

BOOK 2

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# **International Seminar on Natural Resources, Climate Change and Food Security in Developing Countries**

## **Proceeding**





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**518-511 ROLE OF RURAL AGRO-INDUSTRY DEVELOPMENT GRANT  
PROGRAM TO EMPOWERMENT COCOA PEASANTS IN  
TECHNOLOGICAL ABILITY AND CAPITAL ACCESS**

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**ABSTRACT**

The purpose of the research are to analyse role of one of National Grant Program in rural area to improve empowerment of cocoa peasants and to study how far this grant enable to improve technological ability and capital access of farmers. The government of Indonesia give many kind of grants to serve rural community with the project that called Rural Agro-Industry Development Grant Program (RAIG) every year to group of farmers or Gabungan Kelompok Tani (GAPOKTAN). The research was conducted on Kabupaten Kulon Progo Daerah Istimewa Yogyakarta (DIY). The Method used in this researh is survey. All of the GAPOKTANs received this grant in 2010 were interviewed by using sensus sampling method. Eighteen GAPOKTANs had got grant located in 5 (five) districts i.e: Kecamatan Girimulyo, Kecamatan Pengasih, Kecamatan Samigaluh, Kecamatan Kalibawang and Kecamatan Kokap. To measure the parameter of technology ability and capital access, any kind of score measurements were used. The result of the research showed that the grant in Kabupaten Kulon Progo able to increase 17,5 % of technological ability and 7,67 % of capital access of cocoa farmer in this location. We concluded that Rural Agro-Industry Development Grant Program is beneficially to the farmer in rural area.

*Keyword: rural, grant, technology ability, capital access*

**INTRODUCTION**

Cocoa is one of the leading commodities of agricultural especially in plantation in Kulon Progo Regency, Yogyakarta Indonesia. In comparativeness to coconut, coffee, and tea, cocoa commodities in Kulon Progo Regency might has many weaknesses to achieve the Indonesian National Standard (SNI). This is due to poor cocoa beans quality at farm level are usually reluctant to perform the fermentation good and right process is to got the beans in accordance with market demand for local, national, and international markets. In order to fulfil this purpose, many kind of grant program form Government had given. One of this program called Rural Agro-Industry Development Grant Program. Every year this grant have been given to group of farmers or Gabungan Kelompok Tani (GAPOKTAN). The objection of the Grant is to empowerment the GAPOKTAN especially in the ability to absorb the technology to produce the good cocoa bean for meeting the Indonesian Standard





Product (SNI). Helping of activity is expected to gradually become a stimulant for the group to be able to produce products of good beans, so it can fix the prices of these products to go toward the improvement of farmers' income.

The technology that must be improved is the technology of fermentation of cocoa beans. In Kulon Progo Regency, most of the cocoa farmers don't get fermentation activities. Only several farmers that do the fermentation very simple by individual farmer without referring to the processing of standard operation System existing. In addition there is also Part of farmers who did not perform the fermentation process because the price of cocoa beans compare with cocoa beans fermented with random (not fermented) is similar, that caused the price by the private local trader (middleman). It is a very affecting farmer not to perform the fermentation process procedurally. Farmer groups of beneficiaries of these activities can increase the production of cocoa in the form of fermented cocoa and be able to market these products to the market with better prices to increase income groups in general and farmers in particular.

Rural Agro-Industry Development Grant (RAIG) program had given to farmers group in Kulon Progo to stimulate the group to be able to produce product of good cocoa beans, so it can fix the prices of these products to go toward the improvement of farmer's income. The evaluation RAIG program must be conducted to analyse how far this skim can be able to improve the farmers and also can increase the income in household level. The purpose of the study are :

1. To analyse role of Rural Agro-industry Development Grant (RAIG) Program to improve empowerment of cocoa peasants.
2. To study how far this grant can be able to improve technology ability and capital access of farmers.
3. To enhance the ability of farmers groups in terms of processing and marketing of cocoa and farmers are able to produce well-fermented cocoa.

## MATERIALS AND METHOD

To assess the location study we closed with purposive random sampling. The location of the study is the the location of activities are farming groups in Kulon Progo district that had received RAIG program. In 2010 18 (eighteen) Farmer group that called Gapoktan received grant spread in 5 (five) Kecamatan : Kecamatan Girimulyo; Kecamatan Pengasih; Kecamatan Samigaluh; Kecamatan Kalibawang; and Kecamatan Kokap. 18 GAPOKTAN that received in that showed at table 1.





Table 1. Farmer Group (GAPOKTAN) Received RAIG program in Kulon Progo 2010.

No	Name of GAPOKTAN	Location	Number of Member
1	Sri Rahayu	Girimulyo	30
2	Ngudi Rahayu	Girimulyo	45
3	Sari Rahayu	Girimulyo	40
4	Ngudi Makmur	Girimulyo	55
5	Ngudi Agawe Makmur	Pengasih	62
6	Sari Tani	Pengasih	30
7	Tani Makmur	Samigaluh	30
8	Nunggal Raos Utama	Samigaluh	30
9	Sido Marem	Samigaluh	45
10	Sedyo Makmur	Kalibawang	52
11	Suka Maju	Kalibawang	57
12	Boga Sari	Kalibawang	67
13	Rukun Abadi	Kalibawang	88
14	Ngudi Makmur	Kokap	56
15	Krida Utama	Kokap	78
16	KWT Sido Rukun	Kokap	36
17	KT Jempolku	Kokap	56
18	Wilis Lestari	Kokap	65
	Total		922

Source : Agricultural and Forestry Kulon progo District (2010).

Parameters observed to study of effectiveness of the RAIG program 2010 were limited only into 2 (two) categories:

1. Technology Capability including of a).The ability of applied of planting, land clearing (sanitation), trimming, control of pest and harvesting techniques with recommendation b).The ability of farmers group to building fermentation unit; c)the ability to process in fermentation in accordance with reference to the requirement for wet processed cocoa product will fermented completely; d) the ability processing into products cocoa fermented with the standard processing of the product by Indonesian National Standard (SNI).
2. Capital Access,  
The parameter in capital access including of: a).the ability of farmers group to managed their group on theirs capital b) the ability of farmers group to managed capital as rolled fund c) the ability to improve the capital d) the ability to access the capital from the outside (Bank, Cooperation, and another financial or economic enterprise).

Data and Analysis





All data to close the objection of the research is scoring data. Any Questioner had asked to all the member of each farmer group. The data obtained was subjected to analyses of variance and means compared from before and after the RAIG program received in farmers group.

Analysis of the study used SPSS 15 with the comparative test ( $t$ -Test) define as bellow. Suppose that two random samples (Before and after RAIG Program) of sizes  $N_1$  and  $N_2$  are drawn from normal populations whose standard deviations are equal ( $\sigma_1 = \sigma_2$ ). Suppose further that these two samples have means standard deviation given by mean of  $X_1$ , mean of  $X_2$  and  $\sigma_1$  and  $\sigma_2$  respectively. To test of hypothesis  $H_0$  that the samples come from the same population, so we use the  $t$  score given by

$$t = \frac{X_1 - X_2}{\sigma \sqrt{1/N_1 + 1/N_2}} \dots\dots\dots (1)$$

Where

$$\sigma = \sqrt{\frac{N_1 s_1^2 + N_2 s_2^2}{N_1 + N_2 - 2}} \dots\dots\dots (2)$$

The distribution of  $t$  is Student's distribution with  $v = N_1 + N_2 - 2$  degrees of freedom. In order to compute a statistic such as (1) and (2), it is necessary to use observation obtained from two samples (Before and after Rural Agro-industry Development Grant condition) as well as certain population parameters (All farmer groups received RAIG program). If these parameters are unknown they must be estimated from the sample.

## RESULTS AND DISCUSSION

### *Respondents Background*

This study showed that all members of group farmers have modest level of education. Majority the member of farmers groups are male, but 2 (two) farmers group (KW Krida utama and Sido rukun) have member that all the member are female. Most of member of all farmers group were senior (age > 60 years old).

All the group of farmers have organisation rule (Main rules and Specific rules) but is not yet complete. Only 5 % of Group that having complete rule and also have been ratified at a meeting members. All the groups have companion group meeting agenda. They have been participating in meeting that held routine one or two times every month or every 35 days (in Javanese people called "*selapanan*"). The meeting



was provided direction and also advise to the group about the handling and manage of cocoa product and cocoa estate. All the farmers group have structure organisation, but only 30 % have secretariat group building, clear address, easily accessible and functioning, but habitually, the place to meet each others in the house of leader of the farmers group. 30 % of farmers groups have group work plan, but the others do not have the planning of the farmers groups.

Table 2. Cocoa Farmers Group Background

Parameter	Number	Percentage
Educational Level		
Elementary School	461	50
Junior High School	369	40
High School	92	10
Age		
21 – 40 Years old	92	10
41 – 60 Years old	184	20
>60 Years old	716	70
Sex		
Male	716	70
Female	206	30
Total	922	100

#### *Impact RAIG Program In Technology Ability*

RAIG Program aims to enhance the ability of farmers groups in cultivate the land on farm also processing fermented cacao for value added product. The goal of this project, farmers groups get benefit of these activities, so can get higher income in selling the processed harvested of fermented cacao. Table 3 had seen the impact of RAIG Program in technology ability of farmers groups.

Technology that applied in this program is The applied of planting, land clearing (sanitation), trimming, control of pest and harvesting techniques with recommendation; applied technology in building fermentation unit; applied technology in processing fermented cacao and technology processing into products cocoa fermented with the standard processing of the product by Indonesian National Standard (SNI).





Table 3. T-test of RAIG Program in Technology Ability.

Program	Number of Score
Before RAIG program	4.6211
After RAIG program	5.4294
T -test	2,543*
Significant ( Two Tail)	0,0001

Source: Field Survey, 2010

Note : \* significant in P-Value &gt; 0,05

#### *Impact RAIG Program In Capital Access*

The purpose of RAIG Program in capital access is to improve the ability of farmers groups to manage their group on theirs capital ; to managed capital as rolled fund; to increase the capital and also to access the Bank, Cooperation, and another financial or economic enterprise.

To improve the capability of farmers group in capital Access, the RAIG Program trained on selling their product (Fermented cacao) so they can get the higher income. The RAIG Project team also organize additional training for join and get networking to the other institute especially trader.. The end of the program, the farmers groups are trained to acces Bank, Cooperation and other Financial entrepriise

Table 4. T-test of RAIG Program in Capital Access

Program	Score
Before RAIG program	5.6367
After RAIG program	6.0667
T -test	2,137
Significant (Two tail)	0,0067

Source: Field Survey, 2010.

Note : \* significant in P-Value &gt; 0,05

#### *Role RAIG Program In Technology Ability And Capital Access*

We study and analysis how far the farmers group ability to absorb the technology. In the first time we studied in condition before RAIG Program (January - June, 2010). After the RAIG Program (July – December 2010) were analysed too. In table 3, With comparative study with T-test , showed there are significant. before and after Rural Agro-industry Development Grant. Table 5 showed that the RAIG





Program can increased Technology ability of farmer groups 17.49 %. It means that the program can get benefit to cacao peasant groups.

Table 5. Role RAIG Program in Technology Ability and Capital Access

Program	Difference (%)
Technology Ability	17.49
Capital Access	7.63
Result	Increase

Source: Field Survey, 2010.

The analysis of capital access showed that there are significant before and after Rural Agro-Industry Development Program Grant. This Program also can be able to increase capital access in 7.63 %.

## CONCLUSION

Rural Agro-Industry Development Program Grant 2010 for cocoa farmers groups in Kabupaten Kulon Progo Daerah Istimewa Yogyakarta (DIY) can be able to increase the Technological ability and capital Access. The Overall program can give the farmers groups benefit, because there are showed significant difference between before and after RAIG Program in 2010.

Activities for Rural Agro-industry Development Program Grant need to be done continuously. In application, the program must be control by Government especially the related Department in Kabupaten Kulon Progo. Factually all activities in these program can be able to improve of knowledge for all member in farmers group. This program make the farmers in all groups get higher ability in technology application to get good fermented cocoa product and capital access.

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