International Journal of Education, Vocational and Social Science
https://e-journal.citakonsultindo.or.id/index.php/IJEVSS
E-ISSN : 2963 4954
IJEVSS

The Role Of Extension Workers Agriculture To Improvement Knowledge Paddy Farmers In Tondo Village, District Sirenja Regency Donggala

Fadillah
Tadulako University, Indonesia
Dance Tangkesalu
Tadulako University, Indonesia
Adinda Elfara Rizki Adam
Tadulako University , Indonesia

Email: fadillahanhar22@gmail.com

Abstract

Extension worker agriculture own contribution strategic in transform knowledge and skills farmers Research this aim for analyze role extension worker agriculture to improvement knowledge rice farmers in Tondo Village, District Sirenja, Regency Donggala. Research methods use approach descriptive qualitative with sample as many as 35 designated rice farmers through simple random sampling technique. Data analysis using Likert scale and Chi Square test. Research results show that role extension worker as mentor amounted to 72.36%, facilitators 57.6%, technicians 57.6% and organizers 49.14%. In total overall, role extension worker is in the category Enough good (62.30%). The calculated chi square value (528.39) is higher big from the chi square table (7.815). This is show that extension worker agriculture play a role real in educate farmers, even though the program counselling not optimal.

Keywords: extension worker agriculture, rice farmers, knowledge, likert chi square scale.

INTRODUCTION

Agricultural sector is bone back the economy in various developing countries, including Indonesia. Its contribution no only limited to the provision of material food for society, as well as absorber power work and resources income main for resident rural areas. Various commodities agriculture is one of them plant food, paddy fields occupy position strategic Because become food

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-Share Alike 4.0 International License

main for majority Indonesian population (BPS, 2024). Rice (*Oryza sativa L.*) with strategic commodities own mark social, cultural and economic tall Because become source food main more of 90% of Indonesian people. Increase rice productivity becomes focus main in development agriculture national (Supriyadi et al, 2021).

Improvement productivity of paddy fields is not only determined by availability factor production, but is also greatly influenced by the level of knowledge farmer in manage farming. Knowledge farmer covers technique cultivation, use varieties superior, control pest integrated, water management, to handling post-harvest. Farmers with good knowledge tend capable take the right decision so that results production become more optimal (Apriyani et al, 2024). Extension agriculture own role strategic in increase capacity farmer as well as support achievement independence food. Extension worker agriculture play a role as connector between government, farmers, and stakeholders (Khairunnisa et al, 2021). Extension no only functioning as means of knowledge transfer, also as a medium of empowerment for farmer in face challenge modern agriculture.

Subdistrict Sirenja is an area that is partly big its people eyed livelihood as rice farmers. Tondo Village is one of the village with activity sufficient rice farming dominant. Limitations amount extension worker compared to amount farmer cause activity counseling not yet optimal and evenly distributed. Participation farmer in activity counseling Still varies so that impact on differences level knowledge farmer in manage paddy farming. Based on condition said, research This done for know role extension worker agriculture as mentor, facilitator, technician and organizer to improvement knowledge rice farmers in Tondo Village, District Sirenja Regency Donggala.

LITERATURE REVIEW

A number of study relevant previous with study about role extension worker agriculture to improvement knowledge rice farmers who have carried out by various researcher.

Study Sudarmo et al, (2021) entitled The Role of Extension Workers Agriculture to Improvement Insight/Knowledge in Increase Rice Production in Tellulimpo Village Subdistrict Marioriawa Regency Soppeng. Research aim for study role extension worker agriculture to production rice farmers in Tellu Village Limpoe Subdistrict Marioriawa Regency Soppeng. Research results show that Perception public to role extension worker agriculture plays a very important role in increase insight/knowledge in increase production rice farmers and also the role extension workers are very important for farmers in Tellulimpoe Village For can increase rice production.

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-Share Alike 4.0 International License

Research by Lusiana et al, (2018) entitled The Role of Extension Workers Agriculture in Increase Income Rice Farming in Olobuju Village Sigi Biromaru District Sigi Regency. Research Objectives for analyze role extension worker agriculture and income paddy farming in Olobuju Village Sigi Biromaru District Sigi Regency. Research results show that, the role extension worker agriculture as mentor is good. This is indicated by x^2 count > x^2 table role extension worker from aspect mentor Farmers (9.27) > (5.99), Facilitators (12.17) > (5.99).

Study Padji et al, (2025) entitled The Role of Extension Workers Agriculture to Improvement Productivity of Rice Farming Business in the Village Mauliru Subdistrict Kambera East Sumba Regency. Aims For analyze role extension worker agriculture in increase results rice production in the sub-district Mauliru, District Kambera, East Sumba Regency. Research results extension worker agriculture in the sub-district Mauliru own roles that are classified as " playing a role " in all indicator role, namely as a motivator, educator, facilitator, consultant, communicator, organizer, and catalyst, with the average score was 3.87. The results of the correlation test show existence connection strong positive between total roles extension worker with improvement rice production , with mark correlation of 0.675 and significance of 0.001.

RESEARCH METHODS

Types of research This use approach descriptive qualitative descriptive role extension worker with use scale Likert for know level satisfaction farmer to extension worker, then to be continued with chi square analysis for know connection role extension worker agriculture with level knowledge farmer in manage paddy farming.

Study This held in Tondo Village, District Sirenja Regency Donggala Research Location this is selected in a way intentionally (purposive), with consideration that Tondo Village is one of the areas where eye his livelihood is sector agriculture specifically paddy fields and the Tondo Village area in part big Not yet recognize system counseling agriculture. Research This will implemented in January 2026 until March 2026.

Respondents in the study This is member group farmers who cultivate paddy fields. Determination respondents in the study This done with use method sample random simple (*Simple random sampling*) Where in study use level 15% error then size farmer respondents used as many as 35 people from the total population 160 rice farmers and 2 extension workers as giver information.

Data collected in study This is primary and secondary data. Primary data is data that is taken in a way directly by researchers through observation live and interview with selected

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-Share Alike 4.0 International License

farmers as respondents so that the data is obtained in the form of raw data while secondary data means data collected by researchers previous and secondary data can be taken through information from journal and agency government. The analysis used for reach objective study This that is descriptive qualitative and chi square for know connection between role extension worker to level knowledge rice farmers in Tondo Village, District Sirenja Regency Donggala.

Analysis Description Qualitative

According to opinion Sugiyono (2021), analysis descriptive qualitative is methods used for analyze the data obtained from observation, interviews, or documentation, then arranged in a way systematic and explained based on facts on the ground without use calculation statistics. The process being measured in data analysis is scale Likert scale is technique in giving scores used in questionnaire research. Alternative answer with use scale likert, namely giving score for each answer question or statement alternative as following:

Table 1. Likert Scale

No.	Answer	Score
1.	Very good	5
2.	Good	4
3.	Pretty good	3
4.	Not good	2
5.	Not good	1

Source : Sugiyono , 2017.

Study This use questionnaires in which each statement accompanied by with five possibilities the answer that must be chosen by the respondent. Answers from respondents to the questionnaire obtained data which is then analyzed with use method scoring (score). From the answers obtained Then arranged criteria evaluation for each statement item.

Table 2. Criteria Assessment of the Role of Extension Workers Agriculture

Category	Class Interval
Very good	85 – 100
Good	69 – 84
Pretty Good	53 – 68

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-Share Alike 4.0 International License

Enough good	37 – 52
Not good	20 – 36

Source : Sugiyono , 2013

For do testing to level role extension worker agriculture used formula index role extension worker as following :

$$Indeks\ PP = \frac{Skor\ yang\ di\ peroleh}{Skor\ tertinggi} x100\%$$

Chi Square (X^2)

Chi-Square (χ^2) test was performed for test whether the frequency that will be observed (observation data) for prove or there is difference in a way real or no with expected frequency. Testing hypothesis with using Chi Square (χ^2). According to Sugiyono (2010), the Chi Square formula (X^2) is as following.

$$x_2 = \sum_{1=1}^{k} \frac{(F_0 - F_h)^2}{F_n}$$

Information :

x^2 = Chi Square;

k = interval class ;

f_0 = observed frequency ;

f_h = expected frequency.

With rules decision as following:

1. If X^2 calculate < X^2 table, then H_0 accepted and H_a rejected means extension worker agriculture no play a role to improvement knowledge of paddy fields in Tondo Village, District Sirenja Regency Donggala.
2. If X^2 count ≥ X^2 table, then H_0 rejected and H_a accepted means extension worker agriculture play a role to improvement knowledge of paddy fields in Tondo Village, District Sirenja Regency Donggala.

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-Share Alike 4.0 International License

RESULTS AND DISCUSSION

Tondo Village, District Sirenja, Regency Donggala is an area that has potential sufficient agriculture big with irrigated rice field area reaching 125.50 Ha and some of it big resident working in the sector agriculture (61.86%). Conditions the show that agriculture, in particular paddy farming, still become source eye livelihood main society and play a role important in support The economy of Tondo Village. The potential of the region is supported by the availability of land agriculture make Tondo Village as areas that have opportunity big for development sector agriculture through improvement capacity source Power man farmer.

Characteristics respondents show majority farmer be in a group aged 52–65 years (42.86%), junior high school education (54.28%), have experience farming for 14–27 years (42.86%), have liability family 1–3 people (77.14%), as well as manage land covering an area of 0.5–1.0 ha (91.43%). Condition This describe part big farmer own enough experience long in manage paddy farming and still are at a relatively young age productive so that potential accept, understand, and apply various innovation agriculture delivered through activity counseling.

The Role of Extension Workers Agriculture As Supervisor

A extension worker is education or teachers for farmers in non-formal education, extension workers own high ideas for overcome obstacle in development agriculture originating from farmers. Based on table 3 can seen that part farmer respondents answered rice paddy role extension worker as mentor enter in category good. This is show that extension workers in Tondo Village have impact for farmer, meaning education provided extension worker to farmer can give influence positive for change pattern performance farmer in process his farming business.

Table 3. Assessment scores role extension worker as supervisor (XI)

Indicator (XI)	Score obtained	Expected score	Achievement (%)
XI. 1	130	175	74.37
XI. 2	135	175	77.14
XI. 3	135	175	77.14
XI. 4	144	175	82.28
XI. 5	89	175	50.85
Amount	**633**	**875**	**72.36**
Category	**Good**		

Source: Primary Data After Processing, 2026

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-Share Alike 4.0 International License

Evaluation role extension worker agriculture as the mentor obtained use scale Likert including in category Good or play a role with index presentation 72.36 % were in the class interval 69 – 84. Interview results to farmers, according to farmer extension worker always teach farmer method cultivation paddy field plants, extension workers also provide solution If there is problem to farming like give directions related time spraying the right weeds so that they don't damage rice plants due to influence wind fast. Even though from statement farmer that extension worker not enough in visiting and less optimally communication between farmers. Conditions the cause part farmer No get information in a way direct so that not yet fully follow directions given. With That required improvement effectiveness communication and dissemination information so that activities guidance can reach all over farmer in a way evenly. This is can it is said that the main capital do guidance is delivery good information, so that the delivery information between farmer can intertwined with Good.

Research result This in line with Apriyani et al, (2024) who stated that extension worker agriculture play a role as mentor through activity coaching and mentoring group farmers, so that can increase knowledge and skills farmer in manage farming. The role of the mentor carried out extension worker No only limited to giving material, but also includes mentoring directly in the field.

The Role of Extension Workers Agriculture As Facilitator

The role of extension workers as facilitator give facilities and empowerment farmer with method make things easier access facilities and infrastructure production agriculture and as bridge connector in convey information to farmer related with new innovations in farming farmer.

Table 4. Assessment scores role extension worker as facilitator (X2)

Indicator (XI)	Score obtained	Expected score	Achievement (%)
X2. 1	144	175	82.29
X2. 2	142	175	81.14
X2. 3	96	175	54.86
X2. 4	66	175	37.71
X2.5	56	175	32
Amount	**504**	**875**	**57.6**
Category	**Pretty good**		

Source: Primary Data After Processing, 2026

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-Share Alike 4.0 International License

Based on table 4 assessment role extension worker agriculture as facilitator obtained use scale Likert including in category pretty good play a role with index presentation 57.6 % were in the class interval 53-68. The results of interviews with farmers, according to part big farmer respondents extension worker as facilitator Already Enough okay, extension worker facilitate farmer in the form of tool agriculture fertilizer subsidized and seeds. But fertilizer available subsidies No sufficient in farming so that Farmers in Tondo Village use their own capital for purchase fertilizer non-subsidized. Extension worker in facilitate capital farmer less than optimal, lack of recommendation extension worker to group farmer for plan development of financial institutions Farmers (LKP) or Cooperative Save Borrow that can make things easier access to capital for activity farming. According to opinion Rizqullah (2021) that as facilitator extension worker or coach responsible answer for provide environment adequate, effective learning as well as other conveniences will be make things easier ongoing an active process.

Research result This in line with Nur Ilahi research et al, (2023) who stated that role extension worker as facilitator No only focused on delivery information and technology agriculture, but also plays a role in bridge farmer for get access to means production, capital, partnership business, and various source power supporters others. With improvement role extension worker in build network with institution finance and strengthen institutional farmer become important for support sustainability paddy farming.

The Role of Extension Workers Agriculture As Technician

The role of extension workers as technician in counseling agriculture emphasize on ability extension worker in give guidance technical in a way direct to farmer through activity demonstrations, training, and field assistance, extension workers as technician functioning for convey material technical as well as demonstrate implementation innovation farming to make it easy understood farmer. Extension worker no only play a role as communicator, but also as trainer who improves skills practical farmers (Kurniawan et al, 2024).

Table 5. Assessment Score of Extension Worker Roles As Technician (X3)

Indicator (XI)	Score obtained	Expected score	Achievement (%)
X3. 1	144	175	782.29
X3. 2	122	175	81.14
X3. 3	96	175	54.86
X3. 4	66	175	37.71

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-Share Alike 4.0 International License

X3. 5	56	175	32
Amount	**504**	**875**	**57.6**
Category	**Pretty good**		

Source: Primary Data After Processing, 2026

Based on table 5, the assessment role extension worker agriculture as technicians obtained use scale Likert including in category pretty good play a role with index presentation 57.6 % were in the class interval 53 – 68. Interview results show that extension worker give information about use fertilizer in accordance dose recommendations, use safe pesticides, as well as utilization technology supporting agriculture activity farming. Presence technology like machine harvest assessed capable increase efficiency work and reduce need power work moment harvest. Extension worker together government the village also strives use water pump solar for help water supply during the dry season drought.

A number of farmer evaluate that delivery material about processing land in accordance condition land, maintenance plants, and handling post-harvest Still not optimal. Utilization technology agriculture not yet felt in a way evenly distributed throughout farmers. The need improvement mentoring and training technical so that farmers capable adopt and utilize technology in a way maximum. Research This in line with opinion Herliyanti (2021) stated that that extension worker as technician must own abilities and skills adequate technical skills to be able to give service consultation and solutions to problems faced farmer.

The Role of Extension Workers Agriculture As Organizer

The role of extension workers as organizer is forming, managing, and strengthening group farmers to be organized in a way effective and sustainable. Extension workers also play a role in connect group farmer with various party like government, institutions finance, and markets, so that farmer own more access wide to information, technology, and assistance.

Table 6. Assessment scores role extension worker as Organizer (X4)

Indicator (XI)	Score obtained	Expected score	Achievement (%)
X4. 1	112	175	64
X4. 2	98	175	56
X4. 3	76	175	43.42
X4. 4	64	175	36.57

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-Share Alike 4.0 International License

X4. 5	80	175	45.14
Amount	**403**	**875**	**49.14**
Category	**Not Good**		

Source: Primary Data After Processing, 2026

Based on table 6 assessment role extension worker agriculture as technicians obtained use scale Likert including in category not good with index presentation 49.14 % were in the class interval 37–52. Interview results show that existence group farmer enough help farmer in reduce cost farming, such as purchase fertilizer, seeds, and rent tractor. Extension worker assessed enough active in invite farmer for join and participate in group farmers. The role of extension workers in push work the same between farmers, regulate activity counseling, helping compilation plan farming, as well as invite farmer follow training Still Not yet walk optimally.

Condition This show that role extension worker as organizer still need improved, especially in build work the same between members group farming and moving activity group in a way sustainable. Involvement extension worker in accompany and direct activity group farmer from stage planning until post-harvest is also necessary strengthened so that the group farmer can functioning more effective in support activity farming rice farmers. In line with study Nurida et al (2024) who stated that role extension worker as organizer is very important in forming and strengthening institutional group farmers, however implementation often not optimal because limitations mentoring as well as low participation member group.

Recapitulation Assessment of the Role of Extension Workers Agriculture in Tondo Village

Evaluation role extension worker as mentor, facilitator, technician, and organizer all each has its own category, role extension worker as mentor own category good, role extension worker as facilitator own category pretty good, role extension worker as technician own category pretty good, and role extension worker as a motivator to have category not enough good, counseling done in order to be able to give input and help farmer in finish existing problems in the field and for increase production agriculture in Tondo Village.

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-Share Alike 4.0 International License

Table 7. Recapitulation Assessment of the Role of Extension Workers Agriculture in Tondo Village 2026

No	The Role of Extension Workers	Score obtained	Expected score	Achievement (%)
1.	The Role of Extension Workers Agriculture As Supervisor	633	875	72.36
2.	The Role of Extension Workers Agriculture As Facilitator	504	875	57.6
3.	The Role of Extension Workers Agriculture As Technician	614	875	57.6
4.	The Role of Extension Workers Agriculture As Organizer	430	875	49.4
	Amount	**2,181**	**3,500**	**62.3**
	Category	**Pretty good**		

Source: Primary Data After Processing, 2026

Based on table 7, from four variables role extension workers, namely mentors facilitators, technicians, and organizers, with a total of 20 statements given to 35 farmers respondents, get a total score amounting to 2,181 with percentage of 62.3%. The results show role extension worker agriculture in paddy farming in Tondo Village, District Sirenja, Regency Donggala including in category pretty good, because is in the percentage interval of 53%-68%. Category the show that existence extension worker has give contribution to improvement knowledge farmer through delivery information, direction and assistance in activity paddy farming business. As for the value that has not been maximum indicates that implementation counseling Still face a number of limitations so that improvement knowledge farmer not yet completely optimal. This is show that the more good role extension workers are carried out, then the more big increase knowledge farmers who can achieved. Research results this in line with opinion Febriansyah et al (2026) who stated that extension worker agriculture play a role in increase knowledge farmer through delivery information and assistance, although its effectiveness influenced by intensity activity counseling

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-Share Alike 4.0 International License

conducted

Research result this in line with Juan's research (2023) found that that role extension worker agriculture in paddy farming is in the category pretty good with percentage 61.08%. Extension workers sued operate various activities, such as mentoring, regular meetings, delivery information, as well as development ability managerial, entrepreneurial, and institutional farmers through activity said, counseling expected capable help farmer in overcome various problem farming as well as support improvement paddy rice production.

The Relationship Between the Role of Extension Workers Agriculture To Improvement Knowledge

Connection between role extension worker agriculture with improvement knowledge rice farmers show existence interconnectedness of a nature in one direction. The increasingly optimal role of extension workers will followed by increasing knowledge farmers. This is happen because extension worker is source main information, learning, and mentoring for farmer in activity rice farming. Relationship the can seen from intensity interaction between extension workers and farmers.

Table 8. Chi-Square Calculation (X^2) Role of Extension Workers Agriculture in Tondo Village, District Sirenja Regency Donggala,

No.	Indicator	Score Obtained (O)	Expected Score (E)	O – E	$(O – E)^2$	$(O – E)^2 / E$
1.	Supervisor	633	875	-242	58,564	66.93
2.	Facilitator	504	875	-371	137,641	157.30
3.	Technician	614	875	-261	68,121	77.85
4.	Organizer	430	875	-445	198,025	226.31
	Amount	**2,181**	**3,500**			**528.39**

Source: Primary Data After Processing, 2026

Based on Chi-Square (χ^2) test results were obtained calculated χ^2 value amounting to 528.39, more big than χ^2 table amounting to 7,815 at the level significance of 5% (df = 3). This result show that role extension worker agriculture influential real to improvement knowledge rice farmers in Tondo Village, District Sirenja Regency Donggala. High χ^2 value show existence difference significant between the conditions obtained and the conditions expected. This is in line

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-Share Alike 4.0 International License

with results analysis Likert scale of 62.3% which includes category Enough good, which indicates that role extension worker has walk However not optimal. Extension workers play a role in give guidance, information and assistance to farmer so that capable increase knowledge farmer in manage paddy farming. Therefore that, the increase quality and intensity activity counseling still necessary for the role extension worker can walk more effective and impactful on increasing knowledge farmer optimally.

Success counseling agriculture in increase knowledge farmers are also influenced by the level of participation farmer in every activity counseling. Activeness farmer in follow meeting, discussion group, demonstration field, as well as consultation with extension worker give more opportunities big in understand and apply innovation agriculture. Good relationship between extension workers and farmers create an effective communication process, so that information provided can accepted with more good and has an impact on improving knowledge rice farmers (Fitria, 2025).

CONCLUSION AND SUGGESTIONS

Conclusion

Based on results research , can concluded as following :

1. The role of extension workers agriculture as mentor get score 633 with percentage of 72.36% including category good. The role of extension workers as facilitator get score 504 with percentage of 57.6% including category pretty good. The role of extension workers as technician get score 504 with percentage of 57,6% including category pretty good. The role of extension workers as organizer get score 430 with percentage of 49.4% including category not good.
2. In a way overall, role extension worker agriculture in Tondo Village, District Sirenja Regency Donggala get total score 2,181 with percentage of 62.3%, so that including in category Enough play a role .

Suggestion

1. Farmers expected can apply information, technology and innovation delivered by extension workers agriculture in activity paddy farming.
2. Extension worker agriculture expected can increase performance, intensity mentorin, as well as his role as facilitator and organizer in support development paddy farming.
3. Government expected can increase support to activity counseling agriculture through

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-Share Alike 4.0 International License

coaching, mentoring, and provision required facilities and infrastructure farmer.

Bibliography

Apriyani, N., Rahmawati, D., & Suryadi, A. (2024). The role of extension workers agriculture in activity group farming and its relationship with productivity of lowland rice. Journal SocialAgribisnis,8(1),45–56. https://ejournal.unma.ac.id/index.php/jsa/article/view/9365

Aryawiguna, MI, et al. (2024). The Role of Extension Workers Agriculture as Organizer in Activity Extension . JPPI (Journal) Indonesian Education Research), 10(3), 851–858.

Central Statistics Agency (BPS). (2024). Statistics Agriculture 2024. Jakarta: BPS RI.

Febriansyah, A., Rahman, B., & Putri, C. (2026). The role of extension workers agriculture in increase knowledge farmer. Journal Scientific Innovation and Communication of Agricultural Development, 10(2), 45–56. https://doi.org/10.56189/jiikpp.v5i2.49

Fitria, I. (2025). The role of extension workers agriculture to improvement Paddy production in Lubuk Sini Village, Taba Penanjung District Central Bengkulu Regency. Journal Agroqua: Information Media Agronomy and Aquaculture, 23(1), 103–109. https://doi.org/10.32663/ja.v23i1.5128

Herliyanti , F. 2021. The Role of Extension worker Agriculture in Empowerment Farmer groups in Pulang Pisau Regency. Doctoral dissertation. Muhammadiyah University of Palangkaraya.

Illahi , SN, Meilani, EH, & Rini, NK (2023). Analysis role extension worker agriculture as facilitator in the Regency Sukabumi. MAHATANI: Journal Agribusiness (Agribusiness and Agricultural Economics Journal), 6(1), 153–163. https://doi.org/10.52434/mja.v6i1.2451

Juan, L. (2023). Analysis of the Role of Extension Workers Agriculture In Paddy Farming in Tabarano Village North Mori District, Regency North Morowali . (Agricultural Extension). Vol 2. No 3. 254-263.

Kurniawan. 2020. Development Study Farmers Group in Developing Organic Rice Farming Business in Sumber Makmur Village, Subdistrict Kalaena Regency East Luwu. Thesis. Unpublished. Faculty of Agriculture. Cokrominoto University Palopo , South Sulawesi. page. 76

Khairunnisa, NF, Saidah, Z., Hapsari , H., & Wulandari, E. (2021). The Influence role extension worker agriculture to level production farming corn . Journal Extension , 17(2), 113–125. https://doi.org/10.25015/17202133656

Lusiana, Laapo, A. and Howara, D. 2018. The Role of Extension worker Agriculture In Increase Income Rice Farming in the Village Oloboju Sigi Biromaru District Sigi Regency. Agrotekbis : E- Journal Agriculture . 6 (1): 40-47.

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-Share Alike 4.0 International License

Padji, MA, Retang, EUK, & Djoh, DA (2025). The role of extension workers agriculture to improvement production business rice farmers in the sub-district Mauliru Subdistrict Kambera East Sumba Regency. Proceedings of the National Seminar on Sustainable Agricultural Technology Innovation (SATI), 4(1), 522–535. ojs.unkriswina.ac.id

Sugiyono. 2013. Research Methods Quantitative , Qualitative , and R & D. Bandung: Alfabeta .

Sugiyono. 2010. Statistics For Research . Bandung: Alfabeta .

Sugiyono. 2017. Research Methods Quantitative , Qualitative , and R&D. Bandung: Alfabeta .

Sugiyono. 2021. Research Methods Qualitative , Quantitative , and R&D. Bandung: Alfabeta .

Sudarmo, Irmayani, and Yusriadi. 2021. The Role of Extension Workers Agriculture To Improvement Insight / Knowledge In Increase Rice Production in Tellulimpo Village Marioriawa District Soppeng Regency. ECOSYSTEM Journal Vol. 21 No. 3 : 554-560.

Supriyadi, S., & Widodo, W. (2021). Technology Rice Paddy Cultivation Based on Local Innovation. Yogyakarta: Deepublish.

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-Share Alike 4.0 International License