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AGILE COMMUNICATION CHANNELS FOR ENHANCING ADOPTION OF EXTENSION SERVICES

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Abstract

Many governments and multi-national agencies have directed a lot of resources towards improving agricultural extension communication but without coordinated, responsive, and audience-focused agricultural extension channels, these efforts have gone to waste. The main objective of this study is to examine the agility of communication channels for enhancing the adoption of agricultural extension services. The study examined the appropriateness, and interactivity of channels; A total of 279 farmers selected from Migori and Homa Bay Counties were interviewed to share their experiences on the agility of channels used during extension services in the production of orange fleshed sweet potatoes. The study population consisted of farmers who participated in Accelerated Value Chain Development (AVCD) project which was implemented by International Potato Centre (CIP) in the two counties in 2017 and 2018. The respondents were identified using systematic random sampling. Quantitative data collection was conducted by use of mobile phone application, Kobocollect. It was established that there was channel agility in terms of venue appropriateness (49%) and the impact of training received (90%) by farmers. There was average interaction agility whereby face to face engagement recorded (48%) most of the time and (49%) half the time. Emerging channels interaction agility was observed in the use of digital platforms (mobile invitation) for meetings at (52%) and inclusion of channel interaction through demonstration was high at (61%). This implies that there is average channel appropriateness and interaction. The extension officers of government and NGOs can use this knowledge of the sensitive, flexible, iterative nature of communication channels to vary their approaches as they communicate during their extension programmes.

Key words: Agile, Communication, Channels, Adoption, Extension

Introduction

Agile communication channels for enhancing adoption of agricultural extension services is supposed to facilitate extension officers to communicate to farmers and to change their behaviors through adoption of messages and acquisition of skills. Just like in agile development agile communication embraces simplicity, flexibility, and constant iteration whereby the later versions plough in challenges and lessons learnt in the previous version into the system to create one that is superior to the previous one.

The term agile can be defined as the ability to create and respond to change. Agile communication channels therefore take cognizant of the audience ever changing communication needs and the development of digital technology in the communication space. In the situation of extension, agile channels must take cognizance of the people's way of doing things and fully integrate the recipients of the technology in the whole chains

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of the adoption process. One way to improve extension service is to make its content more relevant to farmers, and to use participatory extension approach under stable policy and sustainable institutional arrangement (Journal of Agricultural Extension Vol. 12 (2) December, 2008).

The purpose of communication channels is to transfer messages with relevance, timeliness, accuracy, cost effectiveness, reliability, usability, exhaustiveness and aggregation, (Tucker and Napier, 2000). To realize these performance indicators there is need to have interactive channels which allow dialogue and ease of exchange of information. A well-established information communication channels enhances effectiveness of communication of messages. In Nigeria, Koyenikan (2008) pointed out that 'one of the strategies to achieve agricultural skill transfer' is to establish effective communication channels among researchers, extension officers and farmers". This position is shared by Awad and Ghaziri (2004) when they contended that "Agricultural extension communication channel is necessary for planning communication between all players in the agricultural sector at all links of agricultural value chain.

Currently there are no guidelines to the choice of channels of communication that officers could rely on, which leaves them on their own to select channels of communication which are familiar to them to convey messages to farmers. When the selected channels of communication are not appropriate, effective communication cannot take place and the intended messages fail to reach the farmer as desired. The net effect is that there is no information passed and hence no impact is realized. When the existing communication channels are not agile, agricultural production becomes unprofitable.to the farmers.

In Nigeria it is reported that the major setback in agricultural production is not lack of recommended practices needed for economic growth and rural transformation but that of disseminating timely recommended practices to end-users (Koyenikan, 2008). Therefore, in order to transform and sustain agricultural production, it is imperative to provide adequate, relevant and up-to-date information through appropriate channel which is a function of effective communication (Journal of Agricultural Extension Vol. 12 (2) December, 2008).

Early agricultural extension relied on direct communication with farmers, however, changes in society have resulted in the use of diverse communication channels (Okwu & Daudu, 2011). Gamble and Gamble (2010) classifies communication channels according to: one; the senses that carry or receive the message, two; if the message is verbal or nonverbal or both, and three; the primary means of communication used to deliver information, whether face-to-face communication, computer mediated communication, telephone communication and text messaging or mass media. Age et al. (2012) however, categorizes communication channels into physical channels, non-physical channels, technical channels and token of communication channels

Agile communication channels emphasize on the use of multiples channels to enhance message delivery and reduce equivocality (Daft and Lengel, 1986). Each channel of communication has distinct features which make it suitable for certain situations and not others (Lengel & Draft, 1988). Guo and Sanchez (2005) also assert that there is symbolic meaning in the choice of a medium of communication beyond the content of the message. "The medium is the message," a statement by Marshall McLuhan means that the choice of channel determines the way the message will be understood.

Agbamu (2006) opined that information is the first and indispensable step of an adoption process in agricultural innovation and this information is needed for the overall development of agriculture and improvement of living standards of farmers. In other words sustainable development in the agricultural sector is dependent on generation of

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appropriate technologies and creation of effective communication strategy for dissemination of recommended techniques to end-users (Dimelu and Anyanwu, 2005).

According to Kinya K Kigatiira in his study of "The Effect of Communication Channels used between extension officers and farmers on the Adoption of Irish Potato Farming". selection of a communication channel is important. This is because there is a relationship between communication channel and communication effectiveness. The transmission of information through a communication channel affects the meaning of the message. Agbamu (2000) contented that the linkage between agricultural research–extension systems as well as practice implies the communication and working relationship established between two or more organizations pursuing commonly shared objectives in order to have regular contact and improved productivity. This paper sought to examine agility of communication channels used to enhance adoption of agricultural extension services by farmers of orange fleshed sweet potato in Homa Bay and Migori counties,

Research Methods

The study employed a case study design to examine agility of channels of communication. Case study design was employed due to its ability to enable in depth examination of a specific case thereby enabling generalizability. Orange fleshed sweet potato has had an organized extension system promoted by Accelerated Local Value Chain Development Project (AVCDP), 2018. The project was implemented in four counties of Western Kenya covering Bungoma, Busia, Homa Bay and Migori with Nairobi, Kenya's capital, as the main center for marketing roots. By the end of the three years, farmers under the AVCD program had increased production of OFSP during the long rainy season as well as the crop area in both seasons. This improved the consistency of supply and access to OFSP roots by traders and processors and for home consumption (www.sweetpotatoknowledge.org)

A total of 279 farmers were identified through purposive, proportionate and systematic random sampling in the order. The study used KoBoCollect tool of data collection.in quantitative data collection. KoBoToolbox that houses KoBoCollect is an open-source suite of tools for data collection and analysis in humanitarian emergencies and other challenging environments.

Enumerators were taken through the items in the tool to familiarize themselves and also to develop translation in local language. Pretest was done in few households that have not been targeted and this this helped to gauge time required to finish interviewing one household.

Findings and Discussions of the Study

The study investigated agile appropriateness of channel of communication and interaction between trainer and audience (farmers). Agile appropriateness was measured through venues where farmer trainings were held and impact of training on farmers and emerging trends of communication channels. Interaction was measured through face-to-face meetings with extension agents, proportion of trainings accompanied with demonstrations, opportunity for farmers to ask questions and farmers' participation in joint research with extension officers or research institution.

Agile appropriateness of channels

Venues where farmer trainings were held.

Appropriate venues enhance agile appropriateness of the channels used to disseminate information. 49% of respondents reported having had their training on the farm whereas 32% received their training in a classroom setting. Only a small percentage (21%) were trained on the farm as well as in class. A paltry 2% had privilege to go on educational trip with a similar proportion reporting having been trained in class, on the farm as well as going on educational trip.

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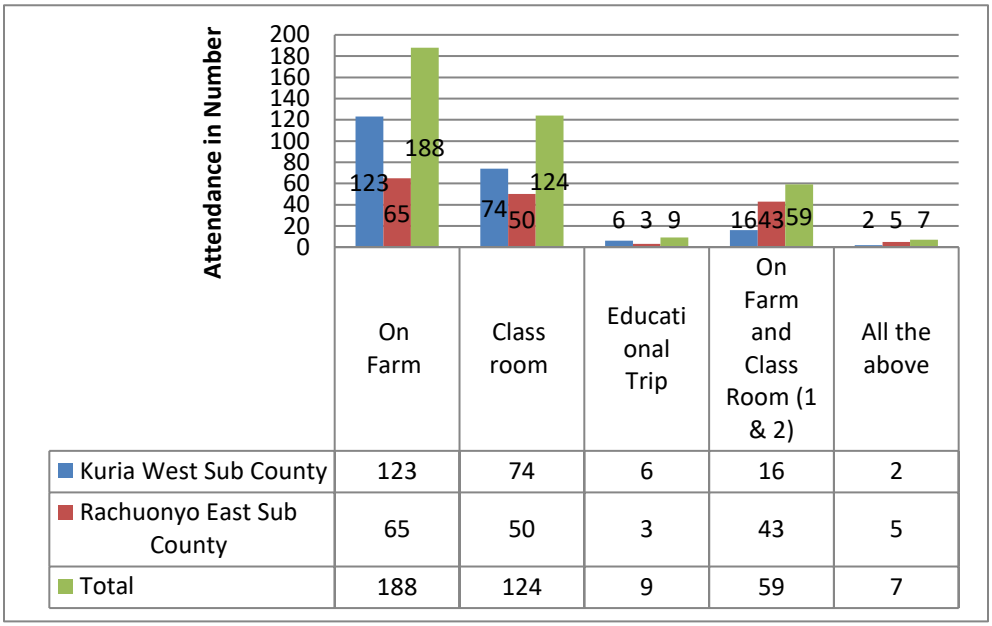
Figure 1

Venue of farmer training



Source (Author, 2024)

Impact of training on farmers.

A total of 38% of respondents reported that their farm activities were impacted very much by the trainings that they attended. A higher proportion of audience reported that their farm operations were impacted much by the trainings they attended. Cumulatively 90% of respondents reported that their farm activities received much or very much impact from the trainings they attended. This could point to the relevance of the messages and receptivity of the audience to messages disseminated during the training. This compares very well with 97% of respondents who remember the extension agents because of one reason or the. Other. 10% of the respondents reported that the trainings they attended had little, very little and no impact at all farm to their operations. This could be attributed to barriers on the side of decoder rather than on the side of the encoder.

The impact of a message is determined by the context in which it is delivered (Dogruel & Schnauber, 2020). The context includes the setting, culture, purpose, values, appropriateness, timing, audience, and other variables that impact communication (8.4 The Context of Communication - College Success | OpenStax). When communicating with people, it is important to consider the setting, culture, and purpose of the communication. Is it a formal or informal setting? Is the communication intended for a specific audience? What is the message trying to achieve? These are some of the questions that can help determine the context of the message.

It is safe to say that the contexts employed by the extension agents were appropriate for a greater part (90%) of the audience. This is the reason the higher proportion reported having realized impact in their farming activities as a result of the trainings they attended.

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High levels of impart only come out of agile appropriate channels. A total of 90% of respondents reported that the training they received had impact in their farming activities. 38% received very much impact while 52% reported having received much impact from the training they received which enabled them to do things differently in their farming enterprises.

Table 1

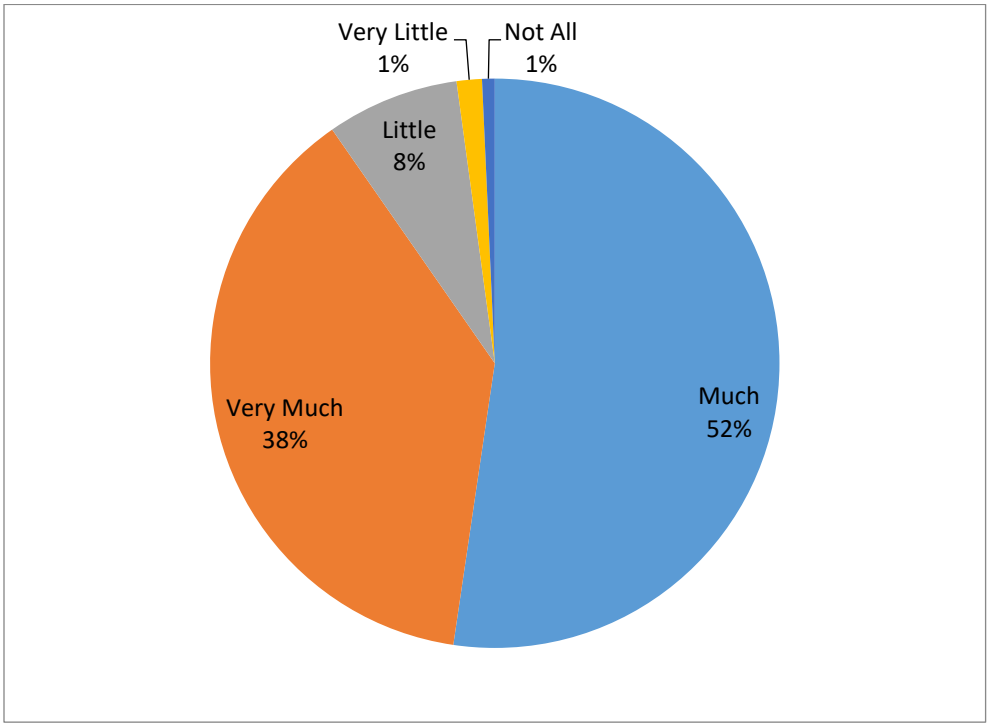
Impact of training on farmers.

Research Area	Much	Very Much	Little	Very Little	Not All	Total
Kuria West Sub County	92	44	18	4	2	160
Rachuonyo East Sub County	54	62	3	0	0	119
Migori & Homabay	146	106	21	4	2	279

Source (Author, 2024)

Figure 2

Impact of training on farmers



Source (Author, 2024)

Emerging trends.

Emerging trends in communication channels was measured through the use of mobile phone communication for invitation to the training and also through online platforms for training of farmers. On the overall 52%' of the respondents reported having been invited to the trainings through mobile phones whereas 48% got invited through letters, radio or by word from neighbor.

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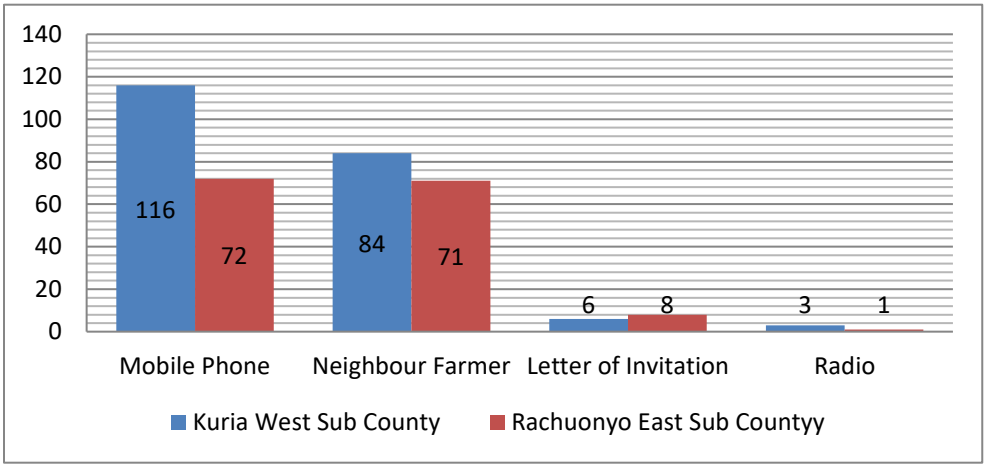
Out of the 48%, 43% learned of the training through their neighbors. Assuming that the neighbors got their invitations through mobile phone communication, it follows that 95% of respondents were invited through mobile communication. This shows a very high level of embracing the use of digital communication thus reducing the digital divide.

Writing of letters of invitation and use of Radio to call farmers to meetings seem to have taken a back seat at only 4% and 1%brespectively.

A total of 26% of participants reported having taken part in conference call whereas 74% of participants reported that they had not taken part in any conference call. This low proportion could be attributed to low digital literacy among the extension staff. At the same time many farmers do not have mobile phones that are compatible with conference platforms. It would be appropriate for extension staff to undergo training on digital literacy to enhance use of conference platforms.

Figure 3

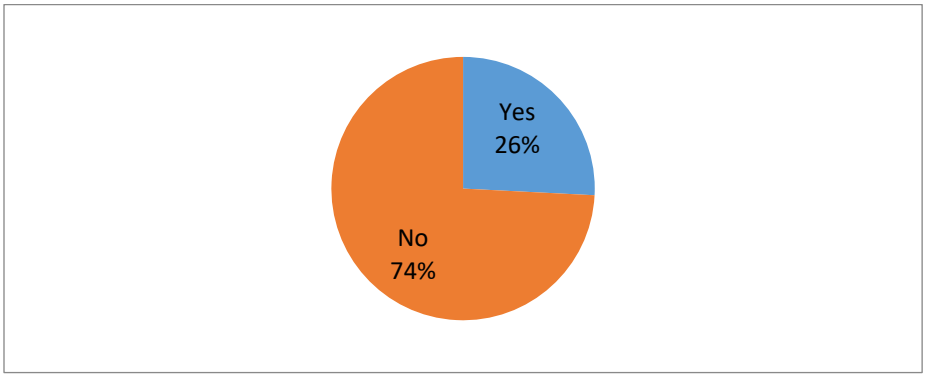
Method of invitation to meetings.



Source (Author, 2024)

Figure 4

Participation in a conference call or video call to receive extension messages.



Source (Author, 2024)

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Agile Interactivity of the channels

Agile interactivity of channels was measured through face-to-face meetings, demonstration-based trainings, and opportunity for farmers to ask questions and receive feedback, follow up visits by extension officers and joint research between farmers, extension officers and researchers.

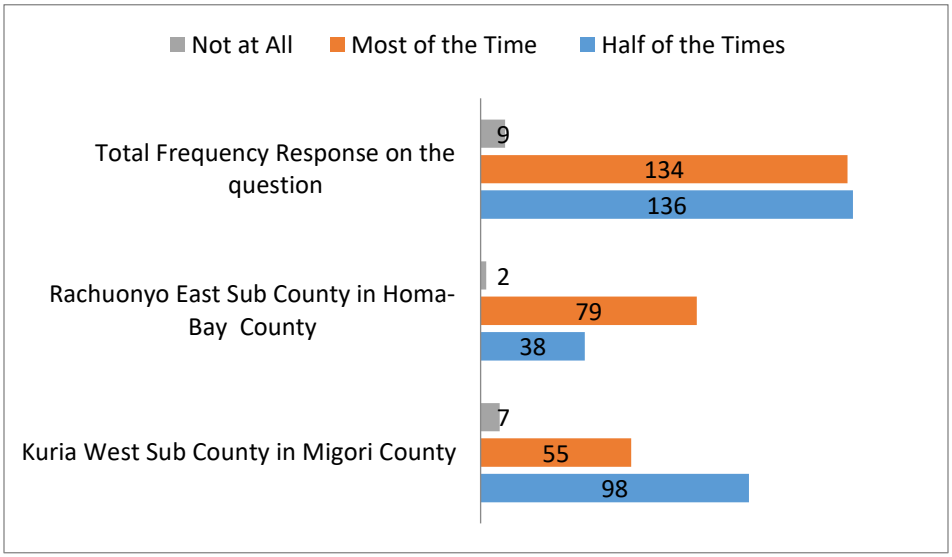
Face to face meetings with extension agents.

A total of 48 % of respondents reported that they had Face-to-Face meetings most of the time and 49% of respondents had face to face meetings half the time.

A total of 97% of the farmers (55% of participants from Kuria West and 42% from Rachuonyo East) had opportunity to ask questions and to receive feedback. Face to face communication is a very important form of participatory communication and promotes dialogic mode of typology.

Figure 5

Frequency of face-to-face meetings with extension agents



Trainings accompanied with demonstrations.

A total of 61%. of respondents reported that some of the training they attended were accompanied with demonstrations whereas 30% reported that all the training they attended were accompanied with demonstrations. The number of participants who received all training accompanied with demonstrations was higher in Rachuonyo East Sub County (25%) than in Kuria West Sub County (5%). Instances of trainings where there were no demonstrations at all was minimal (9%). This interactivity of channel was highly appreciated.

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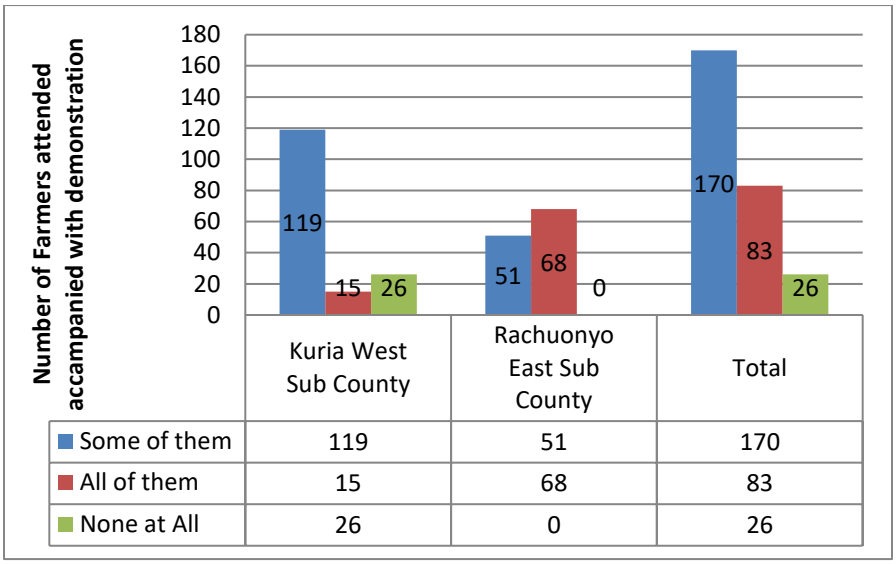
Figure 6

Demonstration-based training



Opportunity for farmers to ask question during or after the training

A total of 97% of respondents were positive that they got opportunity to ask questions. Only 3% of participants did not ask questions. This is high level of interaction of the channel in use.

When audience ask questions during or after the instructor is able to gauge the extent to which the message has been understood. Asking good questions is central to learning and sometimes can be more important than getting the answers, particularly when the questions encourage students to think critically. "Skill in the art of questioning lies at the basis of all good teaching" (Betts, 1910). Equally important is helping students use self -questioning to monitor their learning. This fact focuses on both teacher questioning and student self –questioning ((Corley et al, (2013). Asking questions lies in the agility of the channel being used to disseminate information. It explores the Alternative paradigm of development communication that encourages participation of audience in the teaching/learning experience.

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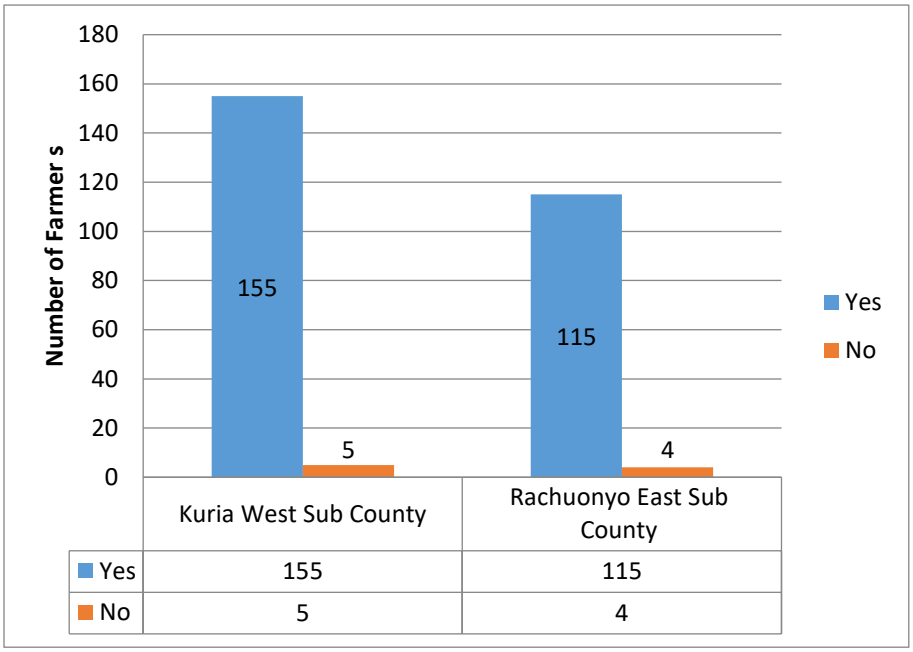
Figure 7

Opportunity for farmers to ask question in the training



Source (Author, 2024)

Frequency of follow up visits

A total of 24% of respondents reported that they often received extension agents on follow up visits after the trainings they attended. 49% of respondents reported that follow up visits to their farms were rare whereas 27% of respondents reported that they never received any follow up visits from extension agents. Follow-up visits to farmers are crucial for the success of agricultural extension programs. These visits provide an opportunity for extension workers to assess the effectiveness of their interventions, identify areas that require improvement, and provide additional support to farmers (www.fao.org/3/t0060e/t0060e07.htm).

When these visits are rare or are completely lacking it means that farmers have nowhere to direct their feedback that comprises of compliments, challenges or even grey areas that require clarification. The extension agent also misses out on the feedback loop (Schramm, 1954) that would help him to assess effectiveness of the channels used.

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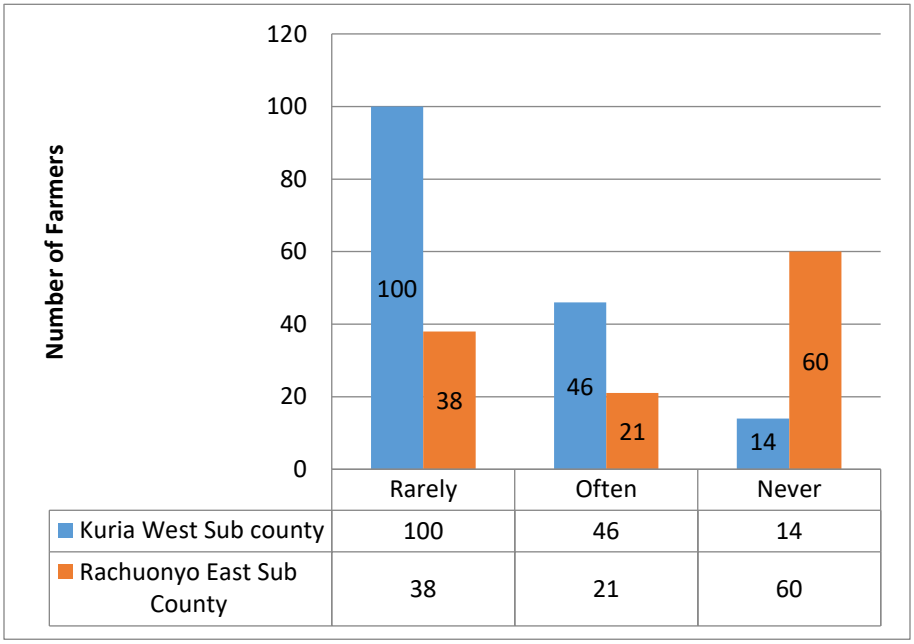
Figure 8

Follow up visits by extension officers after the training



Source (Author, 2024)

Participation in joint research with extension officers or research institution.

A total of 37% of respondents reported that they had participated in joint research with extension officers or research institution. Out of this 32% of participants came from Kuria West whereas only 5 % came from Rachuonyo East sub counties. Extension Officers in Kuria West involved farmers more in on-farm research than the extension officers in Rachuonyo East. 63% of respondents reported that they had never participated in joint research with extension officers or research institution.

This low proportion (37%) shows that knowledge creation institutions have not adequately involved farmers in research that is intended to benefit them. Uttar et al (2021) in their article ' 'Co-creation of knowledge in agro ecology' present that the co-creation of knowledge is gaining recognition and use within the science, practice, and movement of agro ecology. Knowledge co-creation fosters participatory learning and development, which differs from passive knowledge sharing. This channel can bridge the real and perceived gaps across diverse forms of knowledge, including what is often distinguished as farmers' traditional, Indigenous, tacit, or local knowledge and experts' scientific, western, or generalizable knowledge. Many of these challenges, such as navigating power dynamics, may be addressed through mindful research and community practices, including strong communication and transparent expectations and goals. Co-creation processes have traditionally and continually taken place between farmers and throughout communities without academic acknowledgment and/or interpretation of such.

When researchers continue to leave out consumers in the knowledge creation process they are missing out on the opportunity of shortening the knowledge dissemination bureaucracy which would not only shorten the adoption process but also build up ownership of the innovation.

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Table 2

Participation in joint research.

Farmers Participation of Joint Research	Kuria West Sub county		Rachuonyo East Sub County		Both Sub Counties	
Yes	88	(32%)	15	(5%)	103	(37%)
No	72		104		176	

Source (Author, 2024)

Conclusions

Many trainings took place in the farm set up but still the channels used were mostly discussions. There was serious limitation on the number of cues employed. It should be noted that many cues help to clarify areas of difficulty and leave audience motivated to try their hands in the innovation.

During the face-to-face meetings participants had opportunity to ask questions and receive feedback. Many farmers were satisfied with the responses they received from instructors. This was evidence of effectiveness of channels used. There was inadequate follow up visits after the trainings which makes it difficult for farmers to share their experiences after they tried the new technologies.

Recommendation.

There is need to enhance use of channels like; demonstration-based trainings and digital communication platforms that enhance interactivity. There is also need to expand joint research for knowledge co creation as it builds ownership of research outputs and enhances adoption of innovations. These will enhance agility of channels used to convey message

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