EFS (Effective Farmer's Store) : A Multifunctional Solution To Improve The Walfare Of Spinach Farmers with Small Land

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Abstract. farming community with small land synonymous a poverty. Basically, the income of small land farmers who are uncertain make their situation is always very poor. Moreover, sometimes when they harvest their crop, the prices go down especially if there is an intermediary brokers. The farmers of small land in this case are spinach farmers. They do not understand how to increase the value added on the spinach. The absence of a well organized association was to be a reason why farmers directly sell their spinach under ordinary circumstances. That is our aim to help farmers to organize their crop. The research methodologies are based on literature study. EFS(Effective Farmer's Store) is expected to be a solution of this problem. The main objective of this program is to assist farmers in increasing the value added of their products from spinach. It hopely will be an institute under Ministry of Agriculture. Basically, there are a lot of alternatives to increase the value added of spinach, like an attractive packaging, making crispy spinach or the others. In addition, another goal of the *EFS* is to design a different market with directly flow the products to consumers.

Keywords: Spinach, Farmers, EFS, Welfare, Value-Added

1. Introduction

Spinach (*Amaranthus sp*) which is one of agricultural commodities that is one type of family *Amaranthaceae*. It is favored by the whole society, because it feels good, soft, can provide a sense of cold in the stomach and can facilitate the digestion. In Indonesia, spinach production in the last three years has increased (Kementan, 2010). It is seen that in Indonesia the spinach becomes the menu as a favorite vegetable that are good for serving at breakfast, lunch, and dinner. The nutrients that contained in the spinach, one of them is ferrum that is needed by the body as the formation for the red blood cells, so by eating spinach we will avoid from the less blood disease (anemia). The content that was contained in spinach not only iron, but there are also proteins, carbohydrates, fats, minerals, vitamins and fiber. There are also the other contents, such as the almost complete vitamin, like vitamin K, A, C, E, B1, B2, B6, and folate as well as calcium and magnesium are also good for bones. Perhaps this is why this vegetable is called a super vegetables and much-loved by various groups in Indonesia. But, there is a gap on the welfare of the spinach farmers in Indonesia. Most of them still live below the poverty line and have not been prosperous. It is caused by some problems and one of them on marketing management.

2. Spinach Farming and Value Added of The Product

Spinach customarily grows throughout the year either in lowland or highland, the desired air temperature is around 20 C - 32 C, except that the degrees of soil acidity (pH) are both about 6-7. This plant was needed plenty of water, so it is well planted at the beginning of the rainy season and it can be planted in the early dry season. The soil is friable and enough fertile. Besides, spinach also grow in the soil with a texture of clay, sandy clay and so on condition that must be given plenty of animal manure.

2.1. The Steps in The Production of Spinach

Several steps should be done in producing the spinach:

• Processing of land

Checking the degree of soil acidity and predict the amount of seeds to be used

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• Planting

Ideally, a hectare of land requires ± 2 Kg of seeds and it will be contain about 30000 spinach

• Maintenance

Usually use urea fetilizer or organic fertilizer

• Harvest

Harvesting is done after the 25th day

• Marketing

Generally farmers sell their product to the collector

These steps are performed in sequence and in practice implemented intensively.

Source: http://pecelbule.com/596/cara-mengkonsumsi-bayam-tanpa-keracunan/&docid=

Picture 1. Spinach on the field

2.2. Complement to Rice and Side Dishes

In Indonesia, rice is the main and the most important food between the other foods. So, if you do not eat rice, you will be hungry, although you have eaten the other foods. Usually the food dish, the rice is always along with side dishes and of course with vegetables. Spinach is one of the favorite choices among the other vegetable because of its taste and nutritional content contained in it. How to cook spinach is very easy, Just plug in spinach leaves into boiling water for about 3-5 minutes.

2.3. Spinach Chips as A Product That Has Value-Added

Spinach chips is the result of spinach processing to add value of spinach. In the form of a product like this, spinach has a much better resistance than as a complement in the side dishes. Although it has undergone treatment process that changes the shape and taste, but the public interest in these products is quite high. In addition, spinach can also be used as raw materials nuggets or meatballs. As we know that in general meatball only contain meat, but spinach can also be a base material and mixed with meat to be meatball.

Picture 2. Spinach chips

Source : http://bumbudapur.com/2010/03/keripik-bayam-kriuk/&docid

3. Existing Condition of Spinach Farmer in Indonesia

For an agrarian country like Indonesia, the existences of farmers are important pillars to meet the demand for food for the nation (Sastraatmadja, 2008). However, farmers service is very large and inversely proportional to realities of the current state of the farmers that are very far from expectations. Most of them still live below the poverty line and has not been prosperous. This condition is exacerbated by the frequent crop failures due to pests, climatic conditions changed, falling prices and the difficulty of accessing capital. In addition, the mindset of farmers who tend to static and running in place, making it become more difficult and hinders the change. It can be seen, although the counseling was carried out which aims to educate farmers to improve their standard of living, but has not been there a significant change to the welfare of farmers. Naturally when we consider the farmer is dirty, far from urban development, and also smart less. It is not much different with spinach farmers, because they are also included within the scope of agriculture which highlighted decent quality of life and looking for a good and effective solution to overcome these solutions.

It's time made a big plan to overcome the dilemma faced by farmers today, especially spinach farmers. We propose an idea to overcome this problem. This idea is packaged in the form of an organized board of a multifunctional which tried to answer farmers current anxiety. Although in Indonesia already exists in the form of cooperative institutions who tried to address these issues, we see it has not been effective and well targeted. There is also *Gapoktan* (Composite of farmer group) in the form of joint farmer groups who tried to overcome this problem, but has not been touched with the maximum.

Table 1. Horticulture Production in Indonesia

Commodity	Hectares in production (2010)	Ton in production (2010)	Productivity (2010)
Spinach	48,844	152,344	31.2
Mustard	59,540	583,770	98.2
Bean	85,828	489,449	57
Stringbean	36,483	336,494	92.2

Source: Kementan.org

Source: http://www.spi.or.id/%3Fp%3D3195&docid=

Picture 3. A farmer on the fieldhttp

Source: www.trekway.com/cuba/photos

Picture 4. Farmer's house

4. *EFS* as a Model for Increasing Farmers Welfare

The goal of every agricultural systems manager (ASM) is to develop a total system that functions without fail. We know that this is an unobtainable goal, yet we strive to approach this by setting a goal of some successful percentage, such as 97% of the time the system operates as we need it (Peart, 2004). We have an idea to form a well organized container, which helps farmers in supply of capital issues, crop failure due to earnings, and also marketing of products, particularly products that have been through the treatment process. In the management of this organization, would be selected members from various backgrounds, whether professors, college students or professional. In the division of profits will give to an administrator about 20-30 percent. Below the advantages of this *EFS* :

4.1. Overcome The Issue of Capital for The Farmers

In the economy's world, capital goods is used to generate additional wealth, or to increase production. Capital is used to produce consumption goods or capital goods. Capital in farming is related to the factors of production to produce a product. This capital is getting contribution for the development of the farming business. In simple farming capital is not too important, but in more advanced farming, more and more capital needed.

4.2. Counseling Facility For The Spinach Farmers

Already familiar to us about the counseling that done for farmers. However, so far the result have not been up there. Spinach farmers who have a field over the decades have so much experience and confidence with their ability. What would happen if there a college student who recently graduated from university go to the field and provide a counseling and give some advices to farmers who have experiences for decades? definitely we can expect that these farmers will feel neglected. If this happens, the university that in fact has the task of giving its dedication to the community will be in a difficult situation. It can also occur when the professors of the university do that. The farmers will feel smarter than others outside their community. Thus, the transfer of knowledge will not be carried out effectively.

For this reason it takes a concept where the university can provide his services freely and transfering the knowledge effectively. To takehold *EFS* officials, it will be selected the people who come from students of college or professionals, but covered with special training and intensive program. This training is more on how we can communicate well to farmers and makes them regard us as part of a group without gaps that blocked. Counseling that we provide is about how the spinach farmers selling all their products not just as fresh (fresh product) but rather to increase the value added of spinach, like chips spinach, spinach noodles, and other creative refined products. From here farmers can earn additional income which is quite useful to improve their welfare.

4.3. The Marketing System of EFS

After the process of counseling and guidance to farmers succeed, the next problem encountered is the marketing. In accordance with current academic practice, marketing is defined as the business activities associated with the flow of goods and services from production to consumption. The marketing of agriculture products begins on the farm, with the planning of production to meet specific demands and market prospects (Abbott, 1990). Here we offer an idea that spinach farmers can sold their products, both fresh product and its processing products. We offer a marketing system that directly to deliver these products to consumers who are already subscribed. Terms are given with a minimum in order of the product, so we don't sell few products. We emphasize this marketing on spinach products, such as spinach chips that have a longer resistance. Payment system is a cash or short term payment given to *EFS* and the profits are divided per a week, so the spinach farmers could quickly feel the benefits of spinach selling.

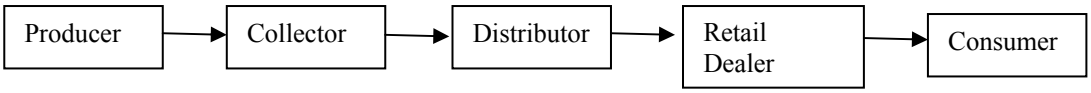

Figure 1. Marketing in Ordinary

Figure 2. EFS Marketing System

In the picture above, we can see that the focus *EFS* system is a direct distribution to consumers. This method is more effective because consumer can enjoy when they buy fresh products and also reduce the additional cost due to the length distribution system. If we compare the condition with the system nowadays which the process of distribution from producer to consumer takes a longer sequence. This situation causes a higher cost and longer time because in every sequences needs more time for storage period.

4.4. Management system of EFS

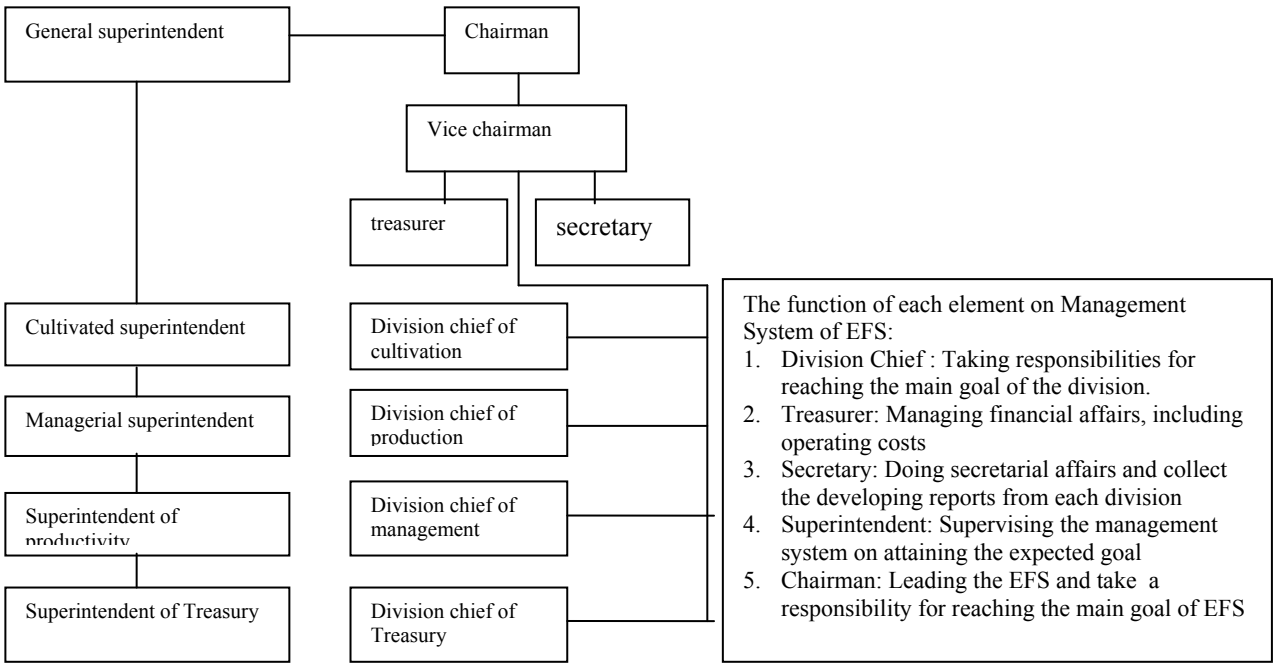

Figure 3. Management system of EFS

In *EFS* management system is seen that there is a clear division of tasks in each section.For each section there is a regulatory body that controls the course of the tasks which should be done. For each section chief is directly responsible to the chairman. Because EFS is under of The Ministry of Agriculture, it will be gotten assistance from the government to finance the operating costs.

5. Conclusion

Spinach Farmers' welfare has not reached the level where farmers get a better living standard. The system has several advantages. EFS is perceived to set the maximum for spinach farmer. By applying EFS on spinach farm, it is expected to increase the confidence of farmers in production activities. EFS is expected to overcome the crucial problem of the government regarding the middlemen who sometimes make farmers feel disadvantaged at very little.

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