ORGANIC VALUE CHAIN ANALYSIS AND CONSUMER AWARENESS SURVEY

THE PROJECT

- Organic agriculture is a sustainable and environmentally friendly production system that is offering producers a wide range of economic, environmental and social and cultural benefits (UNEP, 2008)
- The system is drawing attention among the public and private sector stakeholders, due to its potential to address food security, land degradation, poverty, climate change and build resilience to shocks in the region (Amudavi et al, 2021).
- Promoting organic production systems is at the heart of PELUM Participatory Ecological Land Use Management (PELUM)
- The organization has been implementing three phases of the Promoting Ecological Land Use Management (ELUM) and Networking for Livelihoods Improvement" (PENELI IV). Currently, at initial stage to kick off the Phase IV of the PENELI.
- The main purpose of this study was to (1) Conduct organic value chain analysis and (2) Conduct consumer awareness on organic foods and products.

STUDY OBJECTIVE

- Objective 1: To map-out the existing potential organic value chains within the network
- Objective 2: To recommend the organic value chains that are most strategic for the network
- Objective 3: To analyze the supporting functions that are required to make the value chain work
- Objective 4: To assess the competitiveness of the organic value chains and determine how to create competitive advantage for the targeted sectors and in the PELUM Kenya network
- Objective 5: To assess the cost, profit, marketing and supply and demand dynamics of the organic value chains
- Objective 6: To determine the relationship between the kinds of organic products customers buy and benefit of using organic products
- Objective 7: To determine the significant relationship between reasons for choosing/not choosing organic products and benefit of using Organic Products.

PARTNERS, LOCATION AND VALUE CHAINS

- **Anglican development services Western region (ADS Western)** – Kakamega County: Sugarland Sweet potato and Khusite Imberi Group located in Mumias East and Matungu locations: Value chains: Chicken, Africa leafy vegetables, sweet potatoes, Chicken and Cowpeas
- **Organic Agriculture Centre of Kenya (OACK)-** Muranga County: Kangari Organic Farmers Market (KOFAM) and Gatanga Organic Farmers Market (GOFAM) were identified. Value chains: Arrow roots, Africa leafy vegetabls, Avocado and Banana
- **INADES-FORMATION** – Machakos County: Kanini Kaseo Group in Katangi and Muuwo Wa Canaani Kithendu in Kithimani were identified: Value Chains: Sweet potato and
- **Laikipia permaculture centre (LPC)**- Laikipia County: Twala Tenebo Cultural Manyatta Women Group and Nabulu Kimakandura Women Group for this study: Value chain: Aloe vera and Honey

Assessment Methodology and Approach

- Applied a mixed method research design to promote stakeholder involvement and learning as much as possible, guided by Value Networks Research Tool (VNRT) employing an integrated approach to studying key parameters and their inter-relations in a dynamic production and market environment.
- The study applied computer assisted personal interviews (CAPI) data collection procedure to collect data at household level, while following COVID19 protocols by the ministry of health, PELUM and local government.
- 131 Individual (Producers) reached at household level survey was undertaken reaching households, traders and consumers with
- 40 Consumers – 20 Urban (Nairobi) (Kikuyu and Kiserian) and 20 in rural (Muranga) consumers were interviewed for Consumer Awareness Survey
- 43 traders on the selected value chains were reached across the targeted locations
- 8 Focused group discussions (FGD) with producer organizations were undertaken.
- 11 Key Informant interviews (KII) were undertaken to achieve the objective of this study.

DEMOGRAPHIC CHARACTERISTICS

- 80% of the respondents were female and 20% were male, indicating majority of participants in the selected value chains were women.
- 36% had attained secondary level of education, 28% tertiary collage and 24% primary education. 67% of respondents in Laikipia had not gone to any school. 81% had capacity to read and write, while 15% were not able to do either of which 61% were in Laikipia
- 80%'s main occupation is Farming, while 14% were in business or trade. Majority of those who do business or trade, 62% were in Laikipia. Sale of crop is the major source of income to majority of the households as reported by 80%, with majority in Muranga and Kakamega.
- Sale of livestock is a main source of income to 11% of the households, with majority in Machackos (25%) and Kakamega (13%). Small business is a major source of income for 15%, with majority, 71% in Laikipia.
- Remittance only reaches 3% of the households, with majority, 19% in Laikipia.

KEY TAKE HOME MESSAGES

- 80% of the respondents were women. Women are the key players in the organic value chain and provided wealth of information and understanding of the value chain, from production to consumption. This group is vulnerable to Shocks and resilience building will be key to become competitive
- 80% of the households depends on production and sale of Crops and livestock in the leading source of livelihood, while 14% of which 71% in Laikipia depend on off-farm business. Any shocks on these value chains have significant impact on the household livelihoods. There is need for enhancing the crops and livestock value chain to improve on the competitiveness.
- 81% have capacity to read and write, while 15% can't on both, of which 61% are in Laikipia. A mixed methodology in value chain promotion through practical (demonstration) and written materials would be usefully to these population. Training methodology should be oral and more practical in nature (exchange visits, reference farms).

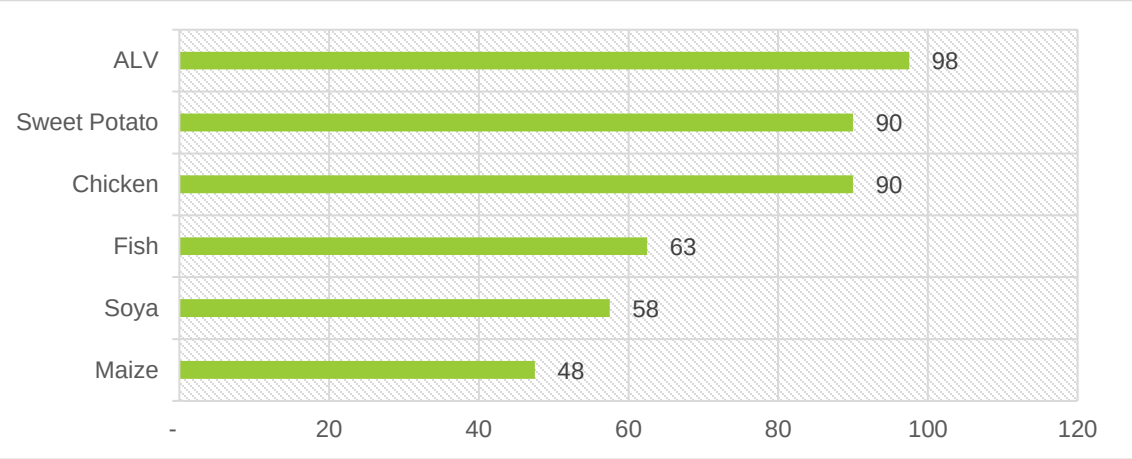
Potential Value Chain Identification and selection

- PELUM cannot focus its limited resources on entire organic products being produced in Kenya.
- PELUM must identify the highest potential organic value chains (commodities) that are aligned with its organic agriculture production mandate.
- PENGUIN examined 27 of the major agricultural commodities in four regions where value chain and consumer survey were undertaken.
- **Western Region:** Sweet potato, soya beans, Maize, Fish (Aquaculture), chicken and Africa leafy vegetables; **Northeastern:** Small ruminants, Honey, Beef and Aloe; **Lower Eastern** Tomatoes, pigeon peas, moringa, Kales, cowpeas and green grams; French beans, cowpeas, Banana, Beans and tomatoes; **In Central Kenya,** Muranga: Tree tomatoes, Tea, Pasion fruits, Herbs, Exotic vegetables, coffee, avocado, arrow roots and macadamia.

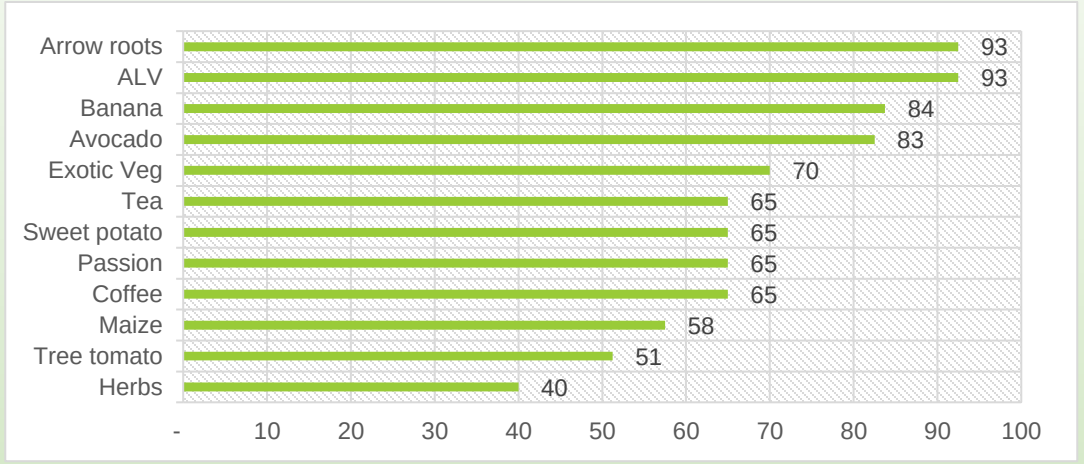
SELECTION CRITERIA

- This analysis consists of a scoring methodology that was based on objective and subjective criteria to identify the value chains to be recommended.
- The evaluation was guided by: (1) Produced by Majority, (3) Consumption and demand at local and export markets (4) Potential for increasing Household income (5) Nutrition and Food security (6) Women and Youth participation (7) Private sector participation (8) Low investment at farm level (9) Potential for collective action.
- Scores were given for each criterion from one to five (five representing the most favorable and one representing the least favorable agricultural commodity value chain to engage) with the overall sums were calculated out of a possible perfect score of 40.

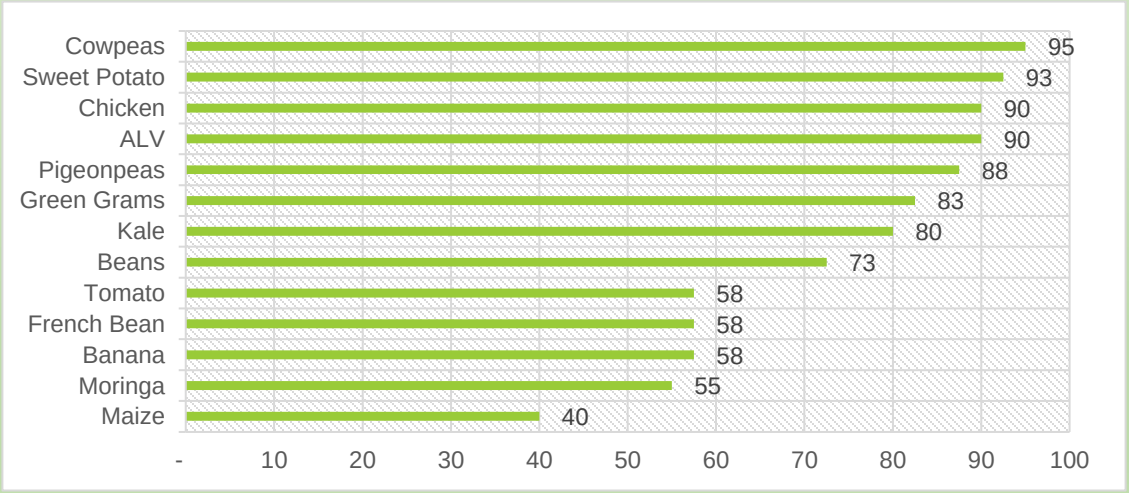
VALUE CHAIN SELECTED



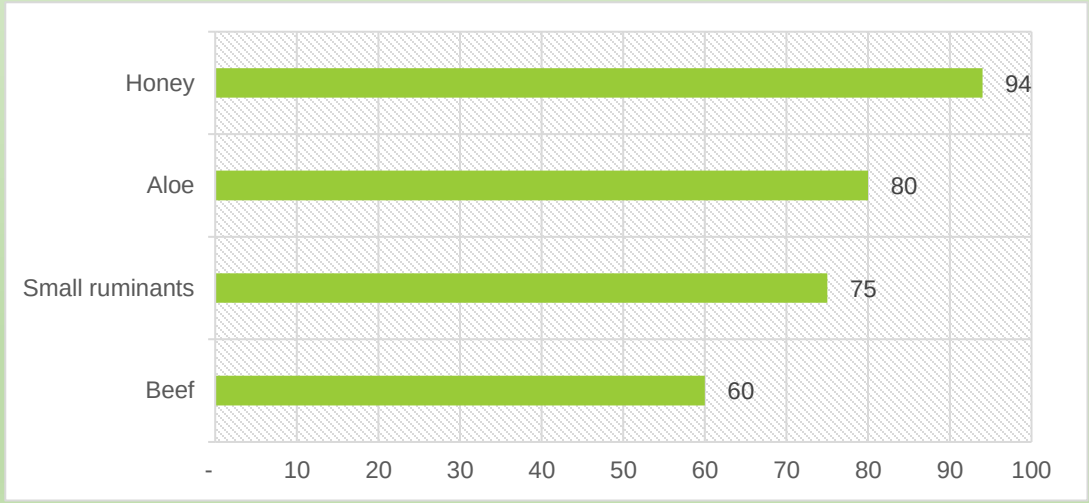
Western: Africa leafy vegetable (98%), Chicken (90%) and sweet potato (90%).



Central: Africa leafy vegetables, Arrow roots, Banana and Avocado, scoring 93%, 93%, 84% and 83% respectively



Eastern: Cowpeas, Sweet potato, Africa leafy vegetables, and chicken were selected having scored 95%, 93%, 90% and 90% respectively



Northeastern: Aloe vera and Honey scored 80% and 94% respectively were selected

VOICES

We selected Africa Leafy vegetables (ALV) as alternative to sugarcane farming. Sugarcane farming has not been rewarding to farmers since the closure of Mumias Sugar Company

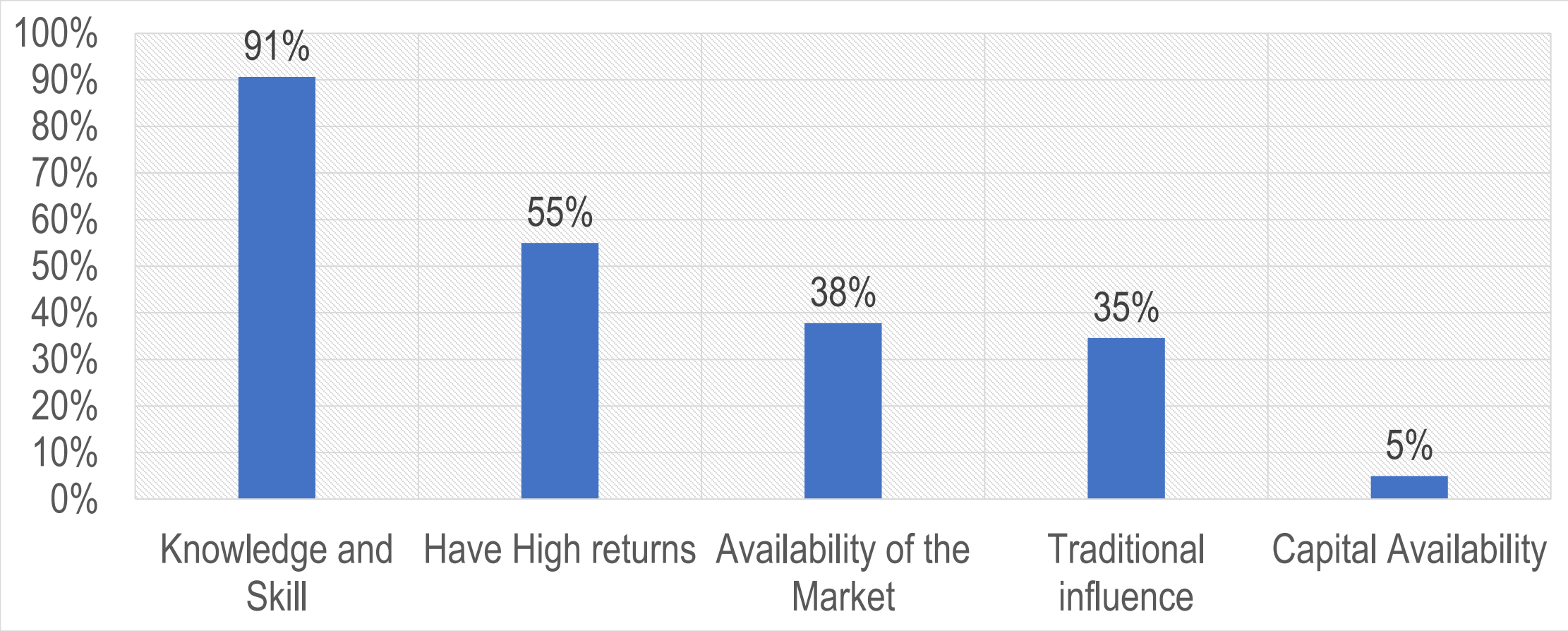
Margaret Kumbe,
Sugarland Famers Group, Mumias, Kakamega

VOICES

The advantage of avocado is that intensive management is done at seedling. After that it requires minimal management and less involving, not as tedious as other agribusiness venture, thus giving a farmer time to do other duties and tasks.

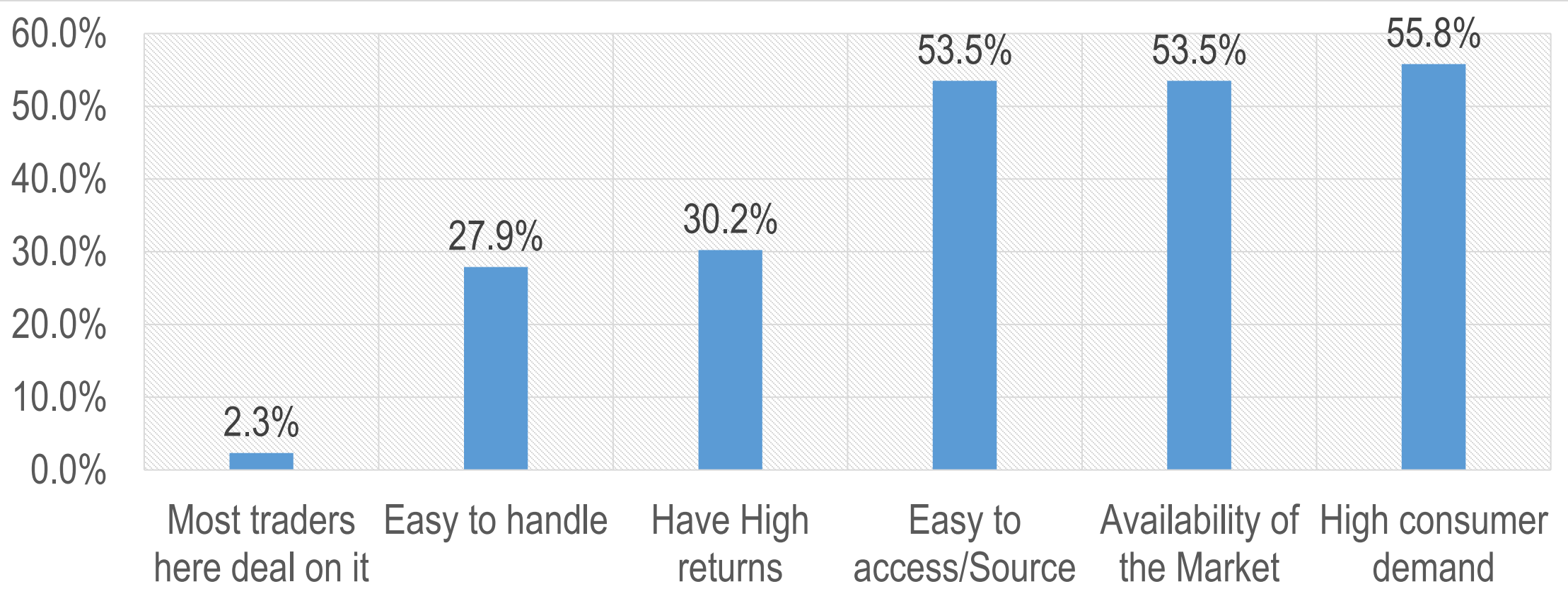
FGD in Muranga

WHAT INFLUENCE VALUE CHAIN SELECTION



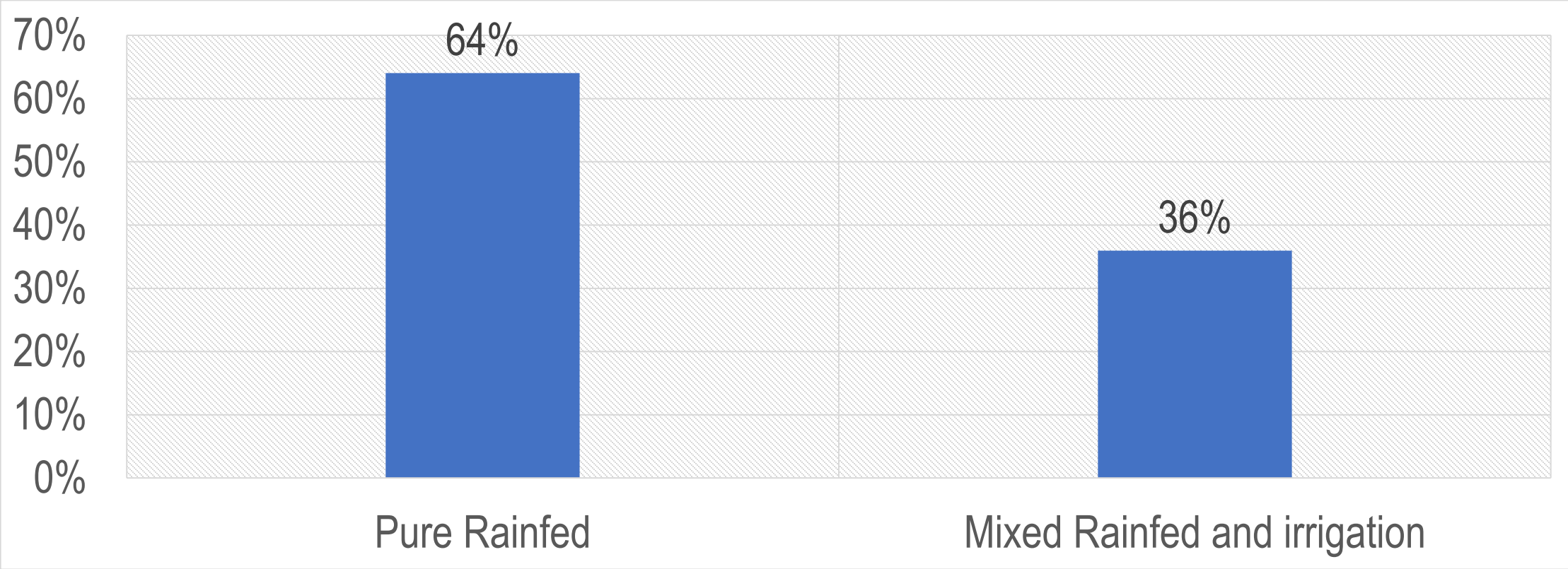
Product selection is mainly driven by need for high returns, availability of the market and knowledge and skill which are the foundation of building a commercial enterprise

WHAT INFLUENCE TRADERS ON PRODUCT TO TRADE IN



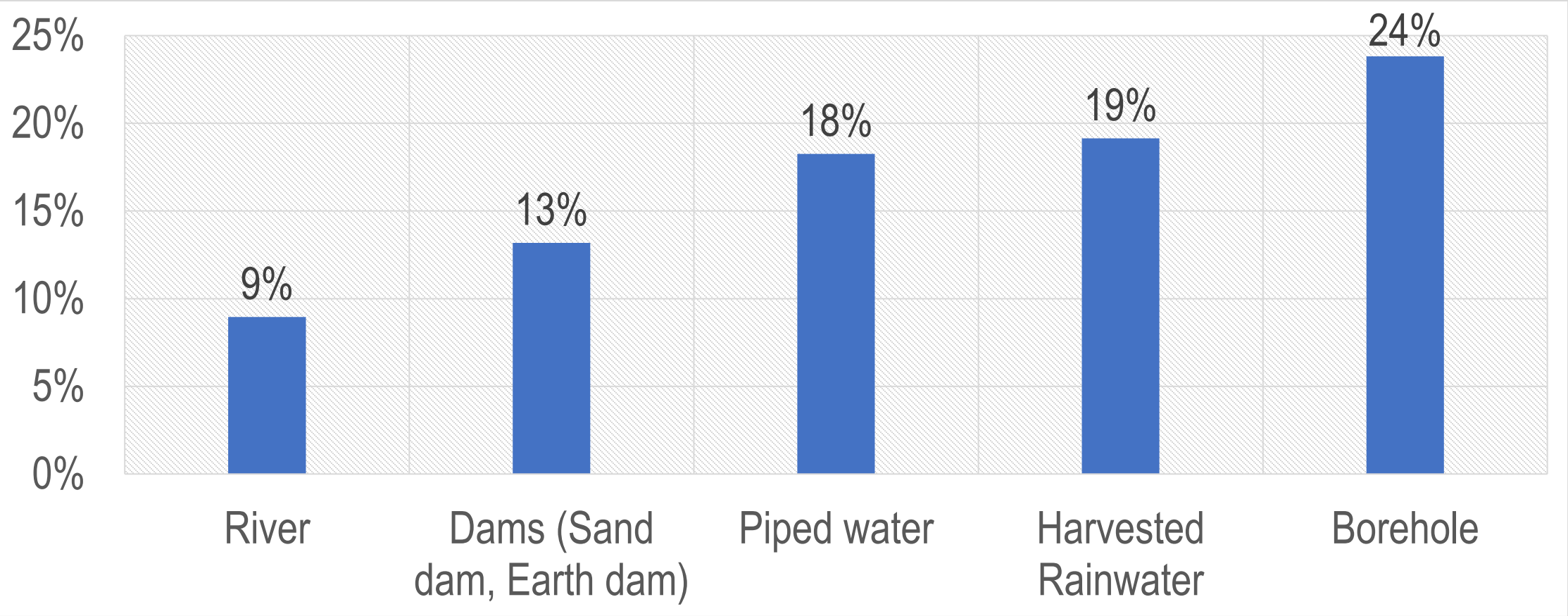
- Product selection for trading is determined by the proportion of consumers demanding the product, availability and access of the product, availability of the market and high returns.
- Promotion of organic value chain therefore need to work from the consumer demand that will act as a production pull (Push and pull innovation).

CROP PRODUCTION SYSTEMS



- Pure rainfall production systems expose the producers to the impact of climate change, unless they adopt climate smart agriculture practices that have potential to integrate soil fertility management such as mulching, manure and low-cost irrigation systems.
- Adoption of irrigation builds the resilience of the producers, helping them produce across the year, with capacity to schedule production based on the markets.

SOURCES OF WATER FOR IRRIGATION



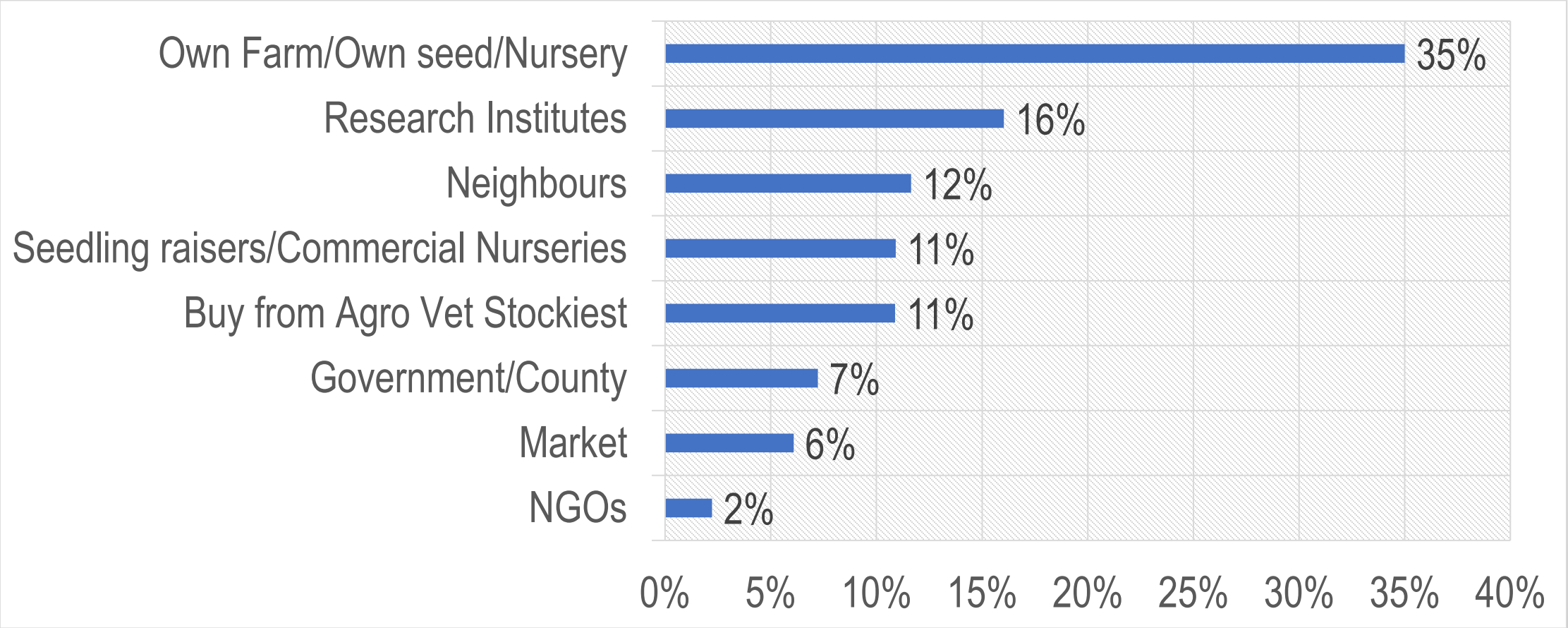
- River were the main source of irrigation water as reported by 43%, with majority, 100% in Machakos. Borehole is the main source of water for irrigation to Muranga (44%) and Kakamega (43%) with an overall access by 29% of the respondents.
- There is need of introducing sustainable water access options such as rainwater harvesting to supplement rainfall in organic production systems.

VOICES

With irrigation, we plant in stages to ensure we have a harvest almost throughout the year. Planting season during the long rains are often very challenging because in the market, leafy vegetables are plenty.

FGD, Kagari

SOURCES OF PLANTING MATERIALS



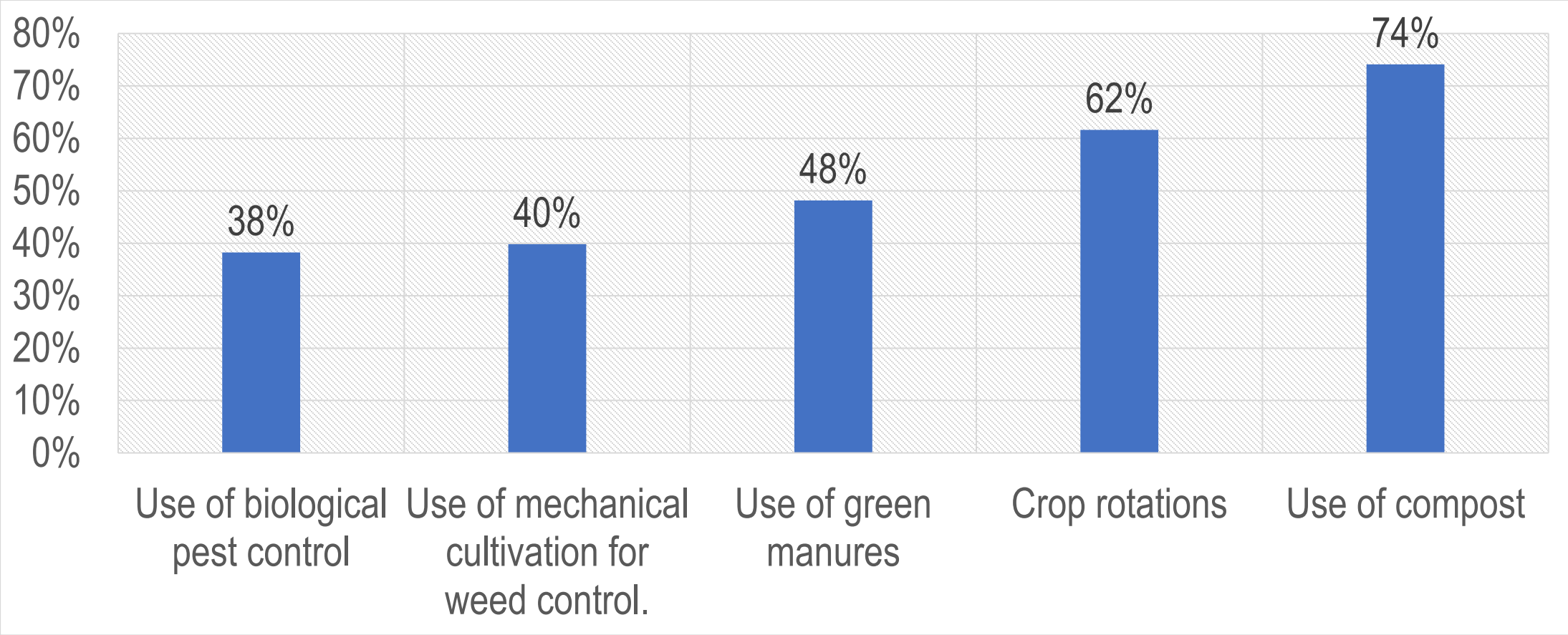
- The challenge with planting of own planting material especially Arrow roots, Sweet potato, Banana is inability to authenticate the quality and true to type.
- There is need for development of a sustainable seed systems managed by the community and supervised by either the NGO or the government staff. To ensure that clean materials are reaching the producers.

VOICES

Access to 1st generation Sweet potato planting materials is a major challenge. Re-use of planting materials for many seasons leads to yield decline

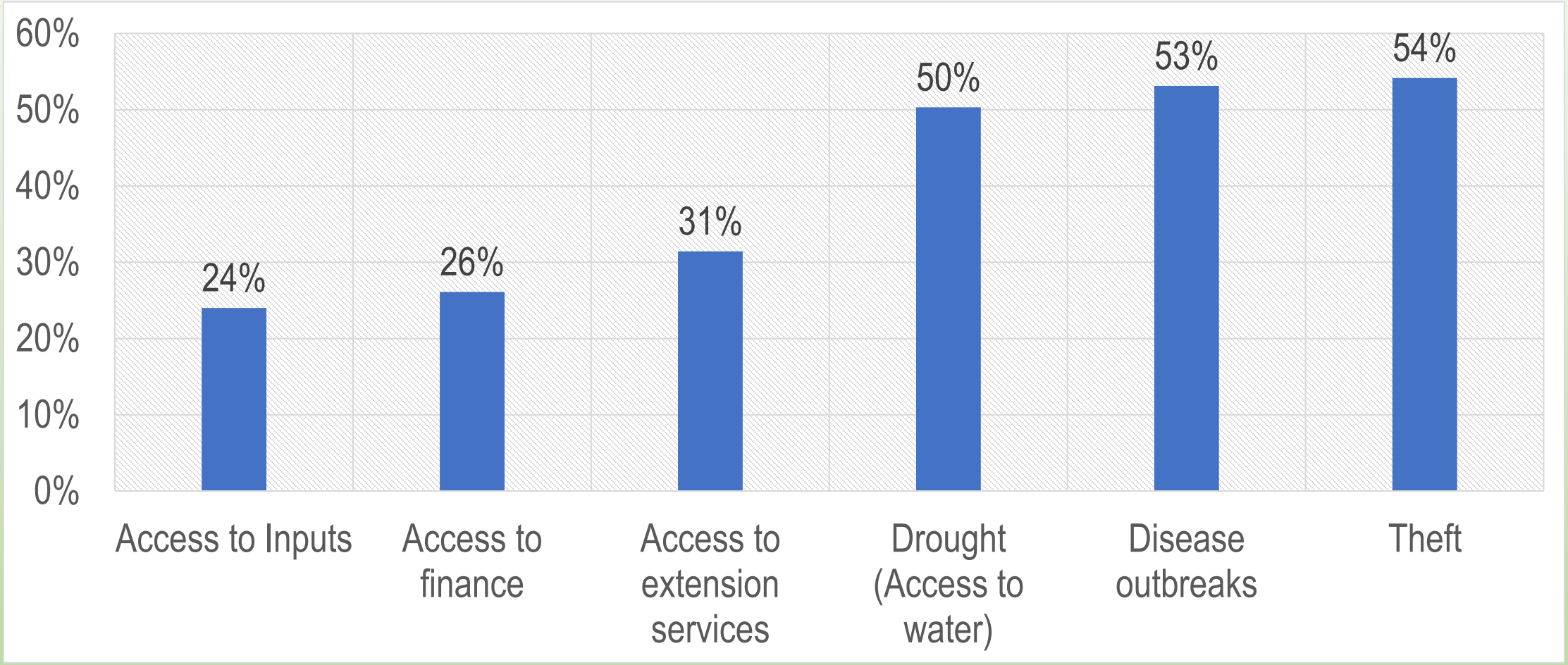
FGD, Sugarland Famers Group, Mumias, Kakamega

ADOPTION OF PRODUCTION TECHNOLOGIES



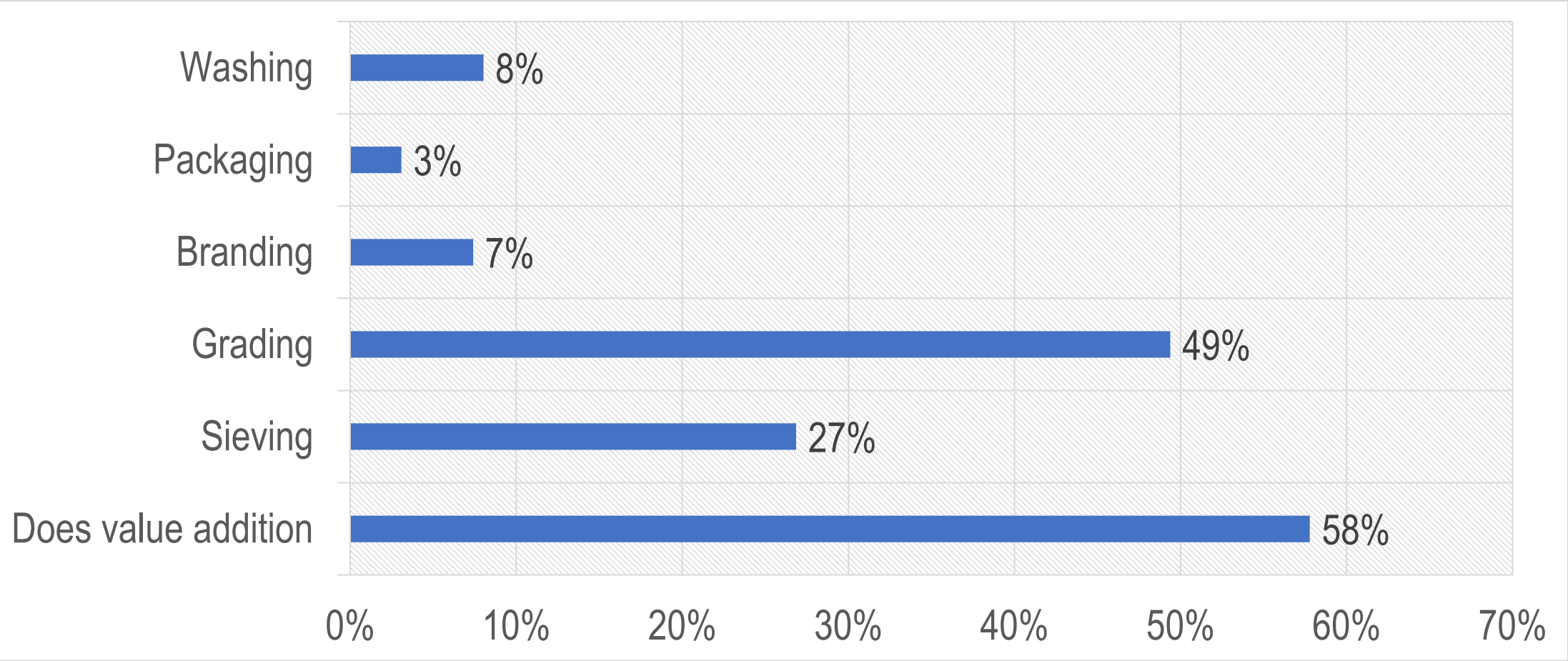
- Adoption of climate smart organic production technologies builds resilience against climate change.
- Introduction and scaling up of novel technologies through reference farm model promoted through farmer led extension system.

Challenges affecting Production



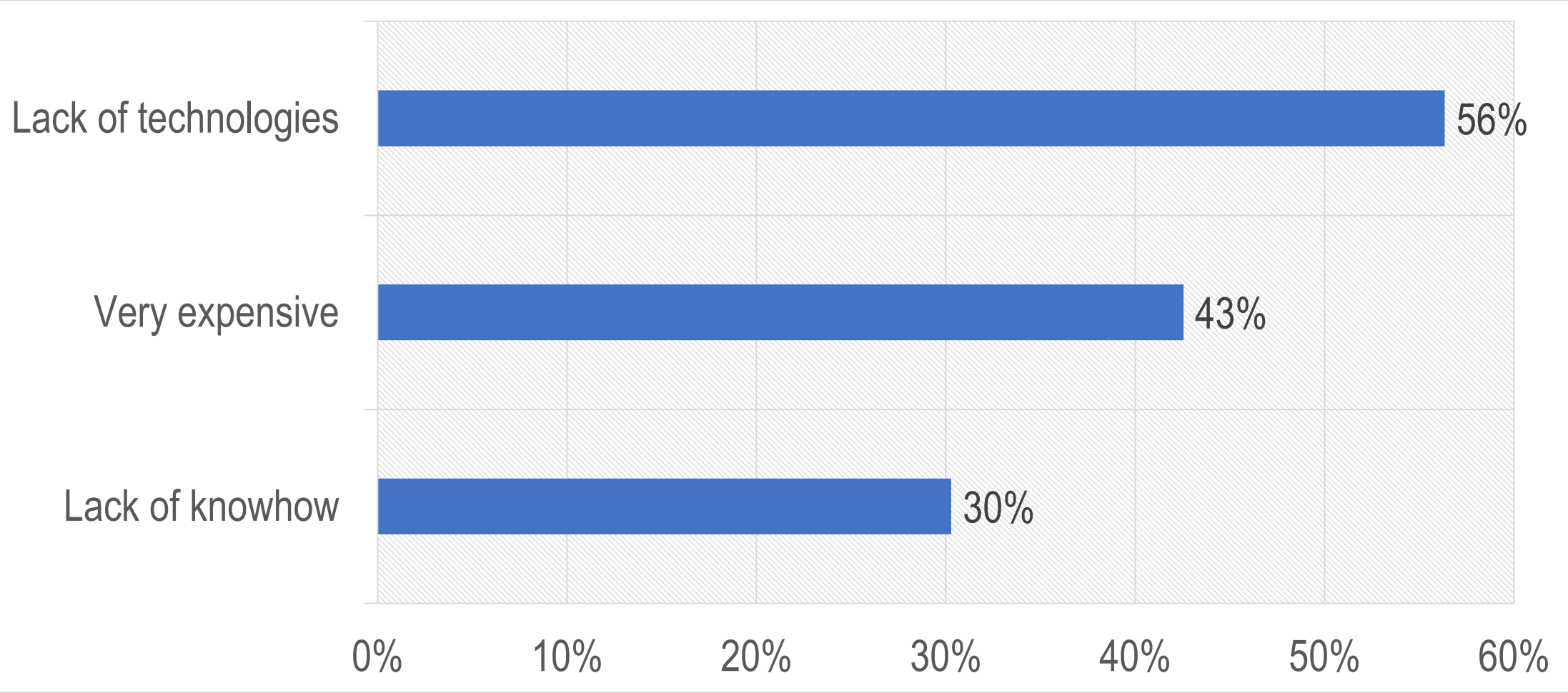
- Investing in water harvesting will be key for increased production and productivity. Improved access to inputs through linkage to input service providers will be important and improved farm biosecurity will be key

ADOPTION OF VALUE ADDITION



- Packaging of sweet potato is the main post harvest and value addition practice done by 61%.
- Sugarland group indicated that they do process small quantities of Crisps, Mandazi, Porridge Floor, Juice, and Crackles from sweet potatoes, which are sold locally

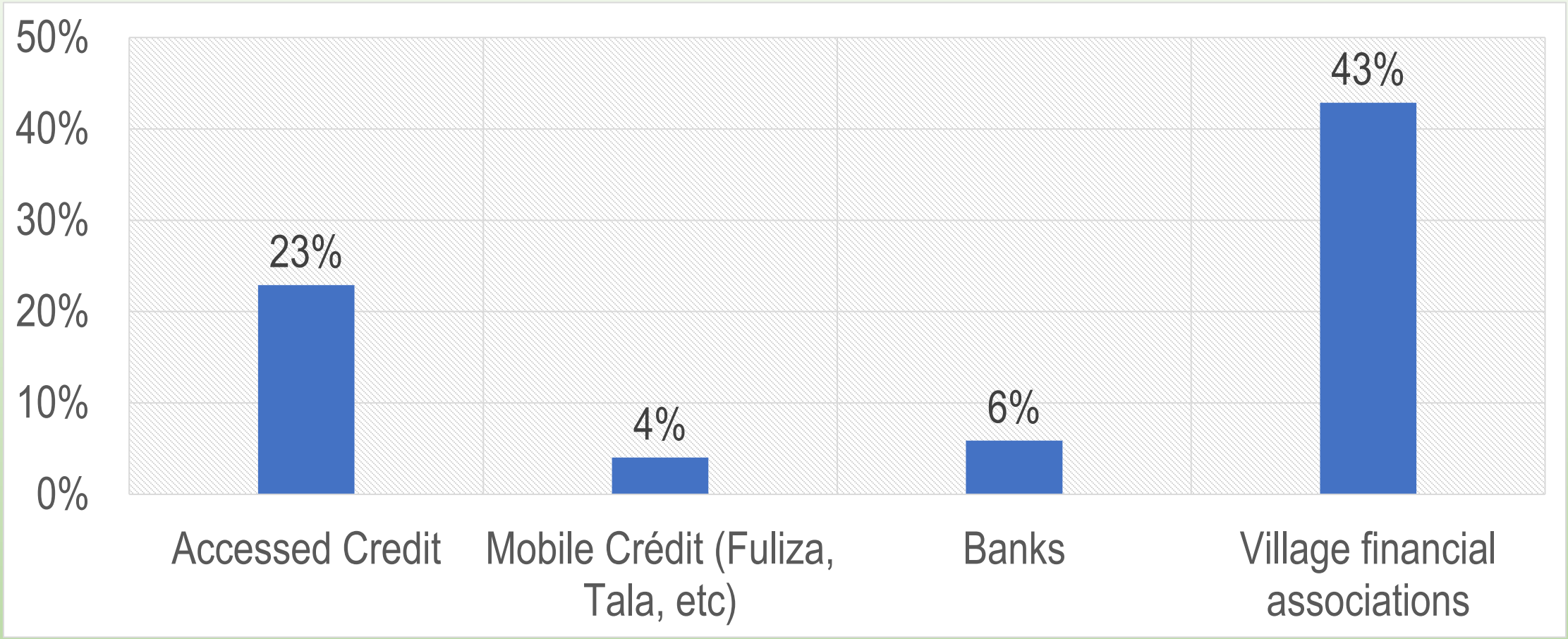
FACTORS AFFECTING ADOPTION OF VALUE ADDITION



- 56% have not been exposed to value addition technologies to undertake this, while 30% lacked the know-how.

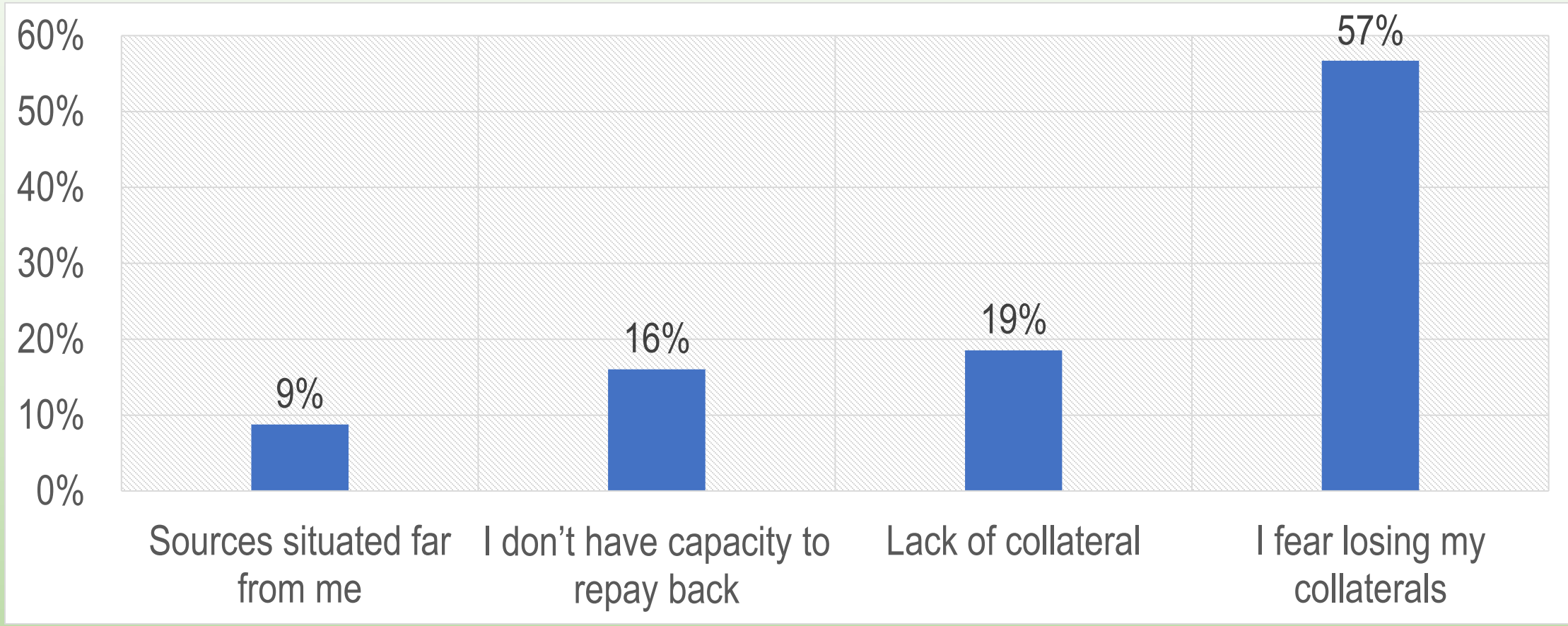
Left: Value added organic sweet potato flour and Solar drier installed by INADES formation at Canaani Kithendu Group in Machakos County for product dehydration

ACCESS TO CREDIT



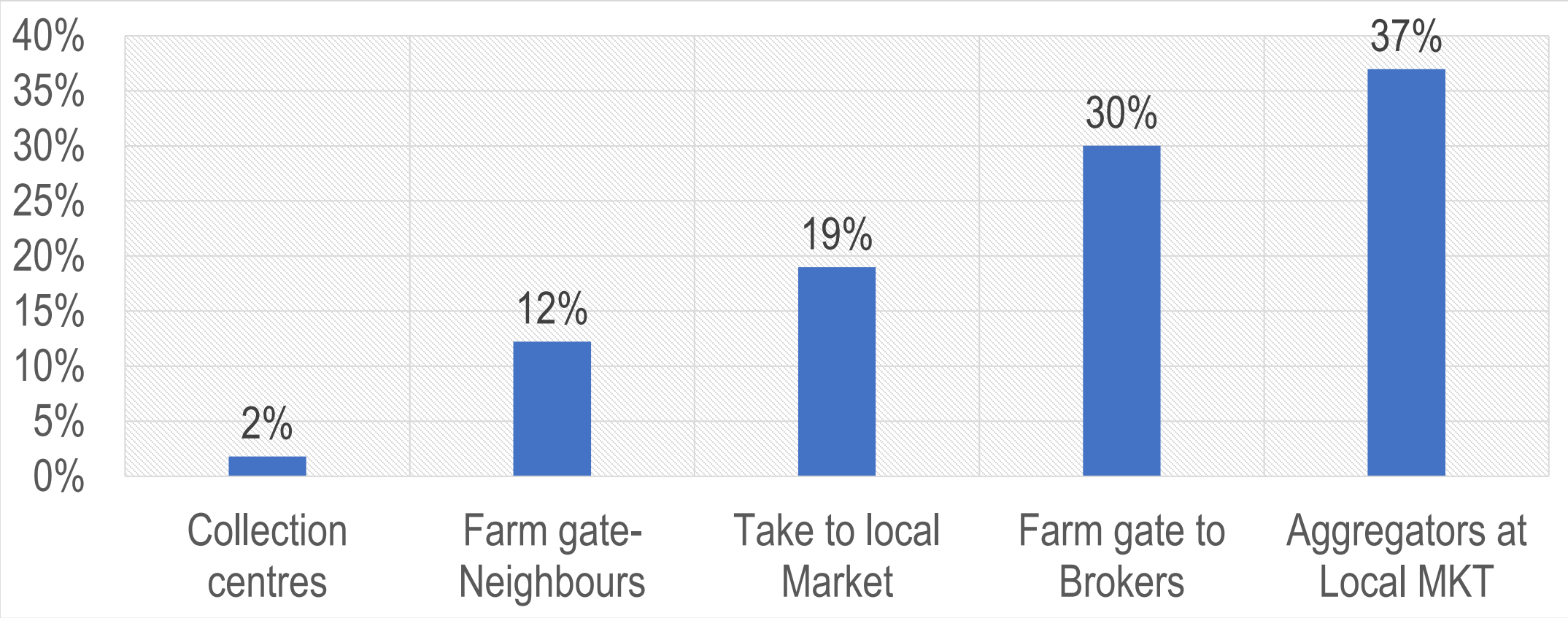
- Improved capacity of the village financial associations such as VSLA will be important for financial service delivery. Linkage to financial institutions will also increase credit access.

CHALLENGES ACCESSING CREDIT



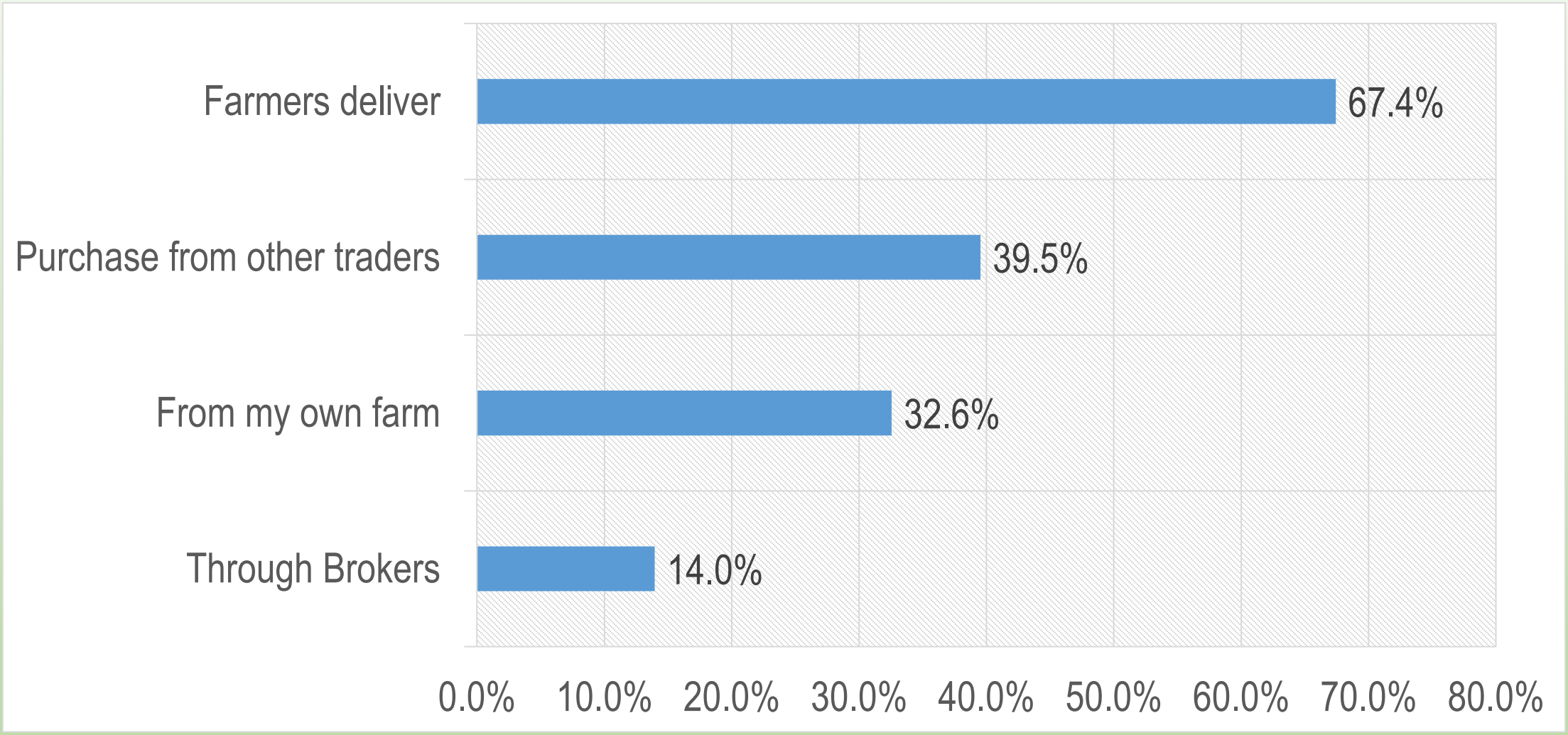
- Linkage to financial institutions, establishment of village saving and credit and building social capital to provide collaterals; Policy influencing at Financial institutions and government to develop financial model for organic products

PRODUCT SALE PATHWAY



- Producers have individualistic approach to the market. There are no structures to support farmers. Even in the organic market, producers bring their products and sale as individuals. Promote collective action and product aggregation for market access.

PRODUCT SOURCING AMONG TRADERS

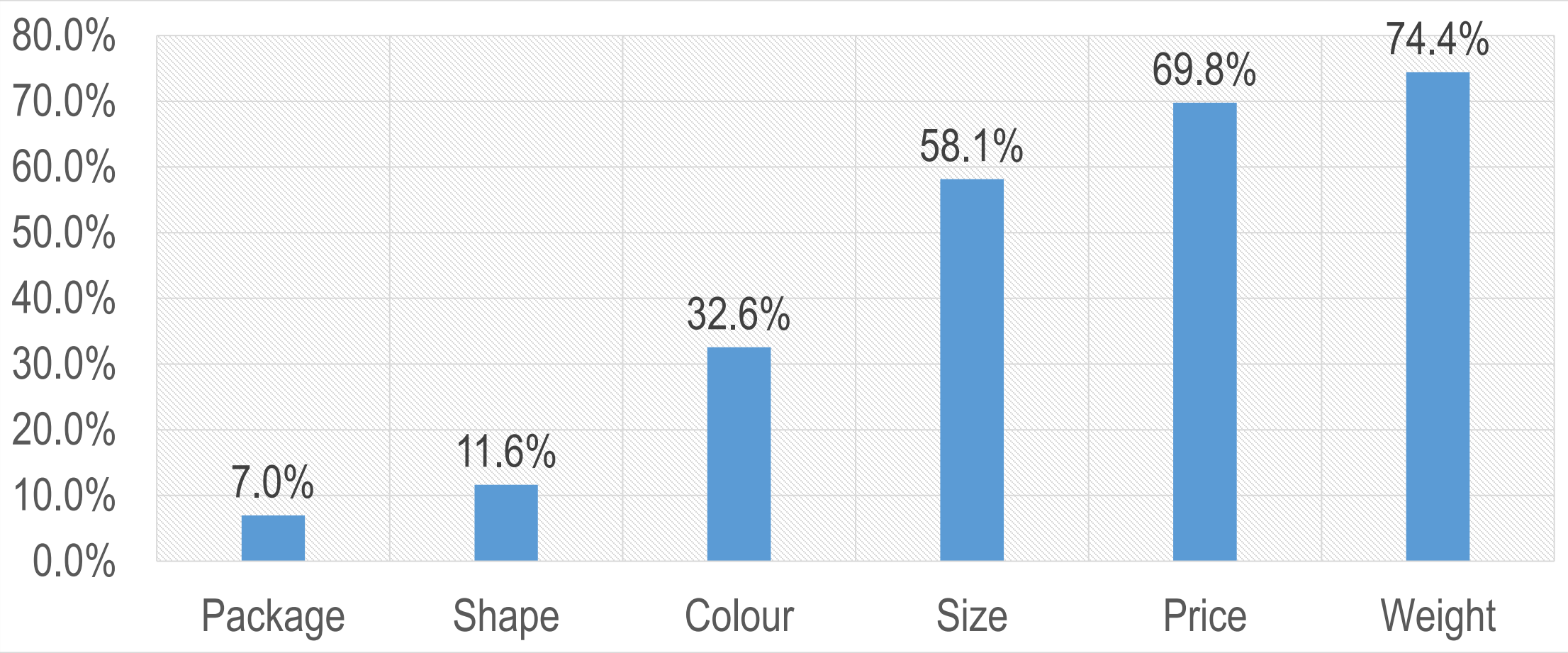


VOICES

We farm individually and sell individually to local and export traders. We also have an allocated space as a group of traders in the Organic market.

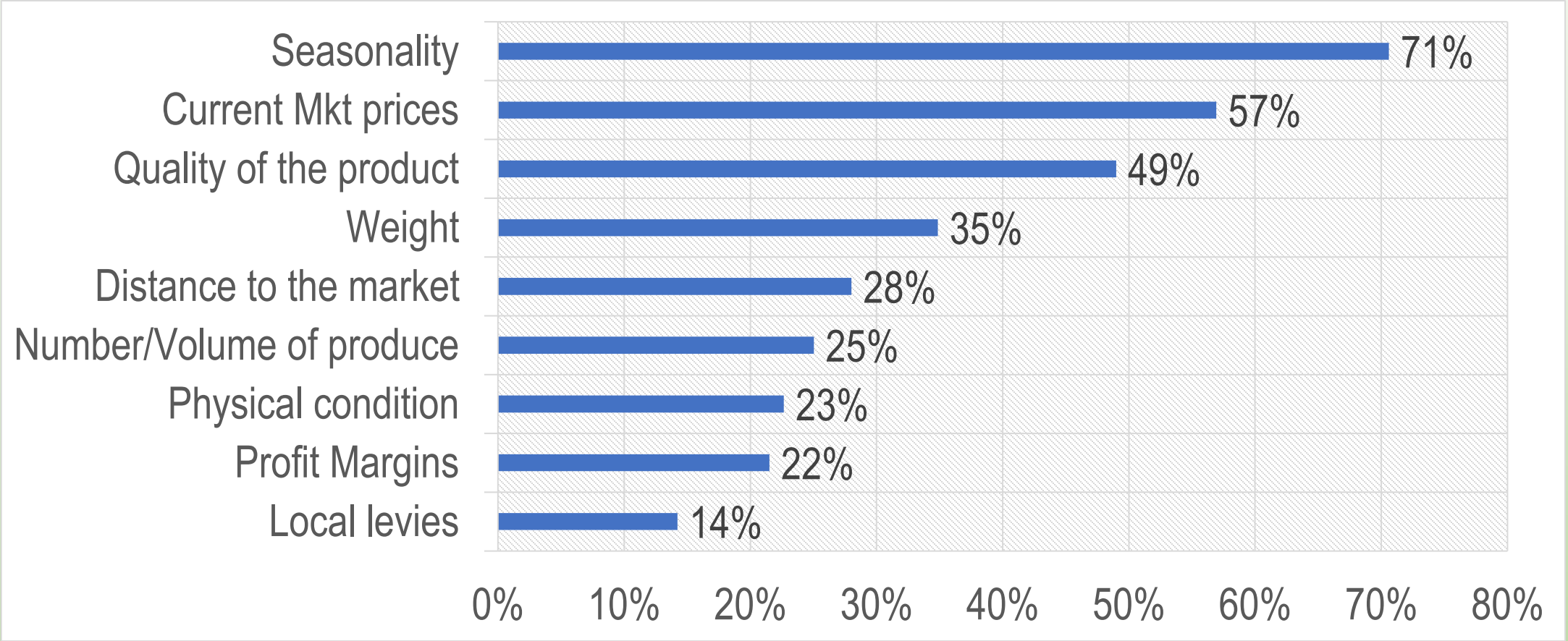
FGD, Kagari

FACTORS INFLUENCING PURCHASE OF PRODUCT - TRADERS



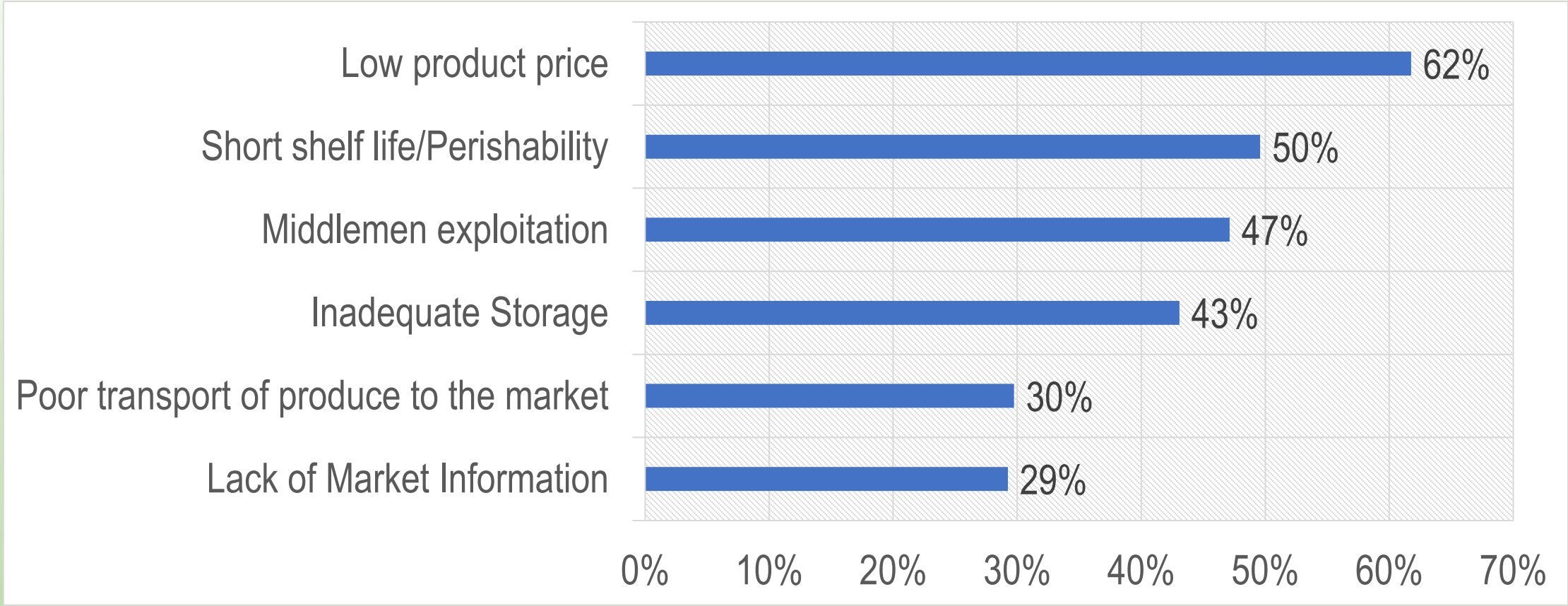
Chances of a product being purchased by the trader is mainly determined by size, the existing market price, weight, color and shape. These attributes are dependent on varieties, breeds and management systems. There is need to introduce and promote the right breeds or varieties, promote best management systems for better product quality.

PRODUCERS - FACTORS THAT INFLUENCE MARKET PRICES



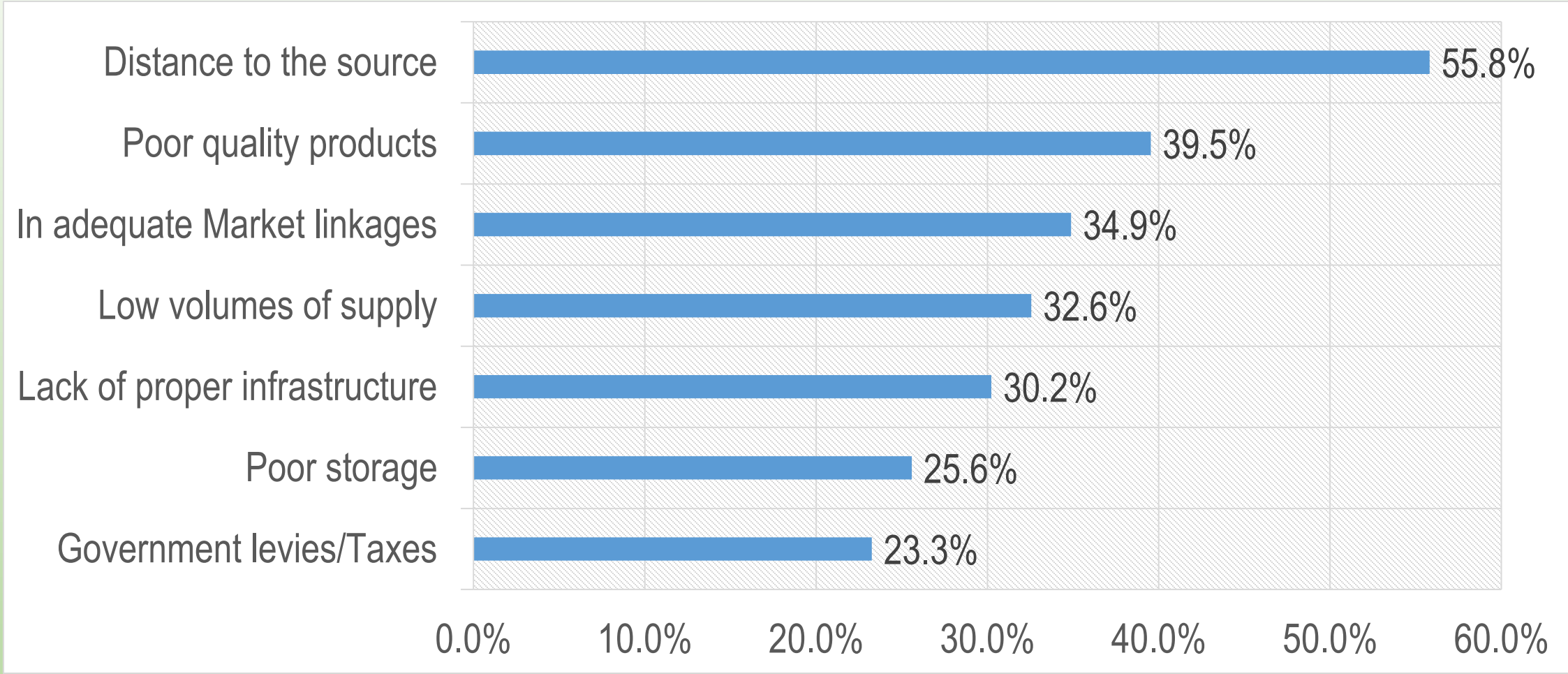
- 71% are influenced by season. Hence, the supply and demand determine at what price the product will be sold.
- 49% are influenced by quality, 57% influenced by current market price.

Product Marketing Challenges



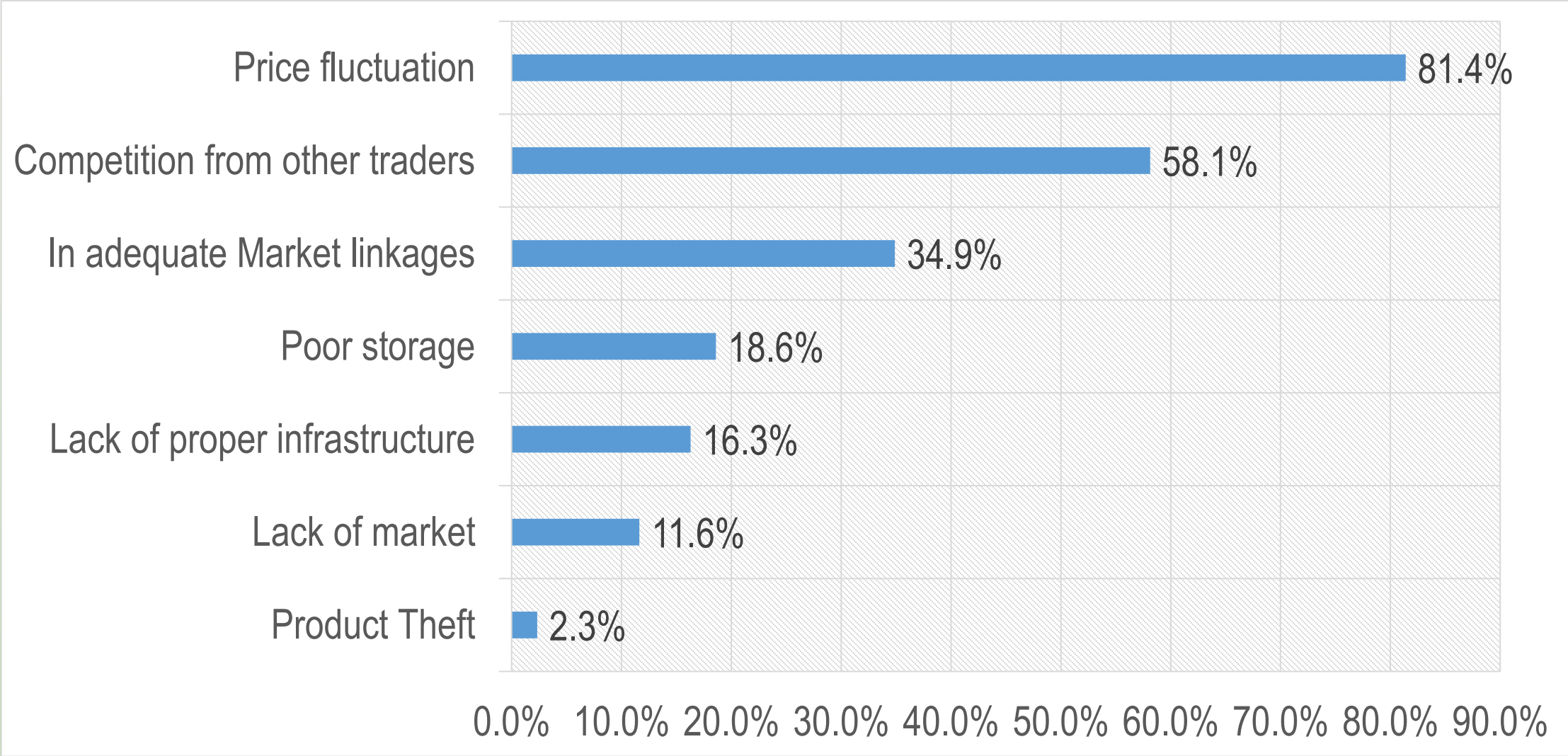
- Low prices and exploitation by middlemen are due to lack of collective marketing and therefore producers lack the voice to determine the price. Need to establish cold chains through adoption of simple cooling systems such as charcoal coolers to reduce post-harvest losses especially for ALV and Cowpeas leaves
- 29% access marketing information from mainly traders and neighbors, which can be misleading. There is need for Market Information systems (MIS).

CHALLENGES WHEN BUYING PRODUCTS AMONG TRADERS



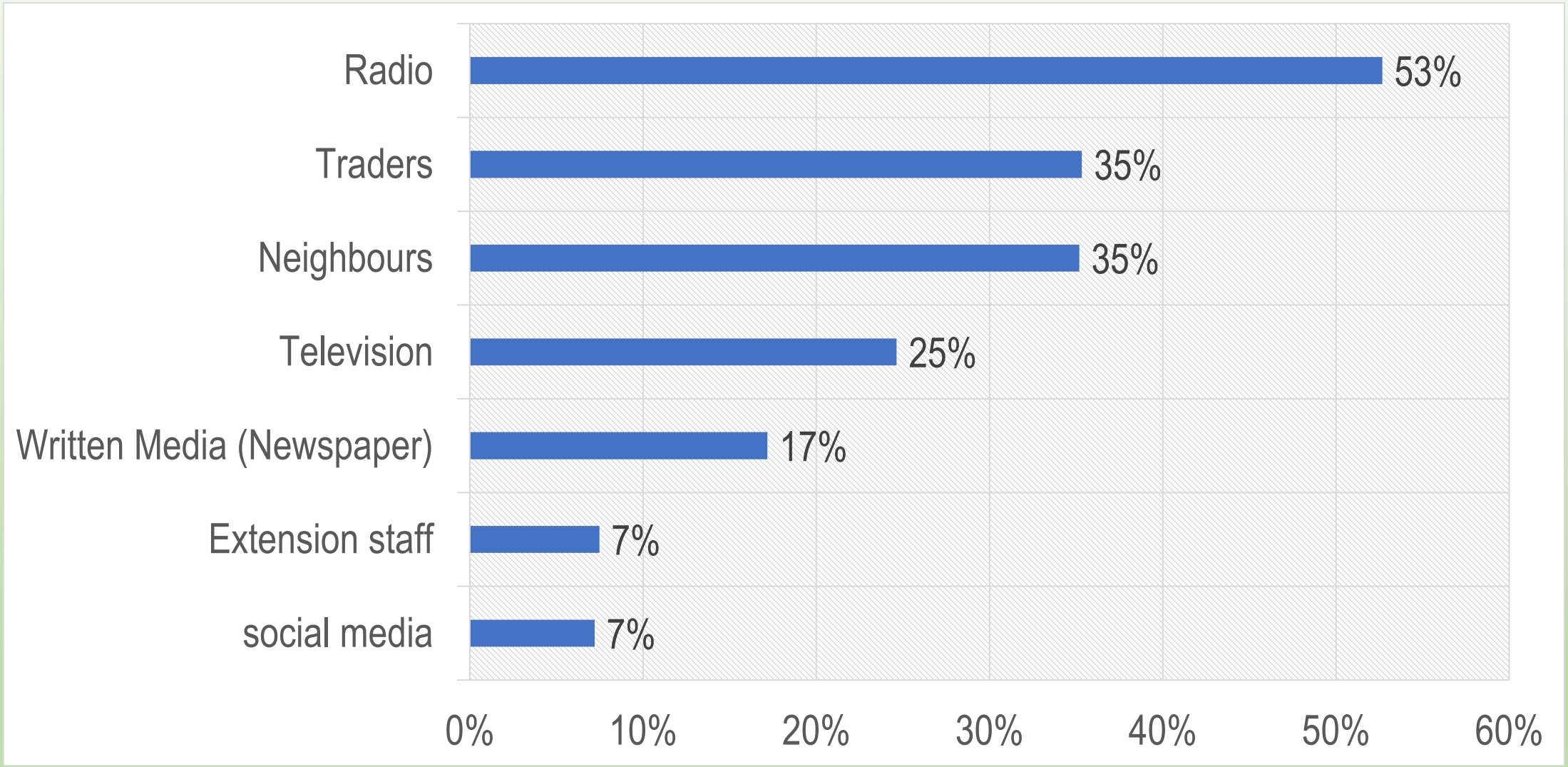
- The distance to the product source, poor quality products, lack of sustainable market linkages, low volumes from the producers and lack of storage infrastructure at the market level. Promotion of collective action among the produces to aggregate will reduce these challenges.

CHALLENGES WHEN SELLING PRODUCTS AMONG TRADERS




THEME: I CHOSE ORGANIC I CHOSE SAFE FOOD
GO ORGANIC!!!
Every Friday From 8am to 12pm

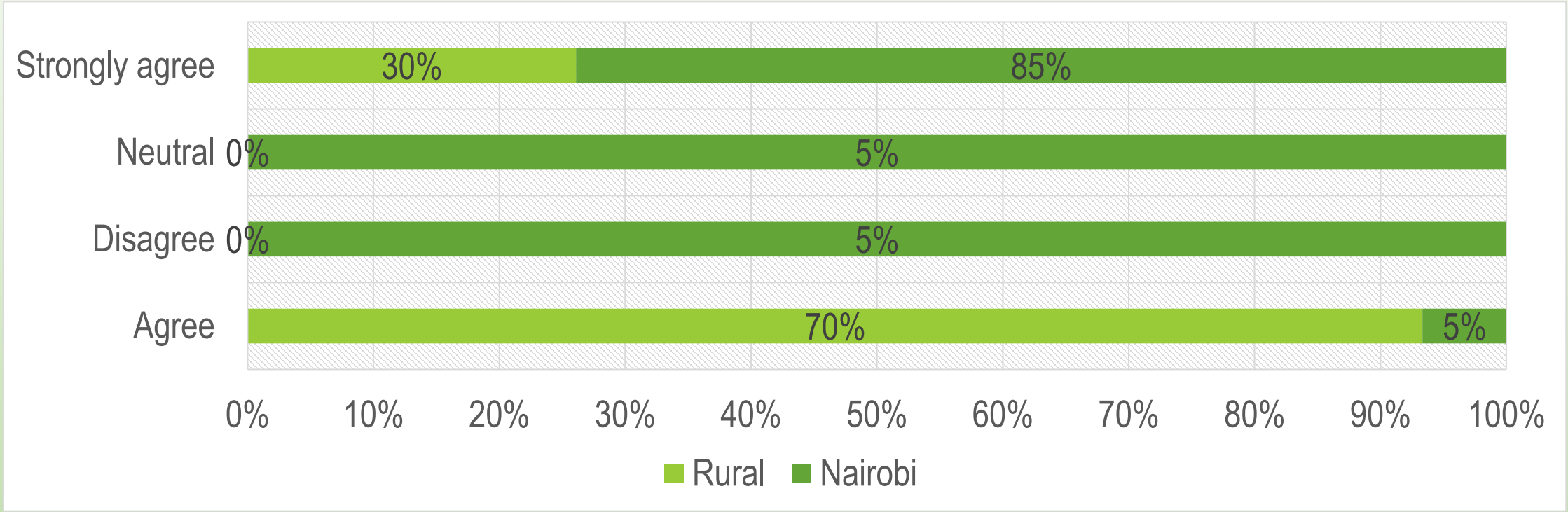
Sources of Market Information at Farm level



Supporting functions to make the value chain competitive

- **Capacity development to enhance Knowledge and skills among the producers:** Establish a sustainable extension system, through farmer led extension systems, linked to the government and private sector extension systems for support
- **Adoption of climate smart technologies to support the value chain resilience:** This will include adoption of improved varieties and breeds with potential to produce high yields and climate smart organic production technologies.
- **Development of a community-based seed systems:** Develop seed systems for pulses and root crops for access to planting materials, while linking to seed companies, KEPHIS and HCD.
- **Development of a market information system:** Establishment of a market information hub at the collection centers need to be initiate, while linkage DIGIFARM, DIGICOW and Kenya meteorological department will be sustainable.
- **Access to finance and financial services:** Strengthen village savings to effectively manage the funds. These include governance, financial literacy and record keeping.
- **Advocacy and policy influencing:** There is need for policy influencing and advocacy on a number of issues affecting the value chain: Product packaging, multiple levies
- **Promoting product aggregation for collective marketing.** Promote organic markets as product collection centers owned by farmers, while enhancing their capacity on governance, financial and record keeping capacity. The organic markets need to increase their capacity to be able to conduct market intelligence for the farmers products.

Consumer's regularity in purchase and utilization of Organic Foods



- 70% rural consumers agree that they regularly purchase organic foods for their household consumption,
- 85% urban consumers strongly agree, 5% agree that they regularly purchase organic products.
- Therefore, most of the respondents both in rural and urban regularly purchased organic foods,

Preference and Consumption of Organic Foods

Information on preference of organic foods was sought to estimate the competitiveness of organic foods as compared to conventional foods.

- 100% of the consumers in Nairobi strongly agreed that they value organic foods more than conventional foods because they are heather, compared to 50% among the rural consumers. In the past 6 Months:
- 68% had consumers organic vegetables of which 60% were in rural areas and 90% in Nairobi.
- 48% consumed fruits such as banana, mango and tree tomatoes, with 90% in urban and 15% in rural,
- 31% consumed root crops with majority, 55% in Nairobi, and 13% in Rural.
- 16% had consumed cooking banana with 15% in Nairobi and 13% in rural,.
- There was generally a high preference of organic foods among the urban consumers compared to rural respondents.
- This study indicates that urban consumers have a diversity of organic products compared to rural consumers.

Organic products being displayed during the weekly market at Kikuyu Organic Farmers market (KOFM)

Influence of Prices on organic foods preference and consumption

- The influence of price on the preference and consumption of organic foods was determined. The dimensions of price used in this analysis were (1) perceived value, (2) premium price, (3) price elasticity and (4) price differentials.
- Both rural and urban consumers agreed that perceived value of organic food, premium price, and price elasticity had a moderate to high influence on purchase of organic foods. This means that the consumers, on average, would consume organic foods more than conventional foods, were willing to pay premium price for organic products, found value for money in consumption of organic products and would buy more if prices are lower than alternative foods.
- The price differential between organic and conventional indicated that consumers were indifferent that price differential was influencing the consumer purchase of organic products. They would purchase the organic products anyway.

OBSERVATION

Both urban and rural consumers had a high trust on organic foods as containing less pesticides and chemicals, and therefore are safer and healthier, suggesting that they had a positive attitude towards organic foods.

This forms the foundation for promotion of organic production systems.

Influence of Attitude on the Preference and Consumption of Organic Foods

- Most of the rural and urban consumers agreed that their attitude related to psychological, uncertainty and environmental factors had influence on their consumption of organic foods.
- In terms of psychological factors, consumers believed that organic foods were safer and healthier, contained more nutrients, looked attractive, smelled nice, tasted better, and contained vitamins/minerals.
- On uncertainty/risk, the findings reveal that most of the respondents were aware of the harmful consequences of non-organic foods, did not trust conventional foods and believed that organic foods were safer.
- Environmentally, the results suggest that most the consumers believed that organic foods contained less pesticides/chemicals and are more ecofriendly.

Influence of Accessibility on the Preference and Consumption of Organic Foods

- The study analyzed how accessibility to organic foods influence consumer preference and consumption of organic food, based on accessibility dimensions such as place of purchase, availability of organic foods and distance
- The study observed that place of purchase of organic products highly influences both rural and urban consumers, availability moderately influences both rural and urban consumers.
- Distance to the outlet where to access organic products potentially influences the urban consumers compared to rural.
- The study observed that most of the consumers agreed that there were many outlets where organic foods could be purchased and would increase consumption if access is improved and is conveniently located.

OBSERVATION

The place of purchase had no influence on preference and consumption of organic foods, meaning that consumers do not have a particular preference to the organic food outlet

Distance affected negatively the organic food consumption especially among the urban consumers. Establishment of more of the organic markets near the residence will promote organic consumption.


SOME & HEALTHY
IKUYU
rganic
RMER'S
ARKET
KIKUYU ORGANIC
FARMER'S MARKET (KOFM)
AT MUGUMO PARK HOTEL
EVERY SATURDAY 9am - 1pm
Vendor enquiries: +254 112526208 / 0727977009
SGP

RECOMENDATIONS

- Functional and Sustainable farmer led extension delivery systems facilitated by functional linkages to private and public sector players
- Sustainable access to inputs, planting materials and finance. This will enhance access to inputs especially planting materials, chicks brooding and processing inputs such as coconut oil in aloe vera.
- Farmer owned product aggregation through collective action and marketing: Promote collective action through establishment of organic markets and collection centers. Capacity building of these groups will be important on governance, financial literacy and record keeping will be important.
- Policy influencing and advocacy through engagement with local stakeholders to address certain legal and policy issues such as multiple taxation, extended bags in sweet potatoes inclusion of the value chains in the CIDPs and promotion of local utilization of products such as aloe vera.

RECOMENDATIONS

- Increased access to finance and financial services through linkages and enhance capacity of the VSLA and merry go round to be able to reach more of the unbackable population.
- Establishment of more organic markets. This will reduce the distance to the organic product source leading to increased consumption. Learnings can be documented among the existing organic markets in Muranga and Nairobi metropolitan.
- Promote the value chains as potential organic products, through media outreach, stakeholder forums by outlining their value, preference for cleaner, safer and a more virtuous lifestyle. Investment in Social behavioral change and communication (SBCC) will be important.

Kenya Organic value chain Transformation Project (KOVAT Project)

Kenya Organic Value Chain Transformation Project (KOVAT Project)
Project goal: To improve the nutrition and economic livelihoods of XXX people through production, promotion and consumption of organic product in Kenya.

The long-term impact of this project will be creation of a vibrant organic product systems, where all the actors are sharing the value created along the value chain.
Value Chains: Sweet Potato, Local poultry, Honey, Africa leafy vegetables, Avocado and Banana

Specific objective 1: To improve Organic production and productivity leading to increased household income and job creation	Specific objective 2: Increase access to products services and markets to improve organic farmers' net income and productivity:	Specific objective 3: Increase awareness and education about organic production and consumption	Specific Objective 4: To increase women and youth gainful participation in the Organic Product Value chain
✓ Extension systems (Digital extension systems (Digital field force), ✓ Promote Farmer led extension systems – Reference farm model, ✓ Access to inputs, Reference farm model) ✓ Promote Organic Climate smart technologies)	✓ Market information systems, ✓ Strengthened Organic Market management systems and ✓ Strengthening of Organic Farmer Organizations ✓ Value addition and post harvest management ✓ Financial inclusion: Impact investment and linkages	✓ Promote enhanced food hygiene and traceability (Certification and quality), ✓ Mainstreaming the Essential Nutrition Actions (ENA) and Essential hygiene actions (EHA) practices, ✓ SBCC approaches for behavioral change in targeted communities ✓ Policy Influencing and advocacy	✓ Gender analysis and mapping, ✓ Promote Income generating activities targeting women and youth ✓ Gender Action Learning System (GALS) in Value Chain Development (VCD) methodology ✓ Promote Village saving and lending schemes

THANK YOU