



## SMALLHOLDER RICE FARMERS ACCESS TO RICE PRODUCTION INPUTS IN EKITI STATE, NIGERIA

<sup>1</sup>Idowu, T. C., <sup>1</sup>Lawal, B. O. and <sup>2</sup>Gabriel, D. A.

<sup>1</sup>Institute of Agricultural Research and Training, Obafemi Awolowo University,  
Moor Plantation, Ibadan.

<sup>2</sup>Alex Ekwueme Federal University, Udufu Alike, Ikwo, Ebonyi State, Nigeria

**Corresponding Author's E-mail:** idowutolulope83@gmail.com, **GSM:** +2348035247600

### ABSTRACT

The study examined smallholder rice farmers access to rice production inputs in Ekiti State, Nigeria. The specific objectives of the study were to: identify the socio-economic characteristics of the rice farmers and ascertain access to inputs for rice production activities in the study area. A multi-stage sampling procedure was used in selecting 135 and data were collected using structured questionnaire. Descriptive statistics such as frequency tables and percentages were used to achieve the research objectives. The result showed that majority (77.8%) of the respondents were male, 66.7% were married, and 65.2% had less than 2 hectares of land. The average farming experience in rice production was 30.8 years and 9 family members as the average household size. Furthermore, the study found respondents had access to simple farm tools (85.2%), rice seeds (92.6%), labour (82.2%) and fertilizers (59.3%). limited access to credit ( $\bar{X}=3.55$ ), lack of awareness on inputs ( $\bar{X}=3.51$ ), lack of access to market ( $\bar{X}=3.47$ ) and scarcity of recommended inputs ( $\bar{X}=3.45$ ) were among the constraints limiting access to inputs by the respondents. The respondents had access to different inputs for rice inputs for rice production but faced constraints in accessing inputs for their rice production. Therefore, it is recommended that government and relevant NGOs should subsidize the cost of farm inputs and strengthen extension services that will train rice farmers on the best methods of using farm inputs that will boost rice production in the country.

**Keywords:** Access, Rice, Inputs, Farmers, Production

### INTRODUCTION

Agriculture plays a vital role in economic growth and development, which reduces poverty and ensure food security. Rice is an important crop in the world for food security for the poorest and undernourished people in the world (Rahman and Zhang, 2022). United State Department of Agriculture (2023) estimates that the world 2023/2024 rice production was 518.14 million metric tons as against 510 metric tons of rice produced in 2022 (Shahbandeh, 2023). According to the World Bank (2024), agriculture accounts for about 17.22% of the nominal Gross Domestic Product (GDP) and 37.99% of the labour force in Nigeria (Statista, 2024). Nigeria is the highest rice producer in West Africa with production amounted to about 8.3 million metric tons annually (Agou *et al.*, 2025; Sasu, 2023). Rice consumption in Nigeria has grown substantially than many food products as more than 50% of the 210 million populations eat rice daily, accounting for nearly 20% of Africa's consumption (Sasu, 2023). Also, rice consumption in Nigeria was 5 million metric tons in 2010 and is expected to reach 36 million metric tons by 2050 with 5.1% annual growth (Mba, *et al.*, 2021).

Access to rice production inputs like improved seeds, fertilizers, and agrochemicals is a key factor in boosting productivity. factors like access to credit, government programs, and extension services significantly influence this access. Farmers' that farmers' ability to obtain credit is critical for purchasing inputs (Njankouo, *et al.*, 2025). Furthermore, rice production inputs are crucial for boosting yield, improving efficiency, and increasing farmer profitability. Their proper use leads to higher output, which helps meet domestic demand, reduce reliance on imports, improve food security, and increase income for farmers (Oyita, *et al.*, 2023). Using inputs like fertilizer, improved seeds, and agro-chemicals significantly enhances the yield of rice and improves the technical efficiency of farmers (Tarantino, 2025). Increasing local rice production through better input use can lead to reduced food import bills and create a pathway toward economic recovery. Subsidized and timely



access to inputs like fertilizers and improved seeds helps lower production costs for farmers, making the process more cost-effective (Tarantino, 2025).

Rice farmers in Nigeria face challenges in accessing inputs due to high production costs, limited financing, and poor input distribution networks. Other issues include the cost of certified seeds, fertilizers, and agrochemicals, as well as issues with timely delivery from contracting firm and low productivity. Rice farmers in Ekiti State as one of the rice producing centers in the country face challenges in accessing inputs, which has limited their ability to produce that will ensure food security. Based on the foregoing, the study aimed to assessed access to rice inputs among rice farmers in Ekiti State, Nigeria.

The broad objective of the study was to access to rice inputs among rice farmers in Ekiti, State, Nigeria. The specific objective of the study were to: identify the socio-economic characteristics of the rice farmers and ascertain the level of access to inputs for rice production activities in the study area.

## **METHODOLOGY**

The study was conducted in Ekiti State, which is located between latitudes 7°15' and 8°71' North of the equator and longitudes 4°47' and 5°45' East of the Greenwich Meridian. Ekiti State is bordered to the North by Kwara and Kogi States, to the South and East by Ondo State, and to the West by Osun State experiences a mean annual rainfall of about 1400mm and a mean annual temperature of 27°C. Its vegetation varies from rainforest in the South to Guinea savannah in the North, with soils rich in organic minerals, making it a significant producer of both tree and food crops. The state is abundant in agricultural resources, with rice being one of its major food crops (Adebayo *et al.*, 2025). Ekiti State comprises sixteen Local Government Areas, with Ado-Ekiti serving as both the state capital and the headquarters of the Ado-Ekiti Local Government Area. By 2022, the population was projected to have reached approximately 3,592,200. This represented a 50% growth since 2006, showing a steady rise in the number of people living in Ekiti State (Kenneth, 2025). Predominantly consisting of the Yoruba ethnic group. This group shares similar cultural and traditional practices and speaks the same language with slight dialect variations. The primary occupation in the state is farming, with significant cultivation of food crops like yam, maize, and cassava, and cash crops such as cocoa, kola nut, cashew, and oil palm. Additionally, a portion of the population is involved in trading, weaving, and handcraft.

Multi-stage sampling procedure was employed for selection of the respondent. In the first stage, three Local Government Areas (LGAs) including Irepodun/Ifelodun, Gbonyin, and Emure were purposively selected based on volume of rice production. In the second stage, three (3) villages were purposively chosen from each of the selected LGA, based on their rice production, giving a total of nine villages. In the third stage, 15 smallholder rice farmers were randomly selected from each village, totaling 45 respondents per LGA. The overall sample size was 135 respondents. Information on socioeconomic characteristics were gathered on gender, age, marital status, farm size, household size, level of education, etc.

Smallholder rice farmers access to inputs was measured at nominal level of yes and no. The list containing inputs such as simple farm tools, rice seeds, labout, fertilizers etc. was presented to the respondents. Constraints faced by smallholder rice farmers in accessing inputs was measured on a 5-point Likert type scale of extremely (5), very (4), moderately (3), little (2) and not at all (1). The arrive at the cut-off,  $5+4+3+2+1=15/5=3.0$ . Therefore, any variable with a mean score of 3.0 was considered a constraint while any variable less than 3.0, was regarded not a constraint.

## **RESULTS AND DISCUSSION**

### **Socioeconomic Characteristics of the Respondents**

Result in Table 1 indicates that 77.8% of the respondents were males while 22.2% were females. This implies that majority of the rice farmers in study are males and this could probably be because of the fact that males have more access to productive resources than females. The result shows that the majority (85.9%) of the rice respondents were less than 65 years, with the mean of



59.4±5.4 years. The mean age signifies that rice farmers were old rice farmers who might not have physical strength to cope with the drudgery that comes with farming. The mean year of experience was 30.8 years, which shows that the rice farmers were experienced in rice production. The study also shows that majority (66.7%) of the respondents were married, implying that the farmers, rice production in the study area was dominated by married who probably engage in rice production to cater for their family needs. The study agrees with Adebayo *et al.*, (2025) that 84.3%% of rice farmers in Ekiti State were married. More so, the majority (65.2%) had farm size of less than 2 hectares, which implies that majority of the respondents were smallholder farmers. Also, 64.5% of the respondents had between 6 and 10 persons with the average of 9 persons and this implies that the respondents had fairly large household size that could supply family labour for rice production as reported by Onyeneke *et al.*, 2021). Also, 48.9% of rice farmers had primary education, which suggests that the respondents could read and write to understand and this helps to simplify difficult concepts that will be easily understood (Ahsan *et al.*, 2020).

Furthermore, 85.9% of the respondents spent between 21 and 40 years in farming rice and the average age was 30.8 years. This implies that the respondents were experienced farmers who have spent many years in rice production that would have helped them devise means of getting inputs for their rice production. The study also found that 50.4% earned ₦ 201000–₦ 400,000, implying that the respondents were smallholder farmers who little from rice production. Furthermore, 60.7% of the respondents pointed out that they had access to extension agents, which implies there was extension service in the study area. Also, 96.3% of the rice farmers were members of social organizations and this could be because farmers usually operate in groups which offer them benefits such as access to inputs. The majority (63.0%) of the respondents got their land from inheritance because it's a traditional system of land tenure.



**Table 1:** Socioeconomic Characteristics of the Respondents (n=135)

Characteristics	Percentage	Mean
<b>Gender</b>		
Male	77.8	
Female	22.2	
<b>Age</b>		
<65	85.9	59.4
>65	14.1	
<b>Marital Status</b>		
Married	66.7	
Unmarried	33.3	
<b>Farm Size</b>		
<2 hectares	65.2	
2-5 hectares	34.1	
>5 hectares	0.7	
<b>Household Size</b>		
<6 persons	12.5	
6-10 persons	64.5	9
11-15 persons	21.5	
>15 persons	1.5	
<b>Level of Education</b>		
No formal education	15.6	
Primary education	48.9	
Secondary education	33.3	
Tertiary education	1.5	
<b>Farming Experience (years)</b>		
<21	8.1	
21-40	85.9	30.8
>40	6.0	
<b>Annual Farmers Income</b>		
N100,000-N200,000	42.9	
N201,000-N400,000	50.4	
>N400,000	6.7	
<b>Contact with Extension Agents</b>		
Yes	60.7	
<b>Membership in social Organization</b>		
Yes	96.3	
<b>Types of Social Organization</b>		
Farmers co-operatives society	83.00	
<b>Methods of Land Acquisition</b>		
Inherited	63.0	
Purchased	14.8	
Leased	21.5	
Others	0.7	

**Source:** Field Survey, 2025.

### Access to Inputs for Rice Production

The study revealed that 85.2% of respondents lways had access to simple farm tools, 85.2% of the farmers in recent time had access to seeds for their rice production, 82.2% had access to labour, 59.3% accessed fertilizer, 89.9% had access to machines, 88.9% had access to land while 63.7% had access to fund/credit. The findings contrast with Aremu *et al.* (2025) that maintained that smallholder farmers face difficulties in obtaining high-quality seeds, fertilizers, and agrochemicals due to high



costs, poor distribution networks, and inconsistent government intervention programs. The finding could be because simple farm tools are crucial for increasing productivity, reducing losses, and boosting income by improving efficiency in all stages of production, from land preparation to harvesting and storage (Nwofoke *et al.*, 2024). Furthermore, improved rice seeds are important for rice farmers as they lead to higher yields, increased income, and enhanced food security by providing better quality and more productive varieties (Izuogu, *et al.*, 2023). Labour is very important for rice farmers forming the backbone of smallholder production, but it is also hindered by issues like drudgery and a lack of young people in the workforce. Human labour is the primary source for most smallholders, influencing productivity and food supply. Mechanization is seen as a way to save labour, reduce costs, and increase output by replacing manual tasks in operations like land preparation, planting, and harvesting (Sadiq *et al.*, 2022).

More so, the study found that the respondents had access to fertilizers and this might be because fertilizers are crucial for rice farmers to increase yields and combat nutrient depletion in the soil. They are essential for providing the nutrients, like nitrogen, phosphorus, and potassium, that crops need for healthy growth, especially in soils with low nutrient content as reported by Iwuchukwu *et al.*, 2022). Also, machinery is important for rice farmers in because it increases production, reduces post-harvest losses, and decreases labor drudgery. Mechanization boosts yields, improves profitability, and enables more efficient land use, which helps reduce poverty and improve livelihoods for farmers (Olatunji *et al.*, 2022). The respondents had access to land and this could be probably be due to the fact that land is fundamentally important to rice farmers, providing livelihoods and food security while also influencing production scale, efficiency, and investment potential. Issues like land fragmentation reduce productivity and limit access to credit, while secure land tenure is crucial for encouraging long-term investments like irrigation and machinery (Ganiyu *et al.*, 2024).

**Table 2:** Respondents' access to inputs for Rice Production Activities (n=135)

Inputs	Percentage
Simple farm tools	85.2
Rice seeds	92.6
Labour	82.2
Fertilizers	59.3
Herbicide	48.9
Machineries	89.6
Land	88.9
Fund/Credit	63.7
Extension service	45.2

**Source:** Field survey, 2025

### Constraints Encountered by Respondents in Accessing Inputs for Rice Production

The constraints of the respondents are presented in Table 3. The mean values in the table show that the respondents encountered constraints in utilization of improved seed varieties such as limited access to credit ( $\bar{x}=3.55$ ), lack of awareness on input sources ( $\bar{x}=3.51$ ), lack of access to market ( $\bar{x}=3.47$ ), scarcity of recommended inputs ( $\bar{x}=3.45$ ). Also, low soil fertility ( $\bar{x}=3.36$ ) inadequate extension ( $\bar{x}=3.33$ ), cost of labour ( $\bar{x}=3.31$ ), high costs of inputs ( $\bar{x}=3.31$ ), low yields from rice production ( $\bar{x}=3.25$ ) and lack of government support ( $\bar{x}=3.21$ ) were among the constraints encountered by the respondents. Limited access to credit directly hinders rice farmers' ability to purchase improved seed varieties, as well as other essential inputs like fertilizers and modern farming equipment. Credit allows farmers to bridge the gap between the harvest and the planting season, enabling them to invest in these productivity-enhancing technologies and materials, ultimately leading to increased yields and higher incomes. Without credit, farmers face capital constraints, forcing them to use fewer inputs and retain traditional, less productive practices. Tanko and Darma (2022) found that lack of access to credit hampered the activities of farmers in Kano State, Nigeria. Lack of awareness on inputs prevents farmers from learning about their existence, benefits,



and how to access them, leading to a lower adoption rate and continued reliance on traditional methods and this agrees with Abdul-Rahman *et al.*, (2021).

Lack of market access prevents rice farmers from accessing inputs, which limits their ability to get information about inputs. The finding agrees with Omotayo, et al., (2020) that poor infrastructure, such as roads and transportation, makes it difficult to reach markets. Inadequate extension services significantly hinder rice farmers' access to improved varieties by providing insufficient information and support, leading to low awareness and adoption rates of these new seeds and technologies. Factors such as poor communication channels, lack of farmer training, limited reach of extension agents, and reliance on outdated extension models all contribute to farmers not knowing about, or having the resources to acquire and correctly use, better rice varieties (Vihi *et al.*, 2024).

**Table 3:** Constraints Encountered by Respondents in Accessing Inputs for Rice Production

Constraints	$\bar{x}$	Std. Deviation
Limited access to credit	3.55	1.24
Lack of awareness on input sources	3.51	1.31
Lack of access to market	3.47	1.31
Scarcity of recommended inputs	3.45	1.36
Land unsuitability	3.41	1.22
Low soil fertility	3.36	1.40
Inadequate extension	3.33	1.22
Cost of labour	3.31	1.28
High costs of inputs	3.31	1.41
Increased pest and diseases	3.25	1.38
Low yields from rice production	3.25	1.45
Lack of government support	3.21	1.29

**Source:** Field survey, 2025

## CONCLUSION AND RECOMMENDATION

Farm inputs significantly boost crop yields and productivity. The study found that respondents had access to simple farm tools, rice seeds, labour, fertilizers, machines, land and credit. However, faced myriads of constraints such as limited access to credit, lack of awareness on input sources, scarcity of recommended inputs, among others. It is therefore recommended that government should subsidize the cost of farm inputs such as herbicides and strengthen extension services that will train rice farmers on the best ways to make use of inputs and improve their rice production.

## REFERENCES

- Abdul-Rahman, A., Issahaku, G., & Zereyesus, Y. A. (2021). Improved rice variety adoption and farm production efficiency: Accounting for unobservable selection bias and technology gaps among smallholder farmers in Ghana. *Technology in Society*, **64**: 101-110. <https://doi.org/10.1016/j.techsoc.2020.101471>
- Adebayo, K. D., Fatukasi, D. T., & Ewere I. (2025). The use of agricultural information by rice farmers in Ekiti State, Nigeria. *Journal of Library Services and Technologies*, **7**(1): 33-44. [Doi:http://doi.org/10.47524/ilst/v7i1.34](http://doi.org/10.47524/ilst/v7i1.34).
- Agou, G. D., Mbolle, C. J., Izuogu, C. U. Njoku, L.C. & Umeh, N. E. (2025). Adoption of climate-smart agriculture practices by smallholder rice farmers in Taraba State, Nigeria. *Journal of Agricultural Extension*, **29**(3): 45-56. <https://dx.doi.org/10.4314/jae.v29i3.5>.
- Ahsan, F., Chandio, A.A, and Fang, W. (2020). Climate change impacts on cereal crops production in Pakistan. *International Journal of Climate Change Strategies and Management*, **12**: 257–269. <https://doi.org/10.1108/IJCCSM-04-2019-0020>
- Aremu, P. A., Adewale, J. G., & Olaniyi, O. A. (2025). Adoption of improved rice production technologies among rice farmers in Ogun State, Nigeria. *International Journal of Agriculture and Earth Science*, **11**(9): 148-158. [doi:10.56201/ijaes.vol.11.no9.2025.pg148.1558](https://doi.org/10.56201/ijaes.vol.11.no9.2025.pg148.1558).



- Ganiyu, M. O., Salman, K. K., Adeleke, O. A., Akintayo, T. K., Tojola, S. S., & Adeyanju, A. J. (2025). Land Access and Tenure Impacts on Technical Efficiency of Rice Farmers in Ondo State, Nigeria. *Trends in Agricultural Sciences*, 3(2): 202-210. <https://doi.org/10.17311/tas.2024.202.210>.
- Iwuchukwu, J. C., Obazi, S. A., Opata, P. I., & Madukwe, M. C. (2022). Factors influencing inorganic fertilizer use among rice farmers in Ebonyi State, Nigeria. *Journal of Agricultural Extension*, 26(1): 27–35. <https://doi.org/10.4314/jae.v26i1.4>.
- Izuogu, C. U., Nwokpoku, J., Orugbala, M. A., Azuamairo, G. C., Njoku, L. C., Inyang, P., Agou, G. D., Olesin-Ibrahim, S., & Chinaka, I. (2023). Awareness, Access and Utilization of Certified Seeds by Rice Farmers in Ebonyi State. *Journal of Agricultural Extension*, 27(4): 77–85. Retrieved from <https://www.journal.aesonnigeria.org/index.php/jae/article/view/3885>.
- Kenneth, (2025). Facts About Ekiti State Population In 2025. <https://naijadetails.com/ekiti-state-population/>.
- Mba, C. L., Madu, A. I., Ajaero, C. K., & Obetta, A. E. (2021). Patterns of rice production and yields in South Eastern Nigeria. *African Journal of Food, Agriculture, Nutrition and Development*, 21(7): 18330-18348.
- Njankouo, A. N., Tourere, Z., Nkouandou, A., Simo, B. H., & Njoya, Z. M. (2025). Determinants of Rice Farmers' Membership in Agricultural Cooperatives in the Noun Department of Cameroon. *International Journal of Research and Innovation in Applied Science*, 10(5). DOI: <https://doi.org/10.51584/IJRIAS.2025.10040035>.
- Nwofoke, C., Igwe, G. V. C & Anaga, F. I. (2024). Utilization Of Improved Rice Production Technologies Among Rice Farmers' Cooperative Societies In Ohaukwu L.G.A Of Ebonyi State. *Journal of Agriculture and Veterinary Science*, 17(8): 31-38.
- Moniyi, L. O., Olorunshola, E. O., & Ogunyinka, A. L. (2024). Assessment of rice farmers' vulnerability to climate change in Ekiti, Nigeria. 2024, Conference Proceedings, CYIAP-Network. <https://www.researchgate.net/publication/389044722>.
- Olatunji, K. O., Ogunkunle, O., Adisa, O. A., & Taiwo, A. (2022). Effect of Agricultural Mechanization on Production and Farmers Economy in Nigeria: A Case Study of Lagos State. *International Journal of Engineering Research in Africa*, 60: 211-231.
- Omotayo, A. O., Oladele, A. O. & Oladele, N. O. (2020). Socio-economic factors influencing perceptions and adaptability of rural rice farmers to climate change, Abuja, Nigeria: applications of heckman two-stage mode. *Russian Journal of Agricultural and Economic Science*, 104(8): 45-56. <https://doi.org/10.18551/rjoas.2020-08.06>
- Onyeneke, R. U., Amadi, M. U., Njoku, C. L. and Osuji, E. E. (2021). Climate Change Perception and Uptake of Climate-Smart Agriculture in Rice Production in Ebonyi State, Nigeria. *Atmosphere*, 12(11): 150-153. <https://doi.org/10.3390/atmos12111503>.
- Oyita, E., Okoh, & Gbigbi, T. M., (2023). Effect of rice production input variables and climate change variables on rice output in Nigeria. <https://www.researchgate.net/publication/370924188>.
- Rahman, A. N. M. R. B. & Zhang, J. (2022). Trends in rice research: 2030 and beyond. *Food and Energy Security*, 12: 390-398. <https://doi.org/10.1002/fes3.390>.
- Sadiq, M. S., Singh, I. P. & Makafi, M. A. (2022). Labour-use efficiency of rice farmers in Nigeria's north-central region. *Efficiencia en el uso de la mano de obra de los arroceros de la región Centro-Norte de Nigeria*. Universidad Central del Ecuador.
- Sasu, D. D. (2023). Rice production in Africa in 2021 by country. Statista. <https://www.statista.com/statistics/1322372/rice-production-in-africa-by-country/>
- Shahbandeh, M., (2023). Leading countries based on the production of milled rice in 2021/2022. Statista. <https://www.statista.com/statistics/255945/top-countries-of-destination-for-us-rice-exports-2011/>.
- Tarantino, A. (2025). What Are The Key Factors In Boosting Overall Rice Production. <https://www.theenvironmentalblog.org/2025/01/what-are-the-key-factors-in-boosting-overall-rice-production>.



***Nigerian Journal of Agriculture and Agricultural Technology (NJAAT)***  
**Volume 5, Number 4A, December, 2025**  
**ISSN (Print): 2811-1885; ISSN (Online): 2811-1893**



- Tanko, Y., & Darma, I. B. (2022). Impact of access to credit facility on the productivity of rice farmers in kano State, Nigeria. *Palace Economic Review*, **2**(2): 78-85.
- Vihi, S. K., Jesse, B., Tanko, P. K. & Seizing, P. M. (2024). Adoption of improved production technologies among rice farmers in Wase Local Government Area of Plateau State, Nigeria. *Agricultural Social Economic Journal*, **24**(1): 23-37. <https://doi.org/10.21776/ub.AgrIse.2024.024.1.3>.