeters. Most of them (73.12%) grow plant carefully with the academic method. 45 of them (41.67 %) grew rotated crops to reduce the spread out of the pest. 48 growers (51.61%) had sometimes calculated the yield per unit area. 62 growers (66.67%) had occasionally checked the quality of production. Almost all of the growers (75 persons, or 80.65%) had sold raw product.

The study on marketing activity presented that 53 growers (56.99%) regularly found the information on price and market. 69 growers (40.35%) searched those information from the merchant. Moreover, most of growers (82.80%) had sold products by their own, and 80 growers (86.02%) sold at store. 82 growers (88.17%) sold at the price which determined by the merchant. Most of growers (89.25%) sold the product by using cash. Additionally, there were no integrated or co-operative groups for cassava growers to sale the products (74 persons, or 79.57%). The study on financing activity illustrated that 47 growers (50.54%) had usually estimated the cost for growing cassava. Half of growers (60.22%) did not calculate the labor cost for the family members. 54 growers (58.07%) had sometimes estimated the net revenue. The sell was in accordant with 6 the estimated revenue in 67 growers (87.01%). 37 growers (39.78%) had made the income account. 66 persons (70.97%) spent cash when they bought any equipment used in the farm. The finding on the management of human resource showed that 50 growers (53.76%) calculated the amount of labor for sometimes. Almost half of them (49.46%) determined a period of work. 4.3 The result on the efficiency on cassava business management is presented below; From the data collection, there were 93 cassava growers. They have their own land 2,221.75 Rai, or in average 23.89 Rai/person. All the factors were included in the analysis, such as raw product, dried product, total revenue, variable cost, fixed cost, total cost, net revenue, net profit. The results showed below in table 1.

Table 1: The efficiency on cassava business management

Lists Total Average/Rai

Raw product (Ton)	7,385.25	3.90
Dried product (Ton)	591.00	1.80
Total Revenue (Baht)	20,014,705.00	9,008.53
Variable Cost (Baht)	3,893,730.00	2,178.66
Fixed Cost (Baht)	3,985,213.28	2,120.46
Total Cost (Baht)	7,878,943.28	4,299.12
Net Revenue (Baht)	16,120,975.00	6,829.87
Net Profit (Baht)	12,135,761.72	4,709.41

The result from the table showed that the 93 cassava growers got the net profit from cassava sale 12,135,761.72 Baht or 4,709.41 Baht/Rai. From this calculation, one can see that the cassava growers in Lansak district, Uthathani province got a profit from the sale. It can be concluded that the cassava growers has an efficiency in the cassava's business management.

5. Conclusion

The study of the efficiency and the agribusiness management of cassava from growers in Lansak district, Uthathani province can be concluded that the most cassava growers were male, who aged 41-50 years. The most of them were farmers and worked as employees for their minor job. The land in Lansak 7 district is agricultural land, and suitable for growing cassava. For the land resource, we found that the fertile soil is in the moderate level, as it has been used for many years. The water resource is not sufficient for farmer's demand, because it is natural rain water so the grower cannot control it to use in their farm. For the capital resource, the study showed that half of them had their own capital and took a loan from financial institution for sometimes. The financial institution is the Bank for Agriculture and Agricultural Co-operatives, as they can take a loan in the long-period and the loan has low interest. The study on production activity showed that cassava growers had a chance to select area used for growing cassava.

The appropriate area used is 12 rai for 1 plot. It is quite a small area, thus the cassava growers are able to find or even rent the best place to grow cassava. If the growers got that chance, they would also consider category of cassava, which is suit the land. According to the marketing activity, most of growers always found the information on price and market, by searching from the merchant. Moreover, most of farmers had sold the products by their own at the store. Per a selling period, growers regularly found information on price from the merchant for higher price, so they do not determined price by their own. Growers are unable to set the price. Most of growers sell raw cassava, and the merchant will buy directly at the store. Furthermore, the study on financing activity illustrated that cassava growers had usually estimated the cost for growing cassava, as they need to consider the expenditure of family. Cassava growers did not calculate the labor cost for the family members, as there was no real expenditure. The finding on the management of human resource showed that cassava growers have estimated the amount of labor and a period of work. To grow cassava, and get high profit, it depends on the season, labor force and specific timeframe. According to these factors, cassava growers will have efficiency in business management.

6. Future research

6.1 The future research should study on the quality of seed and the appropriate harvesting period for cassava

6.2 The comparison between the factors influenced on cassava business management

7. Acknowledgement

The study has got a support from Faculty of Business Administration and Information Technology, Rajamangala University of Technology Suvarnabhumi, and the contribution from students from Department of Agribusiness Administration for data collection. The researcher acknowledges 8 cassava growers in Lansak district, Uthaitani province for their invaluable input. Finally, the researcher thanks family for moral support.

8. Brief biography of each author

I am Supanee Cheenaphet, the lecturer for the Department of Agribusiness Administration, Faculty of Business Administration and Information Technology, Rajamangala University of Technology Suvarnabhumi, Thailand. My expertise is on Agribusiness management, Agricultural Economics, Human Resource Management and Small and Medium Sized Enterprise (SMEs) Management

9. References

- Chairat Petchalanuwat. 2008. **Effect of varieties, harvesting dates, rates of fertilizer on cassava yield and starch quality**. Bangkok: Kasetsart University.
- Pattawoot Pukcatati. 2007. **An analysis of the location of cassava industry in Thailand**. Bangkok: Silpakorn University.
- Walee Supharerkrat. 2009. **An Economic Analysis of Cassava Production in Nakhon Ratchasima Province, 2007/2008**. Bangkok: Kasetsart University.
- Travel Encyclopedia. 2012. Travelling in Lansak. Bangkok: Suwan Publisher.
- Siros Tongchue. 2008. **The comparison of production efficiency and cost and return of cassava production between inside and outside Royal-rain Making area**. Bangkok: Ramkhamhaeng University.
- Department of Agriculture. **The history of cassava** (Online). 2012. Available from <http://www.doa.go.th/th>. Accessed on 11 December 2013.
- Bryan Cave (Thailand). **Cassava and its products** (Online). 2008. Available from <http://orchid.kapi.ku.ac.th>. Accessed on 2 December 2013.
- The Thai Tapioca Development Institution Foundation. **How to make Tapioca as food** (Online). 2013. Available from <http://www.tapiocathai.org>. Accessed on 3 December 2013.
- Thai Tapioca Farmers Association. **Growing Cassava in Central part of Thailand** (Online). 2012. Available from <http://www.ttta-tapioca.org>. Accessed on 28 November 2013.
- Department of Lands, Uthai Thani province. **Information of Uthai Thani province** (Online). 2012. Available from <http://www.alro.go.th>. Accessed on 12 November 2013.
- Office of Agricultural Economics. **Harvesting land, Agricultural product, and Agricultural product per Rai in Thailand** (Online). 2011. Available from <http://orchid.kapi.ku.ac.th>. Accessed on 2 January 2014.
- Food and Agriculture Organization of the United Nations. **Cassava and Land for growing** (Online). 2012. Available from www.oecd-ilibrary.org. Accessed on 16 December 2013.
- Katz, R. L. & Kahn. (1966). **Skill of an Effectiveness Administrators**. Harvard Business Review. January – February.
- Millet, J. D. (1954). **Management in the Public Service**. New York: McGraw - Hill.
- Simon, H. A. (1960). **Public Administration**. New York: Alfred A Knopf.