

# The Role of Agricultural Counselor for Arabica Coffee Farmers' Productivity

SATIA NEGARA LUBIS, SEPTI WARDANTI, LINDAWATI

Agribusiness

University of North Sumatera

Jalan Dr. T. Mansur, Padang Bulan, Medan

INDONESIA

wardanti12@gmail.com

*Abstrak:* The purposes of this study is to determine the role of agricultural agriculture counselor on the productivity of Arabica coffee farmers and to find out the obstacles faced by agricultural counselors in providing information concerning the productivity of Arabica coffee farmers in Sait Buttu Saribu Village, Pematang Sidamanik District, Simalungun Regency. The research location was chosen deliberately with two considerations, where the Sait Buttu Saribu Village is one of the centers for Arabica coffee production and counselor activities. The method of determining the sample in this study used simple random sampling with the research sample were farmers who participated in counseling activities. Data analysis was carried out by means of Likert scale and descriptive analysis. The results showed that the role of agricultural counselor workers as dynamists and facilitators was in the category of important role, while the role of counselor workers as motivators was in the category of very important role and the constraints faced by agriculture counselor in extension activities were that farmers did not participate in couseling activities, the distance from the plantation location far enough to travel, and poor road facilities and infrastructure.

*Key-Words:* the role of counselor workers, productivity, Likert scale

## 1 Introduction

According to Directorate General of Plantations (2019), among the coffee production in 34 provinces in Indonesia, North Sumatra is ranked as first coffee producer. In 2016 coffee productivity was 1,141 Kg/Ha, in 2017 coffee productivity was 1,072 Kg/Ha, in 2016 In 2018 coffee productivity was 1,084 Kg/Ha, in 2019 coffee productivity was 1,080 Kg/Ha and in 2020 coffee productivity was 1,086 Kg/Ha. Although North Sumatra is ranked as first producer in Indonesia, however coffee productivity fluctuating year by year

Generally, Indonesia agricultural development still face many obstacles caused by various factors. It is difficult for farmers to solved the agriculture problems. Thus, the government has formed an institution which is called as agricultural counselor. The aims of agricultural extension is to shift the people and communities mindset concerning the agriculture, in order to change the way of thinking, working, attitude and way of life towards the agriculture welfare.

Most of the population of Sait Buttu Saribu Village work are Arabica coffee farmers. So far, the counseling has been held. By the extension activities, the productivity of Arabica coffee is expected to increase because in extension farmers are given various kinds of knowledge and motivation by an extension worker. Thus, the researcher intend to identify th role of extension among the Arabica coffee farmers on the productivity of the Arabica coffee.

## 2 Problem Formulation

1. How is the role of agricultural counselor on the productivity of arabica coffee farmers in Sait Buttu Saribu Village, Pematang Sidamanik District, Simalungun Regency?
2. What are the obstacles faced by agricultural counselor in providing information about the productivity of arabica coffee farmers in

Sait Buttu Saribu Village, Pematang Sidamanik District, Simalungun Regency.

### 3. Theoretical Basis

#### 3.1 The Role of Agricultural Counselor

According to Sunandar (2019) the role of the counselor is as a dynamist, facilitator and motivator.

##### 1. As a dynamist

The ability of an agricultural extensionist in carrying out his duties to mobilize farmers to make changes to their farming and farmer activities

##### 2. As a facilitator

The role of agricultural extension as a facilitator is the ability of an agricultural extension agent in carrying out his duties as an intermediary between farmers and parties who support the progress and improvement of farming such as agricultural research institutions, agricultural shops, laboratories for plant pests and diseases, providing superior seeds and others

##### 3. As a motivator

Agricultural counselors are expected to be able to make farmers willing, able and know to apply the recommended innovation information.

#### 3.2 Productivity

Agricultural productivity is strongly influenced by inputs and outputs of agricultural products. Inputs from agriculture include capital, agricultural land, labor, and technology, while outputs from agriculture include managed agricultural products such as coffee. Productivity in agriculture can also be influenced by various socio-economic factors that exist around the environment (Ramalia, 2011).

Puspadi (2010) argues that productivity is a measure of how well a resource is utilized and managed to achieve the desired results. Productivity is a ratio between output to resources used in managing an activity.

### 4. Methods

#### 4.1 Determination of Research Area

The research was conducted in Sait Buttu Saribu Village, Pematang Sidamanik District, Simalungun Regency. The distance from the city of Medan to the research location is  $\pm 157.8$  Km. The location of the

research was determined purposively with the consideration that Sait Buttu Saribu Village, Pematang Sidamanik District, Simalungun Regency is one of the centers for Arabica coffee production and there are outreach activities.

#### 4.2 Sampling Method

The total population of Arabica coffee farmers who participated in extension activities or joined in farmer groups, was 265. The technique used in sampling is probability sampling with a simple random sampling method and samples can be obtained using the Slovin formula (Supriana, 2012).

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

$$n = \frac{265}{1 + (265)(0,15)^2} = 38$$

According to Roscoe (1975) in Sugiyono (2014) the determination of the number of samples can be based on a sample size of more than 30 people and less than 500 is appropriate for most studies. So the number of samples in this study amounted to 38 samples and had met these criteria.

#### 4.3 Method of Collecting Data

The data collected from the study consisted of primary and secondary data. Primary data were obtained from direct interviews with respondents using a questionnaire that had been prepared in advance and direct interviews with the Sait Buttu Saribu village counselor. While secondary data were obtained from related agencies such as the Central Statistics Agency, the Village Head of Sait Buttu Saribu, and other agencies related to research.

#### 4.4 Data Analysis Method

The method of data analysis based on Likert scale method. The scores for measured items are:

- a. a score of 1 does not play a role
  - b. score 2 does not play a role
  - c. Score 3 neutral
  - d. score 4 plays a role, as well as
  - e. a score of 5 is very important
- (Wardah and Setia, 2018).

The scale range for the role of the extension worker is as follows:

- 1) 1 – 1.79 = very unimportant
- 2) 1.80 – 2.59 = not important
- 3) 2.60 – 3.39 = quite important
- 4) 3.40 – 4.19 = important
- 5) 4.20 – 5.00 = very important (Sidauruk, et al., 2016).

This study also uses a descriptive method with a quantitative approach in describing the constraints

experienced by agricultural agriculture counselor in carrying out their roles.

## 5. Problem Solution

### The Role of Counselor on the Productivity of Arabica Coffee Farmers

#### 1. The Role of Agriculture counselor as Dynamizers

For the distribution of questionnaire item with the counselor as a dynamist (X1) can be seen in table 5.2

**Table 5.2 Distribution of Respondents' Answers from Agriculture counselor as Dynamizers (X1)**

Instrument	VDa	A	N	A	VA	Total	Average	Description
X1.1	0	0	0	24	14	166	4,37	Very important
X1.2	0	0	1	29	8	159	4,18	important
X1.3	0	0	2	21	15	165	4,34	important
X1.4	0	0	3	25	10	159	4,18	important
X1.5	0	0	7	28	3	148	3,90	important
Total Average							4,13	important

Source: Primary data

Agricultura couneslor provide guidance to farmers to increase Arabica coffee productivity (X1.1). In this case, farmers already understand the productivity of Arabica coffee, so to optimize the productivity of Arabica coffee, agriculture counselor are needed to guide the farmers.

Agriculture counselor conduct collaborations or meetings between Arabica coffee farmer groups (X1.2). Agriculture counselor must work together and hold meetings twice a week with farmers to provide direction regarding increasing Arabica coffee productivity.

The agriculture counselor made direct observations in the field after providing information about increasing the productivity of Arabica coffee (X1.3). The results of farmer activities in terms of Arabica coffee cultivation always receive direction and assessment from agriculture counselor to find out the shortcomings in the development of Arabica coffee cultivation so that the agriculture counselor make direct observations in the field.

The agriculture counselor conveyed information concerning the increasing productivity of Arabica

coffee (X1.4), which included the use of superior seeds, intensive care and post-harvest handling.

Agriculture counselor activate the roles of farmer group administrators and farmer group members (X1.5). The programs and activities held by the agriculture counselor to increase the productivity of Arabica coffee were welcomed by the farmers who participated in the counseling, thus the farmer groups could be directly involved in the activities held by the agriculture counselor and increase the role of the administrators of the farmer groups and members of the farmer groups.

The overall average obtained is 4.13. it is concluded that the extension agent as a dynamist (X1) plays an important role.

#### 2. The Role of the Extension Officer as a Facilitator

Distribution of questionnaire items of counselor as a facilitator (X2) is shown in table 5.4

**Table 5.4 Distribution of Questionnaire Items of Counselor as Facilitators (X2)**

Instrument	VDa	A	N	A	VA	Total	Average	Description
X2.1	0	0	0	18	20	172	4,53	Important
X2.2	3	17	18	0	0	91	2,40	Unimportant
X2.3	0	0	9	25	4	147	3,87	Important
X2.4	5	13	14	6	0	97	2,55	Unimportant
X2.5	0	0	2	20	16	166	4,37	Very important
X2.6	0	0	1	29	8	159	4,18	Important
X2.7	0	0	9	22	7	150	3,95	Moderate
Total average							3,69	Important

Source: Primary data

Agricultural counselor help farmers to find good inputs (production facilities) for arabica coffee plants (X2.1). In this case, farmers are facilitated by agricultural agriculture counselor to obtain the desired production facilities. For example, superior seeds used by Arabica coffee farmers.

Agriculture counselor help farmers to find capital (X2.2). The agriculture counselor role is less important for their focus more on the technical cultivation of coffee plants so that they can increase the productivity of Arabica coffee and the farmers also have sufficient capital for their farming business.

Agriculture counselor help farmers to establish and develop farmer groups (X2.3). Agriculture counselor do not only play a role in increasing the productivity of Arabica coffee, but also in establishing and developing farmer groups to be more advanced in the future.

Agriculture counselor help farmers Arabica coffee beans (X2.4). In marketing the Arabica coffee beans, the agriculture counselor has indirect involvement because the existance of merchants. The farmers sell their Arabica coffee beans to merchants at the appropriate price.

Agriculture counselor help farmers to work together with other farmer groups (X2.5). In this case, the counselor play as mediator between one farmer group to another. Cooperation is used to find out the advantages and disadvantages between farmer groups.

Agriculture counselor assist farmers to participate in training held by government or private institutions for the development of arabica coffee plants (X2.6). The counselor becomes a forum for developing the sharing knowledge about the progress of Arabica coffee productivity by collaborating with government or private institutions.

Agriculture counselor assist farmer groups in collaborating with government agencies or the agriculture officer in terms of providing seeds and fertilizers (X2.7). In this case, the extension worker cooperates with government institutions, especially the agricultural service, regarding the provision of Arabica coffee seeds and fertilizers.

Total average for questionnaire items is 3.69. It is concluded that the extension worker as a facilitator (X2) plays an important role.

### 3. The Role of Counselor as Motivators

For the distribution of questionnaire items of counselor as a motivator (X3) is shown in table 5.6

**Table 5.6 Distribution of Questionnaire Items of Counselor as Motivators (X3)**

Instrument	VDa	A	N	A	VA	Total	Average	Description
X3.1	0	0	3	23	12	161	4,24	Very important
X3.2	0	0	2	27	9	159	4,18	Important
X3.3	0	0	2	22	14	164	4,32	Very important
X3.4	0	0	3	11	24	173	4,55	Very important
X3.5	0	0	4	6	28	176	4,63	Very important
X3.6	0	0	4	23	11	159	4,18	Important
X3.7	0	0	5	22	11	158	4,16	Important
Total average							4,32	Very important

Source: Primary data

Agriculture counselor encourage farmers to take part in training held by agriculture counselor/agricultural services on arabica coffee plants (X3.1). Agriculture counselor provide work programs or training to farmer groups as a form of encouragement for farmers.

Agriculture counselor encourage farmers to increase their arabica coffee production (X3.2). Agriculture counselor encourage farmers from various activities carried out by farmers such as the use of superior seeds and plant care to increase the productivity of Arabica coffee.

Agriculture counselor encourage farmers to take part in counseling about arabica coffee plants (X3.4). Agriculture counselor provide information about the development of Arabica coffee productivity so that farmers have knowledge.

Agriculture counselor support farmers to use quality Arabica coffee seeds and fertilizers (X3.4) In increasing the productivity of Arabica coffee, agriculture counselor fully support the use of quality seeds and proper fertilization.

Agriculture counselor encourage farmers to stay with Arabica coffee farmer groups (X3.5). The counselor strongly encourage farmers to stay in farmer groups to provide direction, motivation and knowledge about Arabica coffee productivity.

Agriculture counselor support activities carried out by farmers, for example using fertilizers to increase Arabica coffee productivity (X3.6). The counselor provides information about the proper and correct use of fertilizers, such as the fertilizer requirements needed by plants and the dosage for its application.

Agriculture counselor encourage farmers to be willing to use new technology (X3.7). To increase the productivity of arabica coffee and streamline the time spent pursuing production, farmers must use the latest technology, such tractors for cultivating, spacing and intercropping.

Totalaverage of questionnaire items is 4.32. It is concluded that the counselor as a motivator (X3) plays a very important role.

## **Obstacle Faced by Agriculture counselor in Extension Activities**

### **1. Farmer Participation**

Based on the results of interviews conducted with agriculture counselor, it was found that only 50%

70% of farmers participating in counseling activities. In carrying out counseling activities, it is difficult to determine the duration of presentation, because in accordance with the material presented by the counselor. Moreover, it is difficult for farmers to comprehend the counseling matter provided by the agricultural counselor. The counseling activities are carried out at the farmer's house, where the content need for the real examples and practice.

### **2. Distance**

From the results of interviews with agriculture counselor in Sait Buttu Saribu Village, the obstacles faced in Arabica coffee farming extension activities are that the location of the plantation is quite far, which is + 50 km, so that agriculture counselor rarely reach out the coffe plantation to see the development of Arabica coffee plants.

### **3. Counseling Facilities and Infrastructure**

Facilities and infrastructure are one of the important things in outreach activities. Based on the results of interviews with the agriculture counselor in Sait Buttu Saribu Village, the obstacle faced by the counselor to reach out the farmers and plantation was due to the poor infrastructure. It is difficult for counselors to hold agriculture counseling activities.

## **6. Conclusion**

The role of agricultural counselor as dynamists and facilitators is in the category of important role, while the role of agriculture counselor as motivators is in the category of very important role. The obstacles faced by agriculture counselor in held the activities are the absence of the farmer in participating the counseling, the distance from the plantation location to be reached, and the poor facilities and infrastructure.

### *References:*

- Direktorat Jenderal Perkebunan. *Statistik Perkebunan Indonesia 2018-2020*. Kopi. Jakarta Sekretariat Direktorat jenderal Pertanian. 2019.
- Puspadi, K. *Ekonomi dan Produksi Pertanian*. Bumi Aksara. Jakarta. 2010.
- Ramalia. Efisiensi dan Penggunaan Faktor Produksi untuk Meningkatkan Produktivitas. *Jurnal Agribisnis* Vol 5 No. 1. 2011.
- Sugiyono. *Metode Penelitian Pendidikan Pendekatan Kuantitatif, Kualitatif, dan R&D*. Bandung:Alfabeta. 2014.

Sunandar, A. 2019. Peranan Penyuluh Pertanian Dalam Peningkatan Kompetensi Petani Padi Sawah (*Oryza Sativa L.*) (Studi Kasus: Gapoktan Sri Rezeki, Desa Pasar Baru, Kecamatan Teluk Mengkudu, Kabupaten Serdang Bedagai). Universitas Muhammadiyah Sumatera Utara. Medan.

Supriana, T. *Metode Penelitian Sosial. Fakultas Pertanian USU. Medan.* 2012.

Sidauruk, H. F., Eri, S., Kausar. Persepsi Penyuluh Dan Petani Terhadap Pentingnya Peran Penyuluhan Perkebunan Kopi Arabika Di Kecamatan Purba, Kabupaten Simalungun, Provinsi Sumatera Utara. *JOM FAPERTA UR* Vol 3 No. 2. 2016.

Wardah, E dan Budi, S. Pelaksanaan SL-PTT Dan Peran Penyuluh Terhadap PetaniKakao Di Kecamatan Bandar Baru Kabupaten Pidie Jaya. *Jurnal Agrifo* Vol 3 No. 2. 2018.