

STRENGTHENING OF AGRICULTURAL LABOR BASED ON LOCAL WISDOM MODEL *BESIRU* IN EAST LOMBOK DISTRICT



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ABSTRACT

Labor is an essential factor of production in running a farm. Production produced by farmers depends on the availability of sufficient labor so that efficiency is achieved. However, the demand for labor is currently high while the supply is low. Therefore, there is a labor crisis in the agricultural sector. Its limited availability is caused by labor regeneration, which is still difficult to implement considering that the younger generation is not interested in working as farmers and chooses other professions. This study aims to analyze farmers' response to agricultural labor based on the local wisdom of the *Besiru* model in East Lombok Regency. This type of research is descriptive analysis research to explain the actual conditions of agricultural labor based on the local wisdom of the *Besiru* model. The research location was purposely determined to be in Batu Putik Village, Keruak District, considering that farmers still use *Besiru* in running their farming business. The research sample of 30 farmers was determined by census in the Bareng Bersinar Farmer Group I and the Bareng Bersinar Farmer Group II. The method for estimating farmer responses to the *Besiru* model labor system uses the empathy, persuasion, impact, and communication (EPIC) model with Likert's Summated Rating Scale (LSRS), where each choice of answers is given a score. The results showed that most farmers' cognitive, affective, and conative responses to the *Besiru* model labor were as expected.

Keywords: agricultural labour; *Besiru*; labour; local wisdom.

INTRODUCTION

Agricultural labor is essential for sustainable agricultural development (Onibala et al., 2017). These agricultural resources can be male or female workers. The role of agrarian labor in absorbing labor has a relatively high contribution of more than 35 percent (Kementerian Pertanian, 2015). However, the facts show that rural complexes have severe labor problems. Susilowati (2016) stated that the issue of agricultural labor is at the old age level, with the majority aged more than 50 years. Demographically, it is unfavorable because the agricultural sector requires a productive workforce.

Meanwhile, the availability of young workers is increasingly critical because the agricultural profession is considered less promising (Sumberg et al., 2021). The farm sector urgently needs a skilled and productive workforce, such as young farmers, to reduce the classic problems of agriculture today and in the future, with the aim of agriculture continuing to contribute to the economy as well as national food security (Handani et al., 2017; Prasada, 2020; Umanailo, 2018; Yustika Devi et al., 2020).

Statistical data shows that the employment rate for the agricultural sector fluctuated in 2015-2020 (Kementan, 2021). There was a decrease in the availability of agricultural labor. Quantitatively, the lowest number of farm workers in 2019 was 23.46 percent of the total agricultural employment absorption rate of 140.22 million people. The shift in the quantity of agrarian labor due to young farmers has decreased relatively sharply, while old farmers have increased by even 50 percent (Bochtis et al., 2020; Tipples & Morriss, 2002). The shift of labor to non-agriculture indicates a change in tastes due to people's negative preferences towards the agricultural sector. This problem has not

yet emerged from the anomaly in the short term, while negative impacts will appear in the long term. If this problem is not anticipated early on, it can threaten agricultural labor.

On the other hand, the characteristic of rural farmers today is that they do not want their children to follow in their footsteps as farmers, thus breaking the sustainability of farming. They argue that working in the agricultural sector closes career opportunities in the future (Widiyanti et al., 2018). Even more extreme, children of farmers with higher education are better off unemployed than going into the agricultural sector (on the farm). This shows that working in the agricultural industry is unattractive to the younger generation (Magagula & Tsvakirai, 2020; Njeru, 2017; Udemzue, 2019). Young people think agriculture is a job for people with low incomes and those without an education level (Mulema et al., 2021). From a low-income perspective, it is tiring and less productive (Sumberg et al., 2021). Demographic problems and the lack of interest of the younger generation are indications of a labor crisis that needs to be correctly anticipated. If not, it can disrupt the economy's and food's structural stability. Using local wisdom in running farming solves the current labor crisis. The *Besiru* model is an alternative applied to the Bareng Bersinar II farmer group in East Lombok. The result is that agricultural labor is fulfilled and not challenging to find. Apart from that, the costs incurred by farmers are reduced. The result is that technical and economic benefits for farmers are achieved.

The current lack of quantity and quality of agricultural labor can be anticipated by applying local wisdom. One of the local wisdom that can strengthen the sectoral workforce is *Besiru*. *Besiru* is a Sasak language term to describe a labor system that alternates from one farmer to another (cooperation). This means that the *Besiru* model workforce is based on local wisdom with the concept of exchanging family labor without wages. This model has been developing for a long time in East Lombok. However, the *Besiru* system has faded as the socio-cultural community tends to perceive agriculture negatively. The *Besiru* model workforce is an alternative to meeting the declining agricultural labor demand in the entire West Nusa Tenggara region, especially in East Lombok Regency. Thus, this workforce problem becomes necessary and must be appropriately anticipated through local wisdom. The problem is that the agricultural workforce in East Lombok Regency is in crisis with more old demographics than young people, which can lead to instability in the farming sector (H. Susilowati, 2016). Thus, this study aimed to determine farmers' response to the *Besiru* model of labor in East Lombok Regency.

MATERIALS AND METHODS

The research location was determined purposefully, namely Batu Putik Village, Keruak District, East Lombok Regency, considering that Batu Putik Village was a village for implementing the *Besiru* model of agricultural labor. The research sample was limited to two farmer groups, the Bareng Bersinar Farmer Group I, and the Bareng Bersinar Farmer Group II. A census of 30 farmers determined the sample in this study. His research was conducted in September 2023. This research lasted three months, from surveying group conditions and problems, collecting data, and analyzing data to completing the final study and estimating the response of farmers to the *Besiru* labor system using the empathy, persuasion, impact, and communication (EPIC) model with the Likerts Summated Rating Scale (LSRS), where each choice of answers is given a score (Budiman et al., 2015; Fauziah et al., 2019). The indicators of this study are knowledge responses (cognitive), attitude responses (affective), and action responses (conative) (Chasanah et al., 2020; Novia, 2011).

Furthermore, the answers to these indicators are measured on a Likert scale of 1 to 3. If the respondent answers 3, it means the answer is as expected; reply two points, it is pretty in line with expectations, and answer 1 is an answer that is not as expected. The response measurement uses the ratio of class distance to the number of class intervals. According to the criteria, the maximum score that can be obtained is 100, while the minimum score is 33.33. This score is obtained from $[(100-0)/3]$. Divisor 3 (three) is the number of class intervals. The result of this response estimate is the behavior of farmers in applying the local wisdom of the *Besiru* model in anticipation of a shortage of labor in the agricultural sector. The hope is that the behavior of farmers towards labor is a positive model according to expectations for sustainability. The criteria for assessing respondents' responses to the *Besiru* system workforce are as follows (Dewi, 2021). Low category (1), if the value obtained is 33.33% to 55.55%, it means that the farmer's response to the *Besiru* system is not as expected; Medium category (2), if the value obtained is 55.56% to 77.78%, it means that the farmer's response to the *Besiru* system is sufficient/moderate as expected; High category (3) if the value obtained is between 77.79% and 100%, it means that the farmer's response to the *Besiru* system is as expected.

RESULTS AND DISCUSSION

Respondent Profile

Age is closely related to the physical ability of farmers to run their farming business (Iskandar & Jamhari, 2020). Not only physical ability but age also affects the ability to think. At a certain age, there is an increase in physical ability, which is then followed by a periodic decrease (Iskandar et al., 2022). Running a farm requires good on-farm and physical skills. The age distribution of farmers when carrying out farming activities was mainly between 38 and 44 years, with as many as ten farmers (33.33%). The average age of farmers who employ the *Besiru* model is 41 years, including productive farmers. Farmers need effective age, considering that the majority of the leading commodities of *Besiru* farmers are Virginia tobacco and rice. Most farmers are 24 males, and the remaining six are females. These female farmers run the farm owned by the head of the family after being left to migrate abroad, and widowed farmers continue the family farming.

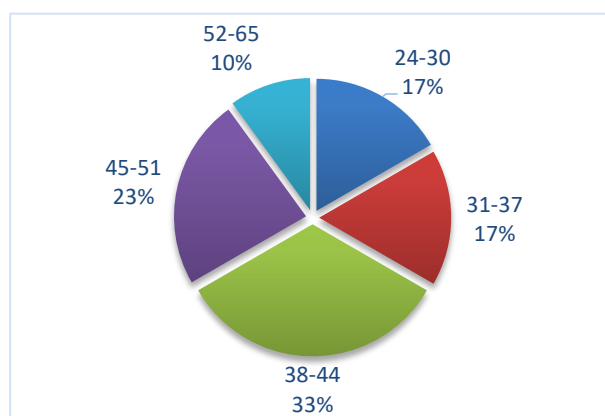


Figure 1. Composition based on farmer age

The education in question is the formal education of farmers taken during or before running their farming business. Education has an essential role in management and decision-making. Whether or not a farmer's potential production is successful is influenced by their level of education (Ninh, 2021). Even education has a significant role as a guide in accepting new things in the agricultural sector, and this is a form of peak indicator of sustainable agriculture (Gusti et al., 2022). Interestingly, the education data for the farmer model is 20 percent. Around six people are educated up to university, although elementary school is more dominant. Those with higher education have other professions, namely as private employees in several government agencies. However, the agricultural sector remains the main occupation. Therefore, they use it to make work easier when working outside of agriculture. Operationally, the farmers who run the *Besiru* model are still within the scope of the workforce within the family and being members of farmer groups.

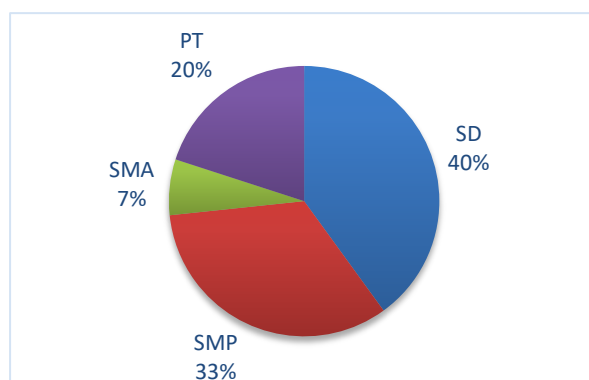


Figure 2. Composition based on farmer education

Based on farmers' land ownership, the scale of farming is still narrow, with the majority controlling land parcels of 0.25 to 0.40 hectares. The distribution of limited farmers' land results from functional conversion (Kusumastuti et al., 2018), fragmentation (Liang et al., 2015), and a decrease in the potential and quality of productive land. Susilowati and Maulana (2012) stated that the welfare of

farmers is only achieved if land tenure is at least 0.50 hectares. The low plots of land farmers cultivate are caused by many of the farmers renting out their productive land. As a result of the inability to manage farming more broadly, the factors of production are difficult and expensive. The nature of this land ownership is self-owned land that is organized together with family members. To facilitate the *Besiru* model workforce because the basic concept of *Besiru* in the field is following the area of each land parcel.

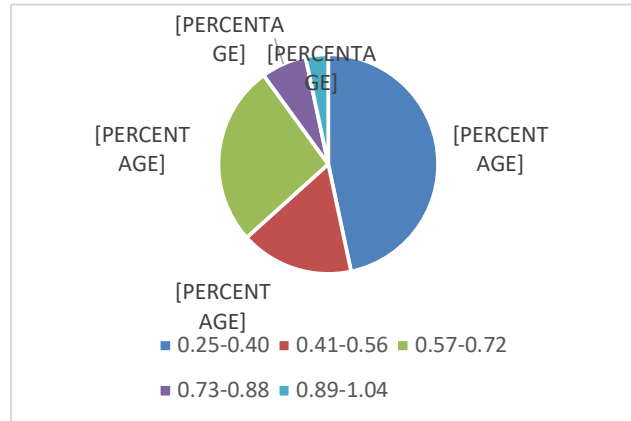


Figure 3. Farmer's area

Farming experience is a learning process that helps farmers develop managerial abilities and skills in farming. Allegedly, long experience will be better for farmers in the on-farm process. That is, the longer the farming experience, the more prosperous the knowledge to manage the farming. Apart from being a managerial incubation for agriculture, this experience serves as a parameter for the ability to respond to increasingly crisis labor conditions. Experience is the primary method of determining all farming activities.

Moreover, farmers with long experience are genuine changes in the agricultural sector's quantity and quality of labor. Before the existence of the *Besiru* model, self-help workers were functioned by farmers with a family scope in cooperation. A labor crisis has made *Besiru* an alternative for farmers to date. The average farmer has 14 years of experience running a farming business. This experience is quite long and is an activity carried out from generation to generation. Percentage of farmers experience at most 4 to 10 years (40%) as many as 12 farmers.

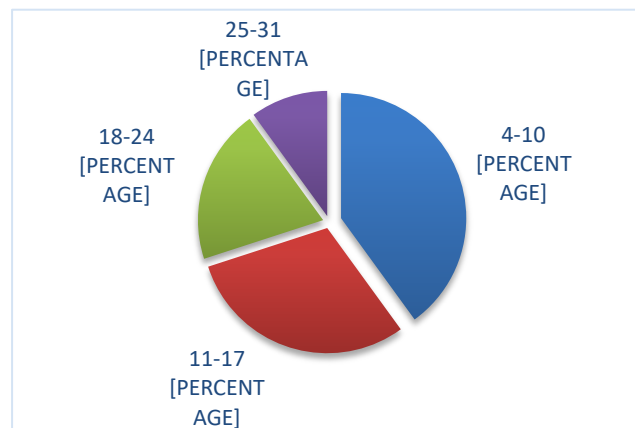


Figure 4. Farming experience

Farmers' Responses to the *Besiru* Model of Labor

Farming practices are constantly faced with the problem of how producers manage their farming to maximize production. The farmer's production efficiency strategy has done quite well, from using farming input-output to post-harvest. However, the risk in the agricultural sector is relatively high, including the factors of production, especially labor. Labor is becoming scarce due to the difficulty of regeneration; therefore, the current agricultural workforce is quite old. The local wisdom of

the *Besiru* model can be a solution for sustainable agrarian labor. Farmers' local wisdom can be seen in how they manage their farming activities in various ways that they have learned from generation to generation (Rozaki et al., 2020). Therefore, local wisdom is an environmentally friendly strategy and saves agricultural resources. However, along with modernization development, local wisdom began to be abandoned under the pretext of being traditional and less profitable. The field results show that cognitively, the response of farmers to the *Besiru* model of labor is as expected (Table 1). The local wisdom of the *Besiru* model has been known for a long time by rural farmers and is even always used. Still, they do not realize that *Besiru* can anticipate a labor crisis in the agricultural sector on an ongoing basis, so it is starting to be abandoned. In line with the findings of Setyowati et al. (2019), community participation in local wisdom techniques is less active even though this model is quite positive. Given the local wisdom, the *Besiru* model is a transfer strategy to rural farms with the potential for small production failures (Norsidi, 2019).

Table 1. Farmers' cognitive responses to the *Besiru* model of labor

No	Indicator	Score 3		Score 2		Score 1	
		Farmer	%	Farmer	%	Farmer	%
1	Knowledge of the agricultural labour crisis	27	90.00	3	10.00	0	0.00
2	Methods of anticipating the crisis of agricultural labor	15	50.00	10	33.33	5	16.67
3	The purpose of using the <i>Besiru</i> model of labour	24	80.00	6	20.00	0	0.00
4	The Advantages and disadvantages of the <i>Besiru</i> Model of Labor	23	76.67	7	23.33	0	0.00

Source: Primary data, 2023

Note: Score 3: as expected; Score 2: reasonably as expected; Score 1: not as expected

The majority of farmers' affective response to the local wisdom of the *Besiru* model met expectations, more than 77 percent. The mixed-type labor force in farming practice saves more costs and increases production. Expenditures are limited to aspects of fulfilling food when running on a farm. The application of the *Besiru* model workforce correlates with the socio-cultural values of the community in terms of the connectivity of family relationships (Norsidi, 2019). The social relations of local wisdom produce products in the form of work motivation, work ethic, and emotional control, which are very draining as a result of working in the agricultural sector. Through the local wisdom of the *Besiru* model, they communicate a lot with each other so that work time is not felt, and psychologically, they perceive working on their land with productive results.

On the other hand, community awareness is awakened to continue carrying out farming activities sustainably while maintaining the resources they have. However, farming producers believe that the *Besiru* model workforce has not saved the quantity of labor. Because the *Besiru* model workforce is only exchanging labor among farmers, not increasing amount.

Table 2. Farmers' affective responses to the *Besiru* model of labor

No	Indicator	Score 3		Score 2		Score 1	
		Farmer	%	Farmer	%	Petani	Farmer
1	The <i>Besiru</i> model workforce can increase farm production	23	76.67	7	23.33	0	0.00
2	Save operational costs on farms, especially farming business	28	93.33	2	6.67	0	0.00
3	The use of the <i>Besiru</i> model workforce saves labor usage	15	50.00	10	33.33	5	16.67
4	Improving family relationships and work motivation	30	100.00	0	0.00	0	0.00

Source: Primary data, 2023

Note: Score 3: as expected; Score 2: reasonably as expected; Score 1: not as expected

The *Besiru* model workforce has developed for a long time among the community, a legacy from their ancestors to the present. This means that this model should still be used, considering the spiritual value generated as a positive response to acquiring abundant natural products. In practice,

without being invited to do *Besiru*, they are self-aware that they devote their energy to helping the work of fellow farmers. This value then becomes the driving force for applying the *Besiru* model workforce to continue to exist in the agricultural sector, under the pretext of remuneration for labor services to other farmers who have had the opportunity to help with farming activities. This *Besiru* concept then becomes local wisdom that can alleviate the problem of the labor crisis. Field results show that, on average, farmers agree to apply the *Besiru* model of labor. Many farmers already feel the impact of the labor crisis and are complaining of high labor costs. Therefore, this local wisdom is necessary and must be rebuilt to overcome the threat of a labor crisis, which ultimately affects food security.

Table 3. Farmers' conative responses to the *Besiru* model of labor

No	Indicator	Score 3		Score 2		Score 1	
		Farmer	%	Farmer	%	Petani	Farmer
1	The application of the <i>Besiru</i> model workforce in a sustainable manner	24	80	6	20	0	0
2	Respond to labour services to <i>Besiru</i> member farmers	25	83.33	5	16.67	0	0

Source: Primary data, 2023

Note: Score 3: as expected; Score 2: reasonably as expected; Score 1: not as expected

CONCLUSIONS AND SUGGESTION

Local wisdom is one of the strategies to overcome the problem of the labor crisis that farmers are currently feeling. Farmers can produce optimally through local wisdom without the threat of labor availability. This local wisdom of the *Besiru* model is a hereditary legacy related to managerial farming practices. In its implementation, even *Besiru* is followed by working together with singing simultaneously. This is done as a form of enhancing family relations. Thus, local wisdom is the right choice to overcome labor based on regional potential. The result is the realization of national food security through the development of local villages. The estimation results show that the cognitive, affective, and conative responses of farmers to local wisdom-based agricultural labor based on the *Besiru* model are in line with expectations. Where farmers know that there has been a labor crisis, which can affect production conditions, apart from that, farmers are aware of the threat of a labor crisis, and they take action to find solutions to overcome labor problems through local wisdom, and in the end, they adopt it while running their farming business. In this way, sustainable agriculture can be carried out by utilizing the potential of local resources by implementing *Besiru* to anticipate the labor crisis.

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