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FARMERS' RESPONSES TO FARMER FIELD SCHOOLS (FFS) ON INTEGRATED CROP MANAGEMENT: A CASE STUDY IN EAST LOMBOK, INDONESIA

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Abstract. The government is trying to maintain domestic food self-sufficiency by promoting field school programs to increase institutional empowerment of farmer groups to adopt technology in order to maintain land productivity and farming. The purpose of this study was to analyze the factors that influence farmers' responses to Farmer Field Schools (FFS)-Integrated Crop Management in the Batu Keliang Farmer Group. The research location was deliberately selected in the Batu Keliang Farmer Group, Pejaring Village, Sakra Barat District, East Lombok Regency because it participated in the FFS program. Respondents used a census technique involving all members of the population as respondents, totaling 25 people. Data were analyzed using a Likert scale and multiple linear functions. The conclusion of the study is that farmers' responses to the FFS rice field program in the Batu Farmer Group were simultaneously 65.9% influenced by all independent variables of age (X_1), education (X_2), land area (X_3), rice farming experience (X_4), number of family dependents (X_5), and active participation in the program (X_6). While the partial influence has two significant independent variables, namely education (X_2) and number of family members (X_5).

Keywords: Batu Keliang; Response; Crop Management; Farmer Field Schools

INTRODUCTION

Food insecurity is a never-ending global issue, and the climate crisis and health problems are serious threats. The number of people affected by hunger reached 828 million people in 2021, unemployment has increased since the outbreak of the COVID 19 pandemic, this is new evidence that the world is moving further away from its goal of ending hunger, food insecurity, and malnutrition in all its forms by 2030 (Burki, 2022; FAO, 2022). To achieve the Sustainable Development Goals, Phase 2 is crucial for estimating the prices of input factors as a step towards understanding the local food system (Klemm *et al.,* 2025). The disruption of the world's food supply and the risk of food insecurity at the local level for vulnerable individuals and households are triggered by natural factors, as well as the political tension of open wars between countries. Concerns about rapidly growing population dynamics necessitate accurate information for policymakers, as well as more effective ways to support the most vulnerable communities in predominantly rural areas, particularly those working in the agricultural and low-income sectors (Miladinov, 2023).

The ASEAN region's population is projected to reach 723 million by 2030, putting pressure on the availability of agricultural land and food systems (*World Economic Forum*, 2020). Rapid population growth and human mobility between countries contribute positively to food production in agrarian countries (Sundram, 2023). The gap in the welfare of farmer households is a priority for improving food crop cultivation techniques, land conservation, and the role of government institutions in reforming agricultural policy (Akbari *et al.,* 2022). In low-income countries, nearly 3.4 billion farmers and poor-quality land are the most valuable assets for navigating regulations at various levels (Woodhill *et al.,* 2022). The green revolution that was triggered in the 1970s aimed to reduce hunger and socio-political conflicts by referring to the introduction of superior seed technology, especially food crops (wheat and rice). Without a green revolution, it is difficult to envision how agricultural production can meet the food needs of a growing population, characterised by the use of superior varieties and chemical fertilisers, which replace local seeds and transform traditional cultivation systems into modern

agricultural systems that marginalise local wisdom. Systematic *Local Wisdom*: Urgent Revitalisation of Farmer Group Institutions is a serious challenge for the agricultural sector today (Alan, 2017; Eyelet *et al.,* 2019). In Indonesia, the technology has an impact on environmental damage and farmers' dependence on the agrochemical industry (Ashari *et al.,* 2020). This situation demands a fundamental shift in the global agricultural paradigm.

The agricultural paradigm, which is results-oriented and exploitative, needs to be changed to a sustainable agriculture paradigm. Environmentally friendly agriculture began to be introduced through the use of materials obtained from the surrounding area (*in situ*). A sustainable agricultural production system is more conducive to the management of environmentally friendly organic farming (Fajar Oktavia et al., 2020; Muhammad *et al.,* 2021). Efforts to actualise the potential of agricultural human resources, such as empowering farmers who are members of farmer group organisations (poktan) as a form of government commitment to the development of farmer human resources in rural areas (Ashari et al., 2020; Muhammad *et al.,* 2022). Government policy towards the achievement of a green economy is derived by improving the quality of agricultural human resources by promoting field schools (*Farmer Field School*) which is dedicated to farmers (van den Berg et al., 2020) type Farmer Field School (FFS) is proven to improve farmers' knowledge and skills on the cultivation aspect, economically proven to be able to revive farmers' household income (Gao *et al.,* 2024; Haryanto *et al.,* 2023; Molina *et al.,* 2021).

Agricultural development in Indonesia is of special concern to the government, because it can support other sectors. Primary products in the agricultural sector serve as raw materials for agroindustry and upstream industries, which can create jobs and help reduce poverty. The increase in population and rising farmers' incomes pose challenges for the current government, on the one hand, while maintaining food security remains a priority on the other. Various obstacles, including the conversion of fertile land, climatic anomalies, *and soil degradation*, have an impact on decreased productivity (Edeng & Wardhono, 2019). The area of rice plants in West Sakra District, East Lombok, during the period 2016-2019 experienced an insignificant increase of 10 hectares, from 2,319 hectares to 2,409 hectares. The average production of harvested dry grain (GKP) is 15,174 tons/year, and the productivity that can be achieved is 6.4 tons/hectare (East Lombok Regency Agriculture Office, 2023). Opinion Dahiri & Tineke (2021) stated that the factors of harvest area and productivity are determinants of rice production ability, where the variables of harvest area are influenced by the factors of agricultural land conversion and commodity transfer, and the factors of human resources, seeds, fertilisers, and agricultural technology influence the productivity variables.

The government seeks to maintain domestic food self-sufficiency by promoting agricultural intensification through the Integrated Crop Management Field School Program (FFS) Paddy Fields. The Paddy Rice Field Cooperative Program aims to enhance the institutional empowerment of farmer groups, enabling them to develop their potential and utilise recommended technologies to maintain land and farming productivity (Irawan, 2017; Malik *et al.,* 2015). The ability to cultivate and manage farming is very low. Limited support for irrigation facilities presents an obstacle (Mulyani & Jumiati, 2014). The human resources of farmers remain inadequate in adopting modern agricultural technology (Pramono, 2017), resulting in stagnant improvements in farmers' abilities and skills (Kasno, 2019). According to Gunawan & Haryanto (2020) government intervention, in this case, through the function and role of field extension officers (PP), providing intensive assistance, can have a positive impact on the adoption of innovation. The long-term benefit of the FFS program is to renew knowledge, enabling farmers to become more skilled in applying location-specific cultivation aspects that maintain farming productivity, thereby improving the welfare of their households.

An open school, or in foreign terms, a Farmer Field School (FFS), is better known as a form of community collaboration in which farmers and practitioners take an active role in supporting the government to alleviate the stagnation of information flows related to agricultural technology. The FFS emerged in response to the disparities caused by the decline in agricultural extension services worldwide (Harness) *et al.,* 2018). The FFS approach was developed in the late 1980s by the FAO in Southeast Asia as a means for small-scale rice farmers to investigate and learn the skills needed to adopt integrated pest management (IPM) practices in their rice fields and their benefits. This approach emerged from the ecological, political, and economic crises caused by the massive outbreaks of rice pests that threatened national food security in many countries in Southeast Asia in the late 1980s and early 1990s (FAO, 2019). The Indonesian government and non-governmental organisations provide non-formal education for farmers to increase their capacity. Field School (FS) is a term associated with non-formal education.

For rice farmers, SL began by equipping them with a new concept of crop protection strategies through the Integrated Pest Management (IPM) program, implemented by the central government in 1990 (Mariyono et al., 2021); The FFS model is a non-formal education model designed to enhance farmers' understanding and expertise in applying appropriate technology according to local resource conditions (Widianta *et al.,* 2016).

The success of the FFS program is evident in its increased capacity and access to real green farming counselling and training, motivating farmers to produce significant yields, innovate, and engage in open marketing (Gunawan & Haryanto, 2020; Irvandika & Suciati, 2024; Mulyani & Jumiati, 2014). FFS is beneficial in filling the local knowledge gap by disseminating and adopting new agricultural technologies. However, the availability of credit that allows farmers to purchase agricultural equipment and supplies needs to be addressed (Sjakir *et al.,* 2015). Technology dissemination through rice FFS and farmers' field meetings has been proven to be effective in convincing farmers and extension workers of the technological advantages demonstrated, as they were witnessed directly (Mikhael et al., 2025).

By participating in the FFS program, farmers gain hands-on experience and direct learning in the field. They can be creative in analysing and finding alternative solutions to problems in rice cultivation techniques. Based on this description, the purpose of this study is to analyse the factors that affect farmers' responses to the Integrated Crop Management Field School Program (FFS) in the Batu Keliang Farmer Group, Pejaring Village, West Sakra District, East Lombok Regency. The urgency of this research lies in the fact that the FFS program can encourage the achievement of food security, enhance farmers' capabilities, and increase the role of farmer groups, ultimately improving farmers' welfare at the economic level.

METHODS

The location of the research was carried out in the Batu Keliang Farmers Group, Pejaring Village, West Sakra District, East Lombok Regency, deliberately (*Purposive*), with the consideration that the Batu Keliang Farmers Group of Pejaring Village has participated in the FFS program in 2024 and has group members who are active in these activities. Respondents were determined using census techniques that involved all members of the population as respondents. This technique is carried out when the population is relatively small (less than thirty people) (Scott, 2018). The respondents in this study were all members of a farmer group, totalling 25 people. The collection of this number of samples also met the criteria of a limited population and the inherent homogeneous nature of the respondents (Rumengan, 2015), this is also in line with Hajar's opinion (Alwi, 2012) If using sampling is available (*Availability Sampling*), that is, the researcher utilizes available subjects, such as a group of people, so that the validity test is statistically fulfilled.

Secondary data was obtained through literature review from various relevant sources. Primary data was obtained through tabulation of the results of direct interviews with respondents, then analyzed with a parametric statistical approach with the following procedure:

1) The independent variables consisted of age (X_1), education (X_2), land area (X_3), experience of rice farming (X_4), number of family members (X_5), and activeness in participating in the program (X_6) and number of responses as bound variables (dependent/Y).
2) In each free variable, a Likert Score is given to determine the response rate with the criteria Very High=4, High=3, Medium=2, Low=1.
3) Each variable score is then determined to have a total number, then analyzed to SPSS with a multiple linear function with the formula (Tuna et al., 2024):

$$Y = a + \beta 1X1 + \beta 2X2 + \beta 3X3 + \beta 4X4 + \beta 5X5 + \beta 6X6 + e \quad \ldots\ldots\ldots\ldots (1)$$

Information:

Y = Number of responses
$\boldsymbol{a}$ = Constant
β = Regression coefficient ($\boldsymbol{\beta}1$, $\boldsymbol{\beta}2$... $\boldsymbol{\beta}6$)
X_1 = Age
X_2 = Education
X_3 = Land area
X_4 = A Pastor's Work
X_5 = Number of family members

X_6 = Activeness in the program
e = error

RESULTS AND DISCUSSION

Farmers who participated in the FFS Program which was carried out in the Batu Keliang Farmers Group, Pejaring Village, West Sakra District responded as follows:

Table 1. Linear Regression Test (Output Model Summary)

Model Summary[b]					
Type	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**	**Durbin-Watson**
1	0.812	0.659	0.545	0.275	1937

a. Predictors: (Constant), age, education, land area, experience in rice farming, number of family members and activeness in participating in the program
b. Dependent Variable: Y_1

Source: Primary Data, 2024

Based on the results of the linear regression analysis shown in Table 1, a correlation coefficient value (R) of 0.812 was obtained. It indicates a strong correlation between the implementation of the FFS program and the response of farmers in the Batu Keliang Farmers Group, Pejaring Village, West Sakra District. The *value of R Square* (R^2) of 0.659 indicates that the independent variable can explain the dependent variable by 65.9%. In other words, the success or failure of the FFS program significantly influences how farmers respond to it. Meanwhile, 34.1% were influenced by other factors that the model could not explain. The *Adjusted R-Square* value of 0.545 indicates that, after adjusting for the number of predictor variables in the model, 54.5% of the variation in farmers' responses can still be significantly explained by the implementation of the FFS program. That indicates that the regression model used has quite good predictive capabilities.

Additionally, the *Standard Error of the Estimate* (SEE) of 0.275 indicates the level of error in the model's prediction of the actual value. This relatively small SEE value shows that the regression model has a reasonably high accuracy in predicting farmers' responses (Janie Arum, 2011). Value *Durbin-Watson* (DW) of 1.937 is close to 2, which means that no autocorrelation was found in the residual model. Thus, the regression model used can be considered valid and meets the basic assumptions in linear regression analysis (Sudariana & Yoedani, 2022).

Table 2. Response Variable Summary Model

ANOVA						
	Type	**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
1	Regression	2.635	6	0.439	5.789	.002
	Residual	1.365	18	0.076		
	Total	4.000	24			

a. Dependent Variable: Y_1
b. Predictors: (*Constant*), age, education, land area, farming experience, number of family members and activeness in participating in the program.

Source: Primary Data, 2024

Based on the results of the ANOVA (Analysis of Variance) test in Table 2, an F value of 5.789 was obtained with a significance value (Sig.) of 0.002. This significance value was below the significance level of 0.05 ($p < 0.05$), which means that the regression model was simultaneously significant in predicting the dependent variable, namely the farmer's response to the FFS program. The F value shows that together the six independent variables in the model (age, education, land area, experience, family dependents and activeness in participating in the program) have a significant influence on the bound variable (number of farmer responses).

The influence of farmer characteristics is important to determine the success of the application of a technology, this is proven by studies Gunawan & Haryanto (2020) that farmers' decisions to adopt PTT innovations are influenced by the characteristics of farmers such as age, education, land area and ownership status, farming experience, number of family dependents, and frequency of training can be considerations and form attitudes (decisions) to accept an innovation. In addition, external factors such as the nature of technology, communication models, and the role of extension workers can encourage and are crucial in determining the success of PTT's innovation transfer (Kallo & Abigael, 2018). The implementation of the FFS program as a whole does have an impact on how farmers respond to the program. Value *Sum of Squares* for regression is 2.635 with a degree of freedom (df) of 6, while the value of residual Sum of Squares is 1.365 with a df of 18. The total Sum of Squares value of 4,000 indicates the total variation in the data. The mean square for the regression is 0.439, while the mean square for the residuals is 0.076, which is the basis for calculating the value of F. These results reinforce that the implementation of the FFS program makes a significant contribution to shaping farmers' responses, and regression models are feasible for explaining this relationship.

Table 3. Partial Regression Test Results (t-test)

Type		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(*Constant*)	0.357	0.837		0.426	0.675
	Age	0.270	0.236	0.183	1.145	0.267
	Education	0.138	0.063	0.321	2.199	0.041
	Land	0.058	0.112	0.109	0.478	0.639
	The Pastor's Work Experience	0.236	0.124	0.404	1.907	0.073
	Number of family members	0.296	0.097	0.501	3.069	0.007
	Activeness in the program	0.002	0.154	0.002	0.014	0.989

Source: Primary Data, 2024

Based on the results of the partial regression analysis in Table 3, it is known that each independent variable of age (X_1), education (X_2), land area (X_3), rice farming experience (X_4), number of family members (X_5), and activeness in participating in the FFS program (X_6) have a different influence on farmers' responses to the FFS program in the Batu Keliang Farmer Group, Pejaring Village, West Sakra District, East Lombok Regency.

The age of farmers had a regression coefficient of 0.270 with a significance value of 0.267 ($p > 0.05$), indicating that age did not have a significant effect on the FFS program and had a direct relationship. The age of farmers participating in the FFS program is dominated by 24 individuals (96%). The difference in farmers' ages does not directly affect their perception or attitude towards the FFS program. Although the indicator of productive age in the age variable (X_1) is more dominant, it is statistically not influential in decision-making regarding the acceptance or rejection of the FFS program. Meanwhile, the positive beta coefficient value (unidirectional) indicates that a one-year increase in the age of farmers will result in a 0.270-unit increase in the response to the FFS program. However, in the technical aspect of applying cultivation technology, the age factor becomes very important. It is because the type of rice farming relies heavily on physical strength; farmers of productive age have stronger physical abilities than those of unproductive age (Pledge *et al.,* 2020). Technological innovation can be seen from the perspective of farmers regarding the complexity of the technology components to be able to adapt to the physical capabilities of farmers. The easier and simpler the technology that is recommended, the more able it will be able to increase crop yields, the more it will be accepted by farmers.

The farmer's education level has a regression coefficient of 0.138 and a significance value of 0.041 (< 0.05), indicating that education has a significant effect on the FFS program and exhibits a one-way relationship. The higher the level of education of farmers, the better their response to the implementation of the FFS program, indicating that education level can facilitate farmers' understanding of the material and applications of technology taught during the FFS program. According Kallo & Abigael (2018) the mindset and reasoning of farmers are shaped by an established level of education,

enabling them to understand existing phenomena more quickly, which instils understanding, attitudes, and affects the ability of farmers to act more responsively to technological innovations.

The land area has a coefficient of 0.058 with a significance level of 0.639, indicating that it does not have a significant effect on the farmers' response to the FFS program, but rather a one-way or positive relationship. The size of land ownership does not determine the attitude or strength of farmers' responses to accepting the program. Because the area of land managed by farmers is relatively small, it is more dominant to cultivate an area of < 0.5 hectares or a small business scale. The area of land managed by farmers is a key factor in their ability to adopt new technologies. That is explained Anwar & Prasetyowati (2021) who note that innovations applied tend to have a strong response when the land they manage is larger, as this encourages the application of cultivation technology, leading to increased productivity and income. A study by Iskandar *et al.,* (2024) states that the land cultivated by farmers is becoming narrower, influenced by external factors such as the high conversion of agricultural land to non-agricultural use, which renders the existence of production uncontrolled by agricultural intensification and extensification programs. The land area factor is sometimes the primary requirement for farmers to obtain fertiliser subsidy disbursements, as shown by the research of Krishna *et al.,* (2022) which indicates that farmers who receive subsidised fertiliser assistance typically have a land area of more than 1 hectare.

The experience of rice farming showed a regression coefficient value of 0.236 with a significance of 0.073 and had a unidirectional effect. Although farmers' experience is not statistically significant, farming experience tends to strengthen farmers' responses to the FFS program. A person's experience can shape their attitude through the process of learning, observation, and appreciation, which then leads to deducing what is happening in their environment, ultimately actualised in the form of responses or attitudes (Damayanti *et al.,* 2016). Factors that play an important role in influencing the formation of attitudes according to Essence *et al.,* (2018) factors that play an important role in influencing the formation of attitudes include direct experience, the influence of family and peers, products obtained through *Direct Marketing,* and information from mass media. According to Michael *et al.,* (2025) farmers' experience of participating in FFS involves seeing or witnessing firsthand the advantages of technology that are disseminated.

Number of family members. It has a regression coefficient of 0.296 and a significance value of 0.007 (<0.05), indicating that family dependents have a significant effect on farmers' responses and are related to each other. The (positive) relationship is explained by Ningsih & Anwar (2023) that when the number of household members grows, the number of workers for rice farming increases, the input of labour in agricultural production must be commensurate with capital disbursement to maintain production efficiency, so that the surplus can be diverted for other needs. The greater the dependency of the farmer's family, the greater the incentive for farmers to respond to the FFS program. The existence of the FFS program will encourage farmers to strive to meet their economic needs by applying agricultural cultivation techniques that are tailored to local specifications (Rozen & Kasim, 2018).

The activeness of participating in the FFS program has a minimal regression coefficient of 0.002, with a significance value of 0.989. This value is far above 0.05, so the activeness of farmers in participating in the program does not have a significant effect on their response. That is due to the inactivity of farmers who do not optimally understand and apply program materials (Irvandika & Suciati, 2024). Farmers who actively participate in a series of FFS activities can benefit from establishing a sense of intensity and familiarity with fellow group members. With the frequency of meetings in FFS training, it can shape the character of participants as an effort to develop awareness of the sustainability of agricultural regeneration, an alternative concept in educating and developing the potential of farmer groups (Aditia et al., 2023). By actively participating in every activity, openness will be created between farmer members and administrators (Perdana & Anggrasari, 2022). Partially, two independent variables have a significant effect on the number of farmers' responses to the FFS program in the Batu Keliang Farmer Group, namely the education variable (X_2) and the number of family members (X_5).

CONCLUSION

The response of farmers to the Integrated Crop Management Farmer Field School (FFS-FFS) program in the Batu Keliang Farmers Group, Pejaring Village, West Sakra District, East Lombok Regency, was simultaneously influenced by six independent variables namely age (X_1), education level (X_2), land area (X_3), rice farming experience (X_4), number of family members (X_5), and active participation in the FFS program (X_6) with a combined contribution of 65.9%. Partial analysis revealed that only two variables, education (X_2) and number of family dependents (X_5), had a statistically significant influence on farmers' responses. These findings suggest that higher educational attainment enhances farmers' capacity to comprehend and adopt agricultural innovations. At the same time, a greater number of dependents may motivate farmers to actively engage in productivity-improving programs, such as FFS, to support their household needs.

The FFS-FFS model has demonstrated potential in enhancing farmers' cognitive skills and technical proficiency in location-specific cultivation practices. It has also contributed to the institutional strengthening of farmer groups and reinforced the role of field extension officers as facilitators and agents of change. Based on these findings, it is recommended that the field laboratory (LL) approach be maintained and further developed by integrating environmentally sustainable practices. Additionally, efforts should be made to increase the frequency of training sessions, foster two-way communication between stakeholders, improve socialisation and reporting mechanisms, and empower extension workers to act as motivators, facilitators, and protectors who can effectively guide farmers. Future studies should consider broader samples and explore additional socio-cultural variables to enrich understanding of the determinants of farmer participation and responsiveness to agricultural innovation programs.

REFERENCES

Aditia, D., Suhendri, H., Gunawan, C. I., Yoga, T., Baizuri, A., & Munna, K. (2023). The Field School of Human Resources as The Forming Character of Youth Organizations in Mangrove Management on The Coastal Village. *Journal of Agricultural Socio-Economics (JASE)*, *4*(2), 83–92. https://doi.org/10.33474/jase.v4i2.20582

Akbari, M., Foroudi, P., Shahmoradi, M., Padash, H., Parizi, Z. S., Khosravani, A., Ataei, P., & Cuomo, M. T. (2022). The Evolution of Food Security: Where Are We Now, Where Should We Go Next? *Sustainability*, *14*(3634), 1–27. https://doi.org/10.3390/su14063634

Alan, B. (2017). *The Green Revolution-Effects in Asia and implications for Africa* (pp. 1–3). LINKS (international journal of socialist renawal). https://links.org.au/green-revolution-effects-asia-and-implications-africa

Alwi, I. (2012). Kriteria Empirik Dalam Menentukan Ukuran Sampel Pada Pengujian Hipotesis Statistika Dan Analisis Butir. *Jurnal Formatif*, *2*(2), 140–148. https://doi.org/10.30998/formatif.v2i2.95

Anwar, M., & Prasetyowati, R. E. (2021). Karakteristik Petani dan Keragaan Usahatani Jagung Lahan Kering Beriklim Kering (LKBK) Di Kecamatan Pringgabaya. *Jurnal Ilmiah Rinjani : Media Informasi Ilmiah Universitas*, *9*(1), 157–165. https://doi.org/https://doi.org/10.53952/jir.v9i1.303

Arnés, E., Díaz-Ambrona, C. G. H., Marín-González, O., & Astier, M. (2018). Farmer field schools (FFSs): A tool empowering sustainability and food security in peasant farming systems in the nicaraguan highlands. *Sustainability (Switzerland)*, *10*(3020), 1–24. https://doi.org/10.3390/su10093020

Ashari, A., Sharifuddin, J., Mohammed, Z. A., & Ramli, N. N. (2020). Green Revolution's Role and Impact: Organic Farming Potential For Indonesian Sustainable Agriculture. *Forum Penelitian Agro Ekonomi*, *37*(2), 115–125. https://doi.org/10.21082/fae.v37n2.2019.115-125

Burki, T. (2022). Food security and nutrition in the world. *National Institutes of Health*, *10*(September), 1–2. https://doi.org/10.1016/S2213-8587(22)00220-0

Dahiri, D., & Tineke, R. (2021). Analisis Pendahuluan APBN:Tinjauan Kritis Produksi Padi Nasionl. In *Pusat Kajian Anggaran*. Pusat Kajian Anggaran-Badan Keahlian DPR RI. https://berkas.dpr.go.id/pa3kn/analisis-apbn/public-file/analisis-apbn-public-60.pdf

Damayanti, V., Lestari, E., & Widiyanti, E. (2016). Sikap Petani Terhadap Kebijakan Subsidi Pupuk Di Kecamatan Cawas Kabupaten Klaten. *AGRISTA*, *4*(3), 192–204. https://jurnal.uns.ac.id/agrista/article/viewFile/30746/20514

Dinas Pertanian Kabupaten Lombok Timur. (2023). *Produksi Padi Kabupaten Lombok Timur Tahun 2023*. https://shorturl.at/eY1f4

Edeng, E., & Wardhono, W. (2019). Manajemen pendidikan Sekolah Lapangan Pengelolaan Tanaman Terpadu Pada Petani Peserta SL-PTT di Kabupaten Subang. *Composite: Jurnal Ilmu Pertanian*, *1*(2), 67–75. https://doi.org/10.37577/composite.v1i2.152

Fajar Oktavia, H., Susilastuti, D., Aditiameri, Husin, M., Tobing, S. M., & Rahmayanti, F. . (2020). Pemberdayaan Petani dalam Mengurangi Residu Melalui Pertanian Ramah Lingkungan di BPP Tambun Utara, Kabupaten Bekasi. *Abdi Wiralodra : Jurnal Pengabdian Kepada Masyarakat*, *2*(1), 27–38. https://doi.org/10.31943/abdi.v2i1.21

FAO. (2019). *Introduction to Farmer Field Schools: A Reader for Institutions of Higher Learning*. FAO & IIRR.

FAO. (2022). *UN Report: Global hunger numbers rose to as many as 828 million in 2021* (pp. 1–1). https://www.fao.org/newsroom/detail/un-report-global-hunger-SOFI-2022-FAO/en

Fatai, K., Abdullahi, H. A., Oba, A. I., & Bijani, M. (2024). Assessment of the Farmer Field Schools Activities as Strategy to Enhance Capacity Building of Smallholder Rural Cocoa Farmers in Kwara State, Nigeria. *Indonesian Journal of Agricultural Research*, *7*(1), 60–67. https://doi.org/10.32734/injar.v7i1.11439

Gao, T., Lu, Q., Zhang, Y., & Feng, H. (2024). Does Farmers' Cognition Enhance Their Enthusiasm for Adopting Sustainable Digital Agricultural Extension Services? Evidence from Rural China. *Sustainability (Switzerland)*, *16*(3972), 1–17. https://doi.org/10.3390/su16103972

Gunawan, G., & Haryanto, Y. (2020). Tingkat Adopsi Inovasi Pengelolaan Tanaman Terpadu Padi Sawah. *Jurnal Kommunity Online*, *1*(2), 111–122. https://doi.org/10.15408/jko.v1i2.20200

Haryanto, T., Wardana, W. W., Jamil, I. R., Brintanti, A. R. D., & Ibrahim, K. H. (2023). Impact of Credit Access on Farm Performance: Does Source Of Credit Matter? *Heliyon*, *9*(e19720), 1–13. https://doi.org/10.1016/j.heliyon.2023.e19720

Intisari, I., Halik, H. A., & Rosnina, R. (2018). Analisis Tingkat Kepercayaan Petani Terhadap Program Sekolah Lapang-Pengelolaan Tanaman Terpadu Padi Di Kota Palopo Sulawesi Selatan. *Jurnal Galung Tropika*, *7*(1), 69–74. https://doi.org/10.31850/jgt.v7i1.287

Irawan, E. (2017). Strategi Pemerintah Desa Dalam Pemberdayaan Kelompok Tani Di Desa Tambe Kecamatan Bolo Kabupaten Bima (Studi Kasus Di Desa Tambe Kecamatan Bolo Kabupaten Bima). *JEBI-Jurnal Ekonomi Dan Bisnis Indonesia*, *02*(01), 45–52. https://doi.org/10.37673/jebi.v2i1.52

Irvandika, F., & Suciati, L. P. (2024). Tingkat Penerapan Materi Dan Partisipasi Petani Pada Sekolah Lapang Climate Smart Agriculture Di Kabupaten Jember. *Jurnal Agribisnis Indonesia (Journal of Indonesian Agribusiness)*, *12*(2), 231–245. https://doi.org/10.29244/jai.2024.12.2.231-245

Iskandar, M. J., Anwar, M., & Parmi, J. H. (2024). Pengaruh Fragmentasi Lahan Terhadap Regenerasi Sektor Pertanian di Lombok Timur. *AGRITEVA*, *11*(2), 481–492. https://doi.org/10.37676/agritepa.v11i2.6718

Janie Arum, N. D. (2011). Statistik Deskriptif & Regresi Linier Berganda Dengan SPSS. In A. S. Ika (Ed.), *Semarang University Press* (Pertama, Issue April 2012). Semarang University Press.

Kallo, R., & Abigael, R. T. (2018). Analisis Respon Inovasi Teknologi Jarwo Super Pada Gelar Teknologi Padi Sawah. *Jurnal Agrisistem*, *14*(1), 1–11. https://www.ejournal.polbangtan-gowa.ac.id/index.php/J-Agr-Sosekpenyuluhan/article/view/160/156

Kasno, A. (2019). Perbaikan Tanah untuk Meningkatkan Efektivitas dan Efisiensi Pemupukan Berimbang dan Produktivitas Lahan Kering Masam. *Jurnal Sumberdaya Lahan*, *13*(1), 27–40. https://doi.org/10.21082/jsdl.v13n1.2019.27-40

Klemm, J., Turowska, Z., Sclama, G., & de Pee, S. (2025). Subnational and lifecycle-specific estimates of diet costs support nutrition-sensitive policies and programmes. *Global Food Security*, *45*(100838), 1–8. https://doi.org/10.1016/j.gfs.2025.100838

Krisna, B., Mamilianti, W., & Nuzuliyah, L. (2022). Pengaruh Pupuk Subsidi Terhadap Pendapatan Petani Padi (Studi Kasus di Kecamatan Sukorejo Kabupaten Pasuruan). *Journal of Agricultural Socio-Economics (JASE)*, *3*(2), 73–78. https://doi.org/10.33474/jase.v3i2.18972

Lestari, W., Rabesdini, D., & Yusri, J. (2012). Respon Petani Terhadap Program Sekolah Lapang Pengelolaan Tanaman Terpadu Padi Sawah Di Desa Pulau Birandang Kecamatan Kampar Timur Kabupaten Kampar. *Fakultas Pertanian Universitas Riau*.

Malik, A., Rosyani, R., & Elwamendri, E. (2015). Tingkat Respon Petani Terhadap Pelaksanaan Teknologi SL-PTT Padi Sawah Di Kecamatan Limun Kabupaten Sarolangun. *Jurnal Ilmiah Sosio-Ekonomika Bisnis*, *18*(1), 63–71. https://doi.org/10.22437/jiseb.v18i1.2817

Mariyono, J., Waskito, J., Suwandi, Tabrani, Kuntariningsih, A., Latifah, E., & Suswati, E. (2021). Farmer field school: Non-formal education to enhance livelihoods of Indonesian farmer communities. *Community Development*, *52*(2), 153–168. https://doi.org/10.1080/15575330.2020.1852436

Mikhael, M., Aziz1, M. A., & Nursyamsi, D. (2025). Accelerating The Adoption of Technological Innovations through of Hybrid Paddy Varieties in Bone District , South Sulawesi. *Jurnal Penyuluhan*, *21*(01), 159–166. https://doi.org/10.25015/21202552999

Miladinov, G. (2023). Impacts of population growth and economic development on food security in low-income and middle-income countries. *Frontiers in Human Dynamics*, *5*(1121662), 01–17. https://doi.org/10.3389/fhumd.2023.1121662

Molina, N., Brunori, G., Favilli, E., Grando, S., & Proietti, P. (2021). Farmers' participation in operational groups to foster innovation in the agricultural sector: An Italian case study. *Sustainability (Switzerland)*, *13*(5605), 1–27. https://doi.org/10.3390/su13105605

Muhammad, A., Muhammad Joni, I., Endang, P. R., & Ningsih, H. D. (2022). Pengenalan Dan Pelatihan Pembuatan Zat Pemacu Tumbuh Tanaman Di KWT Andar Nyawa" Desa Pesanggrahan. *Abdimas Rinjani (JAR)*, *2*(2), 21–26. https://jurnal.ugr.ac.id/index.php/abr/article/view/434/341

Muhammad, A., Murah, M., & Muhammad, Z. (2021). Identifikasi Manfaat Limbah Batang Tembakau Di Kabupaten Lombok Timur (Pengelolaan Limbah Pertanian Dengan Konsep Eco-Farming). *Journal Ilmiah Rinjani (JIR)*, *8*(2), 11–21. https://doi.org/10.53952/jir.v9i2.331

Mulyani, I. S., & Jumiati, E. (2014). Peningkatan Produktivitas Padi Melalui Pendekatan Sekolah Lapang Pengelolaan Tanaman Terpadu Di Kecamatan Sesayap Hilir Kabupaten Tana Tidung. *Jurnal AGRIFOR*, *XIII*(1), 75–84. https://doi.org/10.31293/af.v13i1.551

Ningsih, D. H., & Anwar, M. (2023). Distribusi Pendapatan Usahatani Padi Sawah (Oriza sativa L) di Kecamatan Aikmel Kabupaten Lombok Timur. *JIA*, *8*(5), 392–403. https://doi.org/10.37149/jia.v8i5.855

Ojelel, S., Mucunguzi, P., Katuura, E., Kakudidi, E. K., Namaganda, M., & Kalema, J. (2019). Wild edible plants used by communities in and around selected forest reserves of Teso-Karamoja region, Uganda. *Journal of Ethnobiology and Ethnomedicine*, *15*(3), 1–14. https://doi.org/10.1186/s13002-018-0278-8

Perdana, P., & Anggrasari, H. (2022). Program Corporate Farming Participation of Barokah Farmer Group , Jetis District on. *Pertanian Agros*, *24*(2), 631–642. http://dx.doi.org/10.37159/jpa.v24i2.1958

Pramono, W. A. (2017). *Pengaruh Sekolah Lapang Pengelolaan Tanaman Terpadu Berbasis Andragogi Terhadap Petani Padi (Studi Kasus Di Desa Sutojayan Kecamatan Pakisaji, Kabupaten Malang Provinsi Jawa Timur)*. Universitas Brawijaya. https://repository.ub.ac.id/5194/

Prasetyowati, R. E., Anwar, M., & Ahmadi, R. (2020). Kelayakan Usahatani Jagung Pada Lahan Kering Di Kecamatan Pringgabaya Kabupaten Lombok Timur. *JIR*, *1*(2), 9–17. DOI : 10.53952/jar.v1i2.55

Pratiwi, N. A., Harianto, H., & Daryanto, A. (2017). Peran Agroindustri Hulu dan Hilir Dalam Perekonomian dan Distribusi Pendapatan di Indonesia. *Jurnal Manajemen Dan Agribisnis*, *14*(2), 127–137. https://doi.org/10.17358/jma.14.2.127

Rozen, N., & Kasim, M. (2018). Teknik Budidaya Tanaman Padi Metode SRI (The System of Rice Intensification). In *8 Juli 2018* (1st ed.). Rajawali Pers.

Sjakir, M., Awang, A. H., Manaf, A. A., Hussain, M. Y., & Ramli, Z. (2015). Learning and technology adoption impacts on farmer's productivity. *Mediterranean Journal of Social Sciences*, *6*(4S3), 126–135. https://doi.org/10.5901/mjss.2015.v6n4s3p126

Sudariana, N., & Yoedani, Y. (2022). Analisis Statistik Regresi Linier Berganda. *Seniman Transaction*, *2*(2), 16–27. https://seniman.nusaputra.ac.id/index.php/seniman/article/download/40/18

Sugiyono, S. (2018). *Metode Penelitian Kuantitatif*. Alfabeta.

Sundram, P. (2023). Food security in ASEAN: progress, challenges and future. *Frontiers in Sustainable Food Systems*, *7*(1260619), 1–14. https://doi.org/10.3389/fsufs.2023.1260619

Tuna, A., Rauf, A., & Boekoesoe, Y. (2024). Analisis Pengembangan Kinerja Kelembagaan Petani Padi

Sawah Gapoktan Tio Olami Desa Bongoime Kecamatan Tilongkabila. *AGRINESIA*, *8*(1), 85–96. https://doi.org/10.37046/agr.v0i0.17905

van den Berg, H., Phillips, S., Dicke, M., & Fredrix, M. (2020). Impacts of farmer field schools in the human, social, natural and financial domain: a qualitative review. *Food Security*, *12*(6), 1443–1459. https://doi.org/10.1007/s12571-020-01046-7

Widianta, I., Anggoro, P., Sukraeni, N. K. K., Suwijana, I. M., Dwijana, I., & Jati, E. N. (2016). *Petunjuk Teknis Tanam Jajar Legowo Super* (Pertama). Balai Pengkajian Teknologi Pertanian (BPTP) Bali-Kementerian Pertanian. https://repository.pertanian.go.id/bitstreams/8820c3e6-fc6e-4d99-8c40-ce7dc456fdaa/download

Woodhill, J., Kishore, A., Njuki, J., Jones, K., & Hasnain, S. (2022). Food systems and rural wellbeing: challenges and opportunities. *Food Security*, *14*(5), 1099–1121. https://doi.org/10.1007/s12571-021-01217-0

Word Economic Forum. (2020). *Future of Consumption in Fast-Growth Consumer Markets: ASEAN* (Issue June). www.weforum.org