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Community Empowerment Through Feed Optimization for Kampung Unggul Balitnak (KUB) Chickens in the Talago Makmur Farmer Women's Group

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ABSTRACT

This community service activity aims to optimize the business activities of the Talago Makmur farmer women's group in the Kampung Unggul Balitnak (KUB) Chicken Farming Business. This activity focuses on increasing understanding through optimizing the use of local feed, providing probiotics, and managing maintenance and cultivation. This activity is designed to combine counseling, training, practical demonstrations, monitoring, and evaluation, thereby increasing the percentage of farmers who understand the material. The counseling materials provided include knowledge of feed, ration preparation, and probiotic administration. Feedback from the activity was measured based on questionnaire data to assess the level of knowledge and understanding of group members who participated in the community service activity. The results of this community service activity indicate that the counseling has been carried out effectively, improving farmers' knowledge and practical skills in ration formulation. A new approach focused on optimizing the use of local feed and probiotics was implemented to encourage community empowerment. Twenty group members attended this activity. Activities carried out include counseling sessions, ration preparation training, discussions, data collection from questionnaires, and distribution of assistance for laying hens and feed. Based on the evaluation results, farmers' understanding showed an estimated average increase of around 30% after participating in the counseling and training activities. The conclusion of this community service activity is an increase in understanding of the use of local feed and probiotics, as well as the development of skills among members of the Talago Makmur farmer women's group through the practice of making rations to optimize KUB chicken rations.

Keywords: Farmer Women Group, Talago Makmur, KUB chicken, probiotics, local feed

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INTRODUCTION

Kampung Unggul Balitnak (KUB) chicken farming has recently emerged as a promising business opportunity for rural communities; however, it faces several production challenges, including suboptimal management practices and high feed costs, which impact profitability. One potential solution is to utilize locally available feed resources to improve cost efficiency without compromising nutritional quality. Furthermore, the use of probiotics to enhance poultry production has been shown to improve overall livestock performance and health. This innovative approach offers a solution for increasing livestock productivity. These strategies are crucial for empowering farmer groups and ensuring the sustainability of KUB poultry farming in rural areas. Community service activities are one form of the Tri Dharma of Higher Education to assist rural communities. These activities aim to transfer knowledge and technology to the community (Wilson et al., 2010). This activity serves as a bridge between universities and community groups, regardless of their economic productivity. Through community service activities, it is hoped that they can help provide solutions to community problems. One of the problems identified is the business of raising Kampung Unggul Balitnak (KUB) chickens, which is managed by the Talago Makmur farmer women's group.

The Talago Makmur Women Farmers Group (KWT) is located in Korong Talagondan, Kurai Taji Village, Nan Sabaris District, Padang Pariaman Regency, Indonesia. This group was established in 2016, in accordance with the Decree of Wali Nagari Kurai Taji Number 20/KEP/NKT/2016. Furthermore, in 2024, group membership will be revitalized in accordance with the Decree of Wali Nagari Kurai Taji Number 15/KEP/KT/2024. The group was chaired by Rudhiyat Eharpi, assisted by the secretary, treasurer, production section, and group members, comprising a total of 20 people.

Currently, the KWT Talago Makmur group operates a KUB (Kampung Unggul Balitnak) chicken farming business. The beginning of this group raising KUB chickens coincided with the receipt of assistance from the local government in the 2023-2024 fiscal year. The pattern of chicken rearing is carried out semi-intensively by group members, but is not optimal. The production of poultry raised semi-intensively will be lower than that of intensively (Sanka & Mbaga, 2014). KUB chickens are kept in cages and sometimes reared in pasture. This group faces challenges related to maintenance and high feed prices, resulting in unmet production targets. One solution is to optimize the use of local feed and probiotics. Probiotic administration can improve growth performance and profitability (Andriani et al., 2020).

Based on the description above, the main problems faced by the Talago Makmur Farmers Women's Group are suboptimal semi-intensive management of KUB chickens, high feed costs, and limited knowledge about the use of local feed for ration formulation and probiotic application, resulting in low productivity and unmet production targets. Therefore, this community service activity aims to address these challenges by enhancing farmers' knowledge and skills through counseling and training, introducing ration formulation techniques that utilize local feed sources and probiotics, and empowering groups to optimize KUB chicken production for sustainable economic growth.

METHOD

The community service activity took place on 19 September 2025, at the Talago Makmur Farmers Women Group (KWT), located in Korong Talagondan, Kurai Taji Village, Nan Sabaris District, Padang Pariaman Regency, Indonesia. Participants consist of 20 group members. The method of implementing the activity consists of several stages, which are as follows:

1. Counseling Methods

The counseling methods were conducted after gathering information from partner breeders to analyze material needs and understand what breeders needed to be conveyed by the team. Furthermore, the team held FGDs and meetings to discuss what material would be delivered and appointed/assigned team members/experts to provide the material to the group members.

2. Training and Practical Demonstration

The activity continued with training and a practical demonstration on maintenance management, as well as the preparation of KUB chicken rations according to the maintenance period. The method used is Direct Practice, which involves the application of technology transfer (utilizing probiotics and local feed ingredients) directly practiced and applied to partner farmers, allowing them to implement the training materials provided directly. The method of preparing the rations provided is a trial-and-error approach, utilizing existing local feed ingredients to reduce ration costs without compromising livestock performance or production. Additionally, the application of probiotics is employed to support health and promote livestock growth.

3. Assistance Provided

This activity involves assisting in supporting the productivity and sustainability of the KUB chicken farming business, which the group manages. The assistance provided consisted of livestock and feed, as well as ration preparation equipment.

4. Monitoring and Evaluation Procedures

The next activity is to monitor and evaluate the grooming pattern to assess the sustainability of the training materials provided. This activity also evaluates the understanding and success of the practices given by farmers during service activities.

5. Data Collection and Analysis

This activity is a stage in the evaluation of the questionnaire distributed and completed by farmers. Data analysis was conducted on the questionnaire, and the data were processed descriptively using descriptive statistics to describe the obtained data without making generalizations.

RESULTS AND DISCUSSION

Rural communities face challenges in raising KUB chickens, primarily related to suboptimal management and high feed costs. This contributes to reduced productivity and profitability. Utilizing local feed resources offers a solution to improve cost efficiency, while the application of probiotics has been shown to improve poultry growth performance, feed conversion, and overall health. This community service activity aims to improve farmers' knowledge and skills through counseling and hands-on training, highlighting the benefits of local feed and probiotics in ration formulation. This innovation has implications for sustainability and stability, enabling farmer groups to achieve more economical and environmentally friendly feed costs, supporting long-term economic and environmental sustainability.

The stages of implementing activities begin with identifying problems within the partner group. The problems faced by the group are the high price of commercial feed and a lack of knowledge in managing KUB chicken rearing. Many members of the group struggle to reduce feed costs, which has hindered the optimal development of their livestock business. After identifying the problem, a program was prepared to address it, namely by introducing the use of local feed and natural probiotics, thereby making the KUB chicken business more efficient and sustainable. This community service activity focuses on efforts to increase the knowledge and skills of group members in raising Kampung Unggul Balitnak (KUB) chickens. The details of the service activities that have been carried out are:

1. Counseling Activities

At this stage, the goal is to conduct counseling activities by imparting knowledge to group members. During the counseling session, the team provided information on KUB chicken rearing management, including the preparation of rations based on local ingredients such as rice bran, ground corn, and maggot, as well as the use of Waretha probiotics — the result of a patented research innovation from Universitas Andalas. This activity was also interspersed with discussions, questions, and answers.

Technology transfer in this activity involves the application of Waretha probiotics in chicken feed, which has been proven to improve feed efficiency, maintain poultry health, and reduce the need for antibiotics (Wizna et al., 2013, 2022). Regular administration of probiotics contributes to healthier and more productive chickens, while also improving environmental hygiene by reducing odor in cages. In parallel, the utilization of local feed ingredients for KUB chickens significantly reduces ration costs (Prasetyo et al., 2021), especially when combined with fermentation techniques using Waretha probiotics for products such as azolla, shrimp waste, indigofera, and rice bran (Mirzah, 2008; Mirzah et al., 2023). These findings align with prior research emphasizing the role of feed innovation and probiotic supplementation in poultry feeding strategies, which not only enhance production performance but also support community empowerment through cost efficiency and sustainable practices. The adoption of these technologies demonstrates the scalability potential for rural farmer groups, reinforcing their capacity for long-term economic improvement.



Figure 1. Counseling activities accompanied by discussions, questions, and answers

2. Training and Practical Demonstration

At this stage, training focuses on preparing rations, which team members and group members directly practice. The method of feeding rations given is trial and error. The preparation of rations starts from determining the protein and energy needs of KUB chickens during the egg-laying period. Furthermore, determine the feed ingredients

required for preparing rations, along with their nutritional content. After the calculation and preparation of the rations were completed, the mixing of the rations followed. The practice of mixing rations begins with adding the least ingredients, then mixing with more ingredients.



Figure 2. Practice of preparing rations and applying waretha probiotics into rations

3. Assistance Provided

The service team assisted in rejuvenating 25 KUB layers, along with several feeds. The provision of this assistance aims to increase the productivity of group livestock, as many hens owned by the group are nearing the end of their reproductive period. With broodstock rejuvenation, it is hoped that productivity will increase again. In addition, assistance was also provided for feed processing equipment, as well as Waretha probiotics, to support the sustainability of the group's business. The assistance is expected to replace broodstock that is no longer productive, thereby increasing egg and chicken meat production.



Figure 3. Handover of chicken brood assistance

4. Monitoring and evaluation activities

Monitoring and evaluation activities were conducted for all group members to assess the effectiveness of the interventions. Monitoring involved collecting data from ongoing activities and evaluating their impact (Nweke, 2021). The Chairman of KWT Talago Makmur, Rudhiyat Eharpi, expressed gratitude to the Universitas Andalas team for the assistance provided, noting that prior to the training, livestock management was based solely on experience and intuition. After participating in the program, the group demonstrated improved knowledge and skills, particularly in preparing their own feed using locally available ingredients, which contributed to reducing feed costs. However,

several challenges emerged during implementation, such as initial hesitation in adopting new practices and limited availability of specific local feed resources. Despite these challenges, local feed formulations were successfully applied in practice, and behavioral changes were observed, including increased confidence in ration preparation and greater willingness to adopt probiotics. Economically, the group reported a reduction in feed expenses and improved growth performance of KUB chickens, indicating positive implications for sustainability and scalability within rural farming communities.

5. Data Collection and Analysis

According to the evaluation results of the questionnaires completed by farmers, it was found that their understanding had increased. The results of completing the questionnaire are presented in the following table.

Table 1. Number of questionnaires for the Talago Makmur Farmers Women Group evaluation

Information	Total
Questionnaires shared	20
Unfilled questionnaire	2
A questionnaire that is filled out and can be analyzed	18

Source: primary data 2025

Table 2. Age of respondents for Talago Makmur Farmers Women Group

Age (years)	Sum	Percentage (%)
20-30	2	11,1
30-40	3	16,7
40-50	5	27,8
>50	8	44,4
Total	18	100

Source: primary data 2025

Table 3. Respondent's last education for Talago Makmur Farmers Women Group

Information	Sum	Percentage (%)
SD (elementary school)	0	0
SMP (junior high school)	2	11,1
SMA (high school)	15	83,3
PT/S1 (higher education)	1	5,6
Total	18	100

Source: primary data 2025

Table 4. Descriptive analysis of respondents' answers by Talago Makmur Farmers Group

No	Questionnaire	Answer			
		Yes	%	No	%
1	Do you know about chicken farming?	18	100	0	0
2	Do you have any experience in raising chickens?	18	100	0	0
3	Do you know what the feed ingredients are for chicken?	17	94,4	1	5,6

4	Do you know the difference between a rooster and a female?	18	100	0	0
5	Do you know what factors affect chicken production?	12	66,7	6	33,3
6	Do you know the nutritional needs of chickens for each period of rearing?	9	50	9	50
7	Do you know what factors affect the sustainability of chicken farming?	6	33,3	12	66,7
8	Do you know how to manage chickens?	12	66,7	6	33,3
9	Do you know the benefits of raising chickens?	18	100	0	0
10	Do you have a desire to raise chickens?	16	88,9	2	11,1
11	Have you been using commercial feed?	14	77,8	4	22,2

Source: primary data 2025

The 18 farmers who completed the questionnaire were the respondents. Two people did not complete the questionnaire and arrived late, and therefore did not participate fully in the activity. The results of descriptive statistical analysis showed that the age of the respondents was the highest, namely >50 years (8 people) or 44.5%, followed successively by respondents aged 40-50 (5 people/27.8%), 30-40 (3 people/16.7%), and 20-30 (2 people/11.1%). With the most recent education, namely high school, with 15 people (83.3%), followed by junior high school, with two people (11.1%), and higher education, with one person (5.6%). Regarding breeder knowledge, in general, breeders possess basic knowledge about chicken livestock, its uses, and the feed provided to them. Based on the evaluation results, farmers' understanding showed an estimated average improvement of 30% after participating in the counseling and training activities. However, their understanding of nutritional needs, maintenance management, and the sustainability of the chicken farming business is relatively limited. According to Amam & Harsita (2019), the three pillars that determine the success of a livestock business are feed, seeds, and management. These three factors are necessary, interrelated, and in line. To improve the cultivation of farmers regarding the success of their livestock business, one approach is through counseling and training activities. The results of activities by Amizar et al. (2019) and Amizar et al. (2022) indicate that socialization and counseling can enhance farmers' knowledge. Meanwhile, the continuous use of commercial feed ingredients will result in high feed costs if not accompanied by the use of local feed and increased production (Masir et al., 2022).

CONCLUSION

This community service activity can be concluded that the activity has been successfully implemented, with an increased understanding of feed formulation and probiotic use, as well as an increase in practical skills among members of the Talago Makmur Women's Farmers Group through direct ration preparation, which optimizes KUB chicken production. The questionnaire results showed that farmers' understanding increased by an estimated average of around 30% after participating in counseling and training activities. Although farmers generally have basic knowledge about poultry, further improvements are needed in nutritional management, husbandry practices, and business sustainability. From this activity, it is evident that the use of local feed and probiotics can reduce costs and increase productivity, as well as highlight the importance of structured training for skills development. The implications of this activity suggest that the strategy can significantly enhance rural poultry development by improving production cost

efficiency and animal health. Recommendations for scale-up include replicating this model in other farmer groups, integrating local feed resources with probiotic use, and fostering partnerships between universities and rural communities. For future evaluation, it is recommended that structured and planned studies be conducted to measure the economic impact, behavioral changes, and sustainability outcomes of the program.

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