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WHAT ARE THE DRIVERS OF YOUTH IN AND OUT OF AGRICULTURE? EVIDENCE FROM WESTERN KENYA

Odendo MO^{1*}, Omondi SP², Tana PO³ and E Kamau⁴



Martins Odendo

*Corresponding author email: odendos@yahoo.com

ORCID ID: <https://orcid.org/0000-0003-2920-5192>

¹Kenya Agricultural and Livestock Research Organization (KALRO), Kakamega, Kenya

²KALRO Industrial Crop Research Institute, Mtwapa, Kenya

³KALRO, Horticultural Research Centre, Kibos, Kisumu, Kenya

⁴KALRO, Muguga, Food Crops Research Center, Nairobi, Kenya



ABSTRACT

Youth comprise 78% of the human population and 64% of the unemployed in Kenya. Agriculture remains the dominant sector in the Kenya's economy, yet most youth are moving out of the agricultural sector to urban areas to look for better opportunities leaving agriculture to the elderly. Low engagement of the youth in agriculture has led to many initiatives in Kenya intended to promote youth involvement in agriculture with little success. This study aimed at answering the following three questions about youth farmers in western Kenya: (i) What is the place of agriculture in the aspirations of the youth farmers? (ii) What is the relationship between youth farmers' aspirations and reality? (iii) What are the challenges and opportunities for youth farmers in agriculture? The study used a mixed -methods approach to collect quantitative data from a random sample of 67 youth farmers and qualitative information from five focus group discussions composed of 24 youth in Busia and Migori Counties. The results show that the average age of the respondents was 29 years with male respondents constituting 60% of the respondents. About one-third (33%) of the respondents had a primary level of education. More than three-quarters of the respondents had access to land they did not own. The aspiration of 46% of youth farmers was white-collar jobs and only 20% aspired to be farmers. However, most youth were involved in farming contrary to their aspiration while in school. The youth who farmed faced challenges that limited their ability to thrive, including negative perceptions and attitudes of most Kenyans towards agriculture, inadequate access to productive resources, insufficient knowledge, skills and information, limited access to markets and low policy support. Encouraging youth engagement in agriculture requires major capital investments in youth-friendly agricultural technologies such as mechanization to alleviate drudgery; and sharpening youth knowledge and skills in agri-business, while ensuring the youth have access to affordable financial services and remunerative markets. Implementation of the Kenyan Government strategies and policies that promote youth engagement in agriculture is likely to attract more youth to agriculture. Collective application of these recommendations could play a vital role in attracting and retaining youth in agribusiness.

Key words: Agriculture, agribusiness, aspirations, challenges, employment, food security, opportunities, youth

INTRODUCTION

In the Global South, concerns for food insecurity, “youth bulge” and youth unemployment have drawn attention to the youth-agriculture nexus [1]. According to the National Council for Population and Development of Kenya [2], a “youth bulge” occurs when more than 20% of a country's population is youth. Youth bulge is a stage in the development of a country where the country successfully reduces infant mortality while fertility rate remains high.

There is no universally accepted definition of the term “youth”. However, the term usually refers to individuals within a certain age span of the general population. The United Nations uses the ages from 15 to 24 to be youth, while the African Union Commission uses the ages from 15 to 35 years. In the Kenyan context, “youth” is defined as individuals between the ages of 15 and 35 years [3]. People born in the same chronological, social, and historical timeframe are collectively called a generation. The generation theory claims that people born in the same generation share similar characteristics and basic behavioral profiles [4]. Youth between 15 and 35 years of age are those people falling in what is dubbed as the Generation Y (Gen Y) and Generation Z (Gen Z) with unique characteristics that position them to strategically explore and harness opportunities in the agriculture sector better than their older counterparts [5].

Africa has the youngest population in the World, with 60 to 70% of its population below 30 years old. While this could be an economic asset in terms of human resources, many scholars have described it as a ticking time bomb waiting to explode [6,7]. This is because if Africa fails to generate appropriate economic possibilities for its youth to earn a modest living. Surging unemployment rates will continue to fuel criminality, insurgency, violent conflicts, religious radicalization, and sexual exploitation [7, 8]. According to the latest Kenya National Population Census in 2019 [9], the population of Kenya was approximately 38 million people, of which 78% were youth. Unemployment rate in Kenya was approximately 40% and about 64% of the unemployed were the youth.

Agriculture remains the dominant sector in the Kenya's economy. The agricultural sector in Kenya employs over 40% of the total population and more than 70 % of the rural populace [10]. The average age of farmers in Kenya is above 60 years and the farmers predominantly engage in traditional and subsistence farming practices [9, 11]. The challenge for agricultural policy and research as framed in dominant development discourse is that rural youth do not aspire to farm—leading to what some have called the ‘youth in agriculture problem’ [12]. The low attraction of the youth to agriculture is partly rooted in historical perspectives. Agricultural tasks have been used in primary and secondary schools as punishments to errant

and in-disciplined children [11,13] and for punishing prisoners [11, 14]. These cases portray agricultural related activities as deserving for culprits [11, 15], low respect towards farmers, and lack of role model young farmers [11]. Hence, youth only consider agriculture as a fallback option for those who have failed in life [16]. The concentration of the public agricultural sector systems on production with limited value addition, processing and marketing could also cause youth disinterest [17]. As a result, sectors like motorcycle transport (*boda boda* in *Kiswahili* language) and micro-enterprises (*Jua Kali*) constitute a significant number of self-employed individuals [12,18].

These concerns have led the Government of Kenya to consider several initiatives to encourage youth engagement in agriculture, including policies and programmes that enable the youth to venture in education as well as create opportunities for income generating projects. The National Youth Agribusiness Strategy (2018 -2022) [19], Empowering Novel Agribusiness-Led Employment (ENABLE) Programme [20], and Youth Enterprise Development Fund [21], are some of such key strategic initiatives. Moreover, increased access to mobile phone and internet connectivity in Kenya has ignited the use of information and communication technologies (ICTs) in agriculture, which is changing the agricultural landscape. ICTs are helping to improve the image of agriculture, increasing the number of youth who perceive agriculture in a new light as an agribusiness and enabling youth to envision diverse roles they can play in the agricultural sector [22].

Despite the initiatives and availability of ICTs, low engagement of youth in agriculture persists. Several studies have examined the effects of youth aspirations on engagement in agriculture without considering whether the youth are already engaged in agriculture or not. Yet aspiration –reality continuum can be best captured from experienced youth already engaged in farming from specific geographic locations with different cultural backgrounds and socio-economic opportunities. Previous studies have used either quantitative [11, 12] or qualitative methods [16] to analyze youth aspirations. To the authors' knowledge, no study has examined career aspirations and reality of youth already engaged in agriculture in rural-setting of western Kenya using mixed methods.

Against this backdrop, this study set out to answer the following three questions about youth farmers in western Kenya: (i) What is the space of agriculture in the aspirations of youth farmers? (ii) What is the relationship between youth farmers' aspirations and reality? (iii) What are the challenges and opportunities for the youth farmers in agriculture? By answering these questions using a mixed methods approach, this study contributes to knowledge by providing a nuanced understanding of youth aspiration-reality continuum and related challenges of youth farmers in specific-rural settings in western Kenya. A clear understanding of

the aspirations of rural youth farmers and the links between aspirations and career decisions provides concrete guidance for policymakers and other stakeholders to find effective solutions for inclusion of youth in agriculture and generation of meaningful employment opportunities for the youth.

MATERIALS AND METHODS

Data for this study came from a cross sectional household survey and focus group discussions (FGDs) conducted in Busia and Migori Counties, western Kenya in June 2024 as part of KALRO/Cornell University Project. Busia County lies between latitude 0° and 0° 45 North and longitude 34° 25' East and covers an area of about 1,695 km² [23]. The County receives an annual rainfall ranging between 760 millimeters (mm) and 2000 mm. The population of Busia County was approximately 997,000 people in 2021 [24].

Migori County is located between latitude 1° 24' South and 1° 40'South and longitude 34° 50'East and covers an area of 2,596.5 km². Annual rainfall averages from 700mm to 1,800 mm. The total population of Migori County was estimated at 1.3 million in 2021[25]. Agriculture is the main economic activity in both study Counties.

Sampling strategy and data collection

The study used a mixed method approach of combining quantitative and qualitative data to provide synergy for a better understanding of the research problem than what either the quantitative or qualitative data alone [26]. Qualitative data captures important nuances of youth aspirations, opinions and perceptions with regard to farming, which quantitative method may fail to capture. A multi-stage sampling technique was used to select one sub-county per study County. The sub-counties of Teso South and Kuria West in Busia and Migori Counties, respectively, were purposively selected because the KALRO/Cornell University project was located there. Three wards were then randomly selected from each sub-county. Three villages were randomly selected from each ward (the lowest administrative unit in Kenya) and lists of youth practicing agriculture in each village were compiled with the help of village elders. A sample of 67 young farmers were sampled from the lists by a systematic random sampling. The study targeted youth already practicing agriculture (young farmers) because they have hands-on experiences, perceptions and opinions on aspiration and their current careers. Data were collected using a pre-tested semi-structured questionnaire administered by trained enumerators. The collected data included demographic and socioeconomic characteristics, youth aspirations before and after schooling, and perceptions of challenges facing youth engagement in agriculture.

Qualitative data were collected using Focus Group Discussions (FGDs). Respondents for FGDs were purposively selected from lists of youth farmers who were resident of the study areas, believed to be more knowledgeable and experienced about matters concerning the youth and agriculture. Four FGDs each comprising between 6 to 8 members were held with 24 participants. This FGDs number was determined by the concept of "saturation". After each FGD session, the information was reviewed to determine if saturation was reached [27]. "Saturation" is the stage of data gathering at which no new insights are found indicating sufficient sampling of the population [27].

Before the start of each FGD, the research team sought informed verbal consent of the participants and assured them of confidentiality of the discussions. The discussions were held in Kiswahili and local languages and translated into English during note taking. A checklist with key topics was developed to guide the FGDs and focused on understanding the following issues: youth career aspirations while in school, youth perceptions on agriculture, socio economic challenges, available institutional support and challenges, and opportunities for youth engagement in agriculture. The FGDs were led by two research team members, one acting as the FGD facilitator and the other as a note taker, audio-recorder and photographer. Each FGD lasted between 60 and 90 minutes.

Data processing and analysis

Quantitative data were cleaned, organized and stored in Microsoft Excel and analysed by Statistical Package for Social Sciences (SPSS) software (version 18). Descriptive statistics using means and percentages were used to summarize quantitative data. Differences between variables were tested using t-test and chi-square and the results were tabulated. Qualitative analysis of information was a continuous process starting during data collection. The FGDs were transcribed and exploratory thematic and content analysis were used to identify emerging themes and patterns between themes. Direct quotations of key expressions were used but the names of respondents were not disclosed due to ethical reasons.

Ethics approval and consent to participate

The Kenya Agriculture and Livestock Research Organization (KALRO) is a Government of Kenya institution mandated to conduct agricultural research and does not require an approval. Respondents provided informed voluntary verbal consent before the interviews were undertaken. Data provided by respondents were held confidential in line with the Data Protection Act, No 24 of Kenya, 2019.

RESULTS AND DISCUSSION

Demographic and socio-economic characteristics

The demographic and socio-economic characteristics of the study sample are presented in Table 1. The average age of the sample of youth farmers was 29 years, with no significant differences ($p = 0.566$) between the two study Counties. Dis-aggregating by County, the respondents from Busia County were slightly younger at mean age of 28 years compared to 30 years for Migori County. These mean ages fall within the age bracket of 18-35, which align with the designated youth age range under the study and indicate that the respondents had a few years to exit the youth age limit of 35 years. The study findings revealed that there was a slightly higher representation of male respondents compared to female respondents without any significant differences between the two Counties. The male respondents constituted about 61% of the total respondents. Regarding education, the respondents were distributed across various levels, including those with no formal education, primary, secondary, and tertiary education. However, about one-third of the respondents (31%) had attained primary education level, whilst a paltry 19% had tertiary educational attainments. The education categories refer to the highest level of education completed, consistent with the Kenya Government classification of levels of education attainments.

The main source of income for most respondents (93%) was sale of crops, implying that the youth had limited diversity of income sources. Turning to access to land, over three-quarters (76%) of the respondents had access to land, whilst nearly (80%) of those who accessed land made decisions on land use. A higher proportion of respondents (93%) of those who had access to land made decisions on land use in Migori than the 61% in Busia. This implies access to land is not a constraint in the short term for youth in rural areas to practice agriculture. About 57% of the respondents cultivated their land solely, implying they are empowered to cultivate the land they have access to. Access of the youth to land was affirmed during FGDs. Almost all youth reported having access to land and the land was allocated to them by parents and guardians on a seasonal basis or leased. The youth said in almost unison as follows:

“The parents fear allocating land permanently to us youth with all rights for fear that we may sell the land”.

The situation was dire for young women farmers, especially those living with their parents. The customary practices discourage allocation of land to women/daughters despite clear provisions in the Kenyan Constitution 2010 [3].

Aspiration of young farmers in Kenya

The results show that the youth farmers mainly aspired for formal sector white-collar jobs, which are thought to have higher economic returns and fewer risk factors. White-collar jobs are usually performed in offices, with work that is managerial, administrative, or clerical in nature and white-collar workers are paid a monthly salary. Foremost, approximately 46% of respondents aspired to do professional work such as doctors and engineers. Regarding farming, only about 20% aspired to be farmers and 7% aspired to be agricultural trainers (Table 2).

Unlike during quantitative survey, in the FGDs, most youth expressed interest in agriculture, probably because of peer pressure during FGDs: As narrated by one young male farmer in Busia County who was also a motorcycle transporter:

"Because of the small land sizes and lack of inputs, we only cultivate our small land to plant maize and vegetables for our family. In our village if you do not farm at all, people will repeatedly ask where you obtain food for your family"

These sentiments show that even though youth farmers may not have initially prioritized farming as their occupation, they still carried out farming to provide for their families. As a young male farmer from Migori who is a Diploma holder observed:

"I trained in general agriculture but if you look at this present generation if you wait for employment you may wait forever. I have gone into diverse farming, growing crops and keeping chicken for my family's food and for income generation...my dream is to be the best farmer in our Ward."

Overall, the FGDs revealed that most of those who aspired to be farmers considered agriculture as a fallback option and expressed dissatisfaction of having to carry out tasks such as weeding, for which a formal education was not perceived as necessary. This is especially the case of youth with tertiary level educational attainment. As female youth participating in the FGD in Busia County puts it:

"...for the youth who have graduated from colleges, agriculture does not appeal to them because it was not their desire when at school, but they do not have any option for now because they are unemployed yet they need to eat and that is why they engage in farming."

However, a male counterpart stated as follows:

"Here, if you cannot afford a motorcycle to transport passengers, your only option to earn a living is farming, which most of us practice as a last resort".

From the preceding statements, it is clear that differences existed between the aspirations and realities among the youth farmers. A different picture emerges when considering what most youth do when they are no longer students. When asked about their own principal occupation presently, the majority of young male and female respondents listed farming as a primary activity. Hence, in contrast to aspirations for formal white-collar jobs, the participants primarily engaged in agriculture after primary or secondary schooling. The difference between these aspirations and realities, referred to as the "aspiration-attainment" gap, has been widely reported in Africa [28] and other regions of the Global South [29]. For instance, a comparative study across 32 countries in Africa, Asia, Latin America, the Caribbean, and Europe [6] found a similar misalignment between youth aspirations and career opportunities.

Access to institutional services

Institutions can play a key role in the development of the agricultural sector. Overall, 96% of the respondents belonged to community-based groups. The main types of groups were savings and credit groups (37%) and youth groups (33%) (Table 3). The membership of youth in groups is key to organized farming and can accelerate adoption of technologies, ease management on production, quality control and members can benefit from economies of scale in buying inputs and collective marketing.

About 60% of the respondents considered social networks to be strong, and only 12% perceived the networks to be very strong. The strength of a social network shows that youth can use their social relations to transmit technical information and interact with each other. Many empirical studies have shown the importance of social networks in the diffusion of new agricultural technologies [30, 31].

A paltry 24% of the youth had obtained some credit in the past one year, mainly from table banking and merry-go-round. The results from FGDs, however, show that such credits were small amounts because of low savings occasioned by low income. The main sources of agricultural information were fellow farmers (84%), mass media (Radio and TV) (38%) and County Governments (16%), implying a weak public agricultural extension system. The small proportion of youth (4%) who received the information from digital platforms is rather surprising because youth are believed to be tech- savvy, thus expected to receive information from digital platforms. The results are consistent with Mbanda [32] who found that fellow farmers were the most popular source of information.

Challenges and Opportunities for youth in agriculture

Negative perceptions and attitudes

The main reasons for the low interest of the youth in agriculture were identified as follows. Primary agriculture requires improved seed and other inputs, which are expensive. Agriculture in Kenya mainly depends on manual labour, which requires the use of a hoe for most farm operations including soil tillage and weeding, which is laborious. These operations make farming not attractive both in terms of physical effort and in terms of financial returns. For example, in most FGDs, female respondents responsible for finger millet production in Busia County found farming difficult as narrated below:

"We use the hoe for ploughing, weeding, and this makes the work hard and boring, yet the harvest is low after waiting for a long time (season). Because of this, we have never seen any successful youth farmer in this area. "Without proper tools, use of hoe for most farm operations causes blisters on my hands and breaks my beautiful nails". If the tools/machines for weeding and threshing finger millet were introduced, it will attract many youths into commercial finger millet farming. Weeding and threshing of finger millet requires a lot of time, and that is why many farmers don't grow sizeable areas of finger millet."

These assertions portray a negative image around primary agriculture. From the FGDs, it is clear that many young people in Kenya find agriculture unattractive because of the drudgery, low yields and lack of role models. The youth prefer activities that are less laborious and fast income generating, whilst agriculture production requires some gestation period. Preferences for enterprises with quick returns are consistent with what the youth referred to during most FGDs as "PesaPap", a slogan used by Safaricom, a popular mobile phone service provider that send money immediately to qualified applicants. The long period taken to receive returns from agriculture has pushed the youth to seek other income-generating activities away from agriculture [11, 33],.

Moreover, the youth participants reported that they have seen the elderly toil daily with the hoes on farms yet they are still living in poverty. Most of the participants recalled how their parents advised them against agriculture as follows:

"My son/ daughter put a lot of effort in reading at school so that you don't become a farmer like me.... When you grow up don't become a farmer".

Those perceptions, partly arise from the fact that the past Kenyan education curricula before the current Competence Based Curriculum (CBC), was oriented towards white-collar jobs. Further, some respondents recalled that during their school days, laborious agricultural tasks were used as punishment for pupils/students.

Inadequate access to productive resources

A female FGD participant was surprised to imagine of her parents allocating her land permanently, and said:

“How can that happen? My brothers and even sisters and the whole community will curse my father if he gave me land with title deed.”

This low access to land by female youth adversely affects youth investment in primary agriculture and hampers their prospects for long-term engagement in agriculture. This observation is corroborated by findings that traditional laws often deny women the right to own land [34].

Insufficient access to inputs like fertilizers and seeds was mentioned severally as an important constraint to entry, stay, or exit of youth in agriculture. A female youth in Busia County observed that:

“help young farmers join farming by giving them initial free inputs especially seed and fertilizers”

Additionally, low financial resources for the youth were mentioned severally as follows:

“Although some credit facilities exist in the communities and the study counties to help purchase inputs, the interest on loans is very high.”

Most financial service providers are reluctant to provide their services to the youth because rural youth do not have collateral.

Insufficient access to knowledge, skill, and information.

Knowledge, skills, and information were also high on young farmers' list for needed support.

“We need training on crop production and marketing skills,” said a young male FGD participant in Migori County.

A young female farmer who was living with her parents reiterated this during FGD in Busia County.

“I like doing farming activities, but doing farming without the right information is like a blind man trying to hold on any object.”

Thus, most youth lack formal training and technical skills in modern agricultural practices, especially climate smart agriculture.

Limited value addition and access to markets

Across the study sites, lack of competitive market for farm produce was highlighted as:

“One of the things that make many youth dislike farming is that a farming season might come, then you realize that the yield is impressive but produce price is low while cost of seed and fertilizer is so high. In fact, we don’t know where to sell.”

Without reliable market linkages, young farmers face uncertainties and risks that affect their profitability and sustainability.

Limited involvement in policy dialogue and policy support

The youth also reported little support from the Government. The participants in the FGDs believed that the government can support youth in agriculture.

*“By supporting us with affordable fertilizers, seed, credit, weather information, storage facilities, and providing a market for our products, the Government will attract many youths in agriculture.”
 We even do not know existing policies that are relevant to us.”*

CONCLUSION AND RECOMMENDATIONS FOR DEVELOPMENT

Most young farmers, while at school, aspired white-collar jobs (46%) with only 20% aspiring to be farmers. Yet, after school, farming was their main occupation, showing a contrast between aspirations and reality. The major challenges that drive youth farmers out of the agricultural sector include negative perceptions and attitudes towards agriculture; limited access to productive resources; inadequate knowledge, skills and information, poor access to lucrative markets, and low policy support. The study of youth already practicing agriculture using a mixed method approach made it possible to share their hands-on experiences, perceptions and opinions on aspiration and their current careers. This led to clear understanding of the aspiration-reality continuum, which would not have been possible if the study had focused on any youth whether already practicing agriculture or not.

Making agriculture appealing and attractive to drive the youth in agriculture requires public-private sector partnerships to undertake transformative actions. First and foremost, it is important to change the mindset and bad perceptions of the youth and general public towards agriculture. This can be achieved by integrating small and innovative technologies that reduce the physical workload and showcasing successful young farmers as role models.

Secondly, there is a need for capital investments, especially those that yield returns in the short-term, to promote youth access to tools and machines (mechanization) that alleviate drudgery and facilitate youth participation in upper nodes of agricultural value chains. There is a need to sharpen knowledge and skills

of the youth through training and mentoring, while ensuring the youth have access to affordable financial services and markets. Finally, implementation of the existing Kenya Government policies and strategies that promote youth engagement is crucial. Collective application of these recommendations could play a vital role in driving the youth to agriculture.

Conflict of Interest

The Authors declare no conflict of interest

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Table 1: Demographic and Farm Characteristics of sample youth in Busia and Migori Counties

Variable		Busia (n=34)	Migori (n=33)	Total (n=67)	Chi-square	p-value
Age	Mean $\pm$ SD	28.15 $\pm$ 3.98	29.67 $\pm$ 4.82	28.90 $\pm$ 4.45	0.578	0.566
Sex	Female	42.9	35.7	41.1	12.085	0.001
	Male	57.1	64.3	58.9		
Level of Education	No formal education	26.5	15.2	20.9	4.716	0.194
	Primary School	38.2	24.2	31.3		
	Secondary School	23.5	33.3	28.4		
	Tertiary	11.8	27.3	19.4		
Source of income	Crop Production	100.0	84.8	92.5	5.67	0.062
	Casual jobs	0.0	3.0	1.5		
	Self-employment	0.0	12.1	6.0		
Land Access	No	38.2	9.1	23.9	7.825	0.005
	Yes	61.8	90.9	76.1		
Land Use Decision	Self	61.9	93.3	80.4	7.741	0.005
	Spouse	38.1	6.7	19.6		
	Jointly	38.1	3.3	17.6		
Land Use	Solely	0.0	96.7	56.9	47.330	<0.001
	Solely and Jointly	61.9	0.0	25.5		

Table 2: Percent youth farmers' aspirations before joining agriculture in Busia and Migori Counties

Aspired occupation	Busia (n=33)	Migori (n=30)	Total (n=63)	Chi-square	p-value
Business/self-employment	17.6	5.9	11.8	35.798	<0.001
Farmer	35.3	8.8	22.1		
Professional careers	11.8	79.4	45.6		
Complete Secondary Schooling	23.5	0.0	11.8		
Teaching profession	11.7	5.9	8.8		

Note: Three (3) and one (1) respondents in Busia and Migori counties, respectively did not report their aspirations

Table 3: Access to institutional support among youth in Busia and Migori Counties

Variable		Busia (n=34)	Migori (n=33)	Total (n=67)	Chi- square	p- value
Group membership (%)	No	5.9	3.0	4.5	0.318	0.573
	Yes	94.1	97.0	95.5		
Type of Groups (%)	Savings and credit group			36.8		
	Youth group			33.3		
	Farming group			18.4		
	Support group			5.7		
	Community group			5.7		
Quality of social networks with the community (%)	Average	47.1	9.1	28.4	14.283	0.001
	Strong	50.0	69.7	59.7		
	Very strong	2.9	21.2	11.9		
Access to Credit (%)	Yes	26.5	21.2	23.9	0.255	0.610
	No	73.5	78.8	76.1		
Sources of Credit (%)						
	Merry Go Round	44.0	76.9	60.8		
	Table Banking	96.0	80.8	88.2		
Sources of Agricultural Information (%)	Fellow farmers	83.3	85.7	83.9		
	Mass media	38.1	35.7	37.5		
	Extension	19.0	7.1	16.1		
	Field day exhibition	16.7	7.1	14.3		
	Research organization	19.0	0.0	14.3		
	NGOs	11.9	0.0	8.9		
	Digital platforms	4.8	0.0	3.6		

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