Effect of Farmers Managed Extension Activities (FMA) on Changes in Farmers' Behavior in Panyakalan, Kubung Sub-district, Solok Regency

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Abstract. This study aims to analyze the effect of the Farmers Managed Extension Activities (FMA) method on changes in farmer behavior between before and after the existence of the FMA method in Panyakalan, Kubung District, Solok Regency. The research method used is a case study method using 55 samples which are determined based on certain criteria and using qualitative descriptive analysis. The focus of this research is to analyze changes in farmer behavior between after and before FMA learning which are seen from changes in farmer orientation about markets, economical business scale, habits of protecting agreements with contract partners based on contracts, building networks between farmer organizations and farmers who have more knowledge becomes a resource for farmers who have lower knowledge. This study found that the implementation of the FMA method (Farmer’s Managed Extension Activities) in which extension activities managed by farmers influence the behavior of the community in Panyakalan District Kubung Solok Regency can be seen from the conditions of farmers who conduct their traditional and subsistence farming into farmers who have applied the principles agribusiness through continuous learning with a learning-by-doing approach (learning by doing) and carrying out technological innovation-based agribusiness learning activities.

1. Introduction

Agricultural extension as part of the effort to educate the life of the nation and promote public welfare is a basic right of the citizens of the Republic of Indonesia. Agriculture is one of the important sectors in national development, so it requires reliable quality human resources, as well as managerial, entrepreneurial capabilities in carrying out its business. Agricultural extension is a learning process for the main actors and businesses to be willing and able to help, organize themselves in accessing market information, technology, capital, other resources, as an effort to increase productivity, business efficiency, income and welfare. Agricultural extension as an educational activity is an effort to help create a conducive learning climate for the main actors and their families, as well as businesses [1].

Counseling is a non-formal education activity and that education is a process that is expected to bring about desired behavioral change, it is necessary to use a variety of ways to create good learning situations. The ways to create a learning situation are popularly called extension methods. These counseling methods are a basic approach to approach, encourage and influence members of the farming community to learn [2]. The Ministry of Agriculture has a Farmer Empowerment Program through Agricultural Technology and Information (P3TIP) in 2007 implemented in 18 provinces, 69 districts, and 3,120 villages which are programs that facilitate agricultural extension activities managed by
farmers. One method is the FMA (Farmers Managed Extension Activities) method. Panyakalan is one of the located in Kubung Subdistrict, Solok Regency which has an FMA group. This FMA method began to be socialized at the end of 2007 and learning activities took place in 2008. Based on these conditions the authors are interested in seeing the effect of the FMA method in Panyakalan on changes in the behavior of farmers in Panyakalan District Kubung Solok Regency [1].

2. Materials and Methods
The research method used is a case study method, where research is carried out in depth about a particular case whose results are a complete and organized description of the case. In this study also conducted a survey method to take samples from the existing population in connection with the data needed in this study [3].

The population of this study were farmers of FMA learning participants throughout the year from 2008 - 2012. For the study respondents each generation was set as many as 10 people. For Key Informants, information is obtained from 2 Self-Supporting Extension Agents, 1 Field Agriculture Extension Officer, 1 Companion Officer from the District Agriculture Office and 1 FMA Consultant. The total number of respondents to the learning participants was 50 people plus 5 key informants. Respondents taken by device as many as 10 people are determined based on the frequency of attendance at the learning activities each year. The respondents taken were 10 of the most diligent participants in the learning activities [4]. The data used in this study is adjusted to the data requirements in the field, namely primary data and secondary data.

Primary data comes from 2 groups, namely:
1. Key Informants consisting of 2 Self-Help Extension Staff, 1 Field Agriculture Extension Officer, 1 Assistant Officer from the Agriculture Service and 1 FMA Consultant.
2. Respondents are farmers participating in FMA learning throughout the class (Year 2008 - 2012), each generation is set at 10 people. Respondents are determined based on the frequency of attendance of the most learning members for each activity [3].

Secondary data is used to support data analysis and interpretation in this study. Secondary data used in the form of written data or pictures that contain population data, data on FMA activity plans and the types of activities that have been carried out, as well as other archives related to FMA activities in Nagari Panyakalan District Kubung Kabupaten Solok [3].

3. Result and Discussions
In the implementation of the FMA method in Panyakalan, Kubung Subdistrict, Solok Regency, changes in farmer behavior seen from the indicators that describe the FMA program have impacted behavior changes to farmers between before and after the Panyakalan method described as below [5]:

3.1. Farmer orientation about markets
Based on the results of an interview with government officer from the Agriculture Office acting as the technical implementer of the FMA method in Solok Regency, prior to the FMA method in Panyakalan, farmers conducted farming and other businesses individually and traditionally and were usually hereditary business activities. However, after the FMA method, farmers learn to see the potential market needs to be developed as a basis for conducting farming in the learning process funded by P3TIP so that businesses that were traditionally and simply managed have been turned into businesses that are managed with better management [6]. Before the existence of the FMA method in Panyakalan, farmers generally carried out farming in the traditional way, meaning that the farmers were trying to cultivate their agriculture extensively and had not maximized the existing inputs. After the learning process in the FMA group, farmers began to understand how to manage agribusiness businesses that began with identifying existing resources, and managing them to meet current needs without compromising the ability of future generations to meet their needs. Farmers also know and apply organic farming. From the activities that have been carried out in the FMA Panyakalan group, the most prominent thing seen from the development of the business is the FMA Panyakalan group has become a provider of rubber seeds for the existing farmer groups both for the Panyakalan themselves and for the neighboring [7].
3.2. Farmer Orientation on Economical Business Scale

Economical business scale of the leading commodities that are used as learning material in the FMA group. Before the existence of the FMA method, the businessman only had 5 people, now it has grown to 15 entrepreneurs and the marketing is getting wider than before FMA [6].

3.3. Habits of Protecting Agreements with Contract Partners based on Contracts

The habit of protecting agreements with partners is based on a contract of market demand for products/commodities that are produced in a certain time continuously. Before the existence of the FMA method, farmers did their farming business more aimed at meeting the livelihood needs of the farmers and not to meet the economic needs of the farmers, so that the farmers' profits from agricultural products were not high. But after the FMA method, farmers began to recognize the principles of agribusiness and apply it in managing their agriculture from the upstream to downstream systems [7]. Starting from the provision of production facilities such as the use of seeds, technology used, production processes, processing results, and marketing processes. So that at this time there is already a collaboration between UP-FMA Panyakalan and other located in terms of providing rubber seeds. After learning in the UP-FMA Panyakalan group, the learning participants began to understand how to be a business-oriented farmer or entrepreneur and who could work professionally. This can be seen from changes in farmer behavior starting from the beginning of the process of farming, production processes to marketing farm produce. Farmers have implemented the principles of agribusiness in farming. And the main thing is that farmers have been accustomed to always making cooperation contracts in doing activities that are mutually beneficial with other farmer groups [8].

3.4. Orientation on Building Networks

Building networks between farmer organizations and other business actors in developing agribusiness at various levels from the village, district and so on. Prior to the FMA method, farmers in Panyakalan tried traditionally, there was no collaboration with partners in terms of production and marketing. But after the FMA method, the farmer groups incorporated in Gapoktan Gema Peta have expanded their businesses and established business networks with farmer groups in 6 neighboring villages such as Pasuruan, Abu Sungai, Indudua, Muara Panas, Bukit Tandang and Gaung. After the FMA method in Panyakalan, business partners formed with the Toko Baru and Toko Bareh Solok formed in terms of selling baro baked sapik cakes. For learning about rubber plants, good collaboration has been established between the UP-FMA Panyakalan farmer group and the Solok District Forestry Office and the rubber farmer group in the Sungai Dareh, Pulau Punjung District, Dharmasraya District [9].

3.5. Orientation on Knowledge Sharing

Farmers who have higher knowledge become resource persons for other farmers who have lower knowledge in managing extension in the village. After the FMA method, it was determined that male and female self-help instructors in the FMA group. The independent extension agent develops learning forums for the main actors and farmer organizations (farmer groups/gapoktan/associations), to produce the main actors as independent entrepreneurs in agriculture. They have also been given facilitation techniques training related to the process starting from planning, implementing activities and evaluating the implementation of activities [10]. This self-help extension agent is also a resource person in other farmer groups in Panyakalan and farmer groups in other neighboring. This farmer group was formed as a forum for communication between farmers and between farmers and related institutions in the process of technology transfer. The number of farmer groups that are participants in the FMA learning process in Panyakalan are 14 farmer groups that are members of Gapoktan Gema Peta.

4. Conclusions

Based on the results of the study, the conclusions of this study are as follows:

Changes in community behavior before and after the existence of the FMA method in Panyakalan, Kubung Subdistrict, Solok Regency, can be seen clearly from the current condition of the farmers as there are behavioral changes of farmers from farmers who carry out their traditional and subsistence
farming into farmers who have implemented the principles of agribusiness through learning which is sustainable by learning while trying (learning by doing) and implementing agribusiness learning activities based on technology innovation.

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