ANALYSIS OF COCOA FARMING AND ECONOMIC LEVEL OF FARMERS ESTATE IN EAST JAVA

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ANALYSIS OF COCOA FARMING AND ECONOMIC LEVEL OF FARMERS ESTATE IN EAST JAVA

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Abstract

Cocoa (Theobroma cocoa) is one of the plantation commodities that are important in the development of plantation sub-sector among others, to meet the needs of domestic as well as export commodities of foreign exchange. In East Java, cocoa is a strategic commodity to raise the dignity of the public by increasing the income of farmers growing plantation and regional economic centers. This research was conducted in East Java with 100 respondents cocoa farmers of the people, by using the survey method. The results showed that cocoa farming is still done with traditional cultivation level that the entire management is done by the family members and neighbors. Farmers with land ownership rate of an average of 1.56 ha may contribute 53.95 per cent of total household income. In addition to the cocoa farming feasibility level analysis shows the value of the ratio B / C of 3.13. It means that cocoa farming is financially viable. In the analysis of the level of welfare of farmers do not prosper because the income of farmers for 1 year <1 nishaf (85 grams).

Keywords: Characteristics, Agricultural Systems and Cocoa

1. INTRODUCTION

Cocoa *(Theobroma cocoa)* is one of the plantation commodities which are important in plantation sub-sector development among others to fulfill domestic needs as well as export commodities a major foreign exchange earner country. In East Java, cocoa is a strategic commodities to lift the dignity community by increasing the income of farmers and plantation growing regional economic centers.

Cocoa plantations developed in folk estate, PT. Perkebunan Nusantara (PTPN) and large plantations private sector (PBS). The area cocoa in East Java in 2010 with an area of 54,007 Ha are divided on 23,634 Ha for folk estate, 26,480 Ha for PTPN, and 4,543 Ha for PBS (DISBUN East Java, 2010).

Cocoa plantations in East Java area of 23,634 Ha are divided on Madiun district 3,852 Ha, Pacitan 3,619 Ha, Trenggalek 3,093 Ha, Blitar 2,544 Ha, and 18 other districts in East Java as Ponorogo, Malang and others. Cocoa Production in local Plantation of 5,877 tons, with productivity average 795 kg/ha/year grains dried up. A cocoa, an damaged (TT/TR) covering an area of 870 Ha, the plant has not yet (also) covering an area of 15,375 Ha, and crops produced covering an area of 7,389 Ha. From this condition so there is hope that is interesting to cocoa production in East Java with a plant which produces (DISBUN East Java, 2010). Following this development data area, production and productivity cocoa in East Java in the time frame 2006-2010 shown in Table 1.

Appointed table 1 above that there is a tendency within the area of the land area cocoa in east Java, the average production tanama cocoa in East Java in 2010 to 20 694 tonnes with produktivita average of 922, 20 kg per ha.

Farming in East Java is a stronghold area area of the land that is very potential to develop. Although cocoa plantations is still not evenly all districts in East Java. Thus, it is necessary to analyzed cocoa farming in East Java and how state economic level of cocoa farmers in East Java.

Table 1. Land Area, Production and Productivity of Cocoa in East Java

Year	Land Area (Ha)	Production (Tonnes)	Productivity (Kg/Ha)
2006	41,840	19,672	1,139.00
2007	44,313	19,672	1,065.00
2008	52,537	18,269	681.00
2009	54,007	22,667	842.00
2010*	54,657	23,192	884.00
Average	**49,471**	**20,694**	**922.20**

Source: DISBUN East Java (2010).

2. RESEARCH METHODS

Location

The study was conducted in East Java folk producer of cocoa, namely the southern zone and the central zone, which comprises the southern zone of the district: Malang, Blitar, Trenggalek and Pacitan, for the central zone consisting of districts: Madison, Nganjuk, Jombang and Ponorogo.

Sampling Technique

This study uses the unit of analysis or research units are cocoa farmers in East Java folk are as many as 49.144 people, then the samples taken must be representative, that could represent the population in terms of all the features and characteristics that exist in the population can be reflected from samples taken. Of the amount will be taken as a sample at a precision level of 10%. Withdrawal sample use you right formula of Emory, 1986) :

$$n = \frac{N}{N d^2 + 1}$$

Description:
n : Number of All Samples
N : total population
d: the level of precision used (10%)

Using the formula above, then the number of samples taken at:

$$n = \frac{49\,144}{49{,}144\,(0.1)\,2 + 1} = 109.67$$

In round it off to **110**.

Feasibility Test

The analysis used is descriptive analysis and farming. Descriptive analysis is used to describe the characteristics of cocoa farmers in East Java, while the analysis of farming used to look at income levels of cocoa farmers in East Java and production expenses, so that the income can be calculated the cost ratio **(B /C ratio)** to determine cocoa farming feasibilities. Analysis of farming mathematically formulated:

Description:

π = Gain

$$\pi = \sum_{y=1}^{n} P_y Y - \sum_{x=1}^{n} P_x X \quad \text{dan B/C} = \frac{\sum_{y=1}^{n} P_y Y}{\sum_{x=1}^{n} P_x X}$$

X = Number of inputs
Y = Total production
Px = the price of production inputs
P_y = the price of production

Criteria for eligibility test :

- If Gross B / C ratio> 1 means the farming of cocoa as feasible or profitable
- If Gross B / C ratio <1 <0 means the farming of cocoa declared unfit or loss.

High farmer economy Cocoa

Data analysis to determine their current level farmer economy by using descriptif analysis based on theory Suroso priests Zadjuli, (2008 Said to be prosperous if the level of expenditures for family consumption annually if less than 1 nisaf (85 grams) of gold then the farmers are poor and vice versa if expenditures within one year over 1 nisaf (85 grams) of gold so cocoa farmers are prosperous or wealthy (Figure 1).

3. RESULT AND DISCUSSION

1. Characteristics of Respondents Based of Cocoa Farming and Production Inputs

Labor outpouring 40.67 includes small, so that it becomes a limiting factor for the sustainability of farming and affect the level of achievement of production targets. According Musofie et. al. (2003) scale enterprises and high but not matched by the availability of sufficient labor can reduce the level of productivity of the business. In addition, the outpouring of a small workforce is an indication that the application has not been intensive cultivation. Therefore, the required additional labor from outside the family farmers themselves.

Experience of farm is an important factor in supporting the success of farming. The experience of farmers to farm the respondents ranged from 5-35 years with an average experience of 17, 09 years. Experience of farm that a learning process that can facilitate the adoption and application of technologies developed dynamically. But the experience of the old farm are not reflected by the respondent farmers applying recommended technology and rely on the experience acquired hereditary. This is demonstrated by the techniques of cultivation and input use the means of production is still low. According to table 2. it appears that the cocoa plant an average age of 25,45 years with a variation between the ages of 5-30 years and with a shade tree fruit crops-2's like papaya, banana and cashew. This reflects that the cultivation of cocoa has long done with little effort rejuvenation. Events economic crisis that hit the country in mid-1998 and lead to the weakening

of the rupiah against the US dollar (USD) would bring good luck to the cocoa farmers. Cocoa is a commodity export selling prices experienced a price rebound. Increased revenue from the increase in the price of many used by farmers to expand acreage of cocoa and rejuvenate the plant.

The level of productivity of cocoa farmers who achieved 16.68 kw / ha are still below the average production of cocoa from Indonesia cocoa coffee research center which is 20 kw / ha. The low level of productivity caused by the pest CPB, due to PBK attack the cocoa beans become disabled and low quality and resulted in lower selling prices.

Input production are applied farmer respondents consisted of fertilizers, insecticides, and labor. Fertilizing plants cocoa farmers do not conform with the dose of fertilizer, manner and time of fertilization, both of fertilizers, manner and time of fertilization. Fertilizer applied is urea with an average dose of 25.96 kg, SP-36 average of 25.39 kg and Kcl average of 24.25 kg / ha.While Kisara the recommended dose of fertilizer to urea, SP-36 and KCl respectively 0 - 333,33kg / ha / yr, 0 -222.22 kg / ha / year and 0 to 333.33 kg / ha / year , Cocoa crop acreage in the study sites had been attacked by pests PBK. Farmers do the pest control to maintain fruit chemically as an effective pest control CPB has not been found. An average of 0.19 liters of insecticides used. The use of insecticides used no direct effect on production because only minimize fruit damage, do not defend from attacks that enter into the fruit.

Table 2. Cocoa Farming Characteristics And Use Input Production In East Java

DESCRIPTION	**PRICE (N =100)**
1. Area of the land (Ha)	1.56
2. Age plants (th)	25.45
3. Production (Kw)	16.14
4. Productivity (Kw/Ha)	16.68
5. Input production:	
a. Urea (Kg)	25.96
b. SP-36 (Kg)	25.39

DESCRIPTION	PRICE (N =100)
c. (Kg)	24.25
d. Insecticides (L)	0.19
e. Labor (HOK)	40.67

Source: Data Analysis (2013).

2. Revenue Farming

In addition to the cocoa crop, farmers in the research area also plant some other plantation crops such as fruits, vanilla, and coffee. Cocoa is a commodity plantation that gives highest income and at the same time as the main source of income for farmers. Outside farm income derived from salaries, pensioners, trade, and construction workers. The highest contribution to farm income in cocoa farming Rp 12.355 million (53.95%) followed by fruit trees for Rp 1.500.000/ (12,14%), and vegetables as big as Rp 1.245.000/(10,08%), trade as big as Rp 1.15 million/(9.31%), Employee Rp 1.05 million/(9.31%), farm laborers, construction as big as Rp 850 000/(6.82) can be seen in the table 3.

Revenue is the value of peasant farming profits derived from the difference between revenues obtained with the cocoa farming costs consist of the cost of fertilizers (urea, SP-36 and KCL), pesticides and labor. The allocation of the highest production costs of labor used for the payment of Rp 2.8469 million per hectare or 72.24% of the total cost of cocoa farming (Table 4). because most of the cocoa crop pests farmers PBK, the herbicide expenditure of Rp 380 000 per hectare, or 9.64% of total expenditure that is used to defend the plants from other plant diseases disorders.

Table 3. Revenue Contribution of Cocoa in East Java

Description	Price (Rp)	This proportion (%)
Total sales revenue	12,355,000	100.00
Cocoa	6,560,000	53.95
Fruit plants 2an	1,500 .000	12.14
Plant vegetables	1,245 .000	10.08
Trader	1 .150 .000	9.31

Civil Servants	1 .050 .000	8.50
Laborer, buildings	850 .000	6.82

Source: Data Analysis (2013).

Price of the cocoa of 15 500,- is a value of average price that ranges from farmers received Rp 13,500 - Rp 16 000,- perkilogram grains dried up. Cocoa production dry per hectare farmers price 16.14 kw. The amount Rp 12 355 000,- per hectare.

Price farmers' incomes high-positive, it means that show profits, that is equal to Rp 8,413,860,- per hectars. A comparison between the revenue or profits as production costs by the B/C ratio of 3.13 saw the B/C ratio, then cocoa farming in East Java are financially qualified to cultivate a source of income families. In addition, cocoa farming promised 3.13 times of the cost revenue that was issued, that still profitable.

Table 4. Average of Revenue, Production Costs, and Benefits

No.	Description	Value	
		Rp	Percentage
1	Reevenue :		
	A. Production (Kg)	16.14	
	b. Tin Production (Rp/Kg)	15 500	
	c. The Production (Rp)	10,501,140	
	Total Acceptance	10,501,140	
2	Production costs :		
	A. Urea fertilizer	168,740	4.28
	b. Fertilizer SP-36	150,500	3.82
	c. Fertilizer (	145,000	3.68
	d. Pesticide	250,000	6.34
	E. Herbicides	380,000	9.64
	f. Labor	2,846,900	72.24
	Total Cost	3,941,140	100.00
3	Profits per Revenue	6,560,000	
	B/C Ratio	3.13	

Source: Data Analysis (2012).

3. *Family Welfare Cocoa Farmers local Observed from Prosperity Line of Muzaqi and Poverty Line of Mustahiq*

If the revenues farmers in one in added with overseas earnings farming, both produced by her husband and wife is a total sales revenue family. The family that will determine whether family was included in the category prosperous family (Muzaki) when the family total earnings, in one year, more than from one nishaf, sedangka when total earnings under the one nisaf, so these groups, including in the group mustahik. Determining category mustahik and muzaki is very important to determine where prosperity muzaki border and poverty mustahiq according to islam for a community in a particular region.

The poverty line according to islam and prosperity this has been developed by Zadjuli (2006) this model use the macro-economic environment, which can be applied to the micro-level household economic. The economy that is used in this model on high consumption autonomous (Co) individual/ community that includes food and non-food according to price valid and constant price. The revenues Advanced level in a good year operating revenue Tani cocoa and revenue usahatani from side business (Y_c), to determine poverty mustahiq household and prosperity muzakki group carried out by means append the high consumption autonomous region around the house with a nisaf that is 20 dinar gold that is equivalent to 85 grams of gold. Household income If farmers cocoa more than spending constant plus 1 nishaf groups around the house was included in the peace of the materials according to Islam. But if the revenues under the expenditure individuals along with one nishaf, then the household is not peace from the material according to Islam and is called mustahiq.

5. CONCLUSION

Cocoa Production dry per hectare farmers price 16.14 kw. The amount Rp. 12. 355. 000 per-hectare. Price farmers' incomes high-positive, it means that show profits, that is equal to Rp 8,413,860 per hectars. A comparison between the revenue or profits as production costs by the B/C ratio value as big as 3.13, then cocoa farming in East Java are financially

qualified to cultivate a source of income families. In addition, cocoa farming promised 3.13 times of the cost revenue that was issued, that still profitable.

REFERENCES

Anonymous, 2010. Data Iuas Lahan Produktivitas Kakao di Jawa Timur. : DISBUN Jawa Timur

Ajewole Davies Ojo & Iyanda Sadiq., 2010. Effect of Climate Change on Cocoa Yield : A case of Cocoa Research Institute (CRIN) Farm, Oluyole Local Government Ibandan Oyo State. Journal of Sustainable Development in Africa Volume 12, No.1.

Albert, *and dst.,* 2009. Traditional Welfare Theory, www.zmag.org/book/I/html , diakses tanggal 12 oktober 2009.

Emory C,William.,1996. Business Research Methods. ahli bahasa Soetjipto Widiono Jakarta :Penerbit Erlangga.

Duncan, Beatrice Akua, 2011,Cocoa, Marriage, labour and land in ghana: some matrilineal and patrilineal perspectives,Africa (pre-2011) 80.2 (2010): 301-321

Kamla.A. Oluyole and Sanusi.,2009. Socio-Economic Variables and Cocoa Production in Cross River State, Nigeria Ibadan, Nigeria. Economics and Statistics Division, Cocoa Research Institute of Nigeria,P.M.B. 5244, vol 25 pp:5-8.

Jonathan E. R,2001. Slave Cocoa and Red Rubber: E. D.Morel and the Problem of Ethical Consumption Morgan State University. Authorities in West Africa were hunting for the MV Etireno p:592-611

Meiernyk,William.,1982. Energy Availability and State Economic Development. Journal of Energy and Development vol 7 pp 163-171.

Norman d. johns,1999. Conservation in Brazil's Chocolate Forest: The Unlikely Persistence of the Traditional Cocoa. Department of Geography University of Texas at Austin 4311 Caswell Avenue Austin, Texas 78751, USA pp: 31-47

Sen, A.,1998. The Concept of Development Economics. Vol 1 New York: Elsivier Sciene Publisher.

Yotopulos,Pan,A, and Jeffry B Nugent, 1976. Economics Of Development Empirical Investigations. New York : Harper & Roo Publisher.

Todaro., 2006. Pembangunan Ekonomi di Dunia Ketiga. (terjemahan) jilid 1 dan 2 Edisi ketujuh,Jakarta : Penerbit Erlangga.

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