International Journal of Marketing and Technology
Vol. 7 Issue 10, October 2017,
ISSN: 2249-1058 Impact Factor: 6.559
Journal Homepage: http://www.ijmra.us, Email: editorijmie@gmail.com
Double-Blind Peer Reviewed Refereed Open Access International Journal - Included in the International Serial Directories Indexed & Listed at: Ulrich's Periodicals Directory ©, U.S.A., Open J-Gage as well as in Cabell's Directories of Publishing Opportunities, U.S.A

VALUE CHAIN ANALYSIS OF BANANA AT KEDIRI AFTER THE ERUPTION OF MOUNT KELUD

Wahyunindyawati*

Kuntoro Boga Andri**

Abstract

Kediri is one of the most severely affected areas of the eruption of Kelud. On the other hand a banana agribusiness potential is very promising. In this district there are 13 varieties of banana :Ambon Kuning, Ambon TW, Kepok, Raja Bulu, Raja Nangka, Candi, Barlin, Berkel (Kitiran / Kawak), Agung, byar, Pisang Ijo, and Masan. Some types of banana which have prospects to be developed extensively as an industrial material like gethuk food, chips, fried foods, cake and pastries are Candi and Raja Nangka. Because of eruption of Kelud, it made impact in agricultural crops, especially banana are damaged and die. Banana production areas in Kediri spread over two districts, namely Kepung and Puncu, requiring effective and efficient marketing system. This study aims (1) To determine the development of the banana farm in the eruption of Kelud; (2) To know the development of the banana value chain system in the development of agribusiness in the eruption of Kelud. The study was conducted by the method of socio-economic survey. The primary data is gained through interviews with respondents both farmers and traders. The results showed that the obstacle is the limited development of agribusiness banana banana seed quality to meet the needs of banana growers; and the unavailability of seed orchards and parent trees to get good quality of bananat; the low level of skills of banana growers; low mastery of pre and post harvest technology; small-scale farming and banana plants

* **Researcher at Assessment Institute of Agricultural Technology (BPTP) East Java, Jl. Raya Karangploso Km 4 Malang 65102, Indonesia**

** **Researcher at Assessment Institute of Agricultural Technology (BPTP) East Java, Jl. Raya Karangploso Km 4 Malang 65102, Indonesia**

as well as the various types of distraction plant bananas will lead to difficulties in the management and development of agribusiness. Banana marketing efficiency is still low, indicated that percentage of the price obtained by farmers to the retail price is lower than margin of its marketing channel. Banana farming development opportunities can be directed through the intensification of a nucleus pattern of big company's care to small companies and foster father's system.

Keywords: value chain, banana, Kelud eruption

I. INTRODUCTION

1.1. Research Background

Food consumption availability will remain an important agenda in the economic development in Indonesia. It is often used as an indicator of the level of welfare. Besides, the food supply crisis would be a very sensitive issue in the dynamics of social and political life. Therefore the role of government continues its efforts to meet food needs from domestic production, at affordable price for low-income people.

One of banana characteristics in the market structure is homogeneous and bulky. Homogeneous indicates that consumers are not able to identify the sources completely substituted by producers. The nature of mass gives an indication that the amount of banana producers is considered small compared to the amount of total marketable commodity, so that banana producers individually can not affect the prices prevailing in the market and act as Price Taker.

As the process of commercial production, the marketing of bananas is a necessary prerequisite in the development of the banana. Banana marketing can create added value through the use of value, place, form and time. It means they are considered to have a productive activity in the marketing of bananas.

The problems will appear more complex with regard to the business phase, particularly there are several parties that perform some kind of function product and production function in various locations. Theoretical concept that allows in describing the rationalization of functional

specialization of this region is called integration market. This concept horizontally and vertically can be used in studying the flow pattern of the market structure of a certain commodity and can also indicate that the process of agricultural marketing in the agricultural marketing system is efficient or not.

Along with the increase in banana processing industry (getuk bananas, banana chips, banana molen), the efforts in improving banana production should be encouraged in order to maintain the raw materials. This effort is important to contribute the revenue of banana farmers comparing being craftsmen and it provides employment opportunities.

Shortages of banana raw material, which struck in the central areas of the banana production because of Kelud eruption, resulted banana farmers looking for raw materials until the outside of Kediri, such as Tulungagung, Lumajang, Jember , and Banyuwangi. The distortion of distribution on banana, especially raw materials for getuk and chips, occurs from the impact of the Domino Effect. Distortion resulting high prices of bananas paid by consumers, especially when compared with the price at the level of the farmer / producer is paid by the merchant.

Based on the above background, the necessary studies concerning aspects of production (farming) and marketing of bananas should be conducted. From the results of this study can be formulated policy recommendations to encourage the development of the banana.

1.2. Problem Identification

Marketing of bananas is one of agribusiness sub-system aspects, in addition to other sub-systems. Hence the linkages between each other sub-system is a prerequisite for the development of agribusiness. Identifying the problem thoroughly agribusiness system at sub-system associated is a prerequisite in order to create a system of sustainable agribusiness.

A major factor in the agribusiness system is production activity. This activity is a combination of physical and socio-economic factors where the value chain directly or indirectly affect the banana farming activities.

From above description , the problems encountered in the development of the banana agribusiness in the region Kelud eruption are:

(1) How far the impact of Kelud eruption towards the development of the banana farm in Kediri region.
(2) How far the value chain in the banana farming supportthe development of agribusiness in the region of Kelud eruption.

1.3. Purpose and Objective

The purpose of this study was to obtain a value chain model on banana farming in supporting agribusiness in the eruption of Mount Kelud and Kediri in general.
The objectives of this research are:
(1) To determine the development of the banana farm in the eruption of Mount Kelud
(2) To acknowledge the development of banana value chain system in the development of agribusiness in the eruption of Mount Kelud.

II. RESEARCH METHODOLOGY

2.1. Selection of Research Area and Respondents

The study was conducted in the area of Kelud eruption at Kediri with based on two sub-systems of agribusiness, namely sub-systems of production and marketing. Sub farm production systems have two subdistricts, namely Kepung and Puncu.

Data should represent a sub system of banana farm production and it has been done in 2 (two) stages of sampling, the village sample unit and farmer groups. In Kepung sub district, Kebonrojo is a village selected while in Puncu sub district is chosen Wonorejo village. Every village has 3 selected farmergroups(Figure 1). Every farmer group is determined 5 farmers of respondent so the number of respondents' farmers altogether is 30.

Subsystem value chain research areas are conducted not only in sample village, but also in other areas. For example, the sample for value chain institution selected is trader/middlemen; wholesalers and retailers of bananas. In order to find out this value chain, it is needed a tracking of the entirely channel from agricultural producers to consumers. Number of institutions involved in value chain is 30 respondents.

The research activities was conducted from January to March 2016. Prior conducting a preliminary survey of farmers and traders to advanced research team was held in order to have a good discussion with banana farmers and traders, with the purpose of getting a real picture of what farmers and traders have been doing.

2.2. Data Collecting Procedure

There are two stages in data collection, those are introductory stage and primary data collecting stage. Introductory stage is collecting all households of banana farmers in sample villages, in context of ownership of banana plants. Besides, the names of banana traders in the research location is included. This data is needed to determine respondents as samples in every subsystem.

Data primary collecting stage was held by interviews with respondents as samples and direct observation towards their activities, both banana household farmers and the traders, through list of questions. In order to get completely data, there is also conducted secondary data collection from involved institutions.

2.3. Analysis Method

Collected data was analyzed and interpreted through two approaches : (1) descriptive approach and (2) partial approach, by efficiency analysis of agribusiness and value chain.

III. RESULTS AND DISCUSSION

3.1. Banana Prospects in Kediri

After Kelud eruption in Kediri area, banana has better prospects to develop, either to reach better production and marketing opportunity. This attainment is supported by favorable agro-ecology for plant growth in line with the increased demand for banana. The big enough demand and consumption of banana in Kediri is a reason why banana should be held up to cultivate as it is now has been explored to make other products such as gethuk, chips, and wet cakes and it has been served as a table fruit.

Varieties grown by farmers may vary, ie Ambon Kuning, Ambon TW, Rojo Nongko, Candi, Barlin, Raja Bulu, Kitiran, Pisang Ijo, Kepok, Cavendis, Agung / byar, Masan, Susu. The sales of those are based of cluster, the highest price is Ambon Kuning banana and Raja Bulu (Table 3.1)

Table 3.1 Banana Variety, Ownership, Amount of plants, Utility, Price per Bunch and Total banana combs in a Bunch

No	Name of Variety	Ownership (%)	Plants (Unit)	Utility	Price per Bunch (Rupiah)	Combs in a Bunch
1	Ambon Kuning	76,6	319	Table fruit	150.000	8-10
2	Candi	73,3	331	processed	40.000	7-8
3	Rojo nongko	56,6	284	Processed	60.000	6-8
4	Barlin	36,6	73	Fruit table	20.000	4-6
5	Raja bulu	26,67	34	Fruit table	170.000	8-10
6	Ambon TW	6,6	140	Fruit table	44.000	6-9
7	Agung/Byar	6,6	21	Processed	50.000	1
8	Cavendis	6,6	6	Table fruit	35.000	5-10
9	Masan	6,6	5	Table Fruit	30.000	4-6
10	Pisang ijo	6,6	49	Table fruit	130.000	8-10
11	Kitiran/Bertel/Kawak	6,6	30	processed	30.000	6-10
12	Susu	6,6	10	Table fruit	40.000	7-9
13	Kepok/Gajih	6,6	34	Bird feed	50.000	6-10

The most preferred type of banana to grow is Candi banana, because it is easy to maintain, has short age (rapid harvest) and quickly sold on the market. Candi banana is usually for processed banana, such as banana chips, fried banana, and the mixture of Gethuk Molen banana. Ambon banana such as Ambon Kuning and Raja Bulu is the second preferred to grow because it has high demand such as for usefulness of custom events as salvation, and also the price is expensive. From the information of merchants, the type of Ambon Kuning and Raja Bulu are quickly sold because of high population of the district and Kediri residents need for more than just table fruits, but also for customary celebration events, like weddings, and circumcisions ceremony.

Banana prices are shown in Table 3.1 is the price of banana on February and March 2016 which are quite expensive because the supply of bananas is a bit less. Lack of banana production is caused by long dry season, plant pests / diseases, therefore many banana plants are damaged and broke down.

After discussions with the farmers, they agreed that the type of banana to be commercialized is Ambon Kuning. The result of PRA - SWOT banana farm development strategy in Kediri should be conducted to recognize how to :

(a) develop the cultivation of banana to exploit the potential of land and make easy of means of production procuring

(b) increase production to fill the market opportunities.

The selection of agribusiness strategy, can be conducted by quantitative planning tools matrix (QSPM). Preparation of matrix Preparation of matrix QSPM as follows :

1. Make a matrix consisting of three columns.
2. In first column consists of strengths, weaknesses, opportunities and threats factors
3. In second column is written scores for each factor, according to the scores contained in the internal and external matrix (Table 3.2)
4. In third column is filled the grades of attractiveness score (AS) and the weighted of attractiveness score (WAS) for each strategy.

Scoring AS is ranged from 1 to 4, depending on the influence of these factors on the strategies that are being considered. Value 1 = unacceptable, 2 = probably acceptable, 3 = most likely be accepted, and 4 = acceptable. If these to meet in the district of Kediri (Table 3.2) factors have no

effect on the strategies, then AS doesn't need to give to these factors. WAS is the value obtained from the score multiplied by the value of AS. Total value of WAS for each strategy is calculated. A strategy that has the largest total value of WAS is the best strategy to be conducted. From the results of the assessment of internal factors, it is acquired 6 and 7 factors of weakness and strength of banana agribusiness.

Table 3.2. Internal Matrix of Banana Farming Opportunity

No	INTERNAL FACTOR	weight	Rating	Score
	STRENGTH			
1	Farmer's age is productive	0.07	3	0.21
2	Farmer's experience of banana cultivating is enough	0.06	3	0.18
3	Farmer's experience of marketing fresh banana is enough	0.08	4	0.32
4	Farmer's willing to improve banana cultivating	0.02	2	0.04
5	Banana cultivating training activity	0.07	3	0.21
6	Training activity of pest and disease controlling on banana	0.09	4	0.36
	WEAKNESS			
1	Banana farming is not intensively cultivated yet	0.08	1	0.08
2	The origin of banana seedlings from seedling	0.09	1	0.09
3	Less of pest control technology	0.08	1	0.08
4	Farmer's capital is limited	0.10	1	0.10
5	Banana breeding is not yet available	0.08	1	0.08
6	Fresh banana quality is varied	0.09	2	0.18
7	Banana production can't meet its consumption in Kediri district	0.09	2	0.18
	TOTAL	1.00	28.00	2.11

Opportunity of banana farming in Kediri has the internal strength above the average value, but farming system of banana is still modest because they have not cultivated intensively as the plant periphery, origins of banana seedlings from seedling, limited capital, nurseries banana, product quality fresh banana still diverse and banana production id not sblr

The assessment of external factors, there are 4 factors of opportunities and 5 factors of threats (Table 3.3)

bel 3.3. External Matrix of Banana Farming Opportunity

	EXTERNAL FACTORS	weight	Rating	Score
	OPPORTUNITY			
1	Potential land for banana cultivation is quite spacious	0.12	3	0.36
2	Market opportunity of banana is still quite large	0.12	4	0.48
3	There is a development policy support of banana	0.10	3	0.30
4	Production facilities available and easily accessible	0.11	4	0.44
	ANCAMAN			
1	Institutional providers of credit is less	0.10	1	0.10
2	Development of farmers in banana farming is not maximized	0.12	2	0.24
3	Cultivation technology that adaptive and economical is not yet available	0.12	2	0.24
4	Banana plants are often affected by the disease (virus)	0.10	1	0.10
5	Fresh bananas product market opportunity is limited	0.11	1	0.11
	TOTAL	1.00		2.37

There are two factors of opportunities that banana has. The potential of land that still allows for the development of banana and market opportunity is still large. Therefore, there is a need of banana policy support and production facilities available, both are needed easily accessible. Opportunities of banana farming have a sufficient response to external factors, especially fresh banana of Ambon Kuning which is the main consumption at special events such as celebrations, clean villages ceremony that use Ambon Kuning banana with supported of an expensive price per cluster/bunch (IDR 250,000 - 300,000)

3.2. Potential Banana in the eruption of Kelud area in Kediri

As it is described above, in Kelud eruption area has a variety of bananas. Therefore, it is needed to select a type that has high economical value. So far, banana is still cultivated individually and only some clumps in one area as a distraction plant and not in the form of banana plantation. The condition of banana plants are also varied, some are pretty good of growth and the others are less of growth.

In line with banana agribusiness development in the volcanic eruption of Kelud, there should be noticed that the condition of banana is supposed to be seen from sub-system of production, as well as marketing and processing sub-systems.

In sub-system of production, banana has been proven as the highest efficiency of farming, as well as in terms of the highest marketing efficiency. Moreover, banana has a pretty good market opportunity, both domestic and export markets. Whilst, the sub-system of banana processing. is likely important that banana as raw material for both small agro-industry households and companies.

3.3. Banana Development Constraints in the Eruption of Kelud Area

Problems of banana farming in Kelud eruption region are pests and diseases, especially Fusarium diseases, blood diseases and bacterial blight. From interviews to farmers, generally they do not know the name of the type of pests and diseases. Furthermore, the farming is traditionally applied, so banana farming has varied production, low productivity and low quality. To cope with this essential need, there is a need to hold the training of pests and diseases in

banana. So far, the farmer just leaves the terrible banana or just cut the plant's illness. Another finding, the intensity of fertilization is only 30%, it was because there are remnants of manure from the main crops.

The main issue complained by banana farmers is, they are lack of knowledge about pest control (83.32 % on Table 3.4)

Table 3.4. Banana Farming Problems by Farmers' Reason

No	Major Problem of Banana Farming by Farmers' reason	Percentage (%)
1	Difficult to cultivate	3,33
2	Cost of production is expensive	-
3	Lack of knowledge of pest and disease controlling technology	83,34
4	Difficult to market	10,00
5	Low in selling price	3,33

Banana farming is generally intercropped with seasonal crops, since banana started in planting until 2 years old. Crop planting patterns of sidelines cultivation in a year is : peanuts - cassava - maize. The variety that farmers cultivate in area of Kelud eruption is diverse, namely Ambon Kuning, Candi, Rajanangka, Kepok / Gajih, Susu Raja Bulu/sajen, Ambon TW, Tanduk (Agung and byar), Masan, Piang Ijo, Cavendis, Kitiran / Bertel / Kawak. The seed is originally from seedling. Spacing is used irregularly with a population of 1,000 trees per hectare. To increase productivity in the farming of bananas, can be done by sidelines planting (Kasijadi, 1994).

Other points which are also a major constraint in the development of banana agribusinessare : providing the means of production, improving low level of skill, enlarger small scale farming, and to overcome of lack of capital.

Ad (1) Providing Means of Production

On the input supply as a major constraint is the limited quality of banana seedlings in sufficient quantities and at affordable prices by farmers. This is due to the limited seed plantation of banana becausesome banana mother plant in the location where the eruption of Kelud occurred was destroyed.Besides, it is also the awareness of farmers in the use of certified seeds is still low. Nearly 90 percent of banana seedlings are planted from seedlings. To overcome these obstacles

to improve the quality of banana is by spreading seedlings through KBD (Seed Garden of Village), and this can be reached by increasing the skill of officers on nurseries and farmers' awareness of the importance of licensed seeds, both can be achieved through counseling activities.

Ad (2) Improving Skill Level of Farmers

In general skills / knowledge of farmers on better production techniques and pre-harvest and post-harvest technology remain low. To overcome these obstacles can be done through training and counseling, to increase the extensive agents on technology pre-harvest and post-harvest of banana

Ad(3) Enlarger the small scale of banana farming

In general, farmers in Kelud eruption areas have narrow-scale of farming and their farms are scattered from one place to another. Besides, banana farming is only as a distraction. Such situation is an obstacle for continues production quality and a barrier to get the uniformity of the harvest, also it is difficulty in collecting banana.

To overcome these obstacles, it can be done as follows:

1. There is a need a system of farming groups so it becomes larger of agribusiness to achieve more efficiency.
2. Improving the uniform of harvest from varieties of banana in order to get high market value.

Ad(4) Limited of Capital

The capital owned by farmers is very limited. Advised technology package could not be accomplished and implemented perfectly because the means of production is only partially purchased. This weak capital led to the managed agribusiness improperly, causing the results are not maximum. To overcome these obstacles can be done as follows:

1. Capital assistance through bank loans with special lending interest rate from governmental banks. (Mandiri, BRI, BNI)
2. Cooperation between banana growers and governmental companies (BUMN) in line with CSR program (Customer Service Responsibility)

3. Cooperation between banana growers with banana food industry (Nestle) and other baby food manufacturers to make a system of nucleus company among banana growers, or system of patron and clients to help small parties having foster father.

3.4. Characteristics of Banana Farmers on Eruption of Kelud Area

The characteristics of banana farmers are as follows

1. Relatively in productive age of 46 years (farmers) and 47 years (traders) each in average.
2. The banana they cultivate with another crops of 98.2%, others have banana plantation of 6.6%. and 3.3% of banana farms is owned by other farmers.
3. The origin respondent are farmers from Kebonrojo of 50%, Puncu of 43.4%, and Bangun Asmoro of 6.6%. The merchants originally come from Kediri of 83.4%, the remaining 6.6% from Puncu and 10% from outside Kediri (Malang, Nganjuk and Tulungagung) (Table 3.5).

Table 3.5. Characteristics of Respondents

No	Description	Farmer	Merchant
1	Age (years)		
	Average	46	47
	Highest Age	65	63
	Lowest Age	32	33
2	Status (percentage-%)		
	Has banana plantation	6,6	-
	Mixed banana plantation with others	98,2	
	Banana plantation by other owner	3,3	
3	Originally come from (percentage - %)		
	Kebon rojo	50	
	Asmoro bangun	6,6	
	Puncu	43,3	6,6
	Kampung baru, kepung, Besowo, Kandangan, Ngronggo, Pare, Krepek, Ngadiluwih, Bendosari, Banyakan		83,4
	Other than Kediri district (Malang, Lumajang, Tulungagung)		10

Transaction of location between farmers and merchant is farmers' (30%). This means all banana is well mature and another location is in banana plantation (70 %) to see the situation or condition if the banana is ready to harvest. Banana sold to collector is 43,35 % and 43,33 % is sold to the merchant out of Surabaya.

Table 3.6 How farmers sell the banana

No	How to sell by farmers	Percentage (%)
1	Direct selling in the stall by the owner	-
2	Sell to collector	43,35
3	Sell to merchant outside	43,33
4	Sell to merchant outside by farmers	-
5	Advanced selling	6,66
6	Processed	6,66

3.5. Marketing Channel

Marketing channel of banana in Kediri district generally involves all merchants, starting village merchant untuk district mrechant. This indicates that banana marketing in Kediri is one of the opportunities for banana development.

Payment method for banana trading is cash and without down payment. In order to continue the cooperation among merchants, they make strategy to do down payment among themselves and the amount of down payment is depending on how many banana will buy. Big merchants give down payment to farmers which is binding. The price of banana is dynamic, means that it can change at any time in accordance with market prices, so traders don't need to run into other traders who are willing to buy at higher prices.

Marketing agencies involve in the delivery of banana from growers or producers to consumers. In the area of Kelud eruption, the marketing channel is still modest. The institutions that have role are collecting merchants and retailers. There are farmers as producer of banana who direct carry and sell by themselves to consumers at Ngongro market.

In a purchase transaction, the traders (merchants) come to the retailers that are relatively close to the market. Banana sell in the form of young fruit, and to make ripe, the sellers will spray etrel or using carbide. The selling of banana per day reaching 7-8 bunches for all types of bananas. According to the traders, they prefer to sell in the market because they can get higher profit than selling to processing unit. It is because the processing unit fix the price which is low, and the merchant acts as price taker of processing unit of price.

Transportation for banana trading is motorbike. The problem of some traders in selling bananas is the shelf life of certain banana, such as Cavendis is approximately 3 days, Ambon banana is about one day as it is easy to break from its fruit stalk, banana susu and banana kepok can be lasting up to 7 days.

Retailers buy banana from the collectors merchant by grading system. Determination of the grading is based on the size or number of combs per bunch. Grading system is usually divided into 3 grades : large, medium and small.

Furthermore, retailers take advantage of the kiosk used as a selling point, is commonly in the market of Gudang Garam and in commercial units. From the retailers, banana is sold directly to consumers.

In sale and purchase transactions, the consumers are active coming to the retailers and the retailers sell banana in the form of comb.

In this simple marketing mechanism, there are lots of banana can be sold as Kediri people love banana. The banana marketing channel in subdistrict Puncu and Kepung has the only channel which is used by farmers, that is collector merchant marketing channel. The collector merchant in the village then sell the banana to the merchant at the distrit market. There are 4 channels of marketing in banana Kediri, as follows:

(1) Farmers - Consumers

(2) Farmers – Collector merchant of village - Consumers

(3) Farmers - Collector merchant of village – Big merchant - Consumers

(4) Farmers – Collector merchant of village – Big merchant - Consumers at Jombang and Mojokerto.

3.5.1. Cost and Margin of Marketing

Banana marketing mechanism is relatively simple, so the marketing costs is not too large. With the marketing costs and profits earned by marketing agencies led to the difference in prices received by farmers and the prices paid by consumers.

The marketing cost of banana from collector merchant and retailer is IDR 2,400 and IDR 3,450 per bunch. It means, total of marketing cost is IDR 5,950/bunch. Whilst, total margin of banana marketing is IDR 1,770 / bunch. Therefore, the ratio between total cost and marketing margin is 0.50 or 50 %.

Table 3.7. Cost and Margin of Banana in Kediri

No	Description	Value (IDR/comb)	% from retail price
1.	Price in the level of farmer*)	15,000	68.18
2.	Selling price in the level of collector merchant	20,000	90.91
	-Harvest/sorting/grading	1000	4,54
	-Transportation	1500	6,82
	-Profit	2500	11.35
	-Marketing margin	5000	22.73
3	Selling price in the level local retailer	22,000	100
	-Damaged (10%)	2,200	10.00
	-Others	1,250	5.68
	-Profit	3,250	14.77
	-Marketing margin	6,700	30.45

*) Average price for all banana type.

3.6. Institutional Banana Farming

Institutional includes things that are not written as customs' rules, norms and value systems adopted by the public, besides something written formally and enforced by government officials (Hermanto, 2007).

In the village of Kebonrojo at district of Kepung, there are 3 farmers' institutions that involve in banana, : Tani Mulyo, Women Farmer Group of Lestari Kelud and Harapan Jaya. In Wonorejo village at district of Puncu Both there are also 3 farmer institution : Tani Mulyo, Rukun Santoso and Suko Tani. This five institutions in both districts except Lestari Kelud - have been actively participating in the establishment of participatory agricultural technology, especially in plants of onion and chili. In working out of the onion and chilli plants can not be separated from the use of pesticides. Many of pesticide formulators who introduced the product to conduct trials for their products are 48 companies that test their products in both villages.

Counseling institution has already been available and has been playing an active role in providing information technology and linking with the implementation of banana development program. However, institutional providers of inputs, credit and marketing have not been formed in the village of Kebonrojo and Puncu. The expectation is, BRI lending institutions such as village units and Bank Jatim are encouraged to play a role in bridging capital banana farming in these two villages.

Activities undertaken by farmer group is the start timing of planting until marketing. Farmer group activities besides agribusiness banana discussion, also for loans and saving as well as regular meetings (Table 3.8).

Table 3.8. Periodic activities organized by farmer groups in Kebon Rojo and Wonorejo villages at Kediri

Activity of Framer Group		Percentage (%)	
		Participation	Not Active
1.	The timing of planting	72.33	26.67
2.	Seed purchasing	56.67	45.33
3.	Fertilizers purchasing	36,.67	63.33

4.	Loans and Savings	40	60
5.	Gathering	45.33	56.33
6.	Regular meeting to discuss agricultural issue	96.67	3.33
7.	Land management	50	50
8.	Planting	46.66	54.33
9.	Fertilizing	50	50
10.	Pest and disease controlling	66.67	33.33
11.	Seed treatment	13.33	86.67
12.	Harvest	26.67	73.33
13.	Post - harvest	16.67	83.33
14.	Processing	26.67	73.33
15.	Marketing	53.33	46.67

From the results of periodic activities in each group, it should be formed integrated agribusiness group (KUAT = Kelompok Agribisnis Terpadu) with concerned at banana. This institution of banana is a cooperative embryo grown in a participatory manner. Thus, KUAT as driving farmers in technological innovation of bananas. The upstream is a banana seed, as well as downstream various preparations made from banana.

The accessibility of farmer towards marketing of banana, how to produce, where farmers sell their harvests, how many are sold to marketing agencies, how to easily market and how the method of payment (Table 3.9) are important information for farmers and government to improve the banana development.

Table 3.9. Accessibility of Farmers towards Banana Marketing

No	Description	Amount
1	Harvest Sold (Percentage/%)	
	-Village consumers	88.20
	-sub-district consumers	11.47
	-district consumers	0.33
2	Marketing agencies contacted (person)	2-3
3	Kemudahan pemasaran pisang (Percentage /%)	100
4	Partnership Ties (Prosentase /%)	
	-banana processing	23.67
	-collector merchant	8.71
5	The way to sell banana (Percentage /%)	
	- Sold before Ripe	0.11
	- Sold after Ripe	-

The accessibility of farmers towards the service of banana counseling, can be started by preparing banana seed, banana cultivation, an integrated manner of pest and disease controlling by biological agents, organic fertilization, host-harvest handling, post-harvest processing, and all those should be conducted regularly with the hope that Kebonrojo and Wonorejo villages will be an attractive banana agro-tourism.

IV. CONCLUSION AND RECOMMENDATION

4.1.Conclusion

1. Limited of banana good seed quality is an obstacle in the development of the banana. Lack of good quality seed due to the unavailability of seed orchards and parent tree in the location

2. Low level of skills is a constraint of banana growers in the banana agribusiness. Mastery of pre and post harvest technology should be trained for banana growers to improve their skill in getting benefits of technology through production and revenue increases.

3. Small scale farming of banana plants as well as the various types of distraction plant of banana will lead to difficulties in the management and development of agribusiness.

4. Limited capital causes not well managed of banana agribusiness

5. Banana marketing efficiency is still low, indicates the price obtained by farmers to the retail price is lower than the margin in the marketing channel

6. Banana production only serves for locally consumers, showing that banana farmers are not able to see the bigger market from outside areas and they are not ready to fulfill the need of the real market.

7. The dependency of banana farmers on traders/merchants points out that the traders/merchants dominate the market

8. There is not fully linkage of production sub system with banana processing due to the limited ability to provide banana as raw material. There is no continuity of the production and unmeet of quality for agro-industry. This indicates that there is opportunity to develop banana agribusiness and can be directed to make nucleus plantation and foster father system.

4.2. Suggestions / Recommendations

1. For decision maker: In order to support the development of agribusiness in Kelud eruption area, there is a need for procurement of seeds and coaching the quality banana seed orchards. The varieties that have highest market value both for the fresh fruit (Ambon Kuning and Ambon TW) as well as to processed (Candi, Rajanangka) should be assisted to improve

2. Because of almost banana growers are small scale agribusiness, there is a need to guide them to the best agricultural practice of banana cultivation. The possibility to make nucleus cooperation between banana growers and agro-industry company is highly recommended through providing production facilities and accommodating their farm.

3. Improving the skills of farmers through

(a) improved their agribusiness;

(b) make demo plots with the aim of farmers can be instantly adopt recommended technology;

4. Improvement of infrastructure and facilities that aim to reduce the level of crop damage, while helping to reduce costs and marketing margins.

4.3. For further research

it is advisable to conduct further research on institutional banana agribusiness as this research is limited on the location of Kelud eruption.

REFERENCES

- F. Kasijadi, Wahyunindyawati, Handoko dan Q. D. Ernawanto. 2000. Pengaruh Tanaman Sela Terhadap Produksi Dan Pendapatan Dalam Usahatani Pisang Ambon Kuning Di Lahan Kering J.Hort. 9 (4): 320-330. Th 2000.
- Hermanto.R. 2007. Rancangan Kelembagaan Tani Dalam implementasi Prima Tani Di Sumatera Selatan. Analisis Kebijakan Pertanian (AKP). 5(2)110-125. Juni 2007
- Kotler, Philips, 1995. Manajemen Pemasaran. Salemba Empat. Jakarta
- Soekartawi, 1993. Prinsip Dasar Manajemen Pemasaran Hasil-Hasil Pertanian. Penerbit PT Raja Grafindo Persada, Jakarta.
- Soekartawi, 1995. Analisa Usahatani. Penerbit Universitas Indonesia, Jakarta.
- Soekartawi, 1999. Agribisnis: Teori dan Aplikasinya. Penerbit PT Rja Grafindo Persada, Jakarta.