Analysis of soybean farmers response on Pajale Special Efforts Implementation (UPSUS) program

Mahyuddin, Saadah, Darwis, N Lanuhu, P Diamsari, A Anisa, A Sulili and A Wirdansyah

Department of Socio-Economic of Agriculture, Faculty of Agriculture, Universitas Hasanuddin, Jalan Perintis Kemerdekaan KM 10, Makassar (90245), Indonesia

E-mail: mahyuddinr@yahoo.com

Abstract. Soybean self-sufficiency has been the main target of the government since 2015 along with two other food commodities, namely rice, and corn. The UPSUS Program (Special Effort) is an effort to support soy self-sufficiency. Special Efforts (UPSUS) is the Ministry of Agriculture's leading program to improve the welfare of farmers. With the UPSUS, it is expected that soybean production will increase. This study aims to determine the response of soybean farmers to the implementation of the Pajale Special Efforts (UPSUS) program. The population of the study was 150 farmers involved in the UPSUS Pajale Program taken by purposive sampling method. Analysis of the data used to determine farmers' responses to the Pajale Special Efforts (UPSUS) program was measured using a Likert scale and descriptive statistical analysis. The Likert scale used consists of the categories of very satisfied (5), satisfied (4), moderate (3), dissatisfied (2), very dissatisfied (1). The results of the study concluded that the response of farmers to the implementation of the Pajale Special Efforts Program (UPSUS) was included in the satisfied category (43%).

1. Introduction

Food is one of the basic human needs. Humans can not survive without food. Therefore, the effort to fulfill food needs is a primary humanitarian endeavor. Increasing food production, especially soybeans, needs to be done considering soybeans are the main strategic food crop after rice and corn. Based on 2014 data from SUSENAS released by BPS, the average tempe consumption per person per year in Indonesia is 6.95 kg and tofu 7.068 kg. Ironically, the fulfillment of the need for soybeans, the primary raw material for tempe and tofu, 67.28% or as much as 1.96 million tons must be imported from outside [1].

Seeing this problem, the Ministry of Agriculture outlines the Special Efforts (UPSUS) to achieve sustainable rice and corn self-sufficiency and soy self-sufficiency, better known as the Pajale UPSUS program. Through this program, the government targets production to be made in 2015, namely rice production of 73.40 million tons with a growth of 2.21%, corn of 20.33 million tons with a growth of 5.57% and soybeans of 1.27 million tons with an increase of 26.47%.

Through the strategies and activities that have been formulated in an extraordinary effort (UPSUS) Pajale is expected to be able to assist farmers in overcoming agricultural problems in the area either through farmer courses conducted as a meeting place for farmers and extension workers, through
village farmer meeting (RTD) activities and through activities other activities that have been formulated in this UPSUS program, where this program is expected to be a learning material for farmers in increasing the production and productivity of their farms to increase the income and welfare of farm families in the area.

Pajale's Special Efforts (UPSUS) are special efforts made by the government to increase crop production and land productivity, but this is not as easy as we think. In this effort to improve, there will be many challenges or obstacles encountered later. Difficulties or problems that arise than can be temporary or in the long term, such as land conditions that do not support both the area of land or the capacity and level of fertility of the land itself or the level of farmers' readiness for the UPSUS program itself [2].

Apart from the Pajale Special Efforts (UPSUS) program, it is the farmers who are deciding the realization of the ideals of the Pajale Special Efforts (UPSUS) program in the country. The involvement of all stakeholders ranging from the central government to the regions, the participation of extension workers, Babinsa and academics cannot forget the critical role of farmers. Thus, commitment and sustainability of assistance to farmers is needed in receiving agricultural information, technological innovations, and solutions. It can be taken against the problems faced by farmers, both on the farm and off-farm. So that problems faced by farmers can be dealt with quickly. Also, Pajale's Special Efforts (UPSUS) program plans can be achieved promptly so that the ideals of self-sufficiency can be carried out as planned. Based on the above background, the purpose of this study is to determine the response of soybean farmers to the implementation of the Pajale Special Efforts (UPSUS) program.

2. Methods

This research was conducted in three locations, namely in Kajaoaliddong Village Barebbo District Bone Regency, AttangSalo Village Marioriawa District Soppeng Regency and Tancung Village Tanasitolo District Wajo Regency. Location selection is made by purposive sampling, namely careful selection. The location is involved in the Special Efforts Pajale program and farmer groups in the village have excellent attention to government programs. The type of data used in this study consisted of primary data and secondary data. Primary data was obtained from direct interviews with respondents who were members of six farmer groups in three districts, namely Bone, Soppeng and Wajo using a questionnaire whereas secondary data was obtained from local agencies or institutions.

The population of the study was farmer groups involved in the UPSUS Pajale Program and farmer groups who were not involved in the UPSUS Pajale program, which taken 25 members of each farmer group so that the number of respondents was 150 people using the census method. Census method is a complete data collection method in which all elements in the population that are the object of research are investigated/enumerated one by one. Census is carried out if all elements/members are observed and the results are actual data (parameters) [3].

To determine farmers' responses to the Pajale Special Efforts (UPSUS) program, they were measured using a Likert scale and descriptive statistical analysis. Likert scale is a measurement scale that has four or more question items combined to form a score/value that represents individual traits such as knowledge, attitudes, and behavior [4].

In this study, the categories used for the Likert scale consist of very satisfied (5), satisfied (4), moderate (3), dissatisfied (2), very dissatisfied (1) categories. High and low scores owned by subjects determine the position of farmers' response to the Pajale Special Efforts (UPSUS) program. The response of farmers to be investigated is related to the fulfillment of the right rule 5 (number, type, quality, time and place) distribution of superior seeds as the purpose of the implementation of the Special Efforts Program to overcome one of the problems of channeling superior seeds that are constrained in fulfilling the right rule 5 (number, type, quality, time and place)[5]. In determining the interval value, the formula used as follows:
Class intervals = (NT-NR)/K \hspace{1cm} (1)

Where:
NT = High value
NR = Low value
K = Number of categories

3. Results and discussions

The farmers are generally of productive age range from 36-45 years, either involved or not involved in the UPSUS Pajale program, with the majority of junior high school / equivalent education with 23 people for non-participating respondent farmers and 23 for respondent farmers participating in the program. Farmers have quite a long experience in farming paddy fields. This is evident from the results of research that shows that farmers have 20-29 years of experience in farming.

3.1. Farmers respond to Pajale's Special Efforts Program (UPSUS)

Pajale's Special Efforts Program (UPSUS) conducted at the three research sites, namely the supply and use of superior seeds to increase land productivity and farmer production. In this case, farmers who received rice seedlings were the Tocinae Farmers Group, the Ajang Ale Farmers Group, and the Sipakatau Farmers Group. The response of farmers observed in the field research related to the fulfillment of the right rules (number, type, quality, time and place) in the distribution of superior seeds and how the suggestions submitted by respondent farmers to the implementation of the Special Efforts Program (UPSUS) further. Response / Response of Farmers Respondents to Special Efforts Program (UPSUS).

Table 1. Farmers Responses To Special Efforts Program (UPSUS) in Kajolaliddong Village, Barebbo District, Bone Regency, Attang Salo Village, Marioriawa District, Soppeng District, and Tancung Village, Tanasitolo District, Wajo District, 2017.

| Farmer Group                   | Interval Score       | Number of respondents | Percentage (%) |
|-------------------------------|----------------------|------------------------|----------------|
| To Cinae farmers group        | Very dissatisfied (5-9) | 0                      | 0              |
| (Kajolaliddong Village)       | Dissatisfied (10-13)  | 0                      | 0              |
|                               | Not satisfied (14-17) | 0                      | 0              |
|                               | Satisfied (18-21)    | 20                     | 80             |
|                               | Very satisfied (22-25)| 5                      | 20             |
| Total                         |                      | 25                     | 100            |
| Ajang Ale farmers group       | Very dissatisfied (5-9) | 0                      | 0              |
| (Attang Salo Village)         | Dissatisfied (10-13)  | 0                      | 0              |
|                               | Not satisfied (14-17) | 0                      | 0              |
|                               | Satisfied (18-21)    | 4                      | 16             |
|                               | Very satisfied (22-25)| 21                     | 84             |
| Total                         |                      | 25                     | 100            |
| Sipakatuo farmer group        | Very dissatisfied (5-9) | 0                      | 0              |
| (Tancung Village)             | Dissatisfied (10-13)  | 0                      | 0              |
|                               | Not satisfied (14-17) | 17                     | 68             |
|                               | Satisfied (18-21)    | 8                      | 32             |
|                               | Very satisfied (22-25)| 0                      | 0              |
| Total                         |                      | 25                     | 100            |
Table 1 shows that respondent farmers had different responses. In Bone Regency, the majority of farmers were satisfied, Soppeng District was delighted with farmers and in Wajo District they were less satisfied with the program. That is because the provision of superior seeds is made enough to help farmers in terms of reducing production costs. The fulfillment of the right rule 5 (number, type, quality, time and place) in the distribution of superior seeds is as follows:

3.2. Quantity of seeds

Table 2. The Number of Superior Seeds Distributed in the Special Efforts Program (UPSUS) in Kajaolaliddong Village, Barebbo District, Bone Regency, AttangSalo Village, Marioriawa District, Soppeng Regency, and Tancung Village, Tanasitolo District, Wajo District, 2017.

| Farmers                              | Amount of seed aid |
|--------------------------------------|-------------------|
| To Cinae Farmers Group (Kajolaliddong Village) | 780 Kg            |
| Ajang Ale Farmers Group (AttangSalo Village)   | 1,925 Kg          |
| Sipakatuo Farmer Group (Tancung Village)       | 715 Kg            |

The number of seeds received gives a different response from each member of the farmer group. For the To Cinae Farmers Group (Kajolaliddong Village) received 780 kg of seed aid. For the Ajang Ale Farmers Group (Attang Salo Sub-District) and Sipakatuo Farmers Group (Tancung Sub-District), they received seed assistance of 1,925 Kg and 715 kg respectively. The farmers' response regarding the amount of seed distributed can be seen in Table 3.

Table 3. Farmer's Response/Response on the Number of Superior Seeds Distributed in the Special Efforts Program (UPSUS) in Kajaolaliddong Village, Barebbo District, Bone Regency, AttangSalo Village, Marioriawa District, Soppeng Regency, and Tancung Village, Tanasitolo District, Wajo District, 2017.

| Interval score | Bone Regency (Tani To Cinae Group) | Soppeng Regency (Ale Farmer Group) | Wajo Regency (Sipakatuo Farmer Group) | Total respondents (people) | Percentage (%) |
|----------------|-------------------------------------|-------------------------------------|----------------------------------------|---------------------------|----------------|
| Strongly Agree | 14/56                               | 22/88                               | 18/72                                  | 54/72                     | 72             |
| Agree less     | 0/0                                 | 0/0                                 | 3/12                                   | 16/18                     | 24             |
| Agree          | 11/44                               | 3/12                                | 4/16                                   | 18/24                     | 24             |
| Total          | 25/100                              | 25/100                              | 25/100                                 | 75/100                    | 100            |

Table 3 shows that the farmers' response to the number of seeds distributed stated that they agreed as many as 54 respondents and strongly agreed as many as 18 respondents with a percentage of 72% and 24%, respectively. These results indicate that the amount of seed that distributed has met the needs of farmers.

3.3. Types of seeds

There are several types of soybean seeds received by farmers. The types of seeds received by the To Cinae Farmer Group (Kajolaliddong Village) are Anjasmoro and for the Ajang Ale Farmer Group (Attang Salo Village) and the Sipakatuo Farmer Group (Tancung Village), Argomulyo. The farmers' responses regarding the types of seeds distributed can be seen in Table 4.
Table 4. Farmers Respond to Types of Superior Seeds Distributed in the Special Efforts Program (UPSUS) in Kajaolaliddong Village, Barebbo District, Bone Regency, AttangSalo Village, Marioriawa District, Soppeng Regency, and Tancung Village, Tanasitolo District, Wajo District, 2017.

| Interval score | Bone Regency (Tani To Cinae Group) | Soppeng Regency (Ale Farmer Group) | Wajo Regency (Sipakatuo Farmer Group) | Total respondents (people) | Percentage (%) |
|----------------|-----------------------------------|------------------------------------|----------------------------------------|---------------------------|----------------|
| Strongly Disagree | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) |
| Disagree | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) |
| Agree less | 0 (0%) | 0 (0%) | 0 (0%) | 23 (92%) |
| Agree | 19 (76%) | 4 (16%) | 1 (4%) | 24 (32%) |
| Strongly agree | 6 (24%) | 21 (84%) | 1 (4%) | 28 (37%) |
| Total | 25 (100%) | 25 (100%) | 25 (100%) | 75 (100%) |

Table 4 shows that the response of farmers regarding the type of seed that was distributed expressed strongly agree, namely 28 respondents, with a percentage of 37%. While for the approved category, there were 24 respondents with a rate of 32%. There were 23 respondents with a percentage of 31% for the disagreeing type.]

3.4. Seeds quality
As the main element to increasing food production, the seeds used must be of good quality, because whether or not the variety of the seeds will determine the yield of a commodity. The status of aid seed distributed was certified as having passed the seed certification process. The farmers' responses regarding the quality of the seed distributed can be seen in table 5.

Table 5. Farmers' Responses to the Quality of Superior Seeds Distributed in the Special Efforts Program (UPSUS) in Kajaolaliddong Village, Barebbo District, Bone Regency, AttangSalo Village, Marioriawa District, Soppeng Regency, and Tancung Village, Tanasitolo District, Wajo District, 2017.

| Interval score | Bone Regency (Tani To Cinae Group) | Soppeng Regency (Ale Farmer Group) | Wajo Regency (Sipakatuo Farmer Group) | Total respondents (people) | Percentage (%) |
|----------------|-----------------------------------|------------------------------------|----------------------------------------|---------------------------|----------------|
| Strongly Disagree | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) |
| Disagree | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) |
| Agree less | 2 (8%) | 0 (0%) | 20 (80%) | 22 (29%) |
| Agree | 23 (92%) | 20 (80%) | 4 (16%) | 47 (63%) |
| Strongly agree | 0 (0%) | 5 (20%) | 1 (4%) | 6 (8%) |
| Total | 25 (100%) | 25 (100%) | 25 (100%) | 75 (100%) |

Table 5 shows the farmers' response to the quality of the superior seeds that were distributed, which overall agreed. This indicates that the quality of seeds in the field is good enough for farmers although there are a small number of farmers who feel they still disagree.
3.5. Seeds distribution time
The distribution of soybean seed aid was carried out at different times from the three study sites. The distribution of aid seeds was carried out in August in Kajolaliddong Village, May in Kel. WattangSalo, and July in Ex. Beheaded. The farmers' responses regarding the time of seed distribution can be seen in table 6.

Table 6. Farmer's response/response on the time of distribution of superior seeds distributed in the Special Efforts Program (UPSUS) in Kajaolaliddong Village, Barebbo District, Bone Regency, AttangSalo Village, Marioriawa District, Soppeng Regency, and Tancung Village, Tanasitolo District, Wajo District, 2017.

| Interval score | Bone Regency (Tani To Cinae Group) | Soppeng Regency (Ale Farmer Group) | Wajo Regency (Sipakatu Farmer Group) | Total respondents (people) | Percentage (%) |
|----------------|-------------------------------------|-------------------------------------|--------------------------------------|---------------------------|---------------|
| Strongly Disagree | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Disagree | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Agree Less | 21 | 84 | 0 | 0 | 24 | 96 | 45 | 60 |
| Agree | 4 | 16 | 23 | 92 | 1 | 4 | 28 | 37 |
| Strongly agree | 0 | 0 | 2 | 8 | 0 | 0 | 2 | 3 |
| Total | 25 | 100 | 25 | 100 | 25 | 100 | 75 | 100 |

Table 6 shows the response of farmers to the distribution of superior seeds as a whole does not agree with the number of respondents as many as 45 respondents with a percentage of 60%. This shows that the seeds distributed are still not on time.

3.6. Place
The place referred to in this case is a place that keeps the rice seeds always in an easily accessible place and the right amount for farmers. The place for distribution of seeds given to each farmer group is in the house of the farmer group leader. The response of farmers regarding the distribution of seeds can be seen in table 7.

Table 7. Farmers' response/response to the distribution of superior seeds distributed in the Special Efforts Program (UPSUS) in Kajaolaliddong Village, Barebbo District, Bone Regency, Attang Salo Village, Marioriawa District, Soppeng Regency, and Tancung Village, Tanasitolo District, Wajo District, 2017.

| Number of respondents (people) | Percentage (%) | Number of respondents (people) | Percentage (%) | Number of respondents (people) | Percentage (%) | Number of respondents (people) | Percentage (%) |
|-------------------------------|----------------|-------------------------------|----------------|-------------------------------|----------------|-------------------------------|----------------|
| Strongly disagree | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Disagree | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Agree less | 0 | 0 | 0 | 0 | 3 | 12 | 3 | 4 |
| Agree | 4 | 16 | 0 | 0 | 20 | 80 | 24 | 32 |
| Strongly agree | 21 | 84 | 25 | 100 | 2 | 8 | 48 | 64 |
| Total | 25 | 100 | 25 | 100 | 25 | 100 | 75 | 100 |
Table 7 shows the response of farmers to the distribution of superior seeds as a whole strongly agree with the percentage of 64% of 48 respondents. That is because the distribution of seeds is distributed directly to the residence of the head of the farmer group who is not far from where each member of the farmer group lives so that farmers can easily reach it.

4. Conclusion
Farmers' responses to the implementation of the Pajale Special Efforts Program (UPSUS) were categorized as satisfying (43%). Through this program, farmers feel that they are helped by the assistance of superior seeds received because they can reduce the production costs that must be incurred. Also, seed assistance received motivates farmers to cultivate agricultural land because of the hope for better production.

References
[1] Badan Ketahanan Pangan 2015 Pedoman Database Ketahanan Pangan (Jakarta: Badan Ketahanan Pangan Kementrian Pertanian)
[2] Rahardjo P 2012 Berkebun Kopi (Penebar Swadaya)
[3] Nurhayati 2008 Studi perbandingan metode sampling antara simple random dengan stratified random J. Basis Data 3
[4] Johnston J and DiNARDO J 1997 Econometric Methods, Fourth Edition (Singapore: McGraw-Hill Book Co)
[5] Arikunto S 2008 Metodologi Penelitian (Yogyakarta: Bina Aksara)