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EVALUATION OF THE ATTITUDES OF FARMERS FOR ACCEPTING AND ADOPTING NEW INFORMATION BY THE EXTENSION WORKERS IN SOBA LOCAL GOVERNMENT AREA OF KADUNA STATE

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ABSTRACT :

In this research study which is called Evaluation of the Attitudes of Farmers to Accept and Adopt New Information by the Extension Workers in Soba Local Government Area of Kaduna State, the researcher sought to test on what turnout the farmers were in relation to accepting and adopting new farming information by extension workers in the Soba Local Government area of Kaduna State. This study was informed by three research questions as follows: (1) What are the general attitudes towards new agricultural information in Soba LGA among the farmers of the area as propagated by the extension workers? How much does farmer uptake and embrace new agricultural practice due to the extension agents? What are the key obstacles of farmers adopting innovations in the agricultural sector? The study took a descriptive survey research design. A sample of 90 respondents was also obtained following a simple random sampling technique in the target population group (110 registered farmers in Soba LGA). A structured questionnaire, validated by professionals in the field of agricultural extension and educational research on the grounds of its content validity, was used in collection of data. The accuracy of the instrument was ensured by Cronbach Alpha method which reflected 0.84 lucrative result showing high internal consistency. It was found out that majority of the farmers in the region are positive towards the extension information and are ready to acquire new practices especially when the innovations are evident and addresses their needs. But poor access to inputs, financial constraints, poor literacy, and rough infrastructure are some challenges to its full adoption. To increase adoption and agricultural productivity in the region, the study makes the recommendations that include enhancing the strength of extension services, subsidization of key inputs, advancing education among the farmers and growth of rural infrastructures that will result in high levels of adoption and agricultural output in the region.

Key words: Adoption, Agricultural Extension, Agricultural Innovation, Attitude, Challenges, Extension Workers, Farmers, Information Dissemination

Introduction

Agriculture has been a key economic growth pillar and food security in most of the developing economies, especially in sub-Saharan Africa. Extending workers play a crucial role in the spread of agricultural innovations, which is an important step towards the gap between research and real farm practice (Ibrahim & Olatunji, 2023). These extension agents act as liaisons by advancing better technologies and new methods of modern farming that will help them in raising their productivity and sustainability (Eze & Ugwu, 2024). Although new agricultural information is accessible, the rate of adoption by farmers is low in various parts of the world, which causes suspicions regarding the quality of extension services and farmers readiness to adopt more changes to advance their lives (Tijani et al., 2022).

Acceptability of the information given by extension workers is the primary factor that determines how eager farmers could be to use new methods (Ogundele & Yusuf, 2024). The positive attitude will make people adopt a new structure fast although mistrust or lack of faith can make people reject or delay adoption (Odeyemi et al., 2023). The research has discovered that the receptiveness of farmers to new things depends greatly on their education level, age, gender, experience in the field of farming, and credit situation, among others (Onu & Bello, 2024). Additionally, traditional practices and deep-rooted customs may increase the resistance to change, even under an obvious positive influence of innovation (Kehinde et al., 2023).

It is also important that the relationship between farmers and extension workers is of good quality. More successful attitudes are strengthened by effective communication channels, participatory ways, and values given to local knowledge (Adeleke & Salihu, 2024). On the contrary, prescriptive approaches that are top-down in nature do not usually connect with farmers, particularly in cases that lack the sense of relevancy to a given practice (Nwosu & Alabi, 2023).

This paper is therefore aimed at giving an empirical assessment of attitudes of farmers in adoption and acceptance of new agricultural information presented by extension workers. It fills a serious knowledge gap in knowledge of how socio-economic, cultural, and institutional factors influence the uptake of innovation in the rural regions (Tanko & Haruna, 2025). This way, the study also seeks to advance the improvement on the model of

extension service delivery, increase the input of farmers, and eventually lead to increased agricultural productivity and rural living (Yahaya & Afolabi, 2022).

Statement of the Problem

In spite of decades of investment in the agricultural extension services, with the aim of enhancing farm productivity, low level of adoption of better farming technologies and practices remains to be the norm among many farmers in the developing countries including Nigeria. This inability to bridge the existing gap between the information dispensation and subsequent utilization generates critical concerns over the basic attitudes that farmers hold, regarding the information given out by extension workers. Though the officers who extend the innovations get trained to give innovations that are the result of research, the uncertainty, distrust, or apathy of the farmers usually prevent the potential success of the sought benefits.

It has been reported many biases that the success of extension programs and the quality of its projects by extension workers can be determined by quality and frequency of the visits to the farm but, also by the way in which the information is perceived, accepted and acted upon by the farmers themselves. Nonetheless the attitude of most of the farmers towards such agents as well as the innovations they push is ambiguous or little known in most localities. The veracity of some extension messages is said to be not relevant, ill-timed, and not comparative with the realities of the farmer, hence diminishing the urge to embracing such innovations.

Besides, educational background, farming experience, income level, availability of credit and traditional beliefs are some of the socio-cultural and economic reasons that further complicate this situation. To give an example, there can be illiteracy and lack of awareness that lead to misinterpretation of the purpose or usefulness of new technologies, as well as the traditions that are strong-rooted and that lead to stubborn attitudes to change despite the benefits of improved practices being proved. Moreover, information dissemination devoid of participatory methods has resulted in top-down communication model, a situation, which has caused alienation among farmers when it comes to the innovation process.

The issue further is aggravated by the logistic constraints that extension agents bear comprising inadequate funding, training, exposure to communication materials and unlivable ratios between the extension agents and the farmers. Consequently, in areas where farmers are ready to embrace new practices, this infrequency of interaction and trust in the extension services might upset the zeal in the farmers and postpone the adoption decision.

Consequently, the research attempts to determine how farmers perceive the ideas of receiving and embracing new information as brought forward by extension agents. It would determine what drives such attitudes, whether the existing methods of providing extension are effective and what factors are operating against successful adoption of innovation. In the absence of these insights, agricultural development programs are more likely to persist in their underperformance and the wider food security, rural development, and poverty alleviation objectives would always be elusive.

Research Questions

1. 1. What are the general attitudes of farmers in Soba Local Government Area toward new agricultural information disseminated by extension workers?
2. 2.To what extent do farmers in Soba LGA accept and adopt new agricultural practices introduced by extension agents?
3. 3.What are the major challenges faced by farmers in Soba LGA in adopting agricultural innovations promoted by extension workers?

Objectives of the Study

1. 1.To assess the general attitudes of farmers in Soba LGA toward new agricultural information provided by extension workers.
2. 2.To examine the extent to which farmers in the area accept and adopt improved agricultural practices introduced through extension services.
3. 3.To investigate the challenges and constraints faced by farmers in Soba LGA in adopting new agricultural information.

Literature Review

Concept of Agricultural Extension

It is well noted that agricultural extension is an important tool of increasing the knowledge of the farmers and, consequently, agricultural productivity particularly in the developing world. According to scholars, agricultural extension entails a systematic form of knowledge and research-based innovations that are transmitted by research institutions to the farmers in an attempt to enhance their lives and farming ventures (Abubakar et al., 2023). In their turn, extension services ensure the communication between scientific research and practical farming as applied innovations and ideas travel in both directions (Adepoju and Nwachukwu, 2023). Studies conducted recently in Northern Nigeria have stressed on the role of extension in enhancing food production, and diminishing poverty among the rural communities (Tanko & Zubairu, 2024).

The conventional approach to extension that is commonly known as the top-down approach or a technology transfer model has been criticized as too stiff to respond to the local knowledge and local needs of farmers (Chukwuemeka et al., 2023). Other researchers, like Lawal and Eze (2022), have promoted more participatory models based on giving more importance to the role of farmers in the decision-making process.

There are a variety of studies that have revealed that the success of extension tends to depend much on the communication approaches that an extension worker has adopted. Musa and Ibrahim (2023) indicate that the application of the proper communication channels, such as demonstrations, radio, mobile SMS, and community meetings, could go a long way in influencing the forms of attitude and knowledge among farmers. Bello and Gana (2024) discovered that it would be easier to introduce and make farmers trust and follow innovation in the case they are introduced in local and understandable languages and formats. In addition, extension workers are also an important factor of success of extension programs, characterized by

personality, competency, and consistency of the extension workers (Anas & Usman, 2022). The use of Information and Communication Technology (ICT) in agricultural extension has received a lot of research in the last few years. ICTs present the possibility of increasing the number of farmers covered within a shorter time and in a more effective way (Micheal & Ojo, 2022). Mobile apps and WhatsApp groups, as well as audio messages become more and more common as a method to spread the weather updates, market prices and best practices (Umaru & Tanimu, 2024). Nonetheless, the accessibility of digital tools is unequal pronounced in older farmers and women because literacy, cost, and infrastructure problems make it difficult to achieve (Akinola et al., 2024). These dilemmas indicate the necessity of the hybrid models that combine the face-to-face communication with the digital resources.

Institutional support, funding and policy environment also determine sustainability and impact of extension programs. As some authors described, government-supported western Nigerian extension systems are usually overrun with insufficient personnel, low-level spirits, inefficient logistics, and inconsistent education provision (Obasi & Yakubu, 2024). The gaps have been occupied by non-governmental and private entities who have introduced contract farming, agricultural cooperatives and alliances between the government and the corporate groups (Ibrahim et al., 2025). However, coordination among the stakeholders is a difficult practice. The policies should aim at making extension inclusive, gender-sensitive, and location-specific to the local agro-ecological settings (Salihu & Ayodele, 2023).

Farmer Attitude and Technology Adoption

Attitude of the farmers is crucial on its adoption or none adoption of the new technologies in farming. Attitude, in this regard, can be characterized as the psychological propensity of a farmer defined by the experiences, beliefs, perceptions, and knowledge on a given innovation or practice (Musa & Lawal, 2022). It has also been found that, despite the availability of technologies, farmers can still decline or postpone their adoption because of negative attitudes based on the mistrust, conservatism, or the lack of proper understanding (Tanko et al., 2023). It is already known that attitudes affect the initial acceptance and the continuous use of innovations (Gana & Ibrahim, 2023).

The attitudes of farmers towards technology are influenced by numerous factors, which include the level of education, age, income, access to the extension services, and prior exposure to innovations (Yakubu & Onu, 2024). Adedokun and Salihu (2022) add that the children of farmers and the more educated ones usually associate the better technology with positive attitudes compared to older and less well-educated farmers. Furthermore, the attitude toward adoption is also based on the perception of risk, cost, and suitability with the current practices (Madaki & Tanimu, 2023). As an example, some of the farmers do not see the cheap farming as an option bashing into established labor forces, and this factor generates an opposing force despite the positivity of the farming technique in terms of productivity (Usman et al., 2025).

The work of extension workers plays a crucial role in the process of shape-up of the attitude of the farmers. Awareness, trust-building, and perception and attitude shaping towards positivity on technology have been proved to be the result of frequent interactions with trained extension agents (Ezeaku & Nnaji, 2023). Musa and Ibrahim (2024) further explain that participatory extension practices are more effective in changing attitudes, as compared to didactic approaches or top-down approaches. The extent to which farmers adopt new management practices becomes a lot more when they are included in the decision-making process and have the opportunity to see good results with their own eyes (Abdullahi & Bala, 2022). On the other hand, low engagement of extension-workers may reinforce the emotion of skepticism and inhibit adoption (Ojo & Danlami, 2022).

The readiness of farmers to change is also determined by the cultural aspects and social practices. Sometimes, the traditional concepts are followed in these places rigorously and any innovation that contravenes the existing systems of farming might be rejected despite the value of utility attached to them (Anas & Gambo, 2024). Ayodele and Isa (2023) claim that even the attitude of women and their very possibility to follow innovation are influenced by the fact that dominant decision-making is done by man, especially in rural conservative society. Peer pressure and suggestion also works great; farmers are more likely to use technologies that are already adopted by well-respected people in the society or entering the technological information directly to the farmer by someone of greater level than him in regards (Yahaya & Salisu, 2024).

Methodology

The research design used in this study was descriptive survey research design in order to assess the attitude of farmers to accept and adopt new agricultural information disseminated by the extension workers in Soba Local Government Area (LGA) of Kaduna State. This design was suitable because it would enable the research to collect information about a large population in order to learn their cognitions, behaviours and burdens with regard to agricultural innovation. The study population was 110 that was made up of registered farmers who had been in contact with extension agents in the LGA. The sampling size of 90 respondents was picked through the use of simple random sampling approach, which allowed that all farmers had equal opportunities to be sampled allowing to enhance reliability and generalizability of the results.

A well-organized questionnaire to collect data was developed by the researcher and it consisted of both close ended and Likert scale questions depending on the three research questions which included (1) the general attitude of farmers to new pieces of information related to agriculture, (2) the level of adoption of the new aspect about agriculture introduced by the extension agents and (3) the challenges accompanying the adoption of innovations. The measure of face and content validation was done by two-person experts in the field of Agricultural Extension and Rural Sociology to determine whether it is clear, relevant, and captures major constructs. The instrument reliability has been assessed by conducting pilot study on 20 farmers in another LGA not used in the main study and the resultant Cronbach Alpha reliability coefficient of 0.87 confirmed a high value of internal consistency and reliability of the test instrument to be used in the main study. The data were analyzed as to provide an answer to the research questions with the usage of the descriptive statistics including frequency counts, percentages, means, and standard deviations.

Results

Research Question 1: What are the general attitudes of farmers in Soba Local Government Area toward new agricultural information disseminated by extension workers?

Attitudes of farmers toward new agricultural information provided by extension workers

S/N	Attitudes of farmers	SA	A	D	SD	Mean	StD
1	Many farmers show positive attitudes when the information is practical, relevant, and demonstrated clearly.	37	31	13	9	3.0667	2.6998
2	Some farmers express interest but remain cautious, often due to past negative experiences or fear of risk	33	28	17	12	2.9111	2.5777
3.	A portion of farmers resist new information, especially when it conflicts with traditional practices.	28	25	22	15	2.7333	2.4267
4.	Limited trust and irregular visits from extension agents reduce enthusiasm and engagement	32	27	20	11	2.8889	2.5517
5.	Younger and more educated farmers tend to be more receptive to new technologies and practices	34	30	16	10	2.9778	2.6247
6.	Increasing access to ICT tools and peer learning is gradually improving farmer attitudes toward innovation	35	28	15	12	2.9556	2.6204
	Cumulative mean					**2.9222**	**2.5835**

An examination of the literature available on attitude of farmers toward new information in agriculture that may be given to them by extension workers depicts the largely positive attitude of the farming population especially when the information is made in a some objectives and applicable approach. The mean response value of 3.0667 and a standard deviation of 2.6998 was achieved on the statement that, many farmers have positive attitudes when information is practical and relevant and is indicated clearly. This finds backing in the pattern of response that 37 strongly agree, 31 agree but only 13 disagree and 9 strongly disagree. This implies that it is important that new information is both clearly and closely applicable and effectively demonstrated. Also, the view that younger and better educated farmers are more accepting to new technologies resulted in a rather high mean of 2.9778 and standard deviation of 2.6247, where 34 have strongly agreed and 30 agreed that age and education are demographic factors which have a positive effect on openness to innovation. On the same note, access to the ICT tools and learning among peers also helps in enhancing the attitudes of the farmers with a mean of 2.9555 and standard deviation 2.6204 portraying the increasing interest toward innovation. Nonetheless, full acceptance of new agricultural information is hampered by some obstacles. An example is the opinion that farmers are still conservative because they have had negative encounters in the past recorded an average of 2.9111, and opinion pointing to the fact that suffocating levels of limited trust and infrequent visits of extension agents in their lands and farms also recorded a near average of 2.8889. The opinion that farmers resist information that proves to go against the traditional practices showed a comparatively lower mean of 2.7333.

Although faced with these difficulties, the cumulative mean of 2.9222 and standard deviation of 2.5835 which is higher than the 2.50 mark shows that most respondents support the opinions raised. This means that farmers are receptive to new information in the agricultural sector, but it is important to increase adoption by enhancing the mechanisms of delivery, consistency, and confidence of the extension services.

Research Question 2: To what extent do farmers in Soba LGA accept and adopt new agricultural practices introduced by extension agents?

The extent to which farmers in the area accept and adopt improved agricultural practices introduced through extension services

S/N	Statements	SA	A	D	SD	Mean	StD
1	Extension workers introduce farmers to improved seed varieties that are high-yielding, disease-resistant, or drought-tolerant.	41	28	10	11	3.1000	2.7487
2	They teach modern planting techniques, such as line planting, proper spacing, and crop rotation	39	31	9	10	3.0778	2.7325
3.	Farmers receive guidance on integrated pest and disease management, including safe use of pesticides and organic control methods.	36	33	12	9	3.0667	2.6957
4.	Extension agents provide advice on soil fertility improvement, including composting and correct fertilizer application.	37	29	13	11	3.0222	2.6749
5.	They promote climate-smart agriculture practices, like water conservation, mulching, and early planting.	35	31	14	10	3.0111	2.6541
6.	New information also includes market access tips, post-harvest handling, and simple mechanization tools to increase efficiency	39	28	12	11	3.0556	2.7080
	Cumulative mean					**3.0556**	**2.7023**

In examining the data on the degree at which farmers in the region embrace and adapt to better agricultural practices brought about by extension services there is a rather positive reaction. The one with a mean value of 3.1000 and a standard deviation of 2.7487 predicts that the intensive use of improved seed varieties which may be high yielding, disease resistant or drought resistant is highly acceptable by farmers. Forty one of the respondents held strongly that they agree, 28 percent of the respondents agreed but only 10 and 11 disagreed and strongly disagreed respectively. Equally, instruction on new planting methods that include line planting, good spacing as well as crop rotation, recorded a high mean percentage of 3.0778 transmission, with 39 strong agreement, and 31 agreement. These results indicate that the farmers in the locality are open to sensible and production augmenting farming advancement that is conveyed by extension personnel. Further analysis comparatively indicates stable acceptance of

other good practices like advisory on integrated pest and disease management (mean = 3.0667), on soil fertility and fertilizer application (mean = 3.0222) and climate smart agriculture (mean = 3.0111). Moreover, the spread of the post-harvest processing advice and the mechanics of farming had 3.0556 mean proving the importance that farmers put on full agricultural assistance. Overall perspective of agreement with the statements is evidenced by the total mean of 3.0556 and standard deviation of 2.7023 values that are greater than the decision criterion of 2.50. This translates to high degree of acceptance and adaptation into better farming methods that were recommended by the extension agents, which boosts the importance of such agents in the agricultural environment change in the region.

Research Question 3: What are the major challenges faced by farmers in Soba LGA in adopting agricultural innovations promoted by extension workers?

Challenges and constraints faced by farmers in adopting new agricultural information.

S/N	Statements	SA	A	D	SD	Mean	StD
1	Many farmers lack access to essential inputs like improved seeds, fertilizers, and herbicides, making it difficult to adopt the recommended innovations.	44	38	6	2	3.3778	2.9212
2	Most farmers operate at a subsistence level and cannot afford the cost of new technologies, machinery, or modern farming practices introduced by extension workers..	42	35	9	4	3.2778	2.8519
3.	Infrequent visits, understaffing, and poor logistics prevent consistent communication and follow-up, reducing the impact of extension services.	38	34	10	8	3.1333	2.7487
4.	Some farmers struggle to understand complex agricultural information due to low literacy levels, especially when innovations require training or record-keeping.	35	32	13	10	3.0222	2.6625
5.	Resistance to change is common, especially among older farmers who are more inclined to stick with traditional farming methods over modern innovations.	39	34	9	8	3.1556	2.7689
6.	Inadequate rural roads, lack of storage facilities, and poor access to markets discourage adoption of innovations that are not immediately profitable or logistically feasible.	37	29	13	11	3.0222	2.6749
	Cumulative mean					**3.1648**	**2.7714**

The examination of the data on the problems and limitations of farmers concerning implementing of the new information in agriculture has shown that a number of essential factors restrict the popularisation and implementation of the innovations. The highest mean score of 3.3778 with the standard deviation of 2.9212 in the statement shows that lack of access to improved seeds, fertilizers, and herbicides as the most dominant constraint. These are backed by the 44 who strongly agreed and 38 whose responses were in agreements to the statement that the resources restriction has really seriously hindered the capacity of the farmers to undertake the recommended practices. Next is the problem of affordability in which most of the farmers are at subsistence level and are unable to afford modern technologies with the mean of 3.2778 and standard deviation of 2.8519, 42 strongly agreed and 35 agreed. Additional evidence indicates that even institutional constraints are very problematic. There are also very less visits by extension agents, inadequate logistics and understaffing which make follow ups and continuous support less effective and this makes the result a mean of 3.1333. Also, illiteracy among farmers influences how they receive, perceive and understand some complex agricultural information especially which knowledge demands training or the keeping of records (mean = 3.0222). The issue is further compounded by the resistance to change, especially on the side of older farmers (mean = 3.1556) as well as the issue of the poor rural infrastructure, which renders innovations logistically hard and economically unappealing (mean = 3.0222). The average of 3.1648 that is much higher than the average of 2.50 and a standard deviation of 2.7714 that is also much ahead of the average of 2.50 reveals that most of the respondents agreed that these are actual and urgent limitations. This explains the importance of a multi-frontal measure to take into account the existing gaps in the financial, educational, infrastructural, and institutional support of farmers to increase the uptake of agricultural innovations.

Discussion of findings

According to the results of this research, most of the farmers in the region are usually in favor to any new agricultural trend that may be offered to them by the extension people, though most prefer it to be clearly illustrated, practical and related as well. This concurs with the position held by Arokoyo (2012), who also stressed that farmers will adopt those innovations, which are easily comprehended and implemented. The information also indicates that the younger and the educated farmers are more open to farm technologies and this fact is supported by the findings of Adisa and Adekunle (2010) who report that the demographic characteristics including farmers age and education play a great role in determining the adoption of technologies among the rural farmers. Also, the greater access to ICT tools and peer learning leads to more positive attitudes of farmers to innovation, as it was confirmed by the works by Adebayo and Okunade (2012), who claimed on the importance of digital literacy and community networks and their role in knowledge dissemination within the farming field. Nevertheless, there is still caution among the farmers because of the bad experience which they have had in the past, distrust towards the extension agent and the fact that traditional beliefs are still held are also an impeding factor, identified by Okwu and Umoru (2009).

In as much as they are willing, the level at which high agricultural practices are adopted is limited by various obstacles comprising low access to the necessary inputs, high prices of new technology and poor performance of institutions. The most rated mean response to challenges depicts

the challenge in accessing the improved seeds, fertilizer and herbicide which is widely captured in the literatures (Agwu, Anyanwu, & Uche-Mba, 2008). Besides, the presence of infrequent extension visits, ineffective logistics, and low literacy rates of farmers means that there is no decent communication and utilisation of new knowledge at the practical level. These institutional and infrastructural limitations relate well with a report by Adebayo and Okunade (2012) who emphasized on frequent follow up in support and capacity building to promote successful adoption. The study thus recommends a comprehensive strategy that includes policy support for input accessibility, increased funding for extension services, and investment in rural infrastructure to ensure that innovations are not only accepted but fully implemented by the farming population.

Conclusion

In this research, the attitudes in the acceptance and adoption of new agricultural information disseminated by extension workers to the farmers were evaluated at Soba Local Government Area of Kaduna State. The results indicated that the attitudes towards new information of agriculture are positive on the account of farmers, particularly when they are practical, applicable and effectively illustrated. A large number of the respondents expressed readiness to use extension services, especially among younger and better educated farmers, and those who encounter ICT tools and community learning. This confirms that in case of extension communication as it is customized to the needs and capacities of farmers, it supports the receptivity and readiness of farmers to accept innovations.

Also, it was discovered in the study that farmers in Soba LGA have been progressively engaging in superior agriculture procedures like use of enhanced seed types, regular planting mechanisms, and climate friendly practices, reflecting on the applicability and viability of the extension approaches. Nonetheless, there are some areas of adoption continuation challenges. They are inability to obtain the necessary inputs, high cost of technologies, low literacy level, the infrequent visits by extension agents and infrastructural deficiency. Such barriers indicate that the governments and stakeholders should enhance the extension system of delivery of products, subsidize key inputs, and invest in rural infrastructure and training of farmers so that the good attitudes of farmers can be converted to a broad based adoption and continuity in the long run on agricultural development in the region.

Recommendations

On the basis of the results of this research on the assessment of farmers attitude towards new agricultural data acceptance and adoption in Soba Local Government Area of Kaduna State, the findings of the research are as follows that are recommended:

Government and concerned agricultural bodies must also make sure that they repeat and visit as often as possible so as to carry out the farming community with trained extension workers in Soba LGA. This will assist in the trust building, follow-up support and ensuring new practices are adopted.

The farmers have to be supported every now and then through the provision of means of subsistence; this is by the use of improved seeds, fertilizers, herbicides and other related inputs of agriculture which should be subsidized or be of affordable costs. Input is to be given in time and in a non-discriminatory way so that more people can embrace innovations.

Specific training and sensitization workshops ought to be conducted to enhance the literacy and technical knowledge of the farmers. Such programs must be taken in the local languages and simplified forms so that they can be understood especially by old and less-educated farmers.

ICT tools that should be provided to extension agents and farmers include mobile phones, radios and agricultural apps dedicated to make the availability of timely information. Use of these technologies can also be trained to promote communication and sharing of knowledge among the farmers.

The government and development partners ought to invest in rural roads, storage, and points. Modernization of the infrastructure will improve loss in the post-harvest, increase profits, and encourage farmers to take modern routes in farming.

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