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## **The Role of Agricultural Instructors on the Income of *Rejeki Alami* Women Farmer Group Members**

*Sintia Gina Alfitri, Tutik Dalmiyatun and Bambang Mulyatno Setiawan*  
Diponegoro University, Central Java  
E-mail: [alfitrisintia@gmail.com](mailto:alfitrisintia@gmail.com)

*Submitted : April 27<sup>th</sup>, 2020 ; Revised : May 5<sup>th</sup>, 2020; Accepted: May 14<sup>th</sup>, 2020*

### **Abstract**

#### **Keywords:**

Income, the role of agricultural instructors, women farmer group.

Agricultural extension is an activity carried out by agricultural instructors to improve skills, knowledge, and attitudes of farmers. Increasing the farmers' knowledge may help to increase farm income and meet the family needs. This study aims to analyze the role of agricultural instructors, the income received by members of *Rejeki Alami* Women Farmer Group members, and the influence of the agricultural instructors' role on the income of *Rejeki Alami* Women Farmer Group members. The research was conducted in Jimbaran Village, Kayen District, Pati Regency. Census sampling method was used by taking 30 members of *Rejeki Alami* Women Farmer Group. Data collection was carried out by commissioning, interview, and observation. Data were analyzed with descriptive analysis, income analysis, and multiple linear regression analysis. The results showed that the overall role of agricultural instructors on the group was fairly good with the percentage of 73.3%. The role of agricultural instructors as innovators, organizers, consultants, communicators, facilitators, and motivators is fairly good with the respective percentage values being 80%, 73.3%, 63.3%, 83.3%, 70% and 66.6%. The average income of the group members is IDR 260,326 per month in individual business, while their income in running group business is IDR 30,097. This shows that each member earns the same income in group business. Based on these results, it can be concluded that the role of agricultural instructors gives influence on the income of *Rejeki Alami* Women Farmer Group members.

How to Cite (APA 6<sup>th</sup> Style):

Alfitri, S. G., Dalmyatun, T., & Setiawan, B. M. (2021). The Role of Agricultural Instructors on the Income of Rejeki Alami Women Farmer Group Members. *SOCA: Jurnal Sosial Ekonomi Pertanian*, 15(2), 296–311. <https://doi.org/https://doi.org/10.24843/SOCA.2021.v15.i02.p06>

## INTRODUCTION

Agricultural extension is a learning process for the main agricultural personnel or agricultural businessmen with the aim that they are able to identify and access the market information, technology, capital, and other resources aimed at increasing productivity, income, and welfare according to Law Number 16 of 2006, and encouraging them to do so. The role of agricultural instructors is currently very much needed to change the attitude of farmers from traditional to modern ones and transform them into intelligent farmers who master the agricultural theories.

In various countries such as Iran, the role of agricultural instructors is emphasized to transfer information based on global and local knowledge to the farmers with the aim that the farmers shall be more educated and able to make better decisions in order to achieve the desired agricultural development (Kabarsioun et al., 2007). In Australia, agricultural extension currently focuses on emphasizing technology-based agricultural production. According to Marsh and Pannell, (2000) the role of agricultural instructors in Australia is still the main producer of information. They have the responsibility to ensure the delivery of information to farmers, and ensure that development in farmer skills are achieved through the adoption of new innovations. The government of Zimbabwe acknowledged that if there is an increase in agricultural productivity in the country, active communication involved between farmers and agricultural institutions, namely agricultural instructors, must be involved. According to Moyo and Salawu (2018), the role of agricultural instructors in Zimbabwe is to provide agricultural knowledge and information to small farmers on how to design good communication through media, modes, channels, methods, approaches, and materials that support the innovation adoption.

Based on the description above, it can be concluded that the role of agricultural instructors in Indonesia has the same role as agricultural instructors in other countries such as Iran, Australia, and Zimbabwe. Indonesia strives to develop advanced agriculture continuously through the role of agricultural instructors as the individuals who provide new innovations, facilitates provision of assistance, provides motivation, as well as befriend the farmers and help them solving problems. The target of the agricultural extension activities are the members of the Farmer Groups and Women Farmer Groups. Women Farmers Group is an organization that can be said to be functioning and exist through mutual cooperation, savings, loan businesses, and social gathering for farming activities.

Rejeki Alami Women Farmer Group is one of the Women Farmer Groups in Jimbaran Village under the guidance of the Agricultural Extension Officers of Kayen District, Pati Regency, whose development of farmer groups is directed at the application of the agribusiness system. The group was established with the aim that the members could take advantage of their spare time through productive activities,

hone their skills, and be able to produce worth-selling products. The productive activities carried out include owning individual and group businesses. The individual business is the production of raw rengginang (rice crackers). The group business is raw soybeans packaging, which are labeled and sold.

The agricultural instructors who assist Rejeki Alami Women Farmer Group strives to develop the group's businesses and make the group members earn income from the businesses to meet the needs of the members. Agricultural instructors develop groups through various training activities on new product processing, providing assistance, encouragement, motivation, and solutions to help the members developing the businesses. Seeing from the description, there is an influence or impact of the agricultural instructors' role and behavior in conducting extension for Rejeki Alami Women Farmer Group.

Based on previous research conducted by Inten et al., (2017) 50% of extension instructors have a very important and influential role in improving the welfare of farmers: as guides, monitors, facilitators, and consultants. Strengthened by further research of Lusiana et al., (2018) the role of agricultural instructors, including as farmer guides, organizers, and facilitators, had an effect on the income level of lowland rice farming in Olobuju Village, Sigi Biromaru District, Sigi Regency.

The novelty of this research is the researchers are interested in conducting research on "The Influence of the Role of Agricultural Instructors on the Income of Rejeki Alami Women Farmer Group members in Kayen District, Pati Regency". The role of agricultural instructors studied in this research were innovators, facilitators, communicators, motivators, organizers, and consultants. Previous studies have not examined these six roles of agricultural instructors.

The aims of this study are 1) to analyze and determine the role of field agricultural instructors in assisting Rejeki Alami Women Farmer Group, (2) to analyze the income level of Rejeki Alami Women Farmer Group members, and (3) to analyze the influence of agricultural instructors on the income of Rejeki Alami Women Farmer Group members. The importance of this research is for consideration and evaluation materials that can be used by agricultural instructors to find out the strengths and weaknesses of their role in developing Rejeki Alami Women Farmer Group in both individual and group businesses. The evaluation material can be used as a guideline for agricultural instructors to further enhance their role in mentoring, guiding, teaching, and motivating members to continue working, be productive, and independent in accomplishing their goals.

## **RESEARCH METHODS**

This research was conducted on November 20 to December 12, 2019 in Jimbaran Village, Kayen District, Pati Regency in *Rejeki Alami* Women Farmer Group. *Rejeki Alami* is one of the women farmer groups located in Kayen District, Pati Regency, which has a business of processed agricultural products such as packaged *rengginang* and soy cracker and has its own business label. The development and progress experienced by *Rejeki Alami* women farmer group is influenced by various factors, one of which is the existence and role of the agricultural instructors who are still assisting the group until now.

The method of determining the research location was done purposively. The sampling method was carried out by census and took a sample of 30 members of *Rejeki Alami* women farmer group. The data collection was carried out through questionnaires, interviews, observation, and literature study. Questionnaires and interviews with group members and instructors who provide guidance to the members were used to measure the opinion of an individual about the role of agricultural instructors in the group and to determine the income of group members in running the businesses. Observations were done by observing the instructors' activities that carried out regularly, along with observing training activities and the process of making *rengginang* crackers.

The types of data used in this study were primary and secondary data. Primary data obtained through observation (direct observation) and interviews with group members and instructors who provide guidance to the members. Secondary data used were general description data or monograph data of research locations and other supporting data obtained from reference books, journals, libraries, and the internet.

The data analysis used in this study were descriptive analysis, income analysis, and quantitative analysis. Descriptive analysis was used to describe or explain the answers of respondents who have responded to questions from the questionnaire given. Income analysis was used to analyze the income of *Rejeki Alami* members in running the businesses. Quantitative analysis was used to analyze the influence of the role of agricultural instructors on the income of *Rejeki Alami* women farmer group members.

Based on the aims of this research, the first aim is to analyze the role of agricultural instructors in *Rejeki Alami* women farmer group which was analyzed using descriptive analysis. Descriptive analysis was used to analyze the responses or answers from respondents to the questions given in the questionnaire. The data obtained from the results of the respondents' answers were analyzed using the scoring method. The second aim is to analyze the income of *Rejeki Alami* women farmer group members using income analysis. The income calculation is formulated as follows:

$$\pi = TR - TC \text{ (Kusnadi et al., 2011)}$$

Information:

$\pi$  = Income (IDR/Month)

TR = Gross Income (IDR/Month)

TC = Total production costs (IDR/Month)

The third aim is to analyze the influence of the role of agricultural instructors on the income of *Rejeki Alami* women farmer group members which was analyzed using multiple linear analysis to determine the simultaneous and partial effect of the role of field agricultural instructors on the income of *Rejeki Alami* members. The multiple linear regression formula is as follows:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + e_i$$

Information :

Y = Members' business income (IDR/month)

X1 = Innovator (Score)

X2 = Organizer (Score)

- X3 = Consultant (Score)  
 X4 = Communicator (Score)  
 X5 = Facilitator (Score)  
 X6 = Motivator (Score)

## RESULT AND DISCUSSION

### Profile of Rejeki Alami Women Farmer Group

*Rejeki Alami* women farmer group was founded in June 2018, which was initiated by agricultural extension agents. Meetings are held regularly on the 20th of each month, located in the homes of each member in turn. The total number of the members is 30 people, 18 members have independent *rengginang* cracker production businesses under the auspices of the group, while the rest are still joining the group's joint venture. The regular meetings carry out production activities carried out together in groups such as making tomato sweets which was done four months ago and soybean packaging. Other activities carried out at the meeting were training on making tomato sweets, making soy milk, planting moringa leaves, using a press to package, and make organic fertilizers that were beneficial to plants in their respective yards. *Rejeki Alami* women farmer group has an organizational structure consisting of a chairman, deputy chairman, secretary, treasurer, business section, finance section, public relations section, and empowerment section as well as supervisors (agricultural extension agents). This is in accordance with the opinion of Gabriella et al., (2020) which stated that farmer groups can have various roles, such as a production unit, learning class, and a vehicle for collaboration that involves members in it.

### Characteristics of the Respondents

The number of respondents in this study were 30 members of *Rejeki Alami* women farmer group. The identities of the respondents used in this study were age, education, length of joining, and occupation which are described in Table 1.

**Table 1. Characteristics of the respondents**

Categories	Number (Person)	Percentage (%)
Age (years)		
<30	2	6.6
30 – 40	16	53.33
41 – 50	8	26.66
51 – 60	4	13.33
Education		
Elementary School	14	46.67
Middle School	5	16.67
High School	11	36.67
Length of Joining (years)		
1.5	30	100
Main occupation		
Housewife	17	56.66

Farmer	11	36.66
Tailor	2	6.66
<b>Total</b>	<b>30</b>	<b>100</b>

Source : Processed primary data, 2020.

Based on the age of the respondents, the average age is 30-40 years old. Most of the respondents were graduated from high school with the main job being a housewife and at their productive age. Productive age members have stronger physical and mental conditions to work optimally in managing their business. They also have the ability to think and act in carrying out activities, so that the material provided by the instructors would be easy to understand and be carried out according to the guidelines. According to Adioetomo and Samosir (2010), the population belonging to productive age is in the range of age 15 - 64 years, while 0-14 years are not yet productive and > 64 years are considered unproductive. Ramansyah et al., (2015) stated that the age of female farmer group members who are in the productive age range are expected to have strong physical abilities and can contribute greater labor contribution to their farming activities.

### The Role of Agricultural Instructors

Based on the results, it can be seen that the role of agricultural instructors as an innovator, organizer, consultant, communicator, facilitator and motivator is in the medium category (fairly good). The details are shown in Table 2.

**Table 2. Percentage of Respondents Regarding the Role of Agricultural Instructors**

Categories	Number of Respondent	Percentage
	---person---	---%---
Good	3	10
Fairly Good	22	73.3
Poor	5	16.6
<b>Total</b>	<b>30</b>	<b>100</b>

Source: Processed primary data, 2020

It can be seen from Table 2 that the assessment of the role of agricultural instructors as innovators, organizers, consultants, communicators, facilitators and motivators is in the fairly good category with the percentage of 73.3%. It means that the role of agricultural instructors as innovators, organizers, consultants, communicators, facilitators and motivators are good enough in assisting and guiding *Rejeki Alami* women farmer group. It proves that the agricultural instructors have made efforts to contribute to the group such as regular extension activities, holding training, motivating members to attend bazaar activities, providing assistance / facilities, befriend the members and assist them in solving problems, and assisting in forming the organization; however, these are not fully carried out yet by the members. This can be recognized by the business conditions run by members; only 18 people have the willingness to independently run the *rengginang* cracker business, while 12 others still depend on group businesses. According to Effendi et al., (2019) insufficient needs and reasons influence someone to accept and carry out a given innovation, while people's interests and reasons differ in perceiving something that is considered beneficial or detrimental.

Members of *Rejeki Alami* are based on their interest and awareness to fulfill their needs in running independent and group businesses. They do not rely on

income from their husbands to meet their daily needs. Not all members run their own businesses and still join group businesses, since there is no strong interest and motivation within them to maximally developed independence. According to Babu et al., (2013), most of the farmers lack the motivation and interest in themselves in achieving success; low income of agriculture sector and lack in information about advance farming activities are some of the reasons.

Acceptance of information and innovation from the results of extension activities would differ in acceptance and understanding by each group member. Differences in information reception occur due to differences in educational backgrounds and members' responses to the information. Group members with higher education are more likely to receive information faster and respond to the information compared to the members with lower education. This is in accordance with the opinion of Effendi et al., (2019) which stated that understanding and reasoning ability is influenced by education; a highly educated person can analyze, assess, and make decisions for good and responsive actions in accepting new innovations compared to someone who is less educated, as they are more self-indulgent.

This condition causes the role of agricultural instructors becomes less optimal because their contribution has not been utilized optimally. Soekartawi (1998) stated that extension has an important role in the process of adopting innovation, such as making changes in behavior both in the form of knowledge, attitudes, and skills in farmers. However, the adoption process can be influenced by individual traits / characters, social factors, economic factors, cultural factors, appearance, and the suitability of technology and services from related institutions.

### Innovator

The number and percentage of respondents based on the assessment of the role of agricultural instructors as innovators in *Rejeki Alami* women farmer group is shown in Table 3.

**Table 3. Percentage of Respondents Regarding the Role of Agricultural Instructors**

Category	Number of Respondent	Percentage
	---person---	---%---
Good	6	20
Fairly good	24	80
Poor	-	-
<b>Total</b>	<b>30</b>	<b>100</b>

Source : Processed primary data, 2020

Based on Table 3, the role of field agricultural instructors as innovators is categorized as fairly good in providing innovations or new knowledge for the members of *Rejeki Alami*. In carrying out their duties as the assistants of *Rejeki Alami* women farmer group, agricultural instructors provide new innovations and technology to members at every meeting which is held regularly every month. The form of innovation provided by agricultural instructors to group members provides information about the processing of innovative food products, such as making non-MSG rice crackers, moringa leaf crackers, cumin leaf crackers, carrot crackers, soy milk, making date-flavored tomato sweets, and teaches product packaging techniques for higher selling value.

Giving innovation to group members is intended to improve skills and take the advantage of new opportunities to develop the group. According to Aregu et al.,

(2018), innovation in the fields of vegetable cultivation, food processing, animal husbandry, and aquaculture has a very important role in restoring the state of decline in food production and being able to access new economic opportunities in villages. The innovations provided must be tailored to the needs and problems that occur. This is in accordance with the opinion of Padmaswari et al., (2018) which stated that the role of agricultural extension agents or instructors as innovators is to provide new knowledge for farmers. The instructors have to understand the problems and provide solutions.

### Organizer

The number and percentage of respondents based on the assessment of the role of agricultural instructors as organizers in *Rejeki Alami* women farmer group are shown in Table 4.

**Table 4. Percentage of Respondents Regarding the Role of Agricultural Instructors**

Category	Number of Respondent	Percentage
	---person---	---%---
Good	2	6.6
Fairly good	22	73.3
Poor	6	20
<b>Total</b>	<b>30</b>	<b>100</b>

Source: Processed primary data, 2020.

Based on Table 4, the role of agricultural instructors is considered fairly good. Agricultural instructors are required to always grow and develop the *Rejeki Alami* Women Farmer Group as a class for learning and discussions. They are also expected to facilitate the cooperation and do division of tasks, rights, and obligations of the members in the group. *Rejeki Alami* women farmer group is assisted by agricultural instructors in terms of division of positions and tasks in groups. It is evident that agricultural instructors act as mediators in the selection of chairman, secretary, treasurer, and other sections. The formation and division of positions and tasks within the group aims to facilitate the activities of the group. This is in accordance with the opinion of Narso et al., (2012) which stated that the formation of organizations for farmers is very important since the existence of an organization makes it easier for agricultural instructors to develop farmer groups. This is in line with the opinion of Babatunde et al., (2019) which stated that it is essential for female farmer groups in the village to have organizations and are well organized. The organization must be optimally empowered to increase women's access to extension services such as easy access to facilities, agricultural inputs, and marketing services.

### Consultant

The number and percentage of respondents based on the assessment of the role of agricultural instructors as consultants in *Rejeki Alami* women farmer group are shown in Table 5.



**Table 5. Percentage of Respondents Regarding the Role of Agricultural Instructors**

Category	Number of Respondent	Percentage
	---person---	---%---
Good	5	16.6
Fairly Good	19	63.3
Poor	6	20
<b>Total</b>	<b>30</b>	<b>100</b>

Source: Processed primary data, 2020.

Based on Table 5, it can be seen that the role of agricultural instructors as consultants is fairly good. An agricultural instructor helps *Rejeki Alami* members to solve problems faced by asking and identifying problems and complaints the members are facing, then together with the members find the solution of these problems. Members of *Rejeki Alami* women farmer group encountered problems in marketing their products since the products were not well known to the public, resulting in poor selling revenue. The instructors tried to approach the members and provided solutions by making a small shop and named it "Griya Kedelai Lokal". The group's products are collected together and deposited in the shop. The establishment of the Griya Kedelai Lokal was initiated by an agreement between the agricultural instructor and group members through open discussions by uniting the aspirations between the agricultural extension agents and the aspirations of the members to create good decision. This is in accordance with the opinion of Effendi et al., (2019) which stated that along with adequate knowledge and reasoning skills, a person will be able to analyze, assess, and then make decisions for good action.

In addition, *Rejeki Alami* women farmer group and agricultural instructors also try to take advantage of market opportunities in tourist attractions around the group's location to market their products. This is in line with the opinion of Mujiburahmad et al., (2014) which stated that agricultural extension agents as farmer consultants must (1) create a conducive condition, so that various agricultural extension activities as a learning process can run optimally, (2) answer challenges in various matters and (3) explore and improve the ability of farmers to meet their needs.

### Communicator

The number and percentage of respondents based on the assessment of the role of agricultural instructors as communicators in *Rejeki Alami* women farmer group are shown in Table 6.

**Table 6. Percentage of Respondents Regarding the Role of Agricultural Instructors**

Category	Number of Respondent	Percentage
	---person---	---%---
Good	-	-
Fairly Good	25	83.3
Poor	5	16.6
<b>Total</b>	<b>30</b>	<b>100</b>

Source: Processed primary data, 2020.

Based on Table 6, the role of agricultural instructors as communicators is fairly good, since as communicators, agricultural instructors are assigned to have a better, polite, correct way of communicating and able to be accepted by all group members.

In communicating with farmers, agricultural instructors have to build an attractive communication that is easy to understand by the members and leads to good and open interactions. Kabarsioun et al., (2007) stated that agricultural instructors not only giving information to farmers. They also have to convey information and communicate it creatively, confidently, and competently to solve the problems. The way to communicate with agricultural instructors is through regular counseling meeting which is held once a month. The agricultural instructors created a WhatsApp Group with the members of *Rejeki Alami*, which aims to make it easier for members to ask for help and advice if there are sudden and important problems. Agricultural instructors also frequently visit the members' houses to check business developments. According to Pratiwi et al., (2015) communication is declared successful if someone involved in it is able to convey the same aims and objectives from the message that was conveyed during communication.

### Facilitator

The number and percentage of respondents based on the assessment of the role of field agricultural instructors as facilitators in *Rejeki Alami* Women farmer group is shown in Table 7.

**Table 7. Percentage of Respondents Regarding the Role of Agricultural Instructors**

Category	Number of Respondent	Percentage
	---person---	---%---
Good	3	10
Fairly Good	21	70
Poor	6	20
<b>Total</b>	<b>30</b>	<b>100</b>

Source: Processed primary data, 2020.

Based on Table 7, it is known that the role of agricultural instructors as facilitators is fairly good. Agricultural instructors stated that they would not provide facilities to members in the formation and operation of businesses too often, such as capital, tools and materials. The instructors only provide knowledge and skills to members in order to develop and improve their businesses. The extension agents once provided facilities to the members, such as scales, press machines, Moringa plant seeds, product sticker designs, and administration books. According to Babatunde et al, (2019), agricultural extension agents as stakeholders in the agricultural sector are able to encourage farmers to participate more by providing capital loan assistance, agricultural input tools, and knowledge aimed at creating sustainable agricultural production. The facilities provided by the instructors were still not fully used by members due to the limited number of tools and the members' lack of understanding of the usefulness of these facilities. According to Indrianingsih (2011), extension agents as facilitators are needed in building cooperation with farmers which includes the availability of farming capital and guarantees for marketing products produced by farmers.

### Motivator

The number and percentage of respondents based on the assessment of the role of field agricultural instructors as motivators in *Rejeki Alami* women farmer group is shown in Table 8.

**Table 8. Percentage of Respondents Regarding the Role of Agricultural Instructors**

Category	Number of respondents	Percentage
	---person---	---%---
Good	6	20
Fairly Good	20	66.6
Poor	4	13.3
<b>Total</b>	<b>30</b>	<b>100</b>

Source: Processed primary data, 2020.

Based on Table 8, the role of agricultural instructors as a motivator is categorized as fairly good in contributing to extension activities. The instructors also give enthusiasm and support to the members every time they get less optimal results. One form of motivation given by the instructor was holding a competition participated by members of *Rejeki Alami* women farmer group in making processed date-flavored tomato sweets (*thorakur*) and liquid fertilizer from rice washing waste. The extension agents gave appreciation and prizes to the members who win the competition, judged by the resulting products. Giving gifts and praise to the members is a small step in motivating members to feel comfortable and be more productive and innovative in doing business. This is in accordance with the opinion of Effendi et al., (2019) which stated that the actions taken by agricultural extension agents can help farmers to analyze and solve the problems, as well as provide motivation for farmers to continue in developing their farming activities.

Extension agents also invite members to take part in a bazaar or expo held by the local agency and other agencies, for example, having participated in the EXPO held by the Pati District Agriculture Office, EXPO held by Diponegoro University, Expo held by KUMIMA (abbreviation of *Kelompok Usaha Mandiri Indonesia Maju*) at Rembang City, and a Bazaar held by the Head of Kayen Sub-district in order to introduce local wisdom. The success of agricultural instructors as a motivator is seen when the group members are motivated and enthusiastic in carrying out activities that have an impact on increasing productivity. According to Winaryanto et al., (2011), agricultural extension agents have a strong enough relationship with farmers' motivation. Agricultural instructors play a role in providing counseling to farmers in order to increase the level of motivation in farmers and motivated them to work better, especially in developing their farming activities.

### Incomes of *Rejeki Alami* Women Farmer Group Members

On average, 18 *Rejeki Alami* women farmer group members who run *rengginang* crackers business and group business have an investment of IDR 494,631. Normally, those who run the *rengginang* cracker business and the joint business (raw soybean packaging) incur a depreciation fee of IDR 14,164. The total amount of the average

variable costs incurred for the *rengginang* cracker business of the KWT *Rejeki Alami* member is IDR 355,928. The variable cost incurred by *Rejeki Alami* women farmer group in group business, the packaging of raw soybean seeds, is IDR 370,000. The average production of *rengginang* crackers is 32 packs with the average price of IDR 20,000 per pack. The average revenue is Rp. 648,056, - The production result for the group business which is carried out jointly is 100 packs of raw soybeans with the selling price of IDR 18,000 per pack.

The revenue obtained by *Rejeki Alami* women farmer group in joint business is IDR 1,800,000, which is obtained from the multiplication of the selling price per pack and the number of products produced in the business. The average net income received by the group members in running individual businesses (*rengginang* cracker processing) is IDR 260,326. The income received by the members in running the group business besides the individual businesses is IDR 30,097. Therefore, each member of the group gets equal share. The income received is derived from the difference between the income and all production costs or fees they had paid. The size of the income received is influenced by the results of production and the costs incurred in the business. This is in accordance with the opinion of Saadah et al., (2011) which stated that the level of income received by farmers is determined by the amount of production achieved, the selling price, and the costs incurred.

### **The Influence of the Role of Agricultural Instructors on the Income of *Rejeki Alami* Women Farmer Group Members**

Multiple linear regression analysis was used to determine the effect of independent variables with the dependent variable. This analysis was also used to determine the dependent variable if the independent variable has increased and decreased. This study conducted multiple linear regression tests to determine the regression equation for Innovators (X1), Organizers (X2), Consultants (X3), Communicators (X4), Facilitators (X5) and Motivators (X6) on the level of the group members' income (Y). Based on the results of multiple linear regression analysis carried out using SPSS 16.0, the regression equation is as follows:

$$Y = 1.495E6 + 28906.095X_1 + 5428.583 X_2 + (-60971.460)X_3 + 1005.860 X_4 + 33726.400X_5 + 64901.091 X_6$$

Information:

- Y = Group members' business income (IDR/month)
- a = Constant
- b = Regression coefficient for each variable
- X1 = Innovator (Score)
- X2 = Organizer (Score)
- X3 = Consultant (Score)
- X4 = Communicator (Score)
- X5 = Facilitator (Score)
- X6 = Motivator (Score)

Based on the multiple linear regression equation above, the result shows that the constant value of 1.495E6 means that if the Innovator (X1), Organizer (X2), Consultant (X3), Communicator (X4), Facilitator (X5), and Motivator (X6) is 0, then the income level of *Rejeki Alami* women farmer group members (Y) is positive

1.495E6. The regression coefficient for the Innovator variable (X1) is 28906,095, meaning that if the Innovator (X1) has an increase in value, the income level of the *Rejeki Alami* members has increased by 28906,095 assuming other independent variables have a fixed value. The regression coefficient for the Organizer variable (X2) is 5428,583, meaning that if the Organizer (X2) has an increase in value, the income level of the *Rejeki Alami* members would increase by 5428,583.

The consultant (X3) variable regression coefficient is (-60971,460), meaning that if the consultant (X3) has an increase in value, the income level of the *Rejeki Alami* members would decrease by 60971,460. The regression coefficient for the Communicator variable (X4) is 1005,860, meaning that if the Communicator (X4) has an increase in value, the income level of the *Rejeki Alami* members would increase by 1005,860. The regression coefficient for the Facilitator variable (X5) is 33726,860, meaning that if the Facilitator (X5) has an increase in value, the income level of the *Rejeki Alami* members would increase by 33726,860. The regression coefficient for the Motivator variable (X6) is 64901,091, meaning that if the Motivator (X6) has an increase in value, the income level of the *Rejeki Alami* members would increase by 64901,091.

The results of multiple linear regressions show that the coefficient of determination (R<sup>2</sup>) is 0.982 or 98.2%. This value shows that the role of the agricultural instructors which includes Innovators (X1), Organizers (X2), Consultants (X3), Communicators (X4), Facilitators (X5) and Motivators (X6) affect the income level of members by 98.2%, while the remaining 1.8% of the income level of the members is influenced by other variables not examined in this study.

### **F Test**

From testing the hypothesis simultaneously, the calculated F value of 101.312m > F table value of 2.62 and a significance value of less than 0.05, it is concluded that there is an influence on the role of agricultural instructors as innovators, organizers, consultants, communicators, facilitators and motivators simultaneously on the income level of the members. The relationship between the role of extension agents/instructors can be seen through how the agricultural instructors spread new innovations. Agricultural instructors also provide assistance such as knowledge, capital, and other facilities to support innovation implementation. The implementation of innovations is also based on the enthusiasm and motivation of the instructors for members to participate in implementing them. The linkage of the six roles of agricultural instructors as innovators, organizers, consultants, communicators, facilitators and motivators influences members in gaining knowledge and skills; the better the role of agricultural instructors, the knowledge and skills of members that can be used as guidelines in improving business will also increase. According to Tanjungsari et al., (2016) the more often agricultural extension agents play a role, the participation of members to develop businesses will be increased.

### **T Test**

The significant value of the innovator variable (X1) is 0.037, the organizer variable (X2) is 0.356, the consultant variable (X3) is 0.000, the communicator

variable (X4) is 0.645, the facilitator variable (X5) is 0.002 and the motivator variable (X6) is 0.000. So it can be concluded that innovators, consultants, facilitators and motivators have a sig value  $\leq 0.05$ . So, there is a significant influence between the innovator, consultant, facilitator and motivator variables on the income of KWT *Rejeki Alami* members. Organizer and communicator variables have a significant value  $> 0.05$ , so it can be concluded that there is no significant influence between the variable organizer and communicator on the income of KWT *Rejeki Alami* members.

Based on the t test above, it can be seen that the role of agricultural extension agents as innovators, consultants, facilitators and motivators had a partial effect on the income of *Rejeki Alami* women farmer group members, while the agricultural instructors' role as communicators and organizers had no effect. This happened because the agricultural instructors provide new innovations in the form of food diversification training accompanied by assistance in the form of production equipment, facilities, and product marketing services. Agricultural instructors are able to collaborate and listen to aspirations and provide solutions to problems faced by members. The motivation given by the extension agents to members is to join the Independent Business Group and KUMIMA. The agricultural instructors also invite members to entrust the products they make at GKL (Griya Kedelai) and encouraging the business to expand especially in product marketing. Saputri et al., (2016) stated that the direction, enthusiasm, and encouragement from agricultural extension agents affects farmers in increasing the ability of members to develop their farming from upstream to downstream.

Agricultural instructors as organizers and communicators have no effect on the income of *Rejeki Alami* women farmer group members, since the members with higher education are more flexible in receiving information from the instructors, while the members with lower education will follow advice from extension personnel if forced to do so. According to Sahanaya et al., (2020) farmers with sufficient education are able to communicate well, which leads to good interactions. The agricultural instructors had formed a structure in the group and is carried out well; however, sometimes members ask each other for help in carrying out their duties due to lack of understanding. This causes difficulties in carrying out their roles in the group. According to Narso et al., (2012) the formation of organizations for farmers is very important because the existence of an organization makes it easier for agricultural extension agents to develop farmer groups.

## CONCLUSION

Based on the results of the study, it can be concluded that the overall role of agricultural instructors in *Rejeki Alami* women farmer group is fairly good with the percentage of 73.3%. The role of agricultural instructors as innovators, organizers, consultants, communicators, facilitators, and motivators is fairly good with the respective percentage values being 80%, 73.3%, 63.3%, 83.3%, 70%, and 66.6% according to the members. The average income received by *Rejeki Alami* women farmer group members is IDR 260,326. The income received by the members in running group business besides the individual business is IDR 30,097, and each member receives the equal income as other members. Simultaneously, there is an influence on the role of agricultural instructors as innovators, organizers,

consultants, communicators, facilitators and motivators on the income of members. Partially, the role of agricultural instructors has an effect on the income of the Rejeki Alami Women Farmer Group members as innovators, consultants, facilitators, and motivators.

## **RECOMMENDATION**

The agricultural extension agents/instructors are expected to increase the frequency of providing innovation, motivation, support and enthusiasm for Rejeki Alami women farmer group members to stay joined and participate in extension activities. The members are also expected to further increase their creativity and skills related to food diversification in order to increase the additional income that can be used to meet household needs. Further researchers should need to master the situation and conditions of the research location to avoid obstacles in the research process.

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