Performance effectiveness of gapoktan pottana'e in Tajong Village, Tellu Siattinge District, Bone Regency

Rahmadanih1, E B Demmallino1, N Lanuhi1, Saadah1, M Fahmid1, Aswar1, and A Nurmas2

1Agribusiness Study Program, Faculty of Agriculture, Hasanuddin University, Makassar
2Department of Agrotechnology, Consentration on Agronomy, Faculty of Agriculture, Halu Oleo Univesity

E-mail: rahmadani.sosek@yahoo.com

Abstract. Farmer's organizations play an important role in the development of the agricultural sector in Indonesia to become a medium for solving agricultural problems. Empowerment of farmers and small businesses in rural areas by the government almost always uses a group approach. One of the fundamental weaknesses is the failure of group development because it is not done through a mature social process. This study aims to analyze the effectiveness of Gapoktan organizational performance based on the achievement of Gapoktan functions. This study used a quantitative method with the research location of Gapoktan Pottanae, Tajong Village, Tellu Siattinge District, Bone Regency, South Sulawesi. The results of the study concluded that the level of effectiveness of the Gapoktan Pottanae performance based on member responses was only 17.20%. It can be concluded that the implementation of the performance of the Gapoktan Pottanae in Tajong Village is not effective. This Gapoktan has not been able to meet the needs of members, both for the needs of agricultural machine tools and member farm capital, the guarantee of quantity, quality and continuity of results, has not been able to add value to products from member processing, there is no market guarantee and has not even been able to create independent farming for member farmers.

1. Introduction
Farmer's organizations play an important role in the development of the agricultural sector in Indonesia to become a medium for solving agricultural problems. In addition, farmer organizations can strengthen farmers to unite and work together for the good of fellow farmers (positive sum game) and not the other way around to bring down each other (zero sum game) and become weak in front of
big capital companies and modern markets. In fact, farmer institutions can further encourage farmers to work together with large companies and modern markets for better mutual cooperation.

The farmer organization at the smallest scale is the farmer group. On a wider scale, farmers in one village form a Farmer Group Association (Gapoktan), which is a combination of several farmer groups in the village. Gapoktan is an institution that is able to encourage motivation and participation of farmers to continue to maintain the spirit of agriculture in line with the development and innovation of agricultural technology and solve existing problems together. Gapoktan institutions also have an impact on increasing farmer's independence in farming techniques, increasing farmer welfare and agricultural sustainability [1].

Gapoktan is characterized as a socio-economic organization because its main objective is to increase economies of scale and business efficiency. Gapoktan is a gateway institution that connects farmers in one village with other institutions outside it. Gapoktan is expected to play a role in the fulfillment of agricultural capital, fulfillment of production facilities, marketing of agricultural products, and providing various information needed by farmers [2].

Strengthening farmer institutions is needed in the context of protecting and empowering farmers. Therefore, farmers can develop institutions from, by, and for farmers in order to strengthen and fight for the interests of the farmers themselves according to the combination of culture, norms, values and local wisdom of farmers and can utilize and cultivate all potential resources available.

Empowerment of farmers and small businesses in rural areas by the government almost always uses a group approach. One of the fundamental weaknesses is the failure of group development, because it is not done through a mature social process. The groups that were formed were seen only as a tool for completing the project, not as a forum for essential community empowerment. The introduction of institutions from outside does not pay attention to the existing local institutional structures and networks, as well as the ongoing economic, social and cultural characteristics. A top-down planning approach causes public participation to not grow [3].

The need to evaluate the effectiveness of Gapoktan performance can be a measure of success in achieving predetermined goals. Effectiveness is a measure of the completion of a particular job within an organization in achieving its goals, whether a job is successful or not. Here effectiveness is defined as a measure of the completion of a job [4]. The criteria for measuring the effectiveness lies in the extent to which the function of the group itself is carried out in accordance with the measurement of productivity, efficiency, and other benefits of group members. [5]. Indicators for measuring the performance of Gapoktan, namely as a unit for providing facilities and infrastructure for production, farming units, marketing units, microfinance business units, and processing business units [6].

South Sulawesi has a total of 2,597 Gapoktan with 354,998 members. Meanwhile, the district with the highest number of Gapoktan is in Bone Regency with 345 Gapoktan. Gapoktan Pottana’e is one of the gapoktan in Bone Regency which has been established for a long time but has not had a big influence on agricultural progress, especially in Tajong Village, Tellu Siattinge District, Bone Regency. Based on this, this study aims to analyze the effectiveness of the organizational performance of the Gapoktan Pottanae organization in Tajong Village, Tellu Siattinge District, Bone Regency.

2. Research methods
This research was conducted at Gapoktan Pottana’e, Tajong Village, Tellu Siattinge District, Bone Regency, South Sulawesi Province from February to May 2018. The population in this study were farmers who were members of the Gapoktan Pottana’e in Tajong Village as many as 525 members.
The samples were determined using simple random sampling technique. The number of samples taken was 50 informants who are members of the group who are members of the Gapoktan Pottanae.

The effectiveness of the Pottanae Gapoktan organization will be analyzed using a quantitative approach based on member responses using a weighted average calculation with a Likert scale. The Likert scale used is a Likert scale with 4 categories, namely strongly disagree (weight 1), disagree (weight 2), agree (weight 3), strongly agree (weight 4). Each sample answer obtained, starting from category 1 to category 4, is given a weight. The way to calculate the weighted average is to add up the product of the weight multiplied by the frequency divided by the total frequency [7].

The initial step taken was to calculate the average weight. After knowing the results, the scale range will be determined to determine the position of the sample response. The formula used to calculate the average weight is as follows.

\[ \bar{x} = \frac{\sum f_i \cdot w_i}{w_i} \]

information:
\[ \bar{x} = \text{Weighted average} \]
\[ f_i = \text{Frequency} \]
\[ w_i = \text{Weight} \]

After the weighted average results are obtained, the range of the research scale will be determined to determine the position of the sample responses. The scale range is calculated using the following formula.

\[ R_s = \frac{R(\text{Weight})}{M} \]

information:
\[ R_s = \text{Scale range} \]
\[ R = \text{Largest weight - the smallest weight} \]
\[ M = \text{The number of weighting categories} \]

| Category                              | Scare range          |
|---------------------------------------|----------------------|
| Strongly disagree (Very imprecise)    | The average is weighted 1.00 - 1.75 |
| Disagree (Inaccurate)                 | The average is weighted 1.76 - 2.50 |
| Agree (Exactly)                       | The average is weighted 2.51 - 3.25 |
| Strongly Agree (Very Precisely)       | The average is weighted 3.26 - 4.00 |

### 3. Results and discussion

Indicators in assessing the effectiveness of Gapoktan Pottana'e performance are based on the results of the achievement of the 5 functions of the Gapoktan, namely as a supply unit for production inputs, as a farming unit, as a processing unit, as a marketing unit as well as a microeconomic unit.

#### 3.1. The performance of Gapoktan as a unit for providing facilities and infrastructure

The performance of Gapoktan as a supply input unit can be analyzed based on the response of members in fulfilling the needs for fertilizer input, certified seeds, pesticides, and agricultural machinery from the results of the implementation of the Gapoktan function as a unit providing agricultural production facilities and infrastructure. The performance assessment of Gapoktan in
fulfilling the input production of fertilizers, certified seeds, pesticides and agricultural machinery for members can be seen in Table 2.

**Table 2.** The performance of Gapoktan Pottana’e in fulfilling the needs of production in Tajong Village, Tellu Siattinge District, Bone Regency, 2018.

| Category          | Weight | Frequency | Percentage |
|-------------------|--------|-----------|------------|
| Strongly disagree | 1      | 5         | 10%        |
| Disagree          | 2      | 24        | 48%        |
| Agree             | 3      | 19        | 38%        |
| Strongly Agree    | 4      | 2         | 4%         |
| **Total sample**  |        | 50 peoples| 100%       |

The weighted averages for the Gapoktan indicator in meeting the needs of fertilizer inputs, certified seeds, pesticides, and agricultural machinery for members are:

$$\bar{x} = \frac{|1 \times 5| + |2 \times 24| + |3 \times 19| + |4 \times 2|}{50}$$

$$\bar{x} = 1.76$$

The weighted average indicators for the fulfillment of input production requirements for fertilizers, certified seeds, pesticides, and agricultural machinery for members obtained are 1.76. This value is within the scale range $1.75 < \bar{x} \leq 2.50$ so it can be indicated that the fulfillment of the input production needs of fertilizers, certified seeds, pesticides, and agricultural machinery for members has not been effective.

The role of Gapoktan as a supply unit for agricultural inputs regarding the response of members to the provision of pesticides, all members previously agreed that there was no type of pesticide prepared by Gapoktan to members, as well as regarding the provision of agricultural equipment and machinery, so most of them chose to strongly disagree or disagree in assessing the performance of Gapoktan as meeting the needs of members.

### 3.2. The performance of gapoktan as a farming unit

The performance of Gapoktan as a farming unit can be analyzed based on the description of the implementation of its function as a farming unit, including the coordination of the planting plan for each member according to the land capacity and human resources of member farmers, the neat recording of each member farmer and the application of SOP (Standard Operational Procedure) for cultivation by each member farmer so as to create a guarantee of quantity, quality, and continuity of agricultural products for members. The performance assessment of Gapoktan in maintaining the quantity, quality and quality of member agricultural products can be seen in Table 3.

**Table 3.** Performance of gapoktan pottana’e as a farming unit in Tajong Village, Tellu Siattinge District, Bone Regency, 2018.

| Category          | Weight | Frequency | Percentage |
|-------------------|--------|-----------|------------|
| Strongly disagree | 1      | 13        | 26%        |
| Disagree          | 2      | 31        | 62%        |
| Agree             | 3      | 6         | 12%        |
The weighted average for the Gapoktan indicator in guaranteeing the quantity, quality, and continuity of members' agricultural products to members, namely:

$$\bar{x} = \frac{1 \times 13 + 2 \times 31 + 3 \times 6 + 4 \times 0}{50}$$

$$\bar{x} = 1.86$$

The weighted average for the Gapoktan indicator in guaranteeing the quantity, quality, and continuity of members' agricultural products is 1.86. This value is within the scale range $1.75 < \bar{x} \leq 2.50$ so it can be indicated that Gapoktan in providing assurance of quantity, quality, and continuity of agricultural products to members has not been effective.

So it can be seen that there is no guarantee of quantity, quality and continuity of results from member farmers for the role of Gapoktan, so it can be concluded that the implementation of the Gapoktan Pottanae function as a processing farm unit has not been effective.

### 3.3. Gapoktan performance as processing business unit

The performance of Gapoktan as a farming unit can be analyzed based on the response of members to the indicator whether members have felt the added value of products from their agricultural products or not. The response of members to the existence of Gapoktan as a value addedmember agricultural products can be seen in table 4.

**Table 4. Performance of gapoktan pottana’e as processing business unit in Tajong Village, Tellu Siattinge District, Bone Regency, 2018.**

| Category            | Weight | Frequency | Percentage |
|---------------------|--------|-----------|------------|
| Strongly disagree   | 1      | 19        | 38%        |
| Disagree            | 2      | 27        | 54%        |
| Agree               | 3      | 4         | 8%         |
| Strongly Agree      | 4      | 0         | 0%         |
| **Total sample**    |        | **50**    | **100%**   |

The weighted average for the Gapoktan indicator as a value-adding to member agricultural products, namely:

$$\bar{x} = \frac{1 \times 19 + 2 \times 27 + 3 \times 4 + 4 \times 0}{50}$$

$$\bar{x} = 1.70$$
The weighted average for the Gapoktan indicator as an added value of agricultural products to members is 1.70. This value is in the scale range ≤ 1.75 so it can be indicated that Gapoktan as an added value of agricultural products to members is not yet effective.

So far in its application, Gapoktan as a member agricultural product processing unit has not been able to realize programs that can increase the value of products from member farmers' agricultural products, so that Gapoktan Pottana'e as a member agricultural product processing unit can also be categorized as ineffective.

3.4. Gapoktan performance as a marketing unit
The performance of Gapoktan as a farming unit can be analyzed based on the achievement of Gapoktan in creating independent farming for members. The response of members to the implementation of Gapoktan as a marketing unit can be seen in Table 5.

| Category          | Weight | Frequency | Percentage |
|-------------------|--------|-----------|------------|
| Strongly disagree | 1      | 27        | 54%        |
| Disagree          | 2      | 21        | 42%        |
| Agree             | 3      | 2         | 4%         |
| Strongly Agree    | 4      | 0         | 0%         |
| **Total sample**  |        | **50**    | **100%**   |

The weighted average for the Gapoktan indicator as a marketing unit for member agricultural products, namely:

\[
\bar{x} = \frac{1 \times 27 + 2 \times 21 + 3 \times 2 + 4 \times 0}{50} = 1.50
\]

The weighted average for the Gapoktan indicator in creating independent farming for members is 1.50. This value is in the scale range ≤ 1.75 so it can be indicated that Gapoktan in creating independent farming for members has not been effective.

3.5. Gapoktan performance as microfinance business unit
The performance of Gapoktan as a farming unit can be analyzed based on member responses to the achievement of Gapoktan in fulfilling the capital aspect for members. The performance evaluation of members on the implementation of Gapoktan in fulfilling the aspects of member capital can be seen in Table 6.

| Category          | Weight | Frequency | Percentage |
|-------------------|--------|-----------|------------|
| Strongly disagree | 1      | 11        | 22%        |
| Disagree          | 2      | 29        | 58%        |
| Agree             | 3      | 10        | 20%        |
| Strongly agree    | 4      | 0         | 0%         |

Table 6. The performance of Gapoktan Pottana'e as a micro finance business unit in Tajong Village, Tellu Siattinge District, Bone Regency, 2018.
The weighted average indicator for Gapoktan as a member of member microfinance business units is:
\[ \bar{x} = \frac{1 \times 11 + 2 \times 29 + 3 \times 10 + 4 \times 0}{50} \]
\[ \bar{x} = 1.98 \]

The weighted average for the Gapoktan indicator in fulfilling the aspect of member capital is 1.98. This value is within the scale range 1.75 < \( \bar{x} \) ≤ 2.50 so it can be indicated that Gapoktan in fulfilling the capital aspect of members has not been effective.

3.6. Recapitulation of respondent’s answers in each indicator

Overall, the recapitulation and analysis of research results on each indicator of effectiveness in this study are as follows:
\[ \bar{x}_e = \frac{\text{infrastructure} + \text{productio} + \text{marketing} + \text{processing} + \text{microfinance}}{5} \]
\[ \bar{x}_e = 1.76 \]

The weighted average for the effectiveness obtained was 1.76. These weighted average scores are within the range of the scale 1.75 < \( \bar{x}_e \) ≤ 2.50 so it can be concluded that the overall response of members to the performance of Gapoktan in carrying out its function strongly disagrees if the performance of Gapoktan is said to be effective, or in other words that according to the members’ response to the performance of Gapoktan Pottanae is not effective. The recapitulation of the percentage of effectiveness can be seen in Table 7.

Table 7. Recapitulation of sample percentage in Tajong Village, Tellu Siattinge District, Bone Regency, 2018.

| Effectiveness indicator                                      | Sample answer response | Total percentage |
|-------------------------------------------------------------|------------------------|------------------|
| Fulfillment of infrastructure                               | Agree: 19 (38.00%)     | 23 (42.00%)      |
| Guarantee of quantity, quality and Continuity of results    | Strongly agree: 2 (4.00%) | 6 (12.00%)      |
| Creating independent farming                                |                         | 2 (4.00%)        |
| Product value added                                         |                         | 4 (8.00%)        |
| Fulfillment of capital aspects                              |                         | 10 (20.00%)      |
| **Total**                                                   | **41 (82.00%)**         | **45 (86.00%)**  |

The level of effectiveness of the Gapoktan Pottanae organization, Tajong Village, Tellu Siattinge District, Bone Regency is as follows:

\[ \text{Effectiveness} = \frac{86.00}{5} \times 100\% \]
Effectiveness = 17.20 %

Based on this, it can be concluded that the level of effectiveness of the organizational performance of the Pottanae Farmer Group, Tajong Village, Tellu Siattinge District, Bone Regency is very low, only reaching 17.20% of the implementation achievement. This indicates that the performance of the Gapoktan Pottanae, Tajong Village, Tellu Siattinge District is still ineffective. Gapoktan Pottanae has not been able to provide facilities and infrastructure, farming units, processing business units, marketing units and microfinance business units for its members.

4. Conclusion

The level of effectiveness of the Gapoktan Pottanae performance based on member responses was 17.20% which was classified as ineffective. This Gapoktan has not been able to meet the needs of members, both the need for agricultural machine tools and members' farm capital, guaranteed quantity, quality and continuity of results, has not been able to add value to products from member processing, has no market guarantee, and has not even been able to create independent farming for member farmers.

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