AFSA
ALLIANCE FOR FOOD SOVEREIGNTY IN AFRICA

AGROECOLOGY FUND

Agro-ecological Enterprises in Kenya: Status, Effectiveness and Ecosystem

A Synopsis of existing agro-ecological enterprises (AEEs) and their service providers (SPs) with the aim of understanding their current status, ecosystem and what is needed in creating an enabling environment for Agroecology

ACKNOWLEDGEMENTS

This report was made possible thanks to the support and guidance of individuals and organizations in the coordinating team. The coordination committee played a key role in providing guidance and support in the different stages of the study.

We sincerely thank each of the members for their time and enthusiasm to see to its completion.

We are very grateful to the interviewees who volunteered their time to respond to the questions asked over phone or face to face as this report would not have been prepared without your thoughtful responses on different perspectives about agro-ecological enterprises in Kenya. It was quite a sacrifice given the circumstances of Covid-19 pandemic in the country.

Finally, we would like to thank the research team comprising of **Gathuru Mburu, Wanjiru Kamau** and the data analyst for the research tools, analysis and report.

We are very grateful for their contribution.

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Abbreviations and Definitions

AEEs	Agro-ecological Enterprises
AEF	Agro-ecology Fund
AFSA	Alliance for Food Sovereignty in Africa
CAPI	Computer Aided Personal Interview
CBD	Convention on Biological Diversity
CSA	Climate Smart Agriculture
FAO	Food and Agriculture Organization
FSN	Food Security and Nutrition
ICE	Institute of Culture and Ecology
KEBS	Kenya Bureau of Statistics
KEPHIS	Kenya Plant Health Inspectorate Service
KRA	Kenya Revenue Authority
KCSAS	Kenya Climate Smart Agriculture Strategy
MoA	Ministry of Agriculture
NGOs	Non-governmental Organizations
SPs	Service Providers
SPSS	Statistical Package for Social Scientists
SSA	Sub-Sahara Africa
UNCTAD	United Nations Conference on Trade and Development
UNEP	United Nations Environment Programme

DEFINITIONS

Non-probability sample: in this sampling method, some members of the population have a greater chance of being selected than others. Samples are subjectively selected by the researcher.

Purposive Sampling: is a type of non-probability sampling where researchers select samples based on their knowledge and credibility. Researchers attempt to obtain a sample that appears to them to be representative of the population and will usually try to ensure that a range from one extreme to the other is included.

Executive Summary

Summary of Findings

These findings represent triangulated data from qualitative and quantitative data, and review of literature.

Socio Economic Characteristics of the Respondents

73% of the respondents were male while 27% were female. The peak age for business entrepreneurs was 35-44 years with 80% of them in the age group 35-64 years. The youth form 13% of the population. For producers, 78% of the respondents were male while 22% were female. 77% were aged between 35-64 years. As expected, there were slightly more youth higher up in the value chain (business) compared to those at production level. 100% of the respondents had completed their secondary school education. 33% were micro enterprises while 40% were categorized as small. 60% of respondents categorized their business as promoters/educators; 47% ast marketers; and 40% as product developers. Food processors were 13%. The Ministry of Industrialization in Kenya has categorized enterprises into micro, small and medium, however it was sometimes challenging to place some respondents in any of the categories due to a mismatch between the number of employees and turnover.

Understanding of Agro-Ecology

All respondents were aware of agro-ecology to a certain extent. 100% of respondents from business were aware about the elements of diversity while 87% mentioned recycling. 80% were well aware of synergies. Resilience and diversity were the leading elements at 100% that producers were aware of. 89% of the producers had previous awareness about agroecology mainly from NGOs and CBOs. This result confirmed what has been known anecdotally that NGOs are the main source of information on agroecology. Media was not mentioned as a source of agro-ecological information by producers despite the extensive radio and television coverage in Kenya. Both businesses and producers engage in agro-ecology to promote healthy living, encourage biological and natural processes in farming and fairer markets. These results indicate that both producers and business people are aligned in their reasons

for liking agro-ecology. This would therefore make a campaign for promotion of agro-ecology quite easy since the message would be similar across the board. The majority of the farmers are mixed farmers which is good for promoting agroecology. Access to irrigation water doubled the number of farmers practicing agroecology. Irrigation water appears to be a limiting factor which could be addressed in agro-ecological interventions.

How Different Players Support Agro-Ecology

Business respondents support activities aligned to healthy, diversified and culturally appropriate food; sustainability issues; and Participatory Guarantee systems. Others support training of producers and other actors as well as fair, dignified, and inclusive livelihoods for all. Some businesses create decent jobs for youth while others support organizational capacity of farmers.

Sources of Inputs for Agro-Ecology

80% of AE businesses sourced their supplies from producers with 67% indicating that the products were always well priced. 60% of the businesses grow their own food, but even then only 56% of them said that the produce was readily available. 47% of the businesses source their technical knowledge from the internet while 40% get it from NGOs/CBOs. Even though internet was highly ranked and is readily available at 71%, it only addresses their challenges about 57% of the time. 100% of producers are informed by NGO/CBOs but the information shared solves problems only 50% of the time. 12% of respondents consult government officers and they get solutions to their challenges. The broader picture is that there is a huge information gap as most of the time the needs of AEEs are not addressed.

Marketing and Finances

Majority of the businesses (73%) sell their products to the local households which include the local markets. 53% sell in urban households and markets. Majority of producers (100%) sell their produce to local markets while 88% grow for own consumption. Only 38% grow for urban markets. These results show that most of the AE produce is sold in the local and urban markets compared to regional and international markets. On capital, 53% of the business respondents source their finances from personal savings, but these do not meet their financial need or goal. Most producers/ farmers source their finances from personal savings (88%) and this source only met their financial needs about 71% of the time. Loans from financial institutions were ranked at 12% and this was explained as due to volatility in the agricultural sector and poor previous experiences with some of the financial institutions.

Level of Financial Support Needed for Sustainability

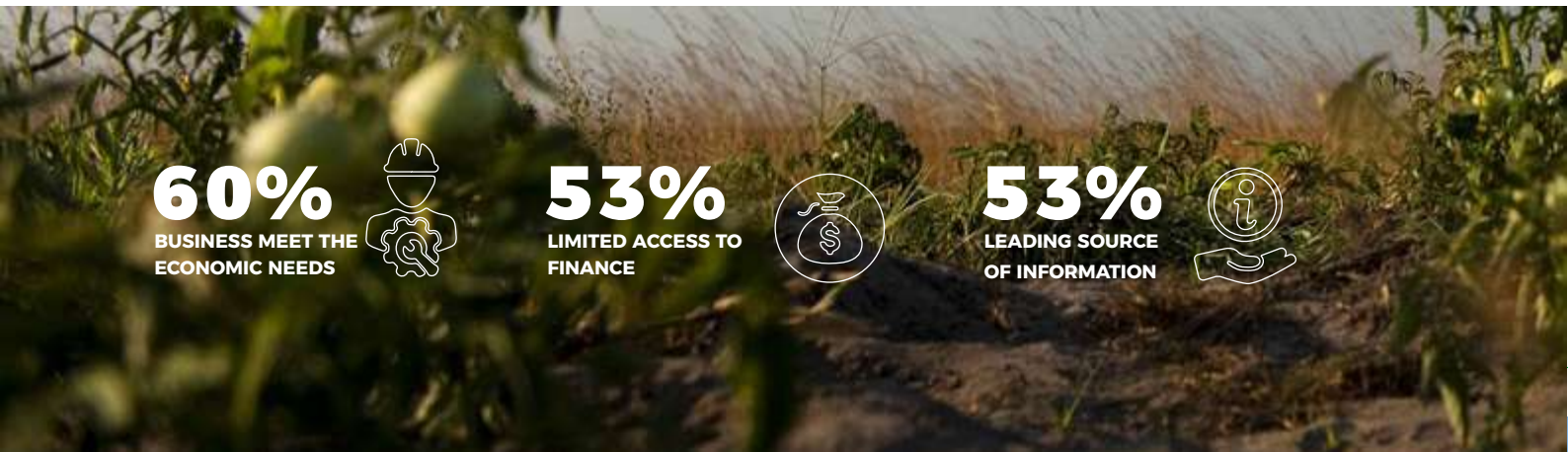
60% of the businesses indicated that they are sustainable and meet the economic needs of the respondent. 50% (both men and women) said lack of financial resources contributed to the sustainability challenge. Impacts of Covid-19 pandemic were mentioned by 17% of the respondents as having negatively impacted on their businesses. 81% of all the business enterprises needed over KES 1Million for sustainability. On the other hand, 62% of the producers said that the enterprise was not self-sustaining while 75% indicated that the farming was not able to meet their economic needs. 80% of producers also mentioned lack of financial support as the number one reason for the enterprise not being self-sustaining. 40% said the capital intensive requirements of labour and transport were key challenges. Both men and women producers agreed that lack of financial resources was the key sustainability challenge.

Challenges that AEEs are Facing

Limited policy & legal support (93%), poor marketing strategies (53%) and limited access to finance (53%) emerged as top three challenges for businesses. 88% of the producers cited lack of technical knowhow on agroecology by extension officers as the top challenge. Both businesses and producers mentioned enabling policy and legal environment, consumer education and general agro-ecological awareness raising, infrastructure development (markets and roads), start-up finances as well as affordable and readily available bio-inputs as key ingredients to address the challenges they are facing. Male producers ranked improved policy environment highly, while female producers ranked improved markets, availability of organic seeds and technical knowledge as important.

Sources of Information on Agro-Ecology

Businesses ranked television as the most popular media. Radio is an unpopular media with businesses. Producers listen to both television and radio but mainly vernacular stations. Most farmers listen to vernacular radio and TV stations. Internet (53%) was by far the leading source of information for businesses. NGOs/CBOs are the key sources of information for producers at 75% followed by agricultural extension officers (38%). Very few producers (12%) listen to radio for agro-ecological information because of its scarcity. This analysis shows that the internet, TV and radio are the main sources of information for businesses. NGOs/CBOs and agricultural extension officers are the main sources of information for producers. However, it is indicative that vernacular media would be quite useful for outreach for producers.



Recommendations

Socio-economic analysis: While anecdotal evidence on the ground indicates more women are at the fore front of promoting agroecology, in this study more men than women were interviewed. Women have less access to productive resources and opportunities than men (The State of Agriculture, FAO 2011). Investments in agroecology should therefore be along the whole value chain and especially targeting women by affirmatively increasing access to agricultural resources, education, extension and financial services, and labour markets. More youth who venture into agribusiness tend to venture into non-farm enterprises (Youth in Agro-ecology Report, 2020). Supporting interventions higher up along the value chain would increase numbers of youth engaging in agro-ecology. The fact that most businesses were categorized as promoters/educators implies that they are finding out of necessity that they have a role in promoting and educating on agroecology to find markets for their produce. Businesses need to be supported by strengthening their capacity to support farmers as well consumer education.

Awareness on agro-ecology: Awareness on agro-ecology is quite high at 89% compared to 55% in 2013 (IFOAM, 2013). NGOs are the main source of information on agro-ecology for producers and internet for businesses and these need to be strengthened. It was not surprising that media was not mentioned as a source by producers since agro-ecological sector in Kenya has not used media extensively to promote itself. However, there is huge potential for use of mass media for outreach on agroecology.

Respondents strongly agreed that urban markets offered a good price. To improve prices, consumer education and working with the media continuously would help address the challenges of market availability.

Sources of inputs, supplies and markets: There is need to encourage the use of farmers' seeds/varieties in agroecology to retain and expand biodiversity as well as independence. From the discussions with policymakers, it emerged that there is a need for support to develop community seed management systems such as community seed banks for sustainability. Most agro-ecological farmers use weed and pest suppresants which reduce weeds and pest attacks (Cheatle, R.J. and P. Nekesa, 1993). These however, only solve their problems sometimes.

It is reccomended that community led research to develop solutions for the most pressing needs of farmers is supported. There is also the need to invest more in water as a tool to promote agroecology. Interventions around poultry could be promoted as they are not only popular but cheap, need small spaces, and are not labour intensive. Respondents strongly agreed that urban markets offered a good price. To improve prices, consumer education and working with the media continuously would help address the challenges of market availability. Supporting segregated markets and cottage industries at local level would also provide a pull factor for the producers to grow AE products.

Source of technical knowledge: For both businesses and producers, internet and NGOs/CBOs are in the top three as sources of information. However, for businesses, internet is the choice source

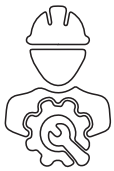
while for producers it is NGOs/CBOs. In this regard there is need for more research and information dissemination to ensure credible information is available online and to NGOs/CBOs. In developed nations, public investment in agro-ecological approaches has been limited and estimated at between 1 percent and 1.5 percent of total agricultural and aid budgets, which partly explains the knowledge gaps (DeLonge et al., 2016; Miles et al., 2017; Pimbert and Moeller, 2018 as cited in Sinclair, F. et al, 2019). Most businesses listen to national media houses while producers listen to vernacular media. With credible research results, NGOs and media can provide a strong strategy for promotion of agro-ecology.

Sources of finances: 60% of the businesses indicated that they are sustainable while on the other hand 62% of the producers said that the enterprise was not self-sustaining and an even higher number (75%) indicated that the business was not able to meet their economic needs. Even though agro-ecology in low and middle-income countries begins as subsistence agriculture, recent research demonstrates that it can be scaled up profitably (Herren, H, 2020). National and county governments should take the lead in the transition to agro-ecology by making the policy and financing environment favorable. Donors will also need to invest more in policy influencing to ensure the right policies are in place that would support adequate financing for agro-ecology. Further to this, AEEs would require to be trained and mentored to develop into sustainable enterprises.

Challenges and suggested improvements: When key challenges were analyzed by gender, men and women agreed that limited access to finance as well as limited policy and legal support were the key issues. High cost of agro-ecological inputs affected women more. Limited technical knowhow on agroecology by extension officers is a top challenge. Capacity development may therefore require women-specific agro-ecological training models that are sensitive to their needs. There is a swelling body of evidence of direct links between the intensification of our agriculture and food systems and the rapid rise of diseases such as obesity, cardiovascular diseases, allergies, some cancers, and diseases of the immune system. (Farming Matters, September 2016). Governments urgently need to look at the impact of agriculture on areas such as public health and the environment and put sustainability at the heart of future policy. Consequently, investment in agro-ecological interventions should prioritize the areas of enabling policy and legal environment, consumer education and awareness creation and improved infrastructure.

75%

BUSINESS WAS NOT ABLE TO MEET THE ECONOMIC NEEDS



CONCLUSION: The findings from the study indicate that there is a huge financial gap for promotion of agro-ecology in Kenya, but needs to recognize the unique needs based on gender, youth, role of actors along the value chain and research. The results strongly support the investment thesis that financial capital can serve as a strategy for inclusion, innovation, and transformation towards agro-ecological food systems.

CHAPTER 1

PROJECT BACKGROUND

CHAPTER 1: PROJECT BACKGROUND

Kenya has about 182,000 ha (0.69%) of total agricultural land under agro-ecological and organic farming (ITC – undated). There is a steady transition to agro-ecological farming, with both large and small agricultural farming enterprises diversifying into this area in order to meet rising demand from customers (IFOAM & FIBL, 2006). There exists no significant domestic market for agro-ecological and organic products as the main focus has been on international markets. However, niche markets for products such as essential oils, herbs and spices, as well as fruits are fast emerging and they provide relatively higher returns for small scale farmers and are unexploited (UNEP/ UNCTAD 2006).

This study was commissioned by Agroecology Fund (AEF) in collaboration with Alliance for Food Sovereignty in Africa (AFSA) and other agro-ecological movement practitioners in Africa. With support from the 11th Hour Project, the study entailed undertaking a collaborative research and analysis of existing agro-ecological enterprises (AEEs) and their service providers (SPs) with the aim of understanding how to enlist existing and emerging enterprises in creating an enabling environment for agroecology. The ultimate aim of the study is to highlight AEEs working in close collaboration with African allies and alongside donors and investors seeking investment opportunities in AEEs.

This study was motivated by the growing need to evolve innovative ways to support agro-ecological Enterprises (AEEs), including the discourse on how financing can support agroecology alongside grants, policy and advocacy. AEF's investment thesis is that financial capital can serve as a strategy for inclusion, innovation, and transformation towards agro-ecological food systems. On the other hand, AFSA has identified marketing of agro-ecological produce as an important work area. This alignment in thesis of the two organizations birthed this study, which is being carried out across East and West Africa.

0.69%

OF TOTAL AGRICULTURAL LAND

1.1 OBJECTIVES OF THE STUDY

1.1.1 General Objective

The study investigated the roles of agro-ecological entrepreneurs (AEEs), service providers, policy experts and institutions and their relationship to the agro-ecological movement, market, and policy in Kenya.

1.1.2 Specific Objectives

1. To document and probe the current status and effectiveness of agro-ecological enterprises / businesses and service providers in Kenya.

2. To document and understand the context (or ecosystem) and forces as identified by entrepreneurs and service providers (e.g.: legal, policy, market, institutional frameworks, etc.) affecting the business and investment environment for agroecology in Kenya.

3. To present key findings and recommendations to aid in promoting agro-ecological enterprises in Kenya.

1.2 RESEARCH METHODOLOGY AND PROCESS

The survey was carried out during the Covid-19 pandemic which posed limitations on mobilisation and allowable number of respondents who could gather together in the same space. Both qualitative and quantitative methodologies were employed in this study. Two sets of data collection tools (questionnaire and discussion guides) were developed in close consultation with project coordinators.

1.2.1 Target Respondents

These were identified through a stakeholder mapping process as well as the list provided by the project coordinators. Players were grouped according to their place along the value chain to include businesses, producers, service providers, policymakers, accelerators, input suppliers, marketers and civil society. Other considerations included type of the enterprise (either micro, small and medium) based on the Kenyan Ministry of Industrialisation criteria to ensure that specific challenges and opportunities are well documented. Thirty respondents were targeted but 23 were achieved.

1.2.2 Sampling Method

For individual interviews, a non-probabilistic method of respondent selection was used as the sampling method. Purposive sampling was then employed. Telephone and face to face interviews were used in March 2021 while focus groups discussions were organized for farmer groups, marketers and policymakers that were interviewed.

1.2.3 Data Analysis

Data was collected electronically using a CAPI (Computer Aided Personal Interview), and analysed using SPSS (Statistical Package for Social Scientists). Further information was acquired through review of relevant reports.

1.2.4 Scope and Limitations of the Study

The scope of the study is the agriculture sector in Kenya. The study target sample size was 30 respondents in the sectors of food production and business but achieved 23 respondents. Other stakeholders interviewed were duty bearers comprising of policy makers, researchers and lawyers.

Geographically, the study was conducted in ten counties. The survey was carried out during the Covid-19 pandemic posing limitations on mobilisation of respondents and number who could gather together in the same space.

CHAPTER 2

BACKGROUND & CONTENT

CHAPTER 2: BACKGROUND AND CONTEXT

How food is produced will have multiple impacts on and off the farm some of which can be negative for example decreasing soil fertility, pollution of rivers, release of greenhouse gases, and pesticide residues in food amongst others. There is a growing realization that we can't produce cheap or highly subsidized food without impacting negatively on our ecosystem and public health which has led to farmers, NGOs, and advocates of sustainability advocating for an agro-ecological approach.

That a major transformation of food systems is needed to achieve food and nutrition security globally in the context of a changing climate is now extensively recognised as the phenomenon has severe negative impacts on livelihoods and food systems worldwide and especially in sub-Sahara Africa (Strohmaier et al., 2016). There is no common, consensual definition of what constitutes an agro-ecological approach shared by all the actors involved (practitioners, scientists, social activists). However international organizations like FAO and civil society organizations e.g. Agroecology Fund have developed definitions that the majority of stakeholders associate with. Though this increases the difficulty of pinning down exactly what agroecology is and what it is not, it enables flexibility that allows agroecology approaches to develop in locally adapted ways. Agroecology is largely a bottom-up approach to food sovereignty where science recognises and appreciates indigenous and traditional knowledge systems, and small holder farmers and communities are the drivers rather than agricultural multinationals. Agro-ecological approaches aim at building resilient and sustainable local food systems, strongly linked and adapted to their territories and ecosystems (Varghese and Hansen-Kuhn, 2013; Nyéléni, 2015; Anderson et al., 2015).

A MAJOR TRANSFORMATION OF FOOD SYSTEMS IS NEEDED

Agro-ecological practices contribute to food security and nutrition (FSN) as well as contribute to 10 of the 17 SDGs (UN, 2015). Further agroecology

contributes to the realization of the Paris Climate Agreement, the Convention on Biological Diversity (CBD) and the United Nations Convention to Combat Desertification (FAO, 2018).

Like all East African countries, Kenya faces deep-seated challenges related to food insecurity despite the country being largely an agricultural economy. Kenya's agricultural development has been buttressed on industrial agriculture with heavy reliance on chemical inputs. All along, the country has not had policy supporting agroecology (UNEP/UNCTAD 2008) despite the immense benefits the farming system comes with especially for small scale farmers who have limited financial capital to invest in farming. Without a formal policy in support of agroecology, players along the value chain always lose out on official support and this has negatively affected the development of the farming system in Kenya. Since awareness among policy makers is also low, there is a need to raise this to levels sufficient to excite favourable action around economic, environmental and social development opportunities offered by agroecology.

Kenya's East African Newspaper (June 2020) reported that agroecology has the potential to reconcile the economic, environmental and social dimensions of sustainability. Unfortunately, investment in research in agroecology is limited in Africa, where its application and funding remain marginal. Further, the paper noted that there is a "need to change funding flows and unequal power relations. It's clear that in Africa as elsewhere, vested interests are propping up agricultural practices based on an obsession with technological fixes that is damaging soils and livelihoods, and creating a dependency on the world's biggest agri-businesses. Agroecology offers a way out of that vicious cycle".

A review of Kenya's agricultural policies indicates that even though "Agroecology" is missing, there is a frequent reference to its elements and practices focussing on productivity and resilience. For example, in the national KCSAS and CSA Implementation Framework, out of the ten agro-ecology elements, resilience, efficiency, diversity and synergies are clearly articulated in the strategy and framework. Vision 2030 is Kenya's development blueprint covering the period 2008-2030. It aims at transforming the country to be a middle income one that is providing a high quality of life for its citizens by 2030. Agroecology can contribute to the economic pillar by increasing value in agriculture through increased productivity and producing niche products like organic foods for local and international markets. In the social pillar, agroecology will contribute to health strategy of shifting from a curative to preventative approach through embracing consumption of healthier and more diversified foods.

VISION 2030 IS KENYA'S DEVELOPMENT BLUEPRINT COVERING THE PERIOD 2008-2030

KENYA'S EAST AFRICAN NEWSPAPER (JUNE 2020) REPORTED THAT AGROECOLOGY HAS THE POTENTIAL

The health effects of pesticide use have become one of the major public health problems worldwide. In developing countries, frequent exposure to pesticides by farmers and farm workers is very common. Pesticide use and farmers' health have been documented most recently by a study undertaken by Route to Food Initiative on kales and tomatoes sourced from Kutus, Kagio and Makutano markets in Kirinyaga which was conducted in July 2020. It drew the following conclusions: pesticide residues were found in all the samples from all three market and in addition, tomatoes had by far the highest toxicity score (198), followed by kale (96) and maize (93). It is worrying that all these crops are foods eaten on a daily basis by Kenyans portending a public health crisis.

Challenges in engaging youth as relates to agriculture include unequal access to and control of resources and often lack of capital and credit facilities to invest in agriculture. The youth also have a negative attitude towards agriculture related activities and therefore tend to shy away from it. Labor time for farm activities for women is limited due to heavy commitment to domestic chores. Studies have shown that where labor is more easily available than capital, such as in many parts of India and sub-Saharan Africa, labor-saving innovations requiring substantive investments might not be seen as desirable (Dorin, 2017).

Despite the significance of agroecology and its high enterprise potential to the country and its people, there has been a lack of policy dedicated to its development. There have been broad-based national policies that incorporate elements of agroecology but lack of a specific policy has contributed to its limited recognition and official government support.

Supporting equitable and sustainable food value chains is a key enabling condition for development of SFSs for FSN. Those farmers who deliver healthy and sustainably-produced food through systems such as agroecology require rewarding markets and at the same time consumers need better and reliable access to such products. Supporting short supply chains and alternative retail infrastructures, such as farmers' markets, fairs, food policy councils, and local exchange and trading systems, may enhance farmers' livelihoods and increase access to local, sustainably-produced and diverse food (Hebinck et al., 2015). This study seeks baseline information to add to the body of knowledge as well as seek out innovative ways to support Agro-ecological Enterprises (AEEs), including the discourse on how financing can support agroecology.

HEALTH EFFECTS OF PESTICIDE USE HAVE BECOME ONE OF THE MAJOR PUBLIC HEALTH PROBLEMS WORLDWIDE.

CHALLENGES IN ENGAGING YOUTH AS RELATES TO AGRICULTURE INCLUDE UNEQUAL ACCESS TO AND CONTROL OF RESOURCES

CHAPTER 3

STUDY FINDINGS

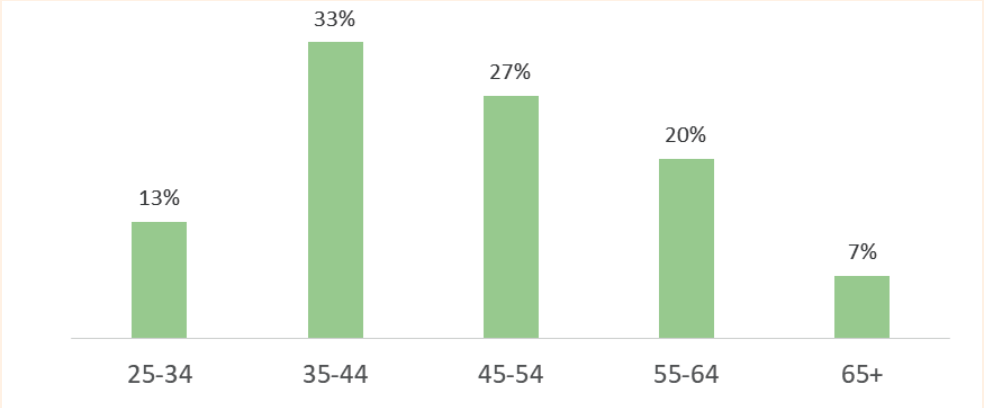
CHAPTER 3: STUDY FINDINGS

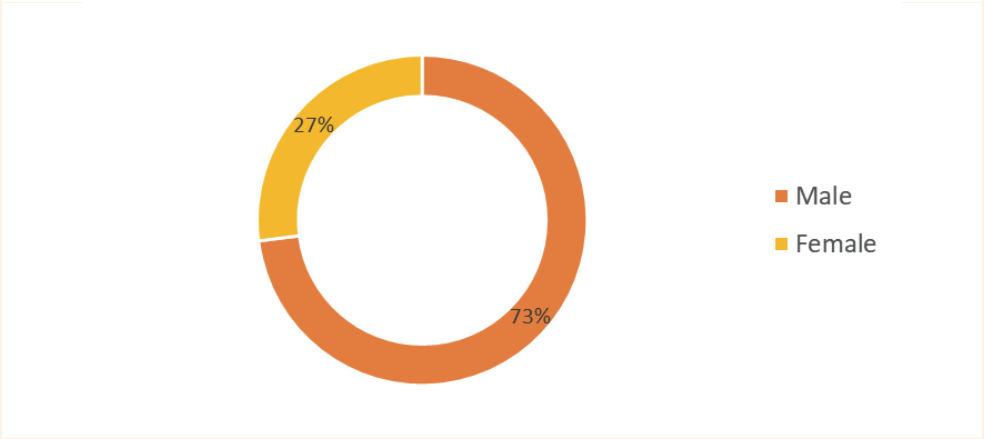
This chapter presents the results of triangulated data from qualitative and quantitative data and review of literature.

3.1 Socio Economic Characteristics of the Respondents

Business

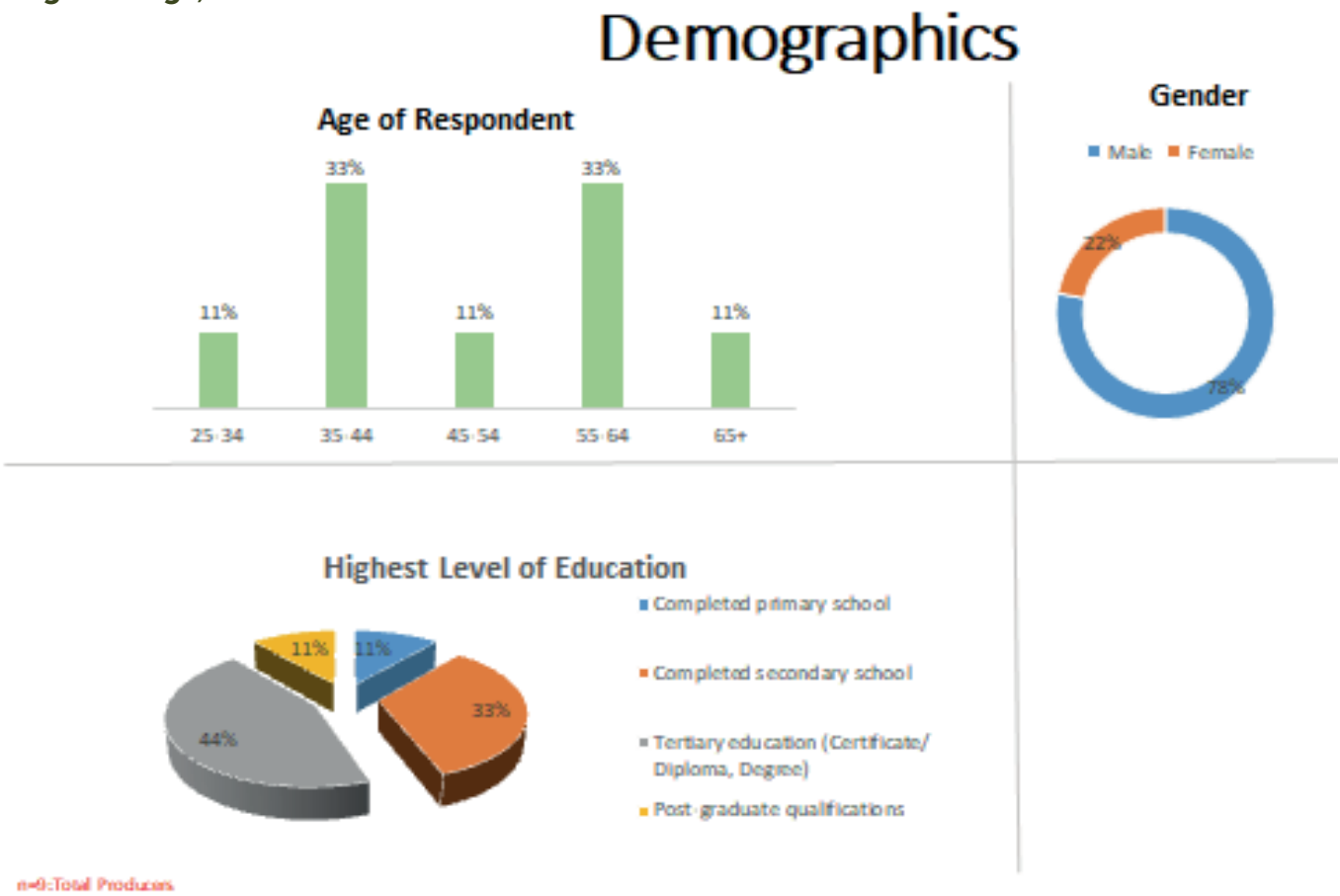
Figure 1. Age Group and Gender of Business Respondents





73% of the respondents were male while 27% were female. The peak age for business entrepreneurs was 35-44 years with 80% of them in the age group 35-64 years. The youth form 13% of the population.

Figure 2. Age, Gender and Level of Education for Producers



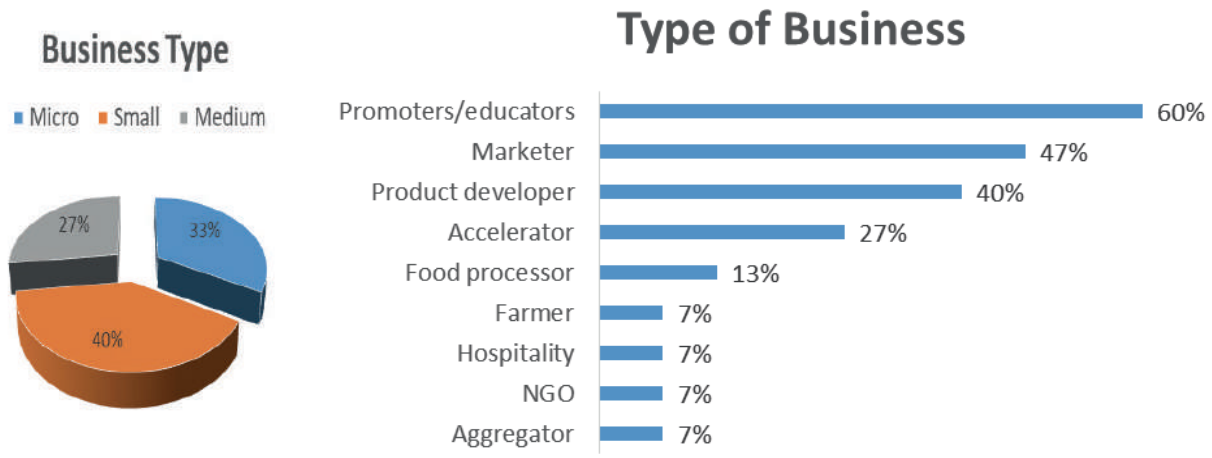
n=9:Total Producers

For producers 78% of the respondents were male while 22% were female. 77% of the farmers were aged between 35-64 years. 100% of the respondents had completed their secondary school education.

Discussion:

It is interesting that for business there was a gradual decline in the numbers while for producers there were 2 peaks at 35-44 and 55-64 with a drastic drop in the age group 45-54 years which is between them. This could be explained by the fact that most people in this age group are usually working perhaps at senior level and therefore may not be investing a lot of time in the enterprises. As expected, there were slightly more youth higher up in the value chain (business) compared to those at production level.

Figure 3. Business Category and Type



On the business end 33% were micro enterprises while 40% were categorized as small. 60% of respondents categorized their business as promoters/educators, 47% as marketers and 40% as product developers. Food processors were about 13%.

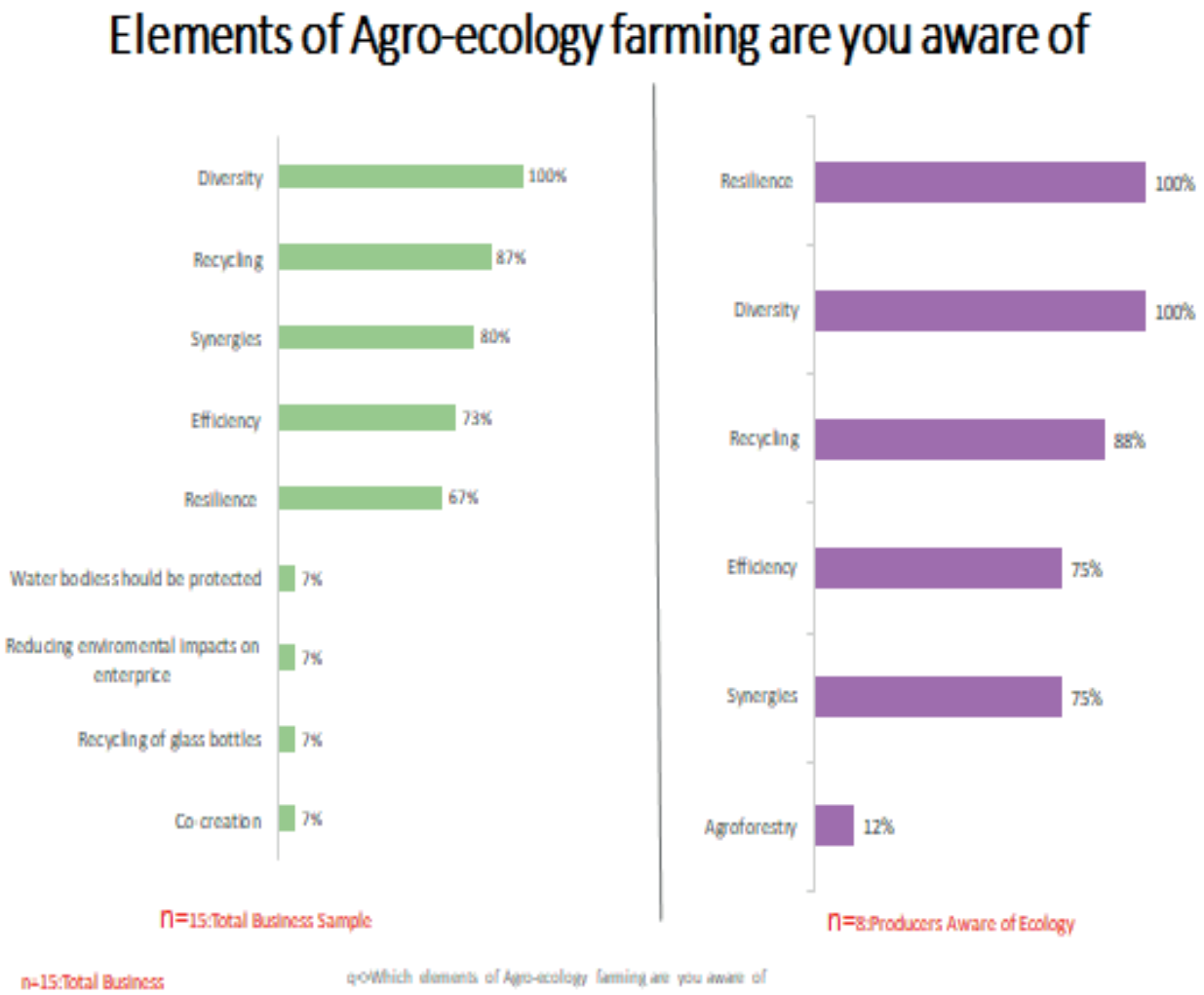
Discussion:

According to Ministry of Industrialization in Kenya, a micro enterprise is one with up to 10 employees /KES 500,000 turnover. Small enterprises have 10-49 employees and KES 500-5M turnover while medium enterprises have 50+ employees/5M+ turnover.

This was sometimes confusing to respondents as sometimes there was a mismatch between the number of employees and turnover. For example, if an organization has 10 employees with a turnover of 4M, it can either be a micro or small enterprise. The fact that most business categorized as promoters/educators implies that they are finding out of necessity that they have a role in promoting and educating on agroecology to find markets for their produce. One of the businesses in hospitality had a social media platform for promoting agroecology.

3.2 Understanding of Agro-Ecology

Figure 4. Elements of Agroecology that Business Respondents were Aware About



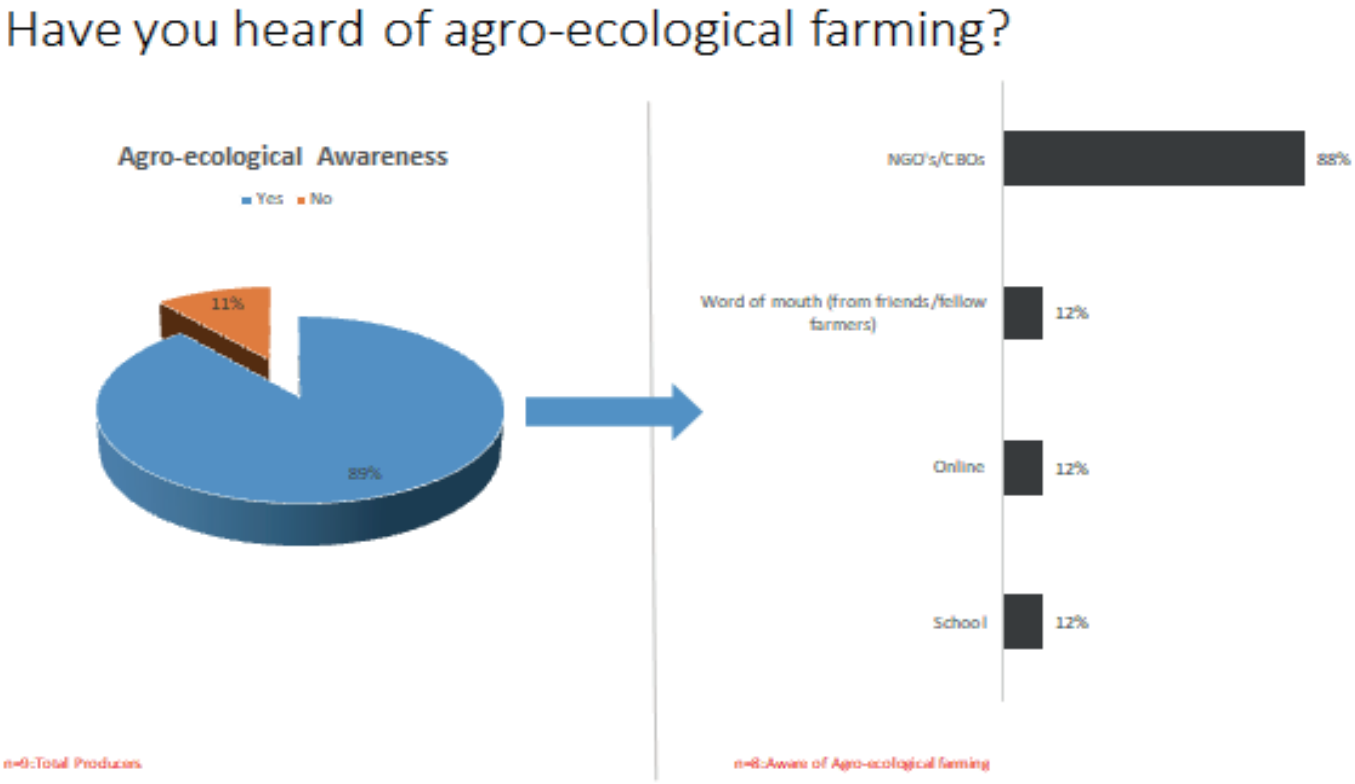
For businesses, 100% of the respondents were aware about the elements of diversity, followed closely by recycling (87%) and synergies (80%). For producers, resilience and diversity were the leading elements at 100% that farmers were aware of followed closely by recycling (88%), efficiency (75%) and synergies (75%).

100%
OF THE RESPONDENTS WERE AWARE ABOUT THE ELEMENTS OF DIVERSITY, FOR BUSINESS

87%
BY RECYCLING

80%
SYNERGIES

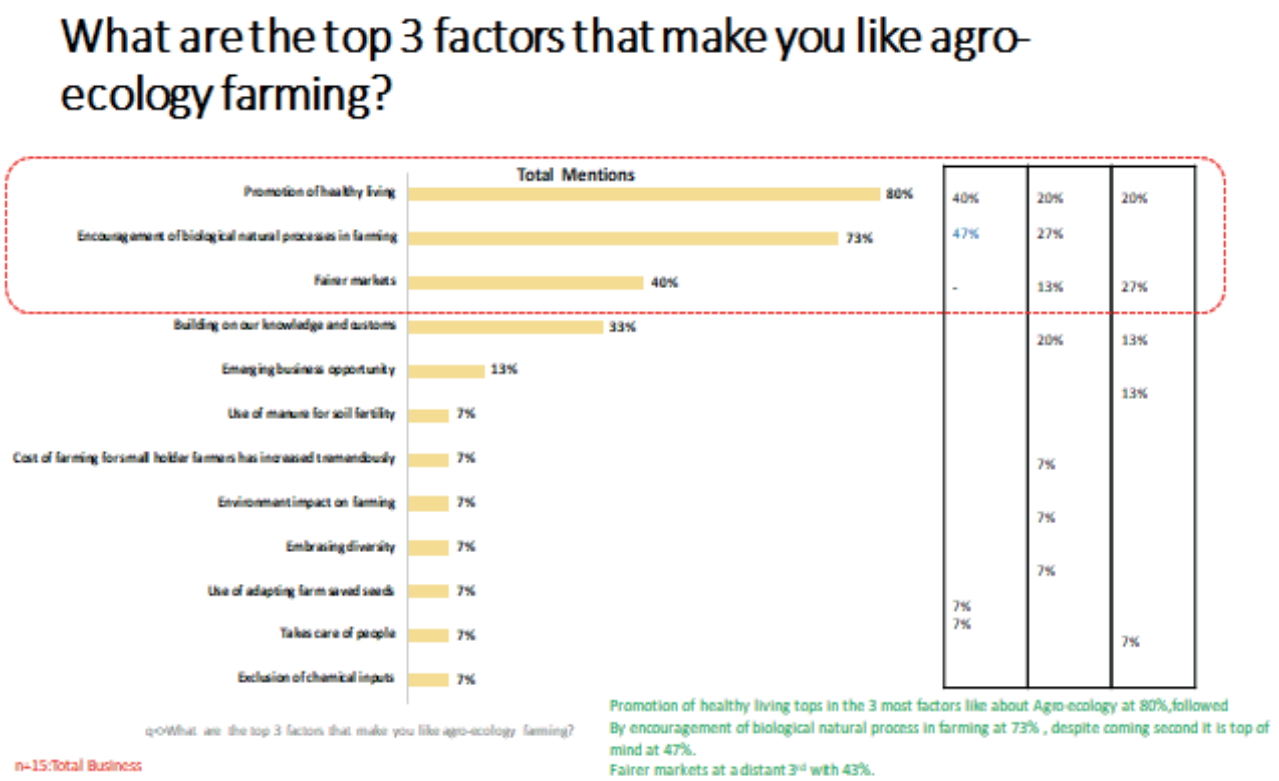
Figure 5. Awareness of AE and Source of Awareness by Producers



89% of producers indicated that they were aware about agroecology with 88% having heard from NGOs and CBOs while word of mouth, online and schools were ranked lowly as sources of awareness on agroecology.

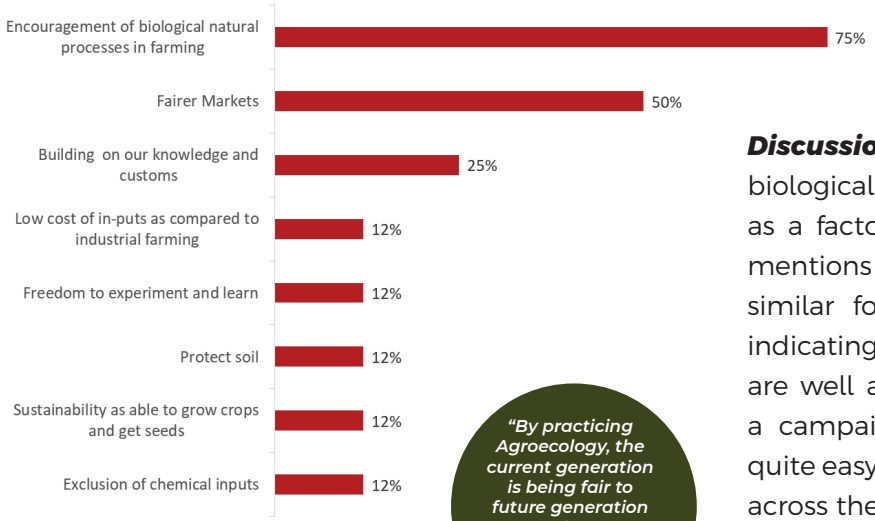
Discussion: Diversity was an element highly ranked by both business and producer groups and therefore there is a need to unpack what it means for each target group and develop messaging that meets these needs. For business, synergies were highly ranked as an element that they were aware of. On the other hand, resilience was an element highly ranked by producers. Support for agro-ecology in Kenya would therefore best be utilized with consideration of the player's position along the value chain. These results further confirm what has been known anecdotally that NGOs are the main source of information on agroecology. It was surprising that media was not mentioned as a source of agro-ecological information by producers despite the extensive radio and television coverage in Kenya

Figure 6. Top 3 Factors why Businesses like AE



On the top three reasons for businesses liking agroecology, promotion of healthy living was top with 80%, encouragement of biological natural processes in farming 73%, and fairer markets 40%. Building on our knowledge and customs (33%) and emerging business opportunity received second and third mentions only. For producers, the top three reasons for liking agroecology were promotion of healthy living (88%) followed by encouragement of biological natural processes in farming (75%) and fairer markets (50%).

Figure 7. Top 3 Factors Producers like AE Farming

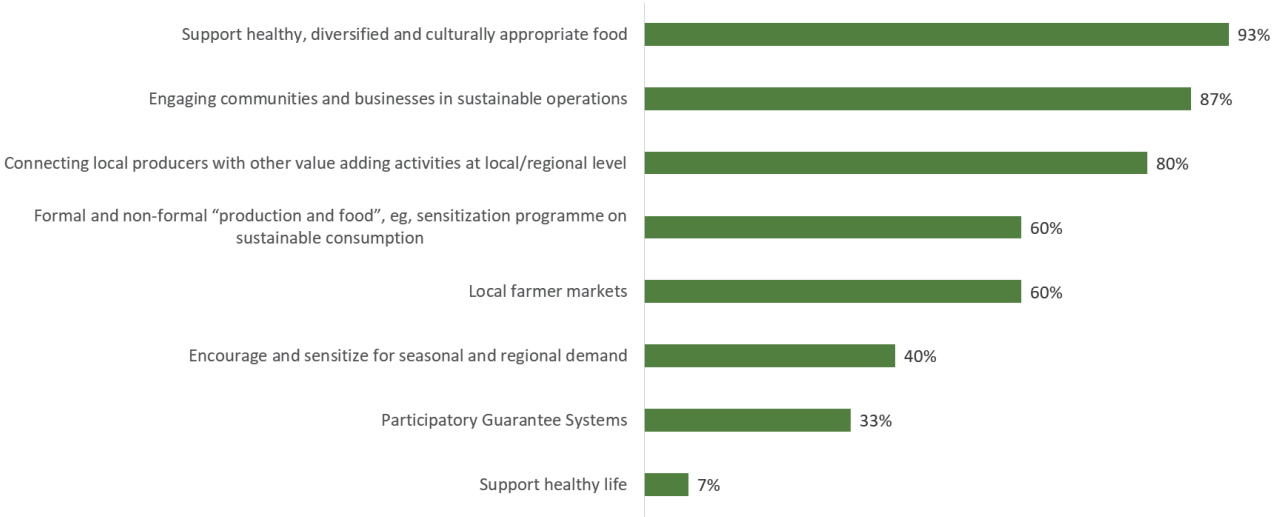


"By practicing Agroecology, the current generation is being fair to future generation by handing over a sustainable farming environment." FGD policymaker

Discussion: Even though encouraging biological natural process ranked second as a factor, it had the most number of first mentions (47%). These findings are exactly similar for both businesses and producers indicating that their values on agroecology are well aligned. This would therefore make a campaign for promotion of agro-ecology quite easy since the message would be similar across the board.

3.3 How Different Players Support Agro-Ecology

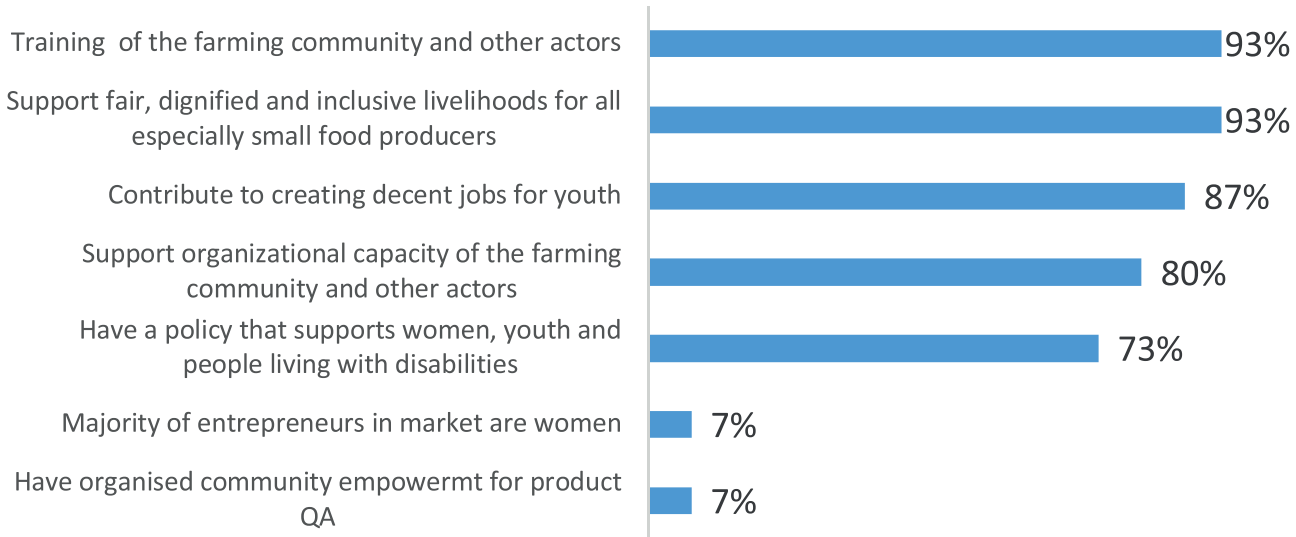
Figure 8. Agro-ecological Activities supported by AE Business



93% of the respondents indicated that they support activities aligned to healthy, diversified and cultural appropriate food followed closely by engaging communities and businesses in sustainable operations (87%) and finally connecting local producers to other value adding activities. Only 33% of the businesses are involved in Participatory Guarantee systems which was somewhat surprising. This can be explained by the findings that most of the produce is sold in local markets which have low emphasis on certification.

3.4 Activities Engaged in to Ensure Sustainability & Equity

Figure 9. Activities Engaged in to Ensure Sustainability & Equity

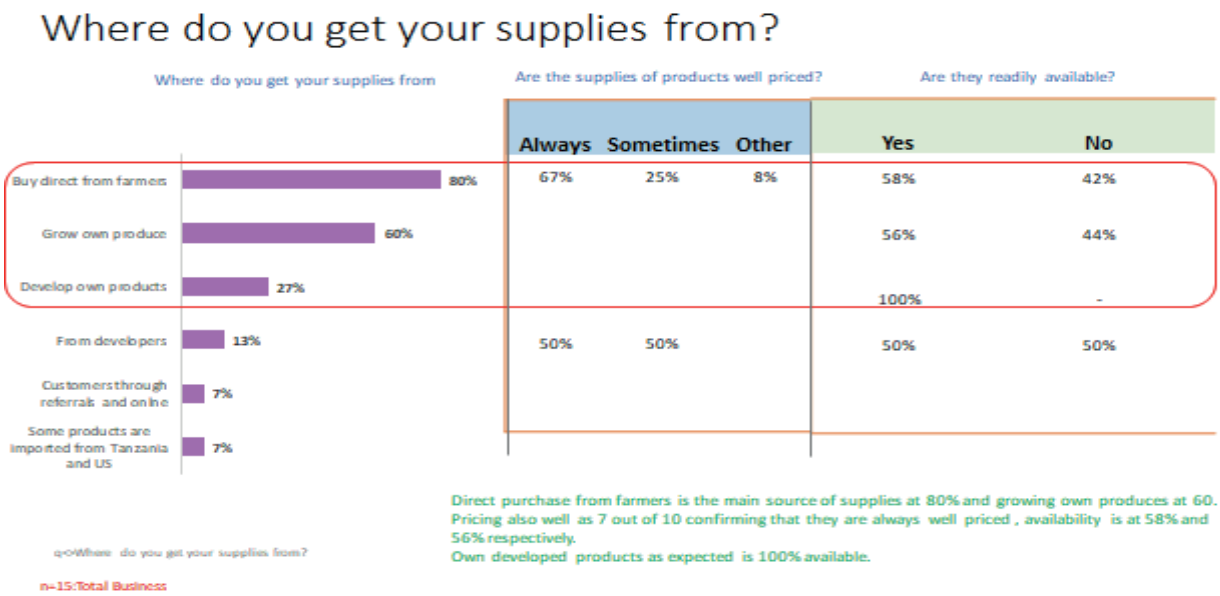


93% of the businesses support fair, dignified, and inclusive livelihoods for all especially small food producers which ties with training of farmers and actors. Creating decent jobs for youth (87%) and supporting organizational capacity of farmers all at the same level (80%) followed. It is noteworthy that many of the businesses also have policies that support women, youth and people living with disabilities.

Discussion: There is need to support community and farmer organizations to improve their capacity to organize especially for marketing through aggregation of their farm produce.

3.5 Sources of Inputs for Agro-Ecology

Figure 10. Sources of Supplies for AE Business

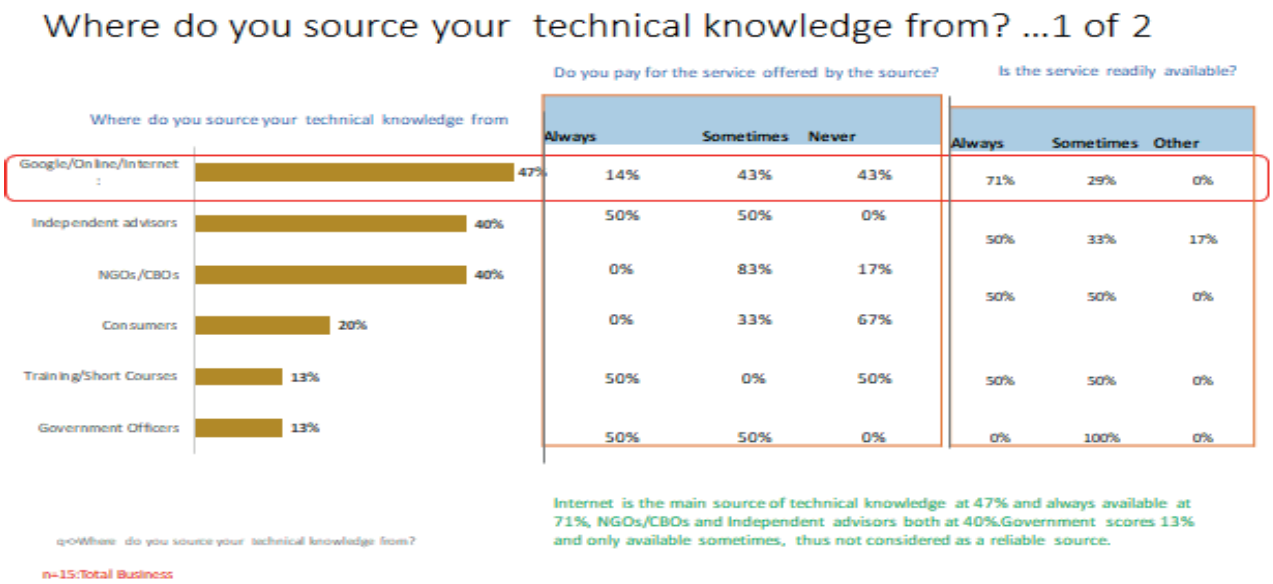


80% of the AE businesses indicated that they sourced their supplies from producers, with 67% indicating that the products were well priced always. 58% said the produce were readily available. Some reasons for this emerged from the group discussions where farmers indicated that bringing product/produce from the farm to retailers is expensive and some have had to partner with a logistics company which increases the cost of AE at retail level. 60% of the businesses grow their own food but even then only 56% of them said that the produce was readily available to meet their requirements. This is an indicator of a shortfall in supplies. 27% of the respondents develop their own products and which were 100% available while 13% buy from developers.

Discussion: There is an almost 50% gap in supplies from farmers indicating a need to support farmers as entrepreneurs to address this. This challenge is almost similar whether the business is getting produce from farmers or growing their own.

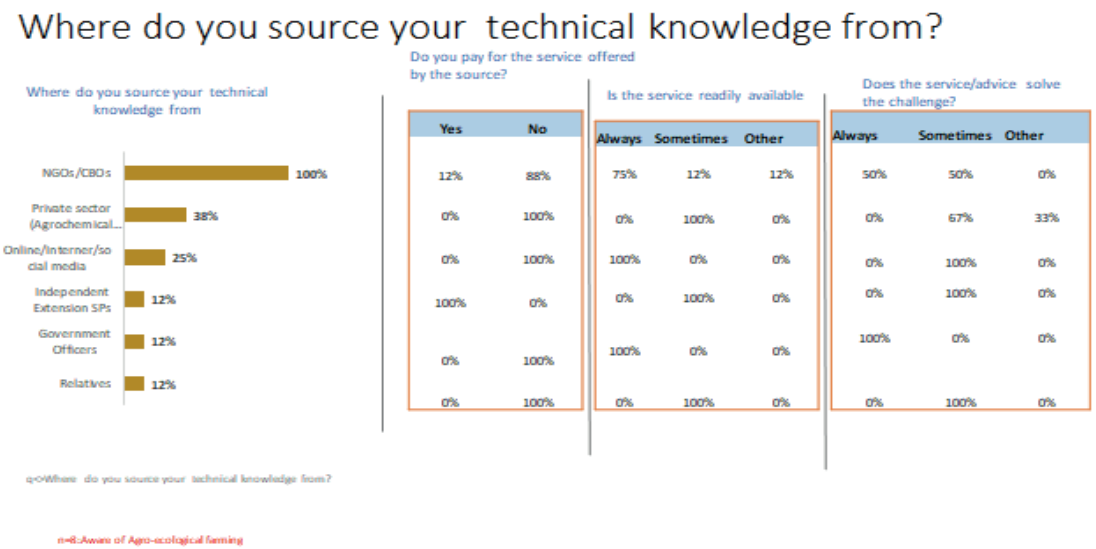
3.6 Sources of Technical Knowledge

Figure 11. Sources of Technical Knowledge for Business



Majority of the businesses (47%) are sourcing their technical knowledge from internet/online, membership networks, personal research and knowledge exchange followed by independent advisors (40%) and NGOs/CBOs (40%). Government officers were least prioritized as sources of technical information. Even though the majority of AEE are getting their technical information from the internet and is readily available at 71%, it only addresses their challenges about 57% of the time.

Figure 12. Sources of Technical Knowledge for Producers



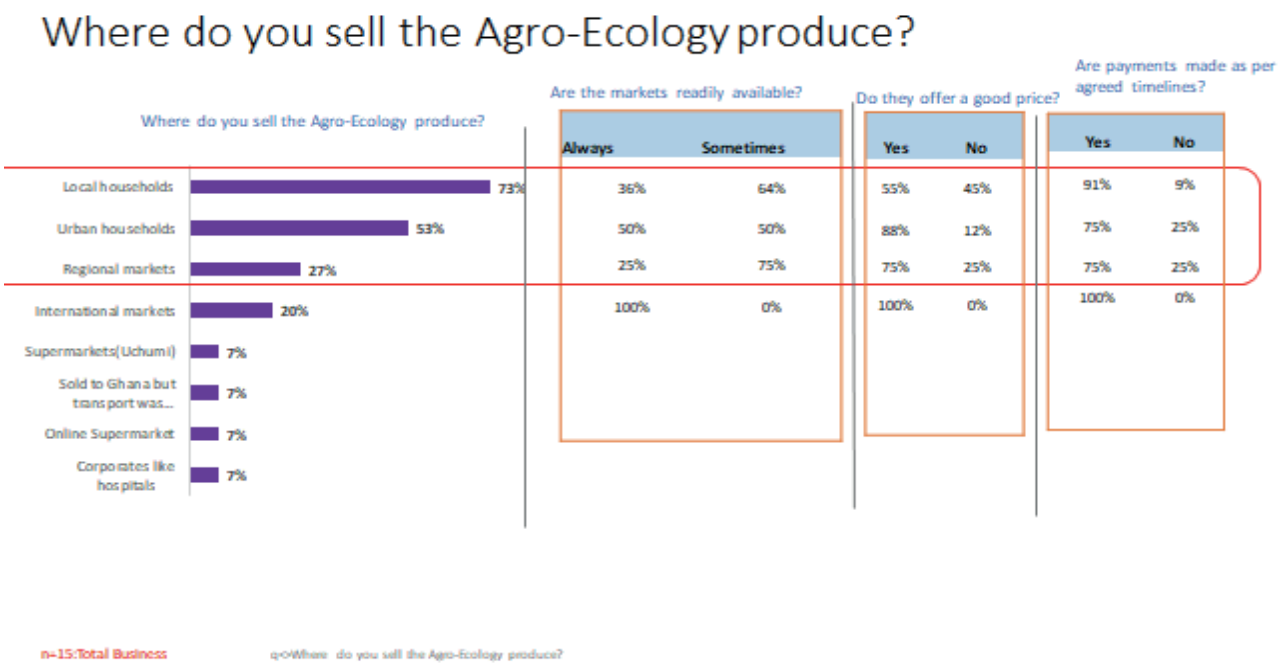
100% of producers source their technical information from NGO/CBOs and this service is not paid for. The service offered solves their problems 50% of the time. Private sector comprising mainly agrochemical companies were consulted 38% of the time and 100% indicated that the service was available sometimes. Online/internet/social media were ranked third at 25%.

Independent service providers delivered technical knowledge 12% of the time and this was paid for 100% of the time. These were ranked together with government officers and relatives. Even though government officers were ranked third as a source of information, they seem to offer solutions to producer challenges.

Discussion: For both businesses and producers internet and NGOs/CBOs are in the top three as sources of information. However, internet is the choice source for businesses while for farmers it is NGOs/CBOs. Unique approaches should be considered when interventions on information are developed for these target groups. Internet provides solutions to challenges 43% of the time while NGOs offer solutions to producers 50% of the time. The results show there is a huge gap in credible information uploaded on the internet as well as that shared by NGOs/CBOs. The broader picture from the analysis is that there is a big information gap as most of the time the needs of AEEs are not addressed.

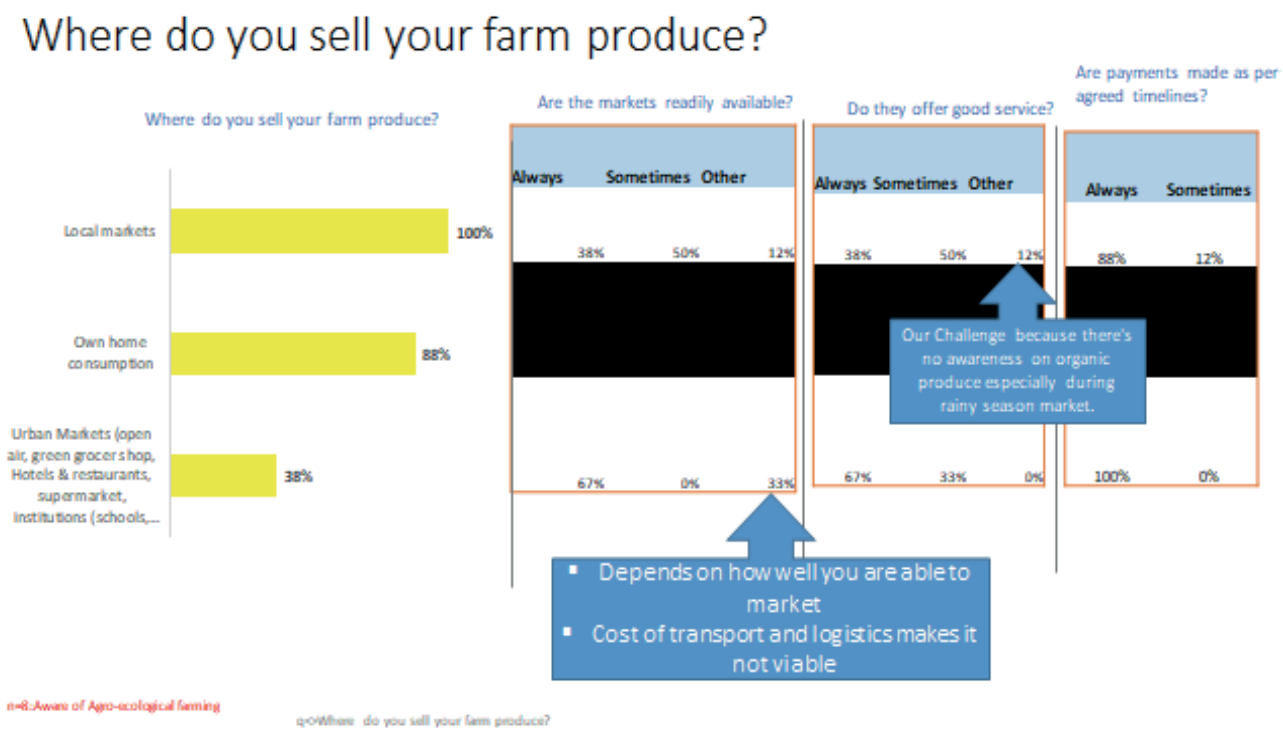
3.7 Markets and Marketing

Figure 13. Markets for AE Produce for Businesses



Majority of the business (73%) sell their products to the local households which include the local markets, which are not readily available. Respondents were split on whether they offer good prices but payments were done promptly mainly because trade is a cash economy. This was followed by urban households and markets (53%) with respondents almost equally split on whether the markets were readily available. Respondents strongly agreed that these markets offered a good price which was paid within agreed timelines.

Figure 14. Sources of Markets for Producers.

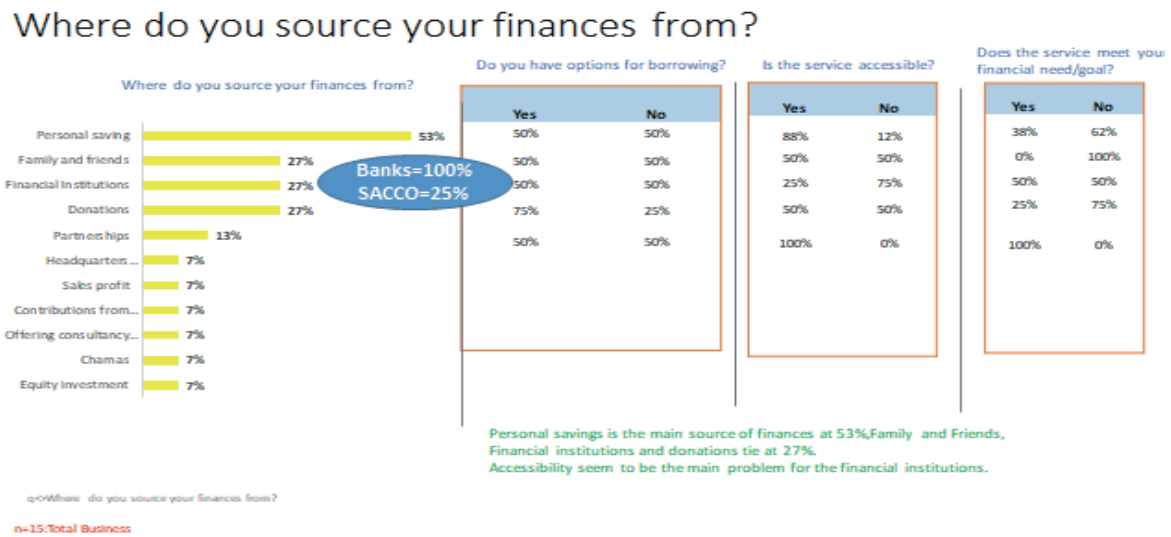


Majority of producers sell their produce to local markets (100%), own consumption at (88%) and finally urban markets at (38%). Payments are made on time. Urban markets offer better prices. From the group discussion, most farmers don't know how to do value addition and have limited knowledge in this area.

Discussion: The results show that most of the AE produce is sold in the local and urban markets compared to regional and international markets. It is worth noting that businesses are twice as likely to sell to urban households as producers. There was consensus from both businesses and producers that urban markets offer better prices than local markets. Consumer education and working with media continuously would help to address challenges with market availability.

3.8 Access to Financial Resources and Sustainability

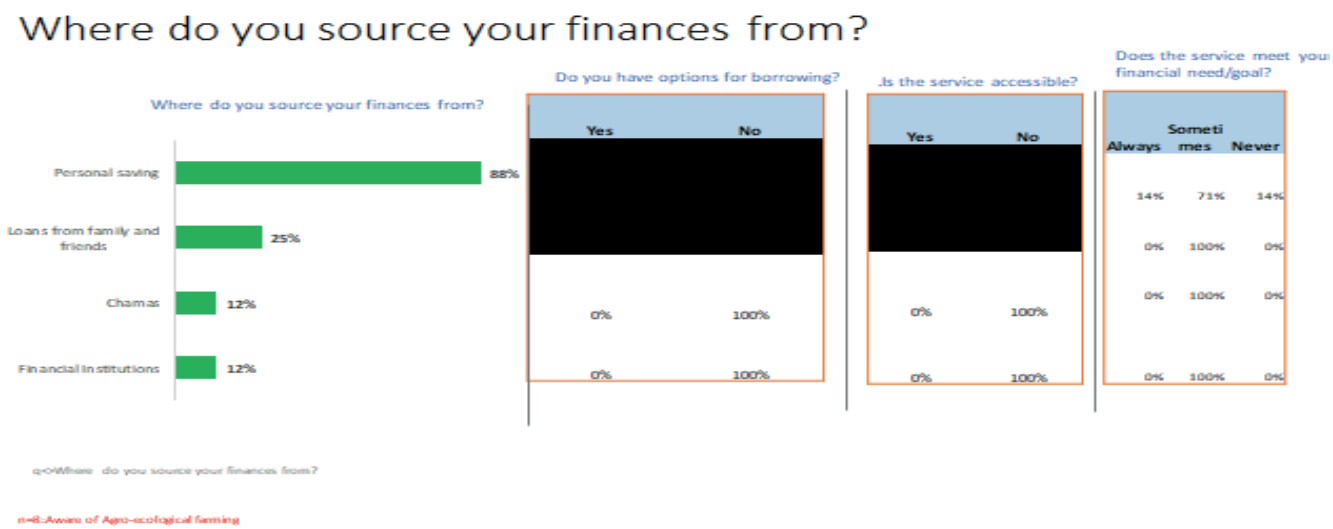
Figure 15. Sources of Finance for Businesses



Majority (53%) of the respondents source their finances from personal savings particularly at the start of the business. While these resources are accessible, respondents felt that they don't meet their financial need or goal. Other sources that were equally ranked were family and friends, financial institutions and donations all at 27%. Respondents were equally split on whether these resources are accessible but strongly agreed that they do not meet their financial goals.

On financial institutions, respondents indicated that this service is not accessible and were evenly split on whether it meets their financial goal. These financial institutions consist of mainstream banks as well as Savings and Credit Cooperatives of which the former were most popular.

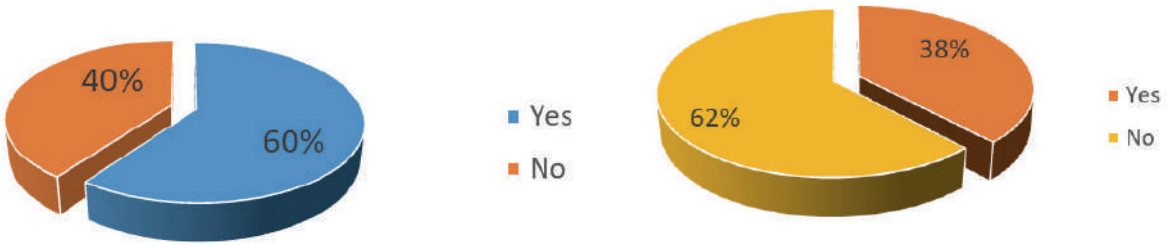
Figure 16. Sources of Finances for Producers



Farmers sourced their finances from personal savings (88%) and this source only met their financial needs 71% of the time. This was followed by loans from friends and family at 25%. Financial institutions provided loans to 12% of the respondents.

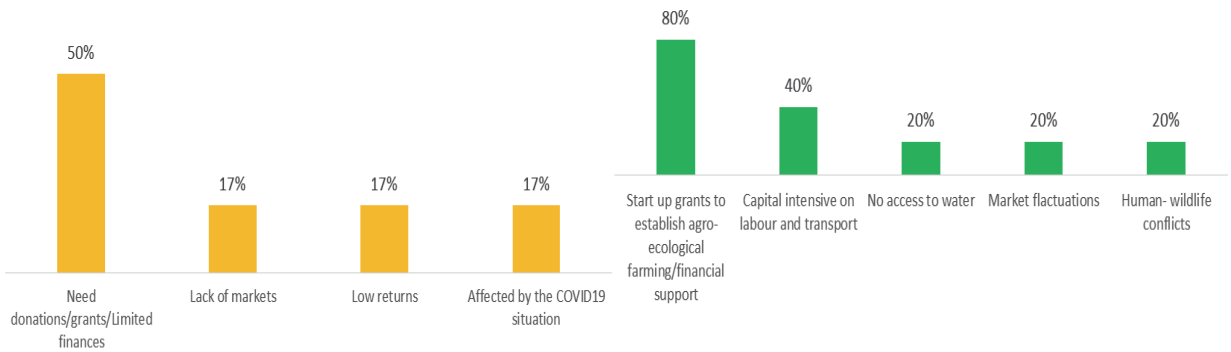
3.9 Level of Financial Support Needed for Sustainability

Figure 17. Assessment of Sustainability by Businesses and Producers



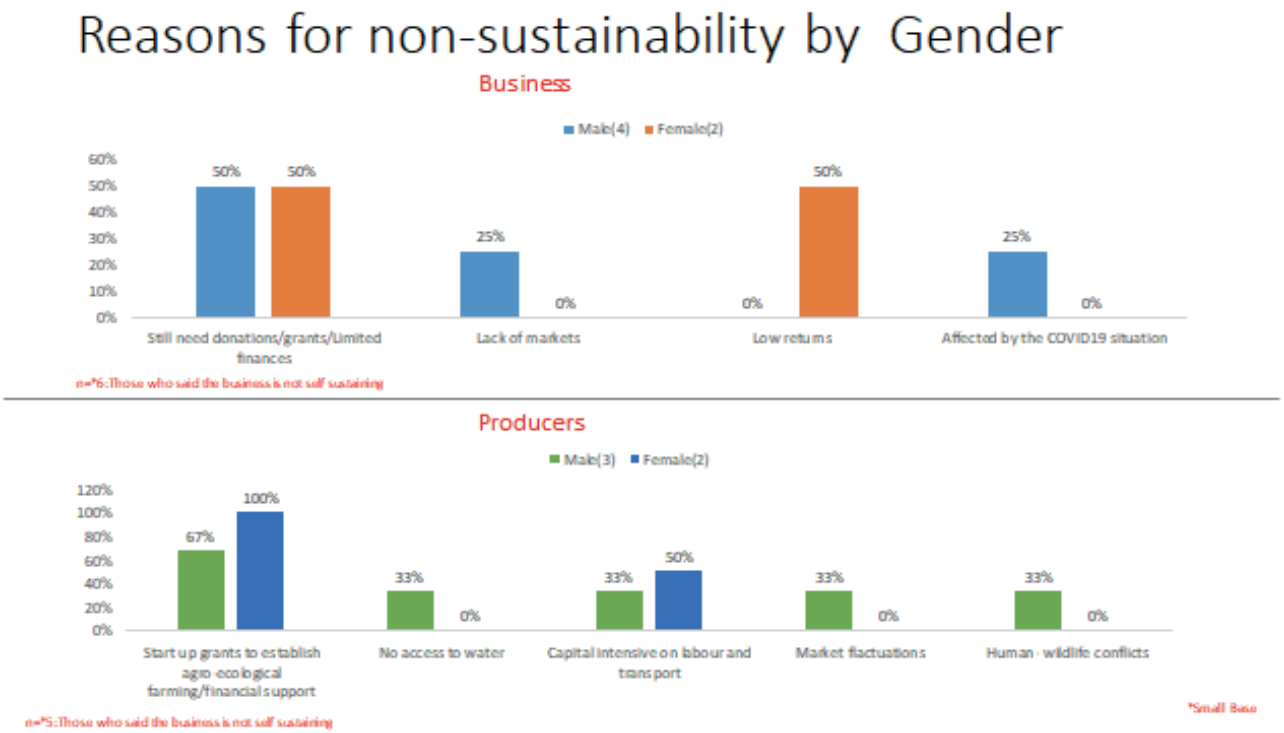
Business sustainability and meeting economic needs are well aligned as 60% of the businesses indicated that they are sustainable and meet the economic needs of the respondent. On the other hand, 62% of the producers said that the enterprise was not self-sustaining and an even higher number (75%) indicated that the business was not able to meet their economic needs.

Figure 18. Reasons for Non-Sustainability by Businesses and Producers



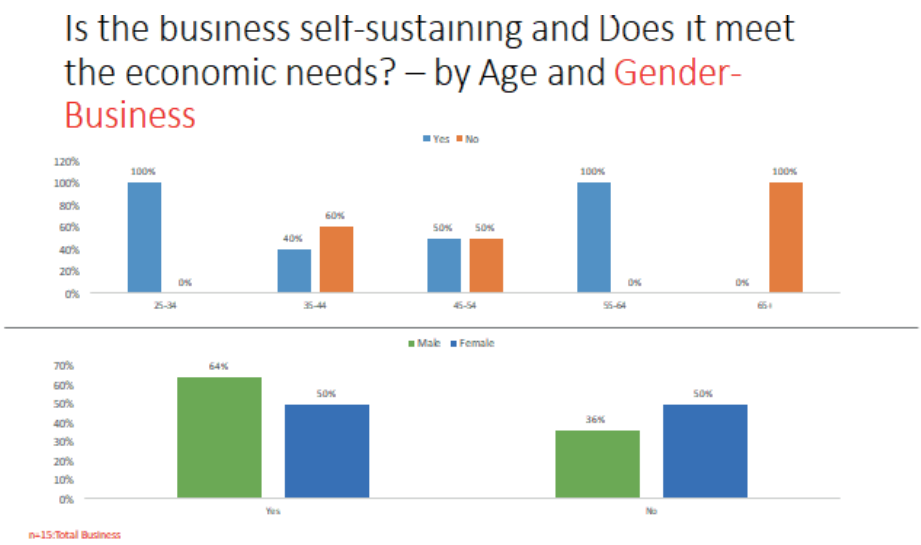
50% of businesses indicated that they were not sustainable due to limited financial resources while 17% each attributed it to lack of markets, low returns and COVID 19 impacts. 80% of producers also attributed lack of financial support as the number one reason for enterprise not being self-sustaining. 40% said the capital intensive requirements of labour and transport were hindrances and 20% each attributed it to no access to water, market fluctuations and human wildlife conflict as other causes.

Figure 19. Analysis of Non-Sustainability by Age Group and Gender



On dissecting these reasons by gender for business, both men and women felt equally strongly on the limited finances. However, lack of markets and impact of Covid 19 was mentioned only by males. Low returns was an important reason for non-sustainability for women. For producers, women cited lack of financial support (100%) and labour and transport (50%) as key reasons. For men, the key reason was lack of financial support. It is interesting that no female cited access to water as a limitation bearing in mind their cultural responsibility of ensuring availability of household water.

Figure 20. Analysis of Sustainability by Age and Gender for Businesses

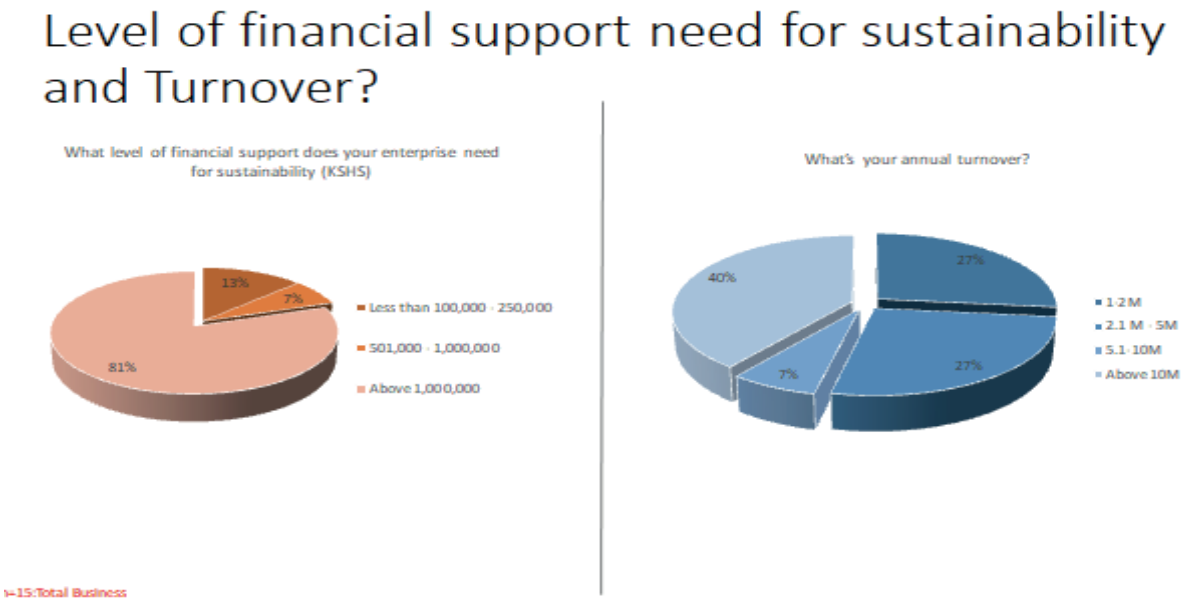


Further analysis on enterprise sustainability showed that 100 % of those aged 25-34 and 55-64 indicated that the business was self-sustaining. Those in the sandwich generation in the age brackets of 35-54 were almost evenly split on whether the business was sustainable. Of those 65 years and above, 100% said the

business was not self-sustaining. Analysis by gender showed that men were more likely to have self-sustaining businesses than women by 14%.

Discussion: It appears from the results that working with the two age groups of 25-34 and 55-64 would be good as the businesses have a good chance of succeeding. The 55-64 years are early retirees and have knowledge, exposure and financial resources to invest in businesses. The two groups are still energetic and able to use modern tools technology. The 55- 65 years group have finished raising children and are able to plough back into the business. 65+ age group may be quite advanced in age and may not be coping well with the changing business environment

Figure 21. Level of Financial Support needed and Turnover for Businesses

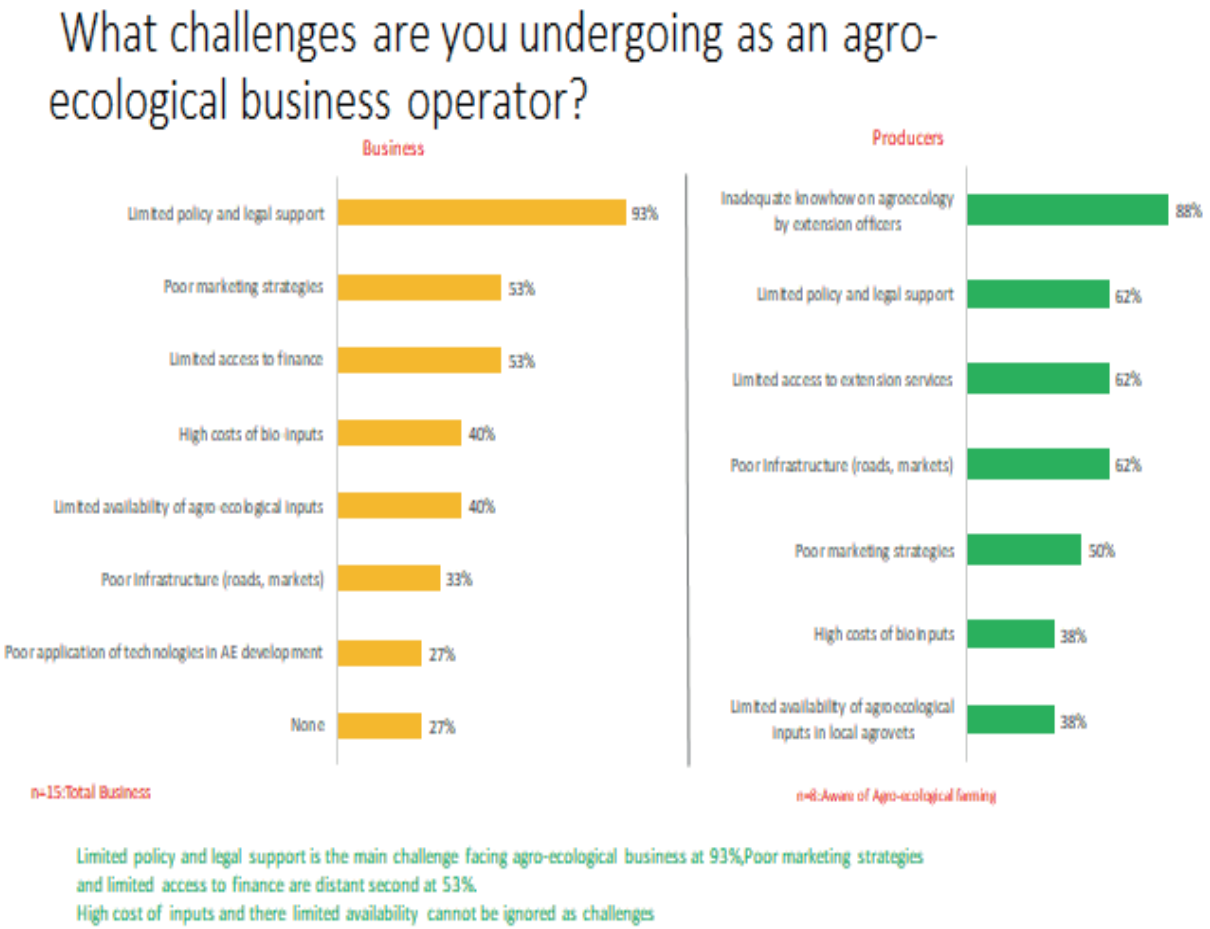


81% of all the business enterprises needed resources well over KES 1Million for sustainability. Also the turnover results were grouped into four categories with 27% having a turnover of up to 2M, 27% at 2-5M, and 7% had a turn over between 5-10M. 40% of the businesses had a turn over above 10M.

Discussion: While both groups got resources especially startup capital from personal savings, most of these sources did not meet their financial goals. Twice as many businesses got their resources from financial institutions compared to producers. There seems to be some discordance as at the beginning of the study most businesses were either micro or small but from the turnover majority are either small or medium at 7% and 40% respectively. These findings should be of concern as they indicate that most producers are practicing agroecology for sustenance not as a business while the businesses are also borderline. The level of financial support required was surprising and perhaps the idea by the AEE is to target the international market as this was mentioned in some of the interviews while other talked about increasing the number of branches. While the AEEs required resources more than 1M with others indicating up to 25M, it was not clear if all of them have the requisite capacity, structures and systems to absorb the additional capital for sustainability.

3.10 Challenges that AEEs are Facing and Suggested Improvements

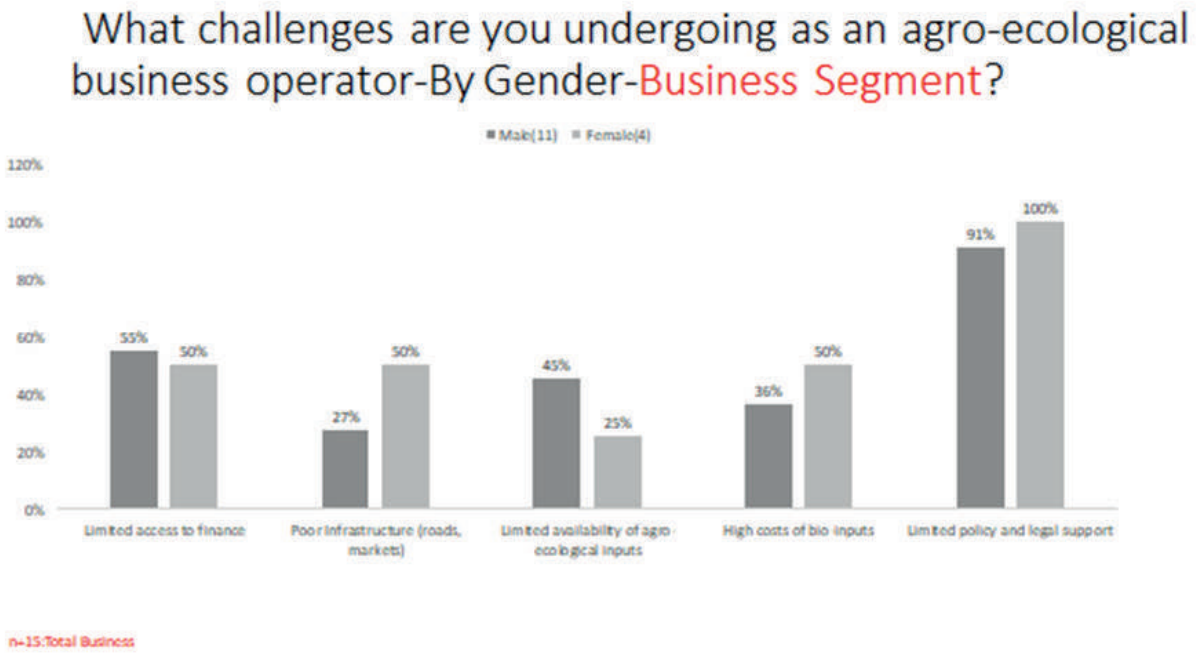
Figure 22. Key Challenges AE Businesses are Undergoing



Limited policy & legal support (93%), poor marketing strategies (53%) and limited access to finance (53%) emerged as the top three challenges for businesses. Focus group discussions indicated that there are too many licenses required. For example, in input production there are so many regulations, through KEPHIS, KEBS, KRA, and MoA. Coupled with high taxes, these make starting and taking off difficult.

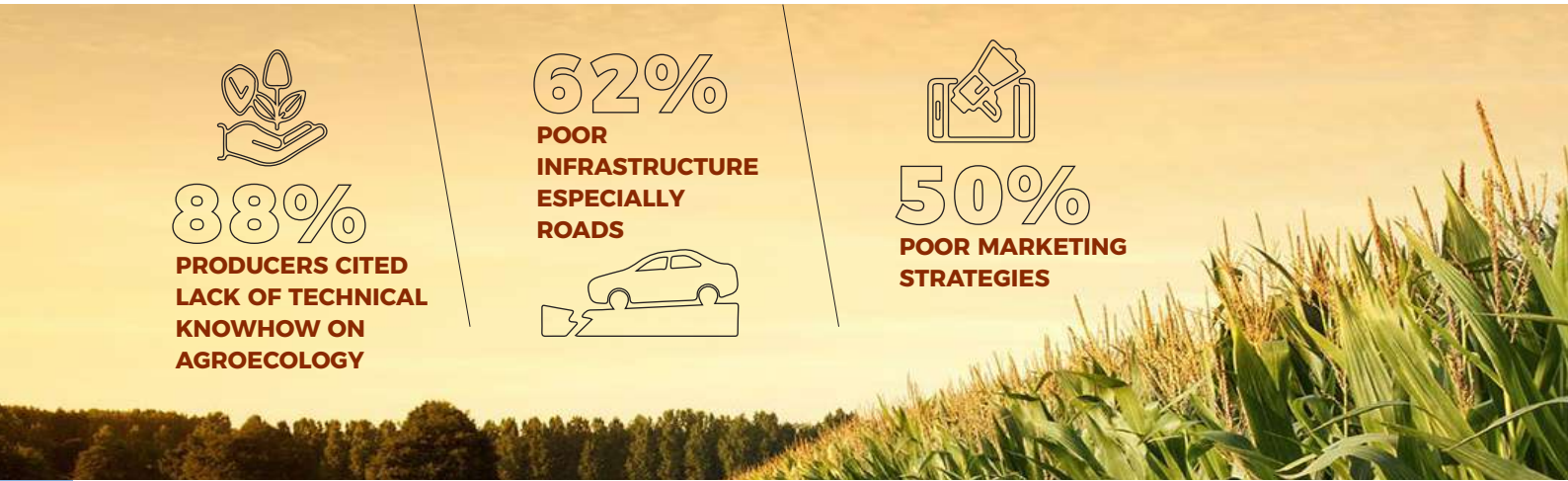
3.10.1 Key Challenges for Business from a Gender Perspective

Figure 23. Key Challenges for Business from a Gender Perspective



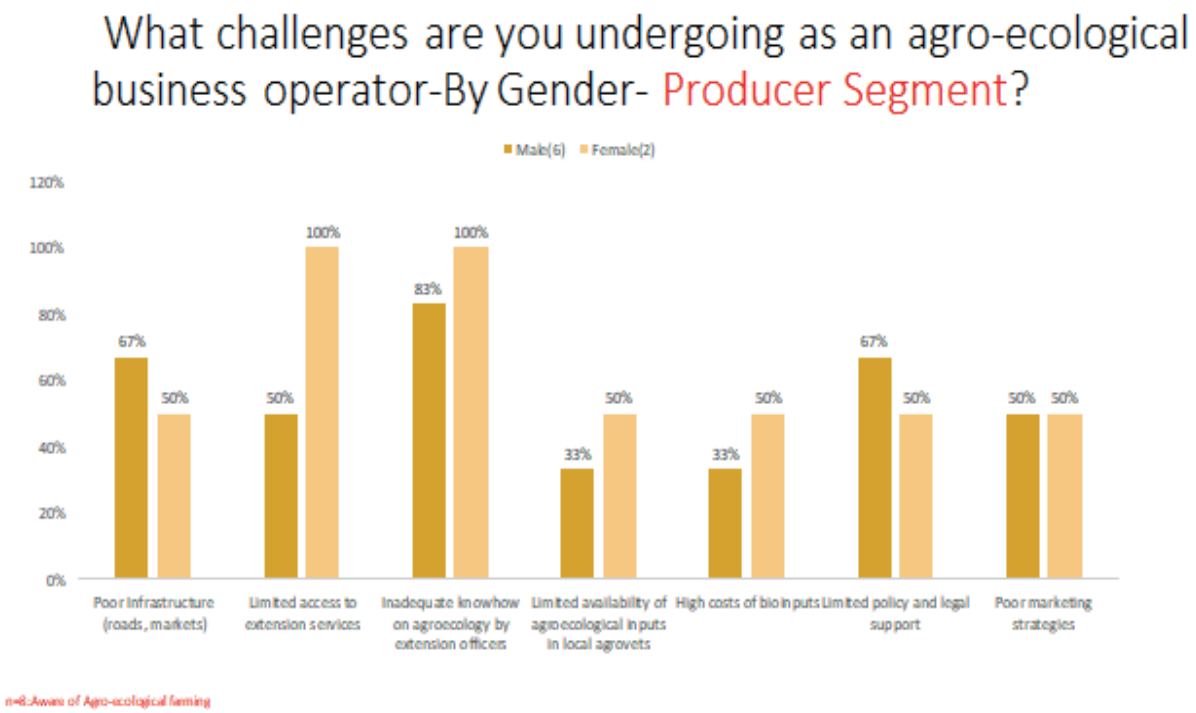
When key challenges were analyzed by gender, men and women agreed that limited access to finances as well as limited policy and legal support were the key issues. Poor infrastructure and high costs of agro-ecological inputs affected women more.

88% of producers cited lack of technical knowhow on agroecology by extension officers as the top challenge. This was followed by limited policy and legal support, limited access to extension services, and poor infrastructure especially roads and markets all at 62%. Others that followed were poor marketing strategies (50%) and high cost of bio inputs.



3.10.2 Key Challenges for Producers from a Gender Perspective

Figure 24. Key Challenges for Producers from a Gender Perspective



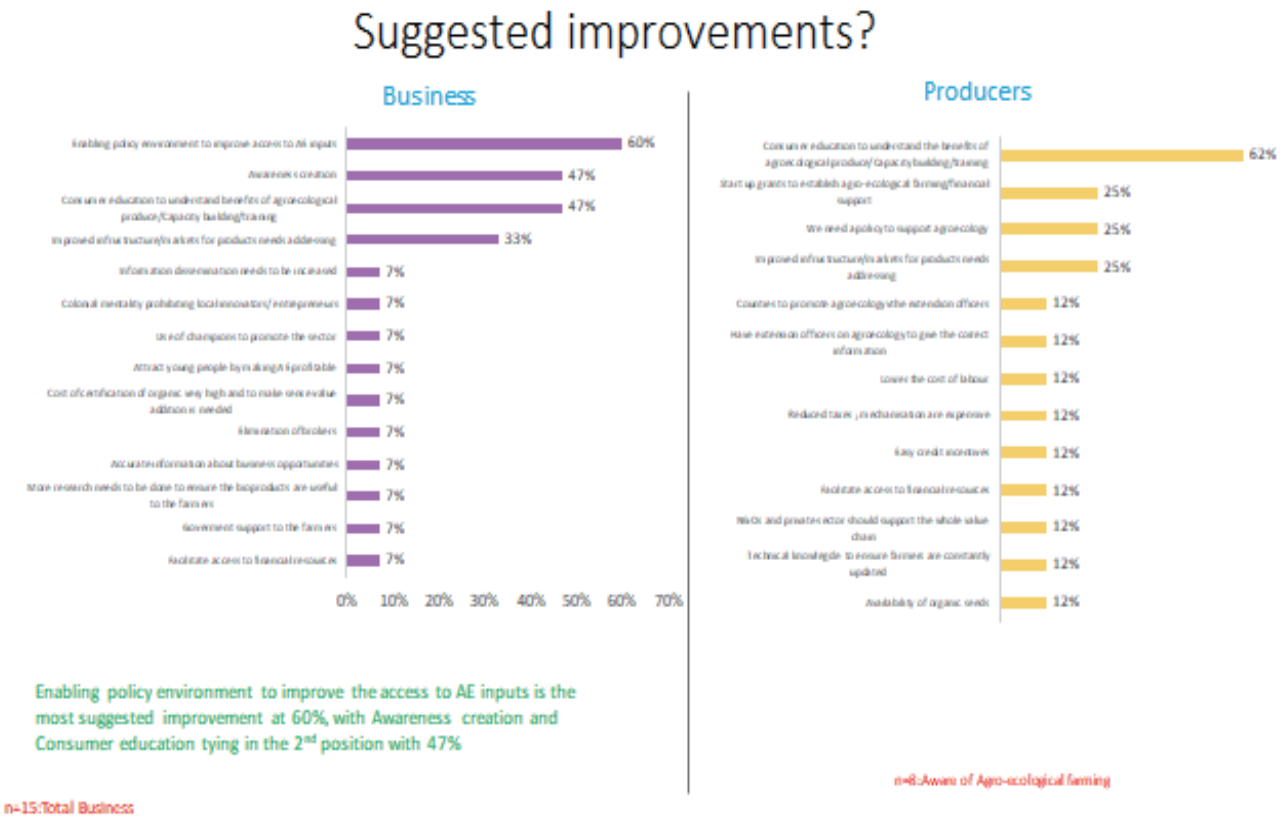
100% of the female producers indicated that limited access to extension services and inadequate knowhow were the key challenges. This could be an indicator that women are not accessing agro-ecological knowhow either directly or through their spouses when trainings are held. For male producers, inadequate knowhow on agroecology, poor infrastructure and and limited policy and legal support were the leading challenges while limited availability of agroecological inputs and high costs of inputs were lowly ranked. Perhaps this could be because men have better accesss to finance than women.

100%

OF THE FEMALE PRODUCERS INDICATED THAT LIMITED ACCESS TO EXTENSION SERVICES AND INADEQUATE KNOWHOW WERE THE KEY CHALLENGES.

3.10.3 Comparisons Between Business and Producers in Areas of Improvement

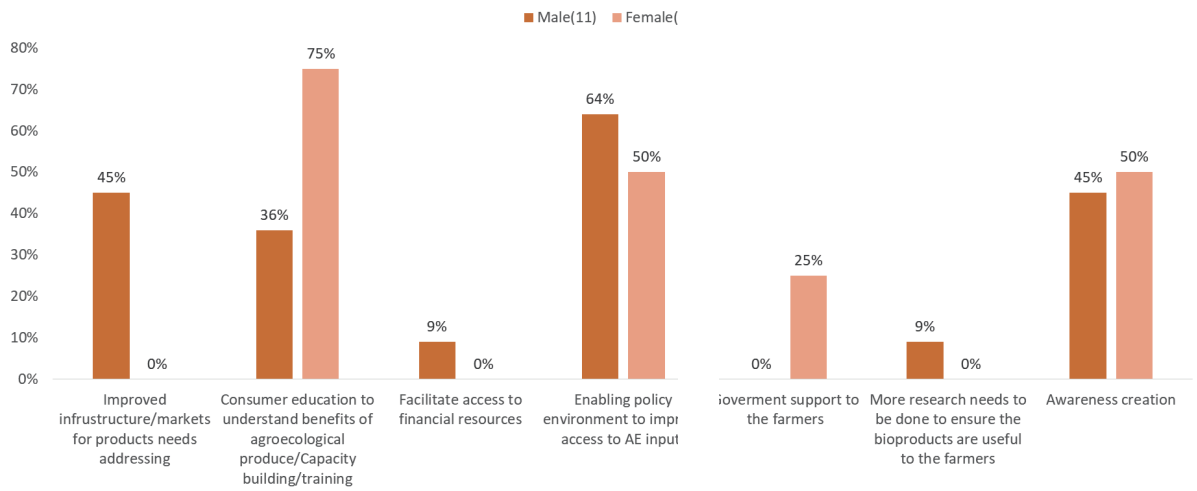
Figure 25. Comparison between Businesses and Producers in areas of Improvement



Businesses suggested improvements on enabling policy and legal environment at 60%, consumer education and awareness creation at 47% and finally improved infrastructure and market for products at 33%. On the other hand, producers suggested improvements on consumer education at 62%, startup grants for agro-ecological enterprises at 25%, policy support at 25%, and improved infrastructure and markets at 25%.

3.10.4 Areas of Improvement for Business by Gender

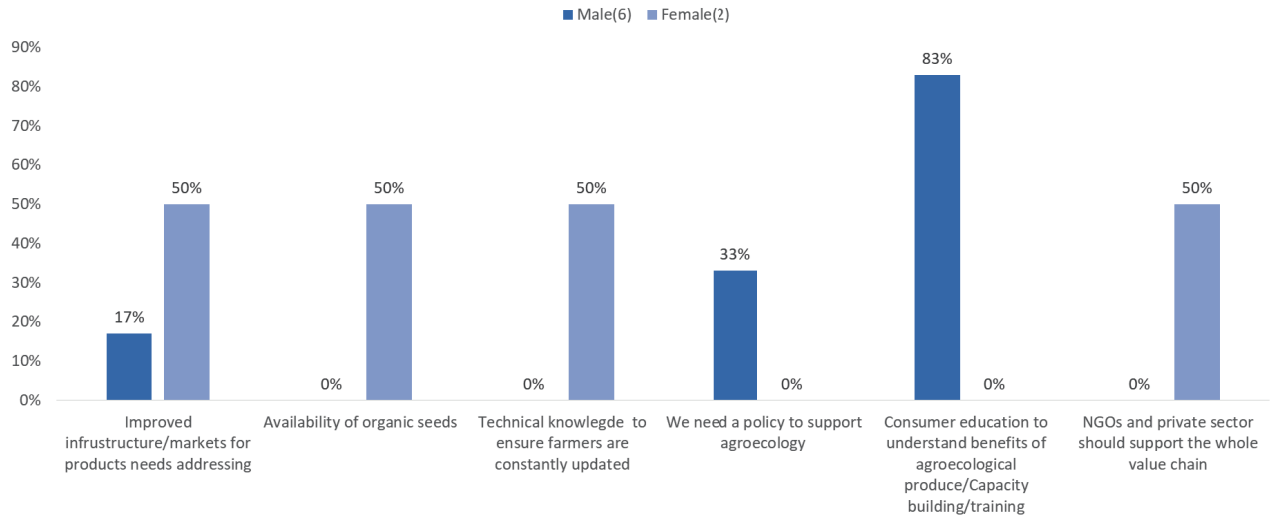
Figure 26. Areas of Improvement for Business by Gender



On analysis of the responses from businesses by gender, women suggested improvements on consumer education and awareness on agro-ecology at 75% and 50% respectively. This is consistently coming out as a big need for women. Infrastructure and an enabling policy environment are key issues for men at 45% and 64% respectively. It was surprising that access to financial resources was lowly ranked as an important area of improvement by business women.

3.10.5 Suggested Areas of Improvement by Gender for Producers

Figure 27. Suggested Areas of Improvement by Gender for Producers



Consumer education is a big priority for male producers followed by policy support. Women did not mention it as an area for improvement which was surprising. This contrasts sharply with women in business who ranked consumer education highly. This is an area that needs further investigation. Female producers ranked improved markets, availability of organic seeds, technical knowledge and support to the whole value chain as key areas of improvement. The demand for organic seeds could be as a result of being discouraged to grow indigenous seeds.

Discussion: From the results, an enabling policy and legal environment, consumer education and awareness creation and improved infrastructure are among the top four proposed improvements for both businesses and producers. Support to whole value chain was key to women as it enables products to move. NGOs are mainly supporting production compared to other areas of the value chain e.g. processing, which would improve marketability of the products.

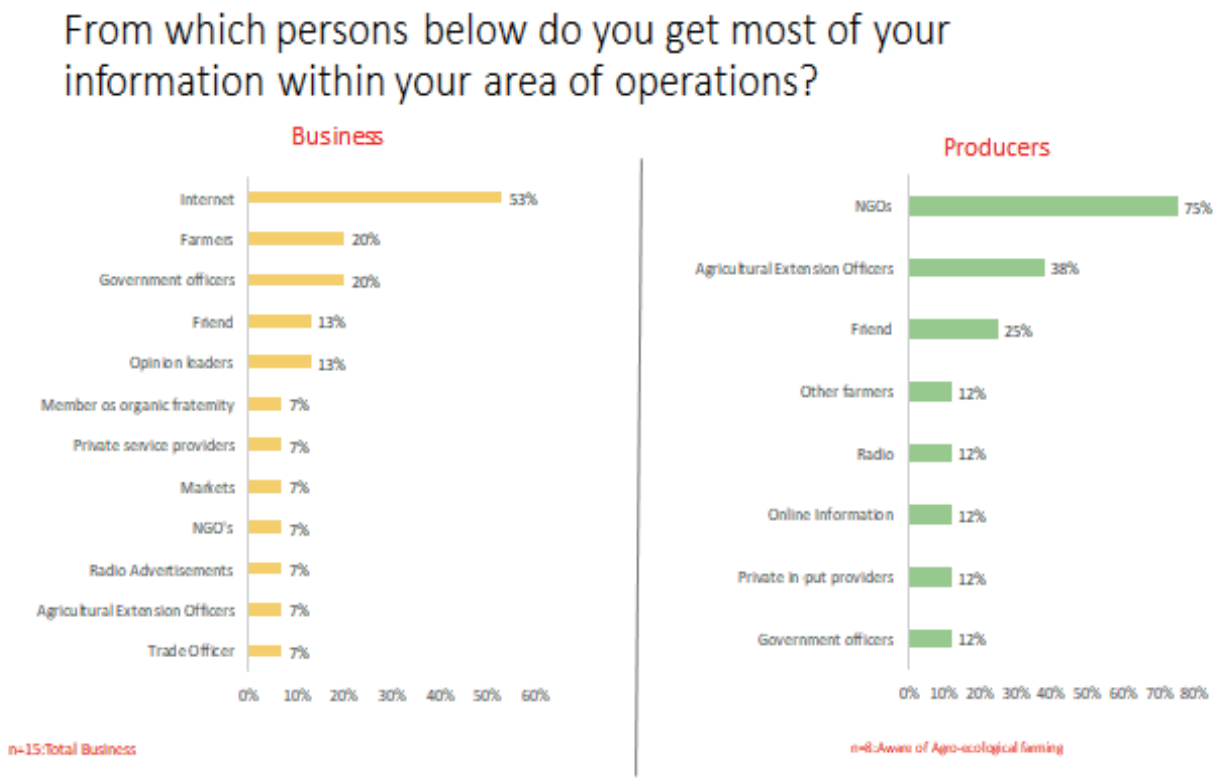
75% & 50% ***RESPECTIVELY***

ON ANALYSIS OF THE RESPONSES FROM BUSINESSES BY GENDER, WOMEN SUGGESTED IMPROVEMENTS ON CONSUMER EDUCATION AND AWARENESS ON AGRO-ECOLOG

3.11 Sources of Information

For businesses the most popular radio stations were Radio Citizen (27%) and Inooro FM (20%). Spice & Kameme FM were ranked at 13%. Citizen TV was the clear front runner at 53% and KTN at 20%. Interestingly, 20% of businesses didn't listen to radio at all. For producers, Inooro FM and TV were ahead at 38%. It should be noted that Inooro TV and radio are vernacular stations for the Mt Kenya region where most of the respondents were from. However, it is indicative of the popularity of vernacular media for outreach.

Figure 28. Sources of Information within your Area for Businesses and Producers



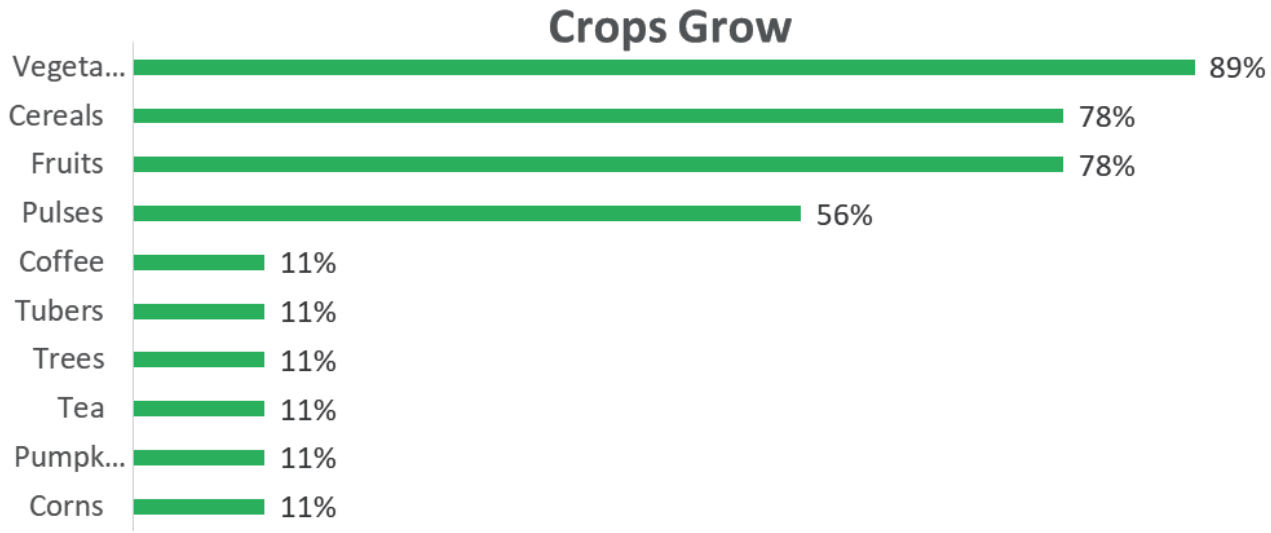
The internet was by far the leading source of information for businesses at 53%. Some of the least popular sources were agricultural extension officers and radio advertisements. The NGOs/CBOs are by far the leading source of information for producers at 75%, followed by agricultural extension officers (38%). The least popular sources were government officers, private input suppliers, online and radio advertisements at 12%

Discussion:

These results show similarities with earlier results where businesses are sourcing 47% of their technical knowledge from internet/online. For producers, NGOs/CBOs are by far the leading source of information. The results call for strengthening of research so as to generate credible information to be uploaded on the internet as well as be used by NGOs. Very few producers (12%) listen to radio for agro-ecological information because of its scarcity. Promoters of agro-ecology have not used media adequately for outreach despite its potential.

3.12 Results for Attributes Unique to Producers

Figure 29. Analysis of Crops grown by AE Farmers



89% of the farmers practice mixed crop and livestock farming. In crops, 89% are vegetables followed by cereals and fruits at 78% and pulses 56%. In livestock, 100% of the respondents said they kept poultry followed by cattle at 56% and goats at 44%. Majority of the farmers (67%) depend on both rain and irrigation for their farming. 89% classified themselves as organic.

Discussion: Majority of the farmers are mixed farmers which is good for promoting agroecology and all the farmers kept poultry for livestock. Access to irrigation water doubled the number of farmers practicing agroecology. Water availability appears to be a limiting factor which could be addressed in interventions to promote agroecology.

3.13 Awareness on Different Elements of Agroecology

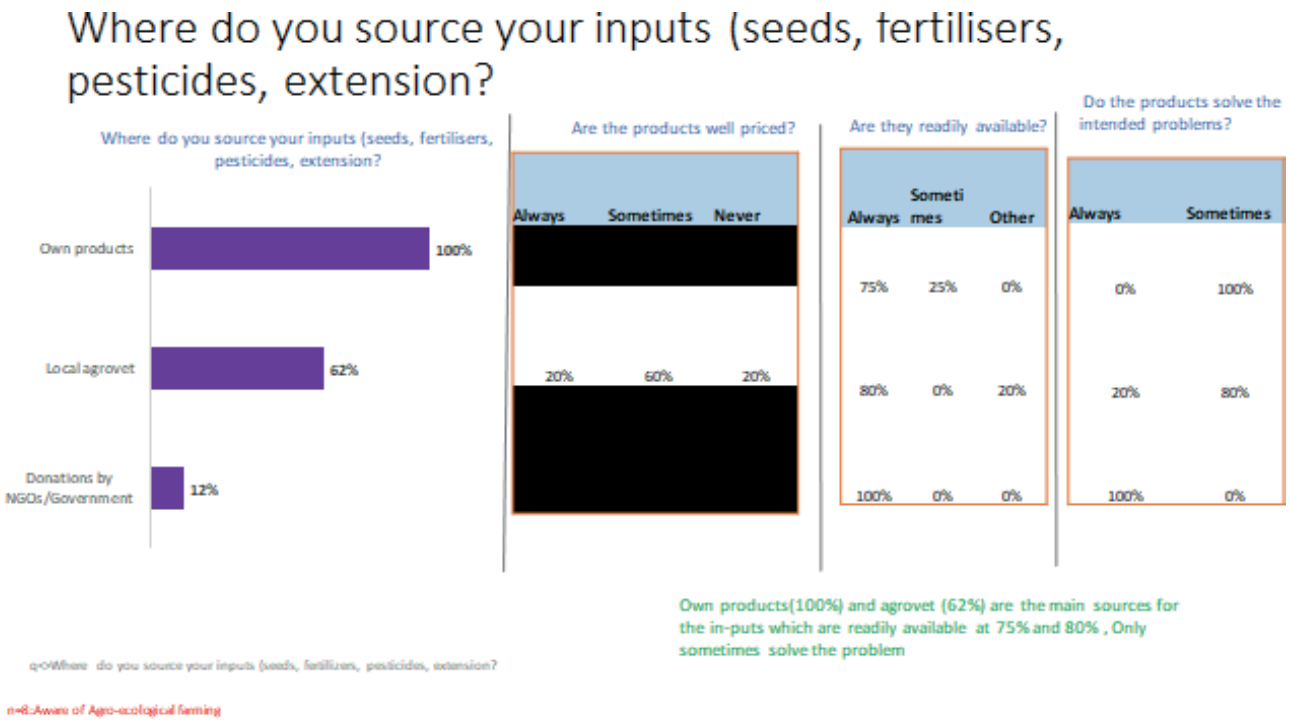
Efficiency practices were highly ranked included waste reduction, reduced application of pesticides and reduced water consumption which were ranked at 100%. Reduced energy consumption in farming was ranked last as an adopted practice. Top recycling practices included biological pest management at 100%, recycling of waste water at 88%, adoption of organic and low input farming at 75%, cover crops use at 75%, and alternative soil inputs to replace synthetic inputs at 75%. It is noteworthy that domesticated pollinators were lowly ranked as adopted practices bearing in mind the crucial role they play in plant growth. Further, use of biomass for energy generation was ranked lowest in recycling practices at 12%.

The leading improved farming practices were agroforestry and incorporation of non-crop plants both at 100%. Diversification of diets, integrating locally adapted crops/races, integrated pest management, and integrated livestock systems followed at 88%. Actions to protect or enhance pollinators and their habitats were lowly prioritized. It is worth noting and following up that farmers practice a 2 crop rotation system twice as often as a 3 crop rotation.

Discussion: 75% mentioned they were using local varieties. This shows there is still a considerable number that is using new varieties. There is also need for a detailed study to unpack the different crops grown and identify people's preferences. Pollinators are seen as security risks particularly in areas of small land sizes and there is need to increase awareness on their (pollinators) importance especially bees and promote enterprises associated with them.

3.14 Sources of Production Inputs

Figure 31. Sources of Inputs for AE Producers



Producers prepare their own inputs and even though they were readily available, they only solved the problems sometimes. Responses on inputs from agro-vets were mixed and even though the majority indicated that they were readily available, they only solved the problem sometimes at 80%.

From the farmers' focus group, pest and disease management is a challenge while at the same time external inputs are expensive and this drives farmers to make their own products. However, this technical knowledge is limited.

> *"Big gap between science and practice as scientists are stuck in the lab which is not working for farmers as there is no follow-up"*
> *FGD farmer*

CHAPTER 4

RECOMMENDATION AND CONCLUSIONS

CHAPTER 4: RECOMMENDATIONS AND CONCLUSIONS

4.1 Recommendations

Socio-Economic Analysis

While anecdotal evidence on the ground indicates more women are at the fore front of promoting agroecology, in this study more men than women were interviewed. This can be explained by the fact that women in agriculture and rural areas have less access than men to productive resources and opportunities. In addition, they have less education and less access to agricultural information and extension services; (The State of Agriculture, FAO 2011). Investments in agroecology should be along the whole value chain and especially women by affirmatively increasing access to agricultural resources, education, extension and financial services, and labour markets. This could increase yields on their farms by 20–30 percent as well as raise total agricultural output in developing countries by 2.5–4 percent. (The State of Agriculture, FAO 2011).

As expected, there were slightly more youth higher up in the value chain (business) compared to those at production level. More youth who venture into agribusiness tend to venture into non-farm enterprises (Youth in Agro-ecology Report, 2020). There is need to increase the percentage of youth in agroecology by supporting interventions higher up along the value chain.

The fact that most businesses were categorized as promoters/educators implies that they are finding out of necessity that they have a role in promoting and educating on agroecology to find markets for their produce. Businesses need to be supported by strengthening their capacity to support farmers as well consumer education.

INVESTMENTS IN AGROECOLOGY SHOULD BE ALONG THE WHOLE VALUE CHAIN AND ESPECIALLY WOMEN

Awareness on Agroecology

While 89% of farmers indicated that they were aware about agroecology, it required some explanation for better understanding indicating an awareness gap. Most of the producers heard about agro-ecology from NGOs and CBOs. This level is much higher than data from a study conducted in Kenya which placed awareness on organic foods at 55% with males (70%) compared to female (62%). (IFOAM, 2013). The results confirm what has been known anecdotally that NGOs are the main source of information on agroecology and these needs to be strengthened. It was not surprising that media was not mentioned as a source by producers since the agro-ecological sector in Kenya has not used media extensively to promote itself. However, there is huge potential for use of mass media for outreach on agroecology. As such, there is a need to unpack what it means for each target group and developing messages that meet the needs of each. In addition, issues around health, and natural processes should be key in messaging or marketing campaigns.

Sources of Inputs, Supplies and Markets

There is need to encourage the use of farmers seeds/varieties in agroecology to retain and expand biodiversity as well as independence. From the discussions with policymakers, it emerged that there is a need for support to develop community seed management systems such as community seed banks for sustainability.

Pest and disease management is a challenge while at the same time external inputs are expensive and therefore farmers make their own products to keep costs down. Most agro-ecological farmers use weed and pest suppressants which reduce weeds and pest attacks (Cheatle, R.J. and P. Nekesa, 1993). The fact that their own products only solve their problems occasionally, is an indication of a huge knowledge gap. It is recommended that community led research to develop solutions for the most pressing needs of farmers is supported. Access to irrigation water doubled the number of farmers practicing agroecology. This shows the need to invest more in water as a tool to promote agroecology. Interventions around poultry could be promoted as they are not only popular but cheap, need small spaces, and are not labour intensive.

Respondents strongly agreed that urban markets offered a good price consequently businesses are twice likely to sell to urban households compared to producers. To improve prices, consumer education to appreciate the benefits of AE food as well as working with the media continuously would help address the challenges of market availability.

89%

OF FARMERS INDICATED THAT THEY WERE AWARE ABOUT AGROECOLOGY,

70%

THIS LEVEL IS MUCH HIGHER THAN DATA FROM A STUDY CONDUCTED IN KENYA WHICH PLACED AWARENESS

MOST AGRO-ECOLOGICAL FARMERS USE WEED AND PEST SUPPRESSANTS WHICH REDUCE WEEDS AND PEST ATTACKS

“To improve prices, consumer education to appreciate the benefits of AE food as well as working with the media continuously would help address the challenges of market availability.

There is also need for segregated markets but hiring the space is often expensive and needs partnership to keep costs down. Another way of supporting growth of agroecology is through development of cottage industries at local level as this will provide a pull factor for the producers to grow AE products.

Source of Technical Knowledge

For both businesses and producers, internet and NGOs/CBOs are in the top three as sources of information. However, for businesses internet is the choice source while for farmers it is NGOs/CBOs. In this regard there is need for more research and information dissemination to ensure credible information is available online and to NGOs/CBOs. In developed nations, public investment in agro-ecological approaches has been limited and estimated at between 1 percent and 1.5 percent of total agricultural and aid budgets, which partly explains the knowledge gaps. (DeLonge et al., 2016; Miles et al., 2017; Pimbert and Moeller, 2018 as cited in Sinclair, F. et al, 2019) indicating that governments need to do more to close these gaps.

Most businesses like national media houses. On the other hand, producers like vernacular media which means that vernacular media across the country would be quite useful to promote agro-ecology especially now that there is a need for mass awareness. With credible research results, NGOs and media can provide a strong strategy for promotion of agro-ecology.

Sources of Finances

60% of the businesses indicated that they are sustainable while on the other hand 62% of the producers said that the enterprise was not self-sustaining and even higher number (75%) indicated that the business was not able to meet their economic needs.

These findings should be of concern as they indicate that most producers are practicing agroecology basically for sustenance and not as a business while the businesses are also border-line. Even though agro-ecology in low and middle-income countries begins as subsistence agriculture, recent research demonstrates that it can be scaled up profitably (Herren, H, 2020). While national and county governments are slowly recognizing agro-ecology, they need to take the lead in the transition to agro-ecology by making the policy and financing environment favorable. Donors will also need to invest more in policy influencing to ensure the right policies are in place that would support adequate financing for agro-ecology. Further to this, AEEs would require to be trained and mentored to develop into sustainable enterprises.

ANOTHER WAY OF SUPPORTING GROWTH OF AGROECOLOGY IS THROUGH DEVELOPMENT OF COTTAGE INDUSTRIES

1%-1.5%

AGRO-ECOLOGICAL APPROACHES HAS BEEN LIMITED AND ESTIMATED

75%

INDICATED THAT THE BUSINESS WAS NOT ABLE TO MEET THEIR ECONOMIC NEEDS.

> ***Most businesses like national media houses. On the other hand, producers like vernacular media which means that vernacular media across the country would be quite useful to promote agro-ecology***

Challenges and Suggested Improvements

When key challenges were analyzed by gender, men and women agreed that limited access to finance as well as limited policy and legal support were the key issues. Poor infrastructure and high costs of agro-ecological inputs affected women more. Producers cited the lack of technical knowhow on agroecology by extension officers as the top challenge. Capacity development may therefore require women specific agro-ecological training models that are sensitive to their needs.

There is a swelling body of evidence of direct links between the intensification of our agriculture and food systems and the rapid rise of diseases such as obesity, cardiovascular diseases, allergies, some cancers, and diseases of the immune system. (Farming Matters, September 2016). Governments urgently need to look at the impact of agriculture on areas such as public health and the environment and put sustainability at the heart of future policy.

Consequently, investment in agro-ecological interventions should prioritize the areas of enabling policy and legal environment, consumer education and awareness creation and improved infrastructure.

While there are ongoing efforts to develop policy and legal support, the efforts are slow and fragmented and therefore their consolidation might enhance movement towards their attainment and therefore, increase returns from agro-ecology. To address all these challenges there is need for coordinated efforts by the supporting partners.

4.2 Conclusion

In conclusion, the findings from the study indicate that there is a huge financial gap for promotion of agro-ecology in Kenya, but one needs to recognize the unique needs based on gender, youth, role of actors along the value chain and research. The results strongly support the investment thesis that financial capital can serve as a strategy for inclusion, innovation, and transformation towards agro-ecological food systems.

References

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Appendices

1. Farmers' Focus Group Discussion Guide

This Topic Guide is intended to be used with a group of small holder farmers.

INTRODUCTION

Moderator/Interviewer to briefly introduce self and explain the purpose of the study.
Objective

i. To document and probe the current status of and effectiveness of agro-ecological enterprises / businesses and service providers at country or region of study.
ii. To document and understand the context (or ecosystem) and forces as identified by entrepreneurs and service providers affecting the business and investment environment for agroecology at country or regional level of study.

Introduction

Give a short narrative about the history of the enterprise i.e. the background and motivation for starting the enterprise

Main Discussion

1. Which of the following best describes your farming System? (Probe for Bio intensive, Organic Sustainable Agriculture, Biodynamic, Conservation Agriculture etc.)

2. What are the key reasons for adopting the farming practices or adjustments are you currently doing? Why?

3. Have you ever heard of the term "Agroecology"? Yes/No

a. What do you think it entails/ it is about?

READ DEFINATION

Agro-ecology is farming that "centers on food production that makes the best use of nature's goods and services while not damaging these resources. Agro-ecological farming seeks to improve food yields for balanced nutrition, strengthen fair markets for their produce, enhance healthy ecosystems, and build on ancestral knowledge and customs (Agroecology Fund). Examples of agro-ecological systems include organic farming, bio-intensive, permaculture, regenerative agriculture, etc.

4. What challenges, are you facing in practicing agroecology?

5. What are the actions/strategies that value chain actors can implement to promote agro-ecology?

6. What support do you need to scale up? (from government (both levels), markets, financial institutions, technical knowledge)

2/ Policymakers Focus Group Discussion Guide

(For Policymakers; County Executive, County Assembly and Extension staff from both levels of Government and NGOs/CBOs)

1. Please describe in detail the role(s) of your institution in relation to sustainable agriculture.

2. What initiatives in Agriculture have registered success in your work in the past? What made them successful? Probe for agro-ecological farming, environmental conservation.

3. Have you ever heard of the term "Agroecology"? Yes/No

Agro-ecology is a farming system that "centers on food production that makes the best use of nature's goods and services while not damaging these resources. Agro-ecological farming seeks to improve food yields for balanced nutrition, strengthen fair markets for their produce, enhance healthy ecosystems, and build on ancestral knowledge and customs. (Agroecology Fund). Examples of agro-ecological systems include organic farming, bio-intensive, permaculture, regenerative agriculture.

4. Having read this statement, do you think agro-ecology is a good thing or a bad thing? Why?

5. How do you think the communities in Kenya would benefit if agro-ecology is adopted? Please explain.

6. From your experience, what are the key barriers to adoption of agro-ecology in Kenya? (Probe for (PESTEL legal, policy, market, institutional frameworks, etc.)

7. What are the actions/strategies that value chain actors can implement to promote agro-ecology?

8. From your experience, what do you think are the actions/strategies needed by both levels of government to promote agro-ecology?