

Trialled IndoDairy Focus Farms as An Extension Approach for Smallholder Dairy Farmers in West Java Province, Indonesia

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ABSTRACT

This paper details how the IndoDairy Project fostered a sense of community and shared learning by trialling a Focus Farm as a new extension approach. The selection process was collaborative, with two farmers successfully passing the rigorous processes. These processes included an interview on their motivation, verification through a farm visit, assessment by comparing the strengths and weaknesses among all candidates, and confirmation on the agreement as a chosen focus farmer. The chosen farmers also had the opportunity to select their own Support Farmers group, which comprised around 3-5 people. The Project Team, a key facilitator in the trial, recommended experts as the Advisory Group, who were selected adjustably based on their expertise to support the implementation of technology interventions. In total, there were ten farmers and seven advisors involved. The Focus Farm had six monthly meetings to monitor and update the farm condition and then discuss what works well and what needs improvement. The project facilitated farmers to trial planting high-quality forages and making silage from these forages. Moreover, the Project also facilitated laboratory analyses for samples of soil, forages, concentrates, and composts they used when planting the forages. Looking at the laboratory results, farmers learned about nutrition balance from local feed resources. Lastly, Open Day aimed to share experiences and lessons learned about being a Focus Farm with more farmers and stakeholders, such as farmer-to-farmer learning.

INTRODUCTION

Livestock farming represents a significant sub-sector of agriculture with substantial potential for development. However, efforts to expand livestock production have yet to meet domestic animal protein demands. Despite numerous technical interventions

to advance national livestock enterprises, this can be attributed to various weaknesses in livestock development systems (Dali et al., 2017). Enhancing livestock development can be achieved by implementing comprehensive strategies to boost livestock development through extension programs.

Empowering farmers necessitates extension agents capable of transmitting scientific knowledge via extension activities designed to increase their knowledge, willingness, and ability to manage their farming operations (Talibo et al., 2017).

Extension services play a crucial role in driving productivity improvements in small-scale dairy farming in Indonesia, mainly through farmer empowerment initiatives (Jatipermata & Purnomo, 2022). Extension programs are also an essential strategy for increasing the adoption of dairy cattle technologies, as reported in studies conducted in Yogyakarta, Central Java, and East Java (Nur et al., 2016). In West Java, farmers have expressed a high demand for extension services that provide access to information on feed technology, reproduction, milking practices, and farm record-keeping (Anugrah et al., 2021). Dynamic system modelling has demonstrated the necessity of extension services to enhance dairy farmers' knowledge and skills, particularly in achieving successful cow pregnancies (Priyono et al., 2023).

Another study proposed several strategies to increase innovation adoption: optimising resources, including human capital and external sources such as livestock, environment, and government (Nur et al., 2016). This study further explained that the role of government and service providers is, among other things, to provide clear and continuous information about innovations, facilitate access to information through increased dissemination activities, and

offer mentoring programs, extension services, and training accompanied by innovation demonstrations (Nur et al., 2016).

However, dairy cattle extension services still face various challenges, such as an imbalanced ratio of extension agents to farmers, a shortage of specialists in dairy cattle, budgetary constraints for developing extension materials and methods, and issues with effective communication to reach farmers. Currently, dairy cattle extension services largely depend on those provided by cooperatives to their members. Dairy cooperatives play a strategic role in many aspects, including guaranteeing milk markets, supplying production inputs, providing financing, processing milk and dairy products, offering technical services, and disseminating information through extension activities (Resti et al., 2017). Therefore, new strategies are needed for dairy cooperatives to provide extension services to their member farmers.

This paper aims to introduce the stages of implementing Focus Farms as an extension approach conducted in the IndoDairy project in West Java Province. The lessons learned from Focus Farms IndoDairy are expected to inspire cooperatives and livestock extension institutions to develop extension methods that can help farmers improve their livestock business performance. Focus Farms highlights the real experiences of a farmer in achieving the targets in the dairy business. The IndoDairy project is a research collaboration funded by the Australian Centre for International

Agricultural Research (ACIAR), aimed at strengthening management systems and marketing in Indonesian dairy farming, including improving farmers' livelihoods through guided technology implementation.

METHODS

This study employed a qualitative method in terms of observation and a series of Focus Group Discussions (FGD) to explore the trialling of an extension approach called "Focus Farm" within the IndoDairy Project. The qualitative method aimed at gaining an in-depth understanding of Focus Farmers' experiences, behaviours, and interactions with support farmers and advisory groups. The observation was conducted by the IndoDairy field extension worker (called Village Level Researcher or VLR), who was appointed to live on the site and interact with the Focus Farmers to observe any progress in the field. The FGDs aimed to share the progress since the previous meeting and discuss any problems encountered by the Focus Farmers, as well as seek advice from the Advisory Team. The Focus Farm approach highlights a farmer's real-life experiences in achieving their livestock business targets. It is believed that farmer-to-farmer technology extension is an effective strategy for improving technology adoption through a learning process from the lead farmers, in this case is the focus farmer (Takahashi et al., 2020).

Study Site

In 2019, two farmers in Tajur

Halang Village, Cijeruk, Bogor Regency, West Java, were selected as Focus Farms, with consideration given to their proximity for monitoring developmental progress by the Project Team based in Bogor City. Tajur Halang Village represents a rural area with significant potential in animal husbandry. Geographically, this village is situated at the edge of Mount Salak, with a topography varying from lowlands to hilly terrain. The abundance of natural resources, such as clean water and green land, makes Tajur Halang Village suitable for livestock business development. Cool climate and adequate rainfall also support the growth of forages, enabling livestock farming in this village to thrive.

Time

During the IndoDairy Project, the overall activities were conducted over one year. However, the recording activities, regular meetings, and discussions were carried out for eight months, from July 2019 to February 2020. Ideally, the learning duration should be two years to observe short-term changes that align with the Focus Farm's objectives. However, in this case, the Project was constrained by technical issues and the onset of the COVID-19 pandemic, which made it impossible to conduct face-to-face meetings.

Respondent Selection

First, the Project set up the criteria for selecting a suitable Focus Farmer. Then, the VLR, who lived in the site, announced to farmers through the leader of the farmer groups. Two criteria applied were (i) an innovator who has

the ambition to try and change things to improve productivity and profitability on the farm and (ii) keeping the commitment of being a Focus Farm who will share any information regarding farm management during the process of learning. After obtaining several names, four steps were followed up to select a suitable Focus Farmer, as explained further in Result and Discussion section.

Limitation of Study

The Focus Farm IndoDairy trial ideally runs for two years to observe the short-term changes in the farmers' goals. Additionally, this duration allows for the study of transferring knowledge and skills from Focus Farm farmers to support farmer groups. However, this study on trialling the pilot of Focus Farm IndoDairy was only effectively conducted for less than one year, as mentioned in this section.

RESULTS AND DISCUSSIONS

Selection Stages for Focus Farm

Trialling this approach prioritizes peer-to-peer learning among farmers, supported by guidance from a competent extension team to implement new practices more effectively in addressing business challenges. As explained below, several steps were taken to select IndoDairy Focus Farm farmers based on specific criteria.

The first step involved the IndoDairy Team identifying farmers with high commitment, innovative attitudes, and a desire to improve their dairy farm management. Farmer participation was voluntary. The

IndoDairy Team then offered and confirmed their willingness to undergo an interview process, field verification, assessment, and confirmation.

During the selection phase, the IndoDairy Team recorded ten individuals interested in becoming Focus Farm farmers. The established criteria included (1) having an innovative attitude, being willing and able to try and change farming methods to increase productivity and profitability, and (2) committing to becoming a Focus Farmer who would share information about their farm management during the learning process. At the end of the selection phase, the IndoDairy Team determined two suitable names according to the Focus Farm farmers' criteria: Mr. Ma'mur Komara and Mr. Muhammad Yunus. The Results and Discussion section explains their respective journeys as Focus Farm farmers. The IndoDairy Team conducted the interview process by considering the farmers' availability. Farmers needed to feel comfortable and ready to be interviewed, so the process was relaxed and unhurried. Therefore, the Team must allocate a full day to interview one farmer.

The next stage was field verification, which involved visiting the barns to check the condition of the cattle. At this stage, the verification team ensured all aspects of the questionnaire were addressed, thus aiding the assessment in the selection process. In addition to the farmers, family members and workers were also verified regarding their commitment if selected as Focus Farm farmers.

The assessment conducted by the IndoDairy Team involved comparing the strengths and weaknesses of candidates based on the criteria, interview results, and field verification. Comparison and ranking were used to select the two strongest candidates as Focus Farm farmers. These two candidates were then reconfirmed regarding their willingness to start activities in the Focus Farm program. The selection of two IndoDairy Focus Farm farmers was intended to compare large farmers with more than ten cows and small farmers with a population of 2 cows.

Determining Support Farmers and Advisory Groups

The first meeting involved selecting an advisory group and a supporting farmer group. The Support Farmers group consisted of 5-7 farmers chosen by the Focus Farm farmer to participate in regular. Additionally, the Project Team recommended that experts form an advisory group. These experts were selected based on their expertise relevant to the farmer's objectives to support the implementation of technological interventions at the Focus Farm. The experts regularly attended each meeting to provide knowledge and advice related to Focus Farm activities and to support participating farmers.

To ensure the effectiveness of discussions and learning, the total number of participants in regular Focus Farm meetings did not exceed 15 people, including support farmers and the advisory team. Regular meetings were held approximately once a month

or every two months at the selected farmer's location.

Technology Facilitation

The Focus Farm approach trial provided technological interventions in the form of demonstration plots on the Focus Farm farmer's land. What distinguished this from other extension approaches was that the technology selection occurred after several regular meetings identified a problem: the low quality of forage used as feed. Consequently, it was agreed to implement soil fertility treatments for planting high-quality forage seedlings.

Based on these findings, the IndoDairy Team facilitated several laboratory tests, including soil tests, proximate analysis of the forages currently fed to cattle, and quality tests of silage made from the planted forages. The team also assisted in procuring superior forage seedlings, an innovation of the Agricultural Research and Development Agency, Ministry of Agriculture, called "bioglass", an elephant grass mutant line (*Pennisetum purpureum Schumach.*). These were given to the two Focus Farm farmers. Additionally, the farmers provided their elephant grass seedlings (for Focus Farm Ma'mur) and dwarf elephant grass or "odot" (for Focus Farm Yunus) as quality comparisons.

After planting the superior forage seedlings, the Focus Farm farmers were also facilitated in making silage from these forages, including quality testing of the resulting silage. Thus, all involved farmers, not just the Focus Farm farmers but also the support farmers,

could learn directly about good soil quality for planting superior forages and study the quality of the forages and silage made from these planted forages.

In each regular meeting, laboratory test results were discussed with experts and explained in simple language so the farmers could understand them. These explanations were provided by the Advisory Group Team and IndoDairy field extension workers (called Village Level Researchers or VLR). The explanation is presented in the Results and Discussions section of this paper for each Focus Farm farmer to provide an overview of the characteristics of large (> 10 cows) and small (2 cows) farms. At the end of the intervention, an Open Day was held to share the experiences and lessons learned from the Focus Farms with more farmers and stakeholders, such as peer-to-peer learning among farmers.

Performance of Focus Farmers

The selection of two farmers in Tajur Halang Village for the IndoDairy Focus Farm project represented a significant opportunity for these two farmers and other farmers in the support group to receive guidance and improve the productivity and profitability of their dairy farming businesses.

The first Focus Farmer named Ma'mur Komara, who began his dairy farming business in 1999. The characteristics of milk quality (milk fat and protein) improved by the end of the Focus Farm activities, as shown in Table 1. Before participating in the Focus Farm activities in 2019, the average milk production per cow per day was 12

litres, with a milk fat content of 3.9% and a milk protein content of 3.2%. According to the Indonesia National Standardization, good quality milk should have a minimum fat content of 3.00% (Wasito, 2011); therefore, Ma'mur met this standard. However, the average daily milk production decreased to 10 litres per cow. This decrease was attributed to a sudden abortion event in cows at seven months of pregnancy, likely due to Brucellosis.

One of the causes of abortion in livestock is Brucellosis, which typically occurs between the 6th and 9th months of gestation (Yanti et al., 2021). The incidence of abortion in a livestock group depends on the severity of the infection, the resilience of the pregnant animals, the virulence of the organism, and other factors. The risk of this disease can increase if the cow has previously experienced an abortion during the 7-8 month or 4-6-month period of pregnancy (Yanti et al., 2021). A study in Bogor showed a relatively good level of awareness among farmers about the importance of Brucellosis vaccination. However, there is still room for improvement in the practices for controlling this disease (Kustiningsih et al., 2023). This pretty good awareness is reflected in the low incidence of abortion among dairy cows at the individual farm level, which is 5.10% (Yanti et al., 2021). The "One Health" strategy is believed to be a solution for tackling Brucellosis, especially in endemic areas (Dadar et al., 2021).

The second Focus Farmer was Muhammad Yunus, who inherited his dairy farming business from his parents in 1995, but the number of

Table 1. Characteristics of Two Focus Farms, February 2020

	Ma'mur's farm	Yunus's farm
Total cattle (heads)	36	2
Milking cows (heads)	11	1
Dry cows (heads)	4	1
Male calves < 1 year (heads)	10	n/a
Heifers (heads)	11	n/a
Average milk production (litre/day/head)	10	13
Milk fat content	4.3	4.3
Milk protein content	3.5	3.4
Milk price/litre	5000	5000
Farmer Group	Mandiri Sejahtera	Kania

Source: Primary Data (n/a : not available)

cows gradually decreased due to household needs, leading to many cows being sold or removed. The characteristics of the farm's conditions, including the number of livestock, milk production, and milk quality at the end of the Focus Farm activities, are presented in Table 1. In 2017, Yunus restarted his dairy farming business with the help of a pregnant cow from the Kania Livestock Group. The number of cows Yunus owned at the beginning and end of his participation as a Focus Farm farmer did not change significantly. Still, there was a notable success in the cows' pregnancy after experiencing repeated failures with artificial insemination (AI).

After participating in the Focus Farm IndoDairy program, the milk production of a lactating cow in Yunus's herd increased from an average of 10 litres per day to 13 litres per day (Table 5). This improvement resulted from introducing a supplemental feed consisting of soybean meal and molasses, a

concentrate with a high crude protein content (16%), administered over two months. This supplemental feeding aimed to enhance the cows' production and reproductive conditions, which had previously experienced three failed artificial insemination (AI) attempts. The common cause of AI failure is unobserved oestrus; however, farmers generally know oestrus signs, which helps reduce the number of services per conception, as observed in a study in Central Java (Wicaksono et al., 2018).

In Yunus's Focus Farm group, however, the farmers were unaware that another cause of AI failure could be related to the Body Condition Score (BCS). A low BCS increases dairy cows' risk of pregnancy loss (Thangavelu et al., 2015). After the introduction of the supplemental feed, the cows' body weight increased from 480 kg to 530 kg, indicating an improvement in BCS. An increase in BCS is associated with enhanced reproductive performance, which positively impacts the success of artificial insemination (Carvalho et al.,

2014).

By the end of the program, the cow successfully became pregnant, and at the time of this writing, the calf born in 2020 has now matured into a breeding cow with two calving events between 2022 and 2024. Yunus's Focus Farm group has recognised the significant impact of improved dairy cow feed on both reproduction and milk production. A study in the same location demonstrated that providing a 16% crude protein concentrate with a calcium fatty acid supplement increased milk production on smallholder dairy farms (Puastuti et al., 2021).

Technology Facilitation on High-Quality Forages and Silage Making in Ma'mur Farm

It was agreed that Focus Farmers would enhance forage production and feed quality to increase milk production by planting high-quality forages, specifically grass. Soil samples were taken from the land where the grass was to be planted. The soil analysis from both farms revealed deficient levels of organic matter (carbon), such as phosphorus and potassium, and the soil was quite acidic, with pH levels ranged from 4.9 to 5.2 in Ma'mur's farm and 4.2 to 4.7 in Yunus's farm.

A proximate analysis of the current feed revealed that the crude protein content was also low in both farms, at only 9%. Based on these findings, the first recommendation from the Advisory Group for Ma'mur's farm was to improve soil nutrients by adding compost and inorganic

fertilisers, and to increase soil pH by applying lime (calcium carbonate), before planting the forages. The application of adding lime corresponds with a study in Lampung that also added calcium carbonate (dolomite) to acidic red soil and showed improvements in the soil's chemical properties, including increased pH, potassium, calcium, and magnesium levels, and decreased iron levels (Cahyono et al., 2020).

The second recommendation for Ma'mur was to conduct trials of planting several varieties of high-quality forages, namely elephant grass and "bioglass", with different applications of urea, as well as planting legumes to help increase the protein content of the feed. Based on the results of another study conducted at the same planting location on Ma'mur's land after the Focus Farm activities ended, laboratory tests on the "bioglass" harvest showed a high crude protein content of 17.5% (Husni et al., 2022). Samples of "bioglass" and elephant grass were then analysed 91 days after planting to determine their protein content and Neutral Detergent Fibre (NDF) levels. From the forage harvesting process, farmers learned that the harvest age can affect the nutritional quality of the forage. The crude protein content of elephant grass decreases with increasing plant age (Jaime et al., 2019).

For Yunus's farm, the Advisory Group recommended enhancing soil nutrients for cultivating "odot" grass. Soil quality and fertility improvements were carried out by applying compost, lime, and inorganic fertilisers. The

Table 2. Laboratory Analysis Results on The Sample of Forages in Trial Plots

Sample of forages	Crude protein %	NDF %
From Ma'mur's farm:		
"biograss"	17.95	61.79
Elephant grass	15.38	63.15
From Yunus's farm:		
"Odot" + Urea	16.44	56.36
"Odot" Non Urea	16.44	57.17

Source: Primary Data 2020

harvest results showed good growth and similar crude protein content on land treated with urea and without urea, as presented in Table 2. Other studies have shown that applying composted cattle manure and urea fertiliser increases forage yield and the nutritive value of the forage (McRoberts et al., 2018). "Odot" grass is commonly used to meet the fibre needs of livestock, as evidenced by the research, which found that this grass contains 16.59% dry matter, 82.81% organic matter, 12.27% crude protein, 32.35% crude fibre, and 2.28% crude fat (Wati et al., 2018). This data shows that the fibre content in "odot" grass is higher than its protein content, similar to the forage samples from the Focus Farm Yunus.

The analysis results of the forages from the two farms are presented in Table 2. From these findings, farmers learned firsthand that high-quality forage has a high protein content, essential for increasing milk production. Facilitating the availability of superior forage seeds can solve the forage availability challenges often perceived as obstacles to adopting or continuing farming practices (Akzar et al., 2024).

The next activity at Focus Farm involved silage production from the harvest on the 85th day after planting. In this activity, Ma'mur used elephant grass and "biograss", while Yunus used "odot" grass. The forages were cut into 2 cm lengths and mixed with molasses and an inoculant containing *Lactobacillus* bacteria. The results of the silage quality analysis, based on different drying times, are shown in Table 3. The analysis revealed that the crude protein levels in the silage from both types of grass on Ma'mur's farm were lower than the dwarf elephant grass or "odot" silage at Yunus's farm, which had approximately 14% crude protein. However, the crude protein content in the silage from elephant grass and "biograss" was still higher than the content in the feed being used at that time, which was below 10%. A study in East Java demonstrated that feeding silage made from agricultural waste can improve dairy cows' milk yield and quality (Ako et al., 2016).

It was also found that "odot" silage is easier to digest, as indicated by its lower Neutral Detergent Fiber (NDF) value. This finding aligns with previous research that increasing dietary crude

protein improves digestibility (Souza et al., 2022). However, the “odot” silage samples treated with urea showed very low protein levels, inconsistent with the fresh forage analysis results. Proteolysis occurs continuously within the first 24 hours of ensiled forage, immediately and after wilting (Santoso & Hariadi, 2008). The protein content can decrease by 0.8% to 0.6% during this period. The crude protein content with incubation times of 0, 7, 14, and 21 days did not show significant differences. This may be due to the additives used, such as molasses and the bacteria *Lactobacillus plantarum* (Santoso & Hariadi, 2008).

Increased Net Profit

The IndoDairy team conducted a profit analysis based on monthly financial records, which were discussed during regular meetings with supporting farmers and the advisory group. Before becoming a Focus Farm farmer, Ma’mur’s average profit per litre of milk increased from Rp 1,721/litre to Rp 2,337/litre over eight months,

despite experiencing losses in November and January (Table 4). In Focus Farm Yunus, the average profit per litre of milk increased from Rp 1,271/litre to Rp 1,468/litre over the same period (Table 4).

The monthly business analysis helped Focus Farm farmers and others better understand costs and revenues, contributing to increased net profits. Farmers also learned how to calculate the net profit from each lactating cow, enabling them to optimise feed management according to the lactation phases. Other research has found that the random effects model identified a positive relationship between milk yield and farm income, with an additional 1,000 kg/cow leading to a 6% increase in annual income (Schorr & Lips, 2018).

Open Day

Initially, the Open Day was scheduled for April 2020, following the completion of the intervention. However, due to the COVID-19 pandemic in March 2020, the event was

Table 3. Laboratory Analysis Results on the Sample of Silage from Forages in Trial Plots

Sample of silage from forages	Crude protein %	NDF %
From Ma’mur’s farm:		
Silage made “bioglass” 7 hours dried	10.88	49.12
Silage made of “bioglass” 3 hours dried	10.42	54.66
Silage made of elephant grass 3 days dried	11.19	55.81
Silage made of elephant grass 2 days dried	10.01	55.07
From Yunus’s farm:		
Silage made of “Odot” + Urea	13.06	49.09
Silage made of “Odot” Non Urea	14.50	47.37

Source: Primary Data 2020

Table 4. Farm Record Keeping on Farm Business Management in Focus Farms

Month	Milk Income/litre (Rp)		Net profit/litre (Rp)	
	Ma'mur' farm	Yunus's farm	Ma'mur's farm	Yunus's farm
July	4,630	5,576	1,721	1,271
August	7,325	5,630	4,194	1,009
September	7,596	5,613	5,104	673
October	8,985	5,895	3,202	2,049
November	5,734	5,000	- 1,521	986
December	8,693	6,104	2,360	2,387
January	5,484	5,000	- 2,683	1,823
February	12,672	5,000	4,692	1,468
Average	6,734	5,447	2,337	1,459

Source: Primary Data 2020

held earlier, on January 24, 2020, during the final meeting of the scheduled monthly sessions before movement restrictions were implemented. The event was attended by all support farmers, the advisory team from the Project, the head of the Cooperative (KPS Bogor), members of farmer groups (Mandiri Sejahtera or Ma'mur's Group and Kania or Yunus's Group), and women dairy farmers participating in another intervention under the Project, the Women's Discussion Group (WDG).

During the Open Day, the VLR presented the processes and achievements of each Focus Farmer. Knowledge transfer was facilitated through discussion and evaluation sessions, where all farmers involved in the Focus Farm initiative shared insights from their learning experiences. Practical skills were demonstrated through silage-making sessions and field visits to forage plantations, where discussions provided a deeper understanding of forage cultivation,

including fertilizer application.

In the evaluation session, farmers rated their experience in the Focus Farm program on a scale of 1 to 5, where 1 indicated a waste of time and 5 signified excellences. All participants rated their experience as excellent and confirmed that they had gained a comprehensive understanding of dairy farm business practices through the experiences of Ma'mur and Yunus. Additionally, most farmers reported acquiring new knowledge, including silage-making techniques, optimal nutrition for lactating cows to enhance milk production, the benefits of a high-yield forage variety called "bioglass," shade structures for cow and calf health, and appropriate harvesting times for high-quality forage.

Furthermore, during the COVID-19 pandemic in 2020, both Focus Farmers were invited to speak virtually at a webinar hosted by the Indonesian Centre for Agricultural Technology Assessment and Development (ICATAD), part of the Agency for

Agricultural Research and Development (prior to its transformation into BRIN). Ma'mur and Yunus shared their experiences in the Focus Farm program with extension officers across Indonesia, farmers, agricultural students, and ICATAD management. This event also served as an online Open Day, facilitating broader knowledge dissemination to a general audience.

CONCLUSION AND SUGGESTION

The Focus Farm IndoDairy approach has been successful in having a positive impact on Ma'mur and Yunus farms. Increased milk production, improved cattle body condition score, and greater profits show that this approach is practical and can be replicated for other farmers in Indonesia. The technical support and assistance provided through this approach allow farmers like Ma'mur and Yunus to optimise their resources for the long-term goals of their silver cattle farming enterprise. Not only does it provide additional experience for the Focus Farm farmers themselves, but learning during the accompanying process also benefits other farmers who are joined in the supporting farmer group. At the end of the activity, there was an Open Day aimed at sharing with more farmers and stakeholders the experiences and lessons learned from Focus Farm, a good learning medium among farmers. IndoDairy's Focus Farm approach proves that with proper trial design and adequate support, small farmers can achieve significant yields, thus improving their well-being to plan their future business development.

Given the positive impacts of trialling the Focus Farm approach as an extension activity in dairy farming, the IndoDairy Focus Farm model could be expanded to other dairy farming regions in Indonesia. Selecting diverse geographic locations would help assess the approach's adaptability in different environments. Furthermore, we also recommend to assess the long-term effects on farmer income, production levels, and community well-being. This would provide valuable insights for refining the approach and demonstrating its benefits to policymakers.

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