A close-up photograph of a woman with a warm smile, wearing a blue and yellow patterned headwrap and a green and white patterned top. She is holding a large, dried corn cob in her hands. The background shows a weathered concrete wall with a red metal box attached to it.

DEVELOPING MARKETS FOR AGROECOLOGY

En exploratory study on markets for
agroecology and small-scale
farming in Nakuru County.

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1.1 ABOUT THIS STUDY

Small-scale agriculture is the basis of most rural communities' livelihoods in Nakuru county. Although small-scale farmers are the foundation of local rural food systems, growing inequalities and the rapid introduction of commercial farming in Kenya's rural areas have put smallholder's livelihoods at risk. Often pressured to turn to conventional and exploitative farming methods on the promise of better profits, small-scale farmer communities are losing autonomy and decision-making power over their lands. Consequently, local varieties are being underutilized, the soil is being depleted and food insecurity is on the rise. As the most fundamental link of local food systems, small-scale farmers must be able to decide what and how they grow the crops they sell and feed their families with. Even though it's been a long process, SSN's work in Nakuru over the past 10 years in capacity building geared towards agroecological practices has enhanced farmer's autonomy and ability to access and sell safe and healthy food. Today, more than 1000 farmers in Nakuru have been trained on bio-intensive gardening techniques and seed saving. But more importantly, today these farmers have a say in what they grow, eat, and sell for a living. There is still much work to do, and ensuring farmers have access to value-adding opportunities and fair markets for their products is crucial to continue strengthening farmer's rights, autonomy, and possibilities of growth.

SSN acknowledges the interdependence of social, environmental, cultural, and economic factors in local food systems. Our aim is to ensure that it is not only fresh, organic, and healthy goods that are being valued, but also local experience, knowledge, and ideas rooted in farmers' vision and cultural traditions.

WHAT WE DO

Seed Savers Network (SSN) is a Kenyan non-profit organization established in 2009 to promote agro-biodiversity conservation by strengthening communities' seeds systems for improved seed access and food sovereignty. SSN work focuses on building the capacity of small-scale farmers on agrobiodiversity conservation, income generation, and sustainable agriculture. In the span of 10 years, the organization has reached over 57,000 farmers in Baringo, Kakamega, Vihiga, Nyandarua, Nakuru, Kiambu, Isiolo, and Lamu counties. In addition to protecting farmers' rights to share, save and sell seeds, SSN is committed to helping smallholders produce healthy and safe food without the need for external inputs.



We understand that the crops being grown and sold by small-scale farmers in Nakuru are crucial as an income-generating activity, but also as a way of ensuring farming communities, no matter their economic status, have access to safe and nutritious food.

This study works under the assumption that the successful development of local market hubs and supply chains must go beyond economic aspects. Therefore, in our search and development of markets for agroecological products, success is defined as the integration of the environmental, cultural, and social dimensions of small-scale farmers' lives.

In line with the intrinsically collective spirit of agroecology and seed saving, this study was only possible because of a collective effort. We are thankful to all the farmers who participated in this initiative, for their time, experience, and generosity; always welcoming in their farmsteads with tea and bread.

1.2 PURPOSE AND METHODOLOGY

This exploratory study used qualitative evidence taken from the producer's perspective, ensuring a representative geographical sample of small-scale farmers within Nakuru (See Map 2). All farmers interviewed and those who took part in focus groups and Seed Ambassador Meetings have previously received at least one training directly from Seed Savers Network staff or from a Seed Ambassador.

Twenty one-on-one interviews were performed between June 12th and August 1st, and participant observation field notes were used to further inform the strategy and action points included in this document. Three case studies were used to explore the main challenges and opportunities other grassroots organizations and agroecology enterprises have undertaken in Kenya. Experience from Laikipia Permaculture Center, Meru Herbs, and East Africa Food for Good was valuable in informing this strategy. Nevertheless, SSN's particular context and the challenges and opportunities highlighted by Nakuru farmers were taken as the primary source of information and knowledge.

The creation of markets for agroecological products must consider the economic, environmental, and social dimensions to contribute to more just and sustainable food systems. Ensuring production is exchanged between local producers and consumers in an equitable way is crucial to promote food sovereignty, and the continuation of seed saving practices of local varieties, which play a crucial role in ensuring nutritious diets in rural communities. This study aims to serve as an overview of the vision Nakuru farmers working with SSN have for selling and distributing their crops, which is naturally intertwined with the changes they have experienced in their livelihoods since they've started using agroecological practices. Furthermore, it sheds light on the shared challenges and opportunities farmers are facing when attempting to enter the market within the broader farming context in Nakuru. Overall, this exploratory study is aimed to inform SSN's way forward in constructing markets for agroecological products, as well as serve as a window for the broader audience into the farming practices, ideals, and purpose of the farmers SSN works within Nakuru county.

The mention of Nakuru farmers and farmers in the present study refers to small-holder farmers who are currently part of SSN and own land plots ranging from 1/8 acre up to 5 acres. These farmers are seed savers and have received one or more trainings on bio-intensive farming techniques from SSN's staff or from a Seed Ambassador. Most of the farmers that participated in this study own the land where they are producing -with their chambers adjacent to their households- while others lease land close by. It is worth mentioning that land is usually owned by the man in the household and that land ownership arises as a gender-sensitive topic, with women having less access and opportunities to land ownership.





Map 1. Nakuru County



Map 2. SSN Nakuru farmers' villages

1.3 NAKURU FARMERS' CROPS

- Maize (yellow, red, purple)
- Beans
- Irish potatoes
- Sweet potatoes
- Cherry tomatoes
- Spring onions
- Oats
- Millet
- Cassava
- Arrow root

Fruits
-Banana
-Lemon
-Strawberry
-Don Melon
-Passion fruit
-Guava
-Orange
-Gooseberry
-Tomato Tree
-Mango
-Powpow
-Avocado

Vegetables
-Spinach
-Sukumwiki (Kale)
-Mito
-Kunde (cow peas)
-Managu (night shade)
-Terere (amaranth)
-Kahurura
-Sageti (spider plant)
-Marenge (pumpkin)
-Cabbage
-Chayote

Herbs
-Lemon grass
-Coriander
-Rosemary
Other
-Chia
-Hibiscus
-Sugar cane

NAKURU FARMERS VISION

2.1 MAIN TAKEAWAYS

The transformative potential of agroecology lies in its ability to integrate food security, biodiversity, and social justice into the day-to-day agricultural practices of small-holder farmers. This approach recognizes farmers as life-uplifters and emphasizes the need to develop farming and food system practices that integrate farmers' traditional knowledge. As commercial agriculture expands and national seed policies continue to undermine the rights and livelihoods of peasant communities in Kenya, agroecology is crucial to ensure the continuation of sustainable livelihoods in the rural context.

In Nakuru County, distance and population density determines livelihood opportunities. Small-scale farmers working with SSN grow and sell their products in different contexts, ranging from small rural communities to more urbanized areas, such as Gilgil and Nakuru City. Most of the farmer's owned land is in a rural-urban continuum, where urbanization extends from the core urban center in often unplanned manners and with little regard to equitable access to public services and transportation. In this context, agroecology presents itself as an opportunity to ensure small-scale farming is a profitable and dignified activity.

In Nakuru, farmers have historically relied on planting maize and beans, but incorporating other crops has become crucial as the market demands diversification and extreme weather conditions make reliance on only a few crops a gamble. Today, farmers have been able to diversify what they grow, sell, and consume (See Table 1). For example, the introduction of local vegetable varieties -such as terere (amaranth) and sukuma wiki (kale)- and cash crops -such as avocado- into farmers chambers and kitchen gardens has allowed them to have a more diversified and nutritious diet. Without the need of adding any external inputs, farmers have learned how to use what is readily available in their farmsteads. Farmer-led research and local knowledge ranges from organic pest control management to seed extraction and the development of natural foliar fertilizers.

Nakuru farmers' most accessible markets remain local, with neighbors, peers, and nearby open-air markets as the main points of exchange. Nevertheless, the expansion and growth of farmer's selling opportunities is necessary to ensure small-scale farming continues providing farmers with a sustainable form of livelihood. The development of agroecological markets is key for farmers in Nakuru to command their natural resources, share their knowledge with peer farmers, and maintain the ability to decide what they grow and consume in a safe and healthy manner.



2.2 SEED SAVING

Farmers in Kenya have traditionally practiced seed saving, selection, and breeding, ensuring the seeds they plant are resistant to the local pests and climate conditions. Seed saving not only serves as way to save money during planting season, but also provides small-scale farmers with the ability of commanding their own resources and a possibility for food sovereignty.

In the wake of climate change, their freedom of choice depends on the free and open use and reuse of their seeds. Nevertheless, certain seeds have become less and less available, and their lack of use and consumption has led to a decimating vicious cycle. In 2019, Seed Savers Network documented 64 underutilized seed varieties in Kenya, which have been neglected in favor of commercial varieties. The latter has had an obvious impact on farmer's diet and health. Furthermore, Kenya's increasingly restrictive laws around seed saving continue to undermine the rights and livelihoods of peasant communities. The Seed and Plant Variety Act 2012 prohibits selling and exchanging uncertified seeds, criminalizing a historical practice among Kenyan's small-scale farmers. But who owns the seeds? The ability of multinational corporations to claim the discovery of seed in Kenya and patent it for profit mirrors the global trend in food production, where exclusive and discriminatory production rights are increasingly unfavorable for small-scale farmers.

Certain farmers in Nakuru, especially women, recall learning how to save seeds from their mothers and grandmothers, particularly crops such as maize, beans and cow peas. Although seed saving practices have slowly diminished with the introduction of commercial and genetically modified seed varieties, seed saving methods such as kitchen smoking (moshi in Swahili), preservation with ash and cow manure, and the use of calabashes to keep seeds have perdured.

Scarcity, cash constraints and the logistics inherent to buying seeds further deepen farmer's dependency on the market. In this regard, seed saving has become crucial for Nakuru farmers to become self-sufficient, even in times of drought and hunger. Several farmers reported having stopped using commercial hybrid seed varieties, which cannot be saved and replanted and need chemical sprays and fertilizers to grow properly. Once introduced to seed saving methods, farmers have learned about seed varieties that adapt to the harsh weather conditions in Nakuru, especially in the dry areas of Kikopey and Gilgil. In learning by doing, farmers have developed efficient and creative ways of observing, marking, extracting, and multiplying the best seeds, no longer needing to buy them or spend on chemicals and fertilizers and are one step closer to self-sufficient farming practices.

Through SSN's capacity building trainings, all farmers that took part in this exploratory study now have their own seed banks, individual or shared. Ranging from well-established spaces where farmers save, document, label, and exchange seeds. (See Francis Ngiri's Eden Farm Seedbank, Beatriz Wangui's seed bank and Kikopey Wakulima Self-Help Group seed bank) to smaller labeling systems in recycled recipients, all farmers extract and save the seeds they use to plant and grow what they eat and sell. With a few exceptions of seeds that are difficult to extract and multiply -such as cabbage and spinach-, all other crops included in Table 1 (Crop table) are part of farmer managed seed systems. Big or small, these systems function as a hub for knowledge sharing and community-building in rural areas.



Francis Nguri's Eden Farm Seedbank



Kikopey Wakulima Self- Help Group
Seed Bank



Beatriz Wangui's seed bank.



2.3 SEED AMBASSADORS COMMUNITY

Introducing knowledge and skills at the grassroots is key to ensuring agricultural innovations' replicability and sustainable growth. SSN work with farmers in the past 10 years has fostered the creation of a farmer's network grounded in principles of solidarity and trust. In this process, ten highly engaged farmers from different villages in Nakuru county have become Seed Ambassadors (SA). SA are farmer leaders who have been trained and master seed saving and other agroecological practices, and who have shown an interest in disseminating such practices using the farmer-to-farmer extension (FFE) model.

Access to knowledge and practical training has proven successful in farmer's adoption of regenerative agriculture methodologies. Using the FFE facilitates the spread of information and incorporates joint learning, feedback, and local knowledge as key principles for community building. Contrary to a top-down approach, the FFE leverages farmer's traditional knowledge and information and builds on local conditions and practices already known to farmers. SAs are responsible for ensuring a farmer-centered approach which recognizes farmers as main stakeholders. This inclusive, low-cost model has a multiplier effect that ensures the successful dissemination of agroecological practices in rural areas. Graph 1 shows the Seed Ambassadors Community Vision as expressed during farmer meetings and trainings.

2.4 SEED AMBASSADOR CRITERIA

As farmer leaders and trainers, Seed Ambassadors (SA) are fundamental for the Seed Savers community. The following criteria has been co-created for and with current SAs.

1. Practitioner of seed saving, organic farming, and/or other related regenerative agriculture techniques.
2. Ability and willingness to train 40 farmers each month. Individual farmers groups can be repeated, but training topic must be different.
3. Successfully establish 2 seed banks annually. Seed banks must have its own representative.
4. Ensure that 50% of those individual farmers (20 each month) that have received training throughout the year successfully adapt seed saving and/or biointensive gardening technologies (sunken beds, multistory, food forest, hugelculture).
5. Agree to take lead on advocacy work related to seed saving practices, agroecology, and food sovereignty.
6. Ability and willingness to record and report training activity in Seed Savers Report Book.
7. Ability and willingness to join a Whatsapp group as a forum to share images, reports and maintain contact with other Seed Ambassadors.
8. Attend SA monthly meetings and come prepared to present main challenges and opportunities experienced in the last month.
9. Ability and willingness to participate in the Seed Ambassadors Exchange program. Seed Ambassadors Program seeks to bring the SA community closer through experience and knowledge exchange. Each SA will be responsible for conducting at least 2 trainings exclusive for other SA on a particular ability relates to agroecology practice. SA must propose idea to SSN's staff with a month's advance. Examples of potential knowledge exchange topics include i.e production costs and record keeping, vegetable drying and crushing, creative multistory building, enhancement of pest management, negotiation skills
10. Possibility of being nominated to participate in a third-party training, conference, working group, travel, etc.
11. Facilitation to organize 4 trainings each month.

organic food to be the most desired in Kenya

change current conventional farming techniques

help farmers ass value to their products

creativity and innovation applied to agriculture

strong farmer's network with barganing power

conform a sacco

Seed Ambassadors Community Vision

join forces as organic farmers

to be recognized as life-uplifters

lifting livelihoods

seed banks established in every corner in Kenya

become a leading community on organic farming

expand market access

Providing information and understanding on organic practices to
communities

uniting voice in advocacy

Chart 1



2.5 PARTICIPATORY ACCOUNTABILITY SYSTEM



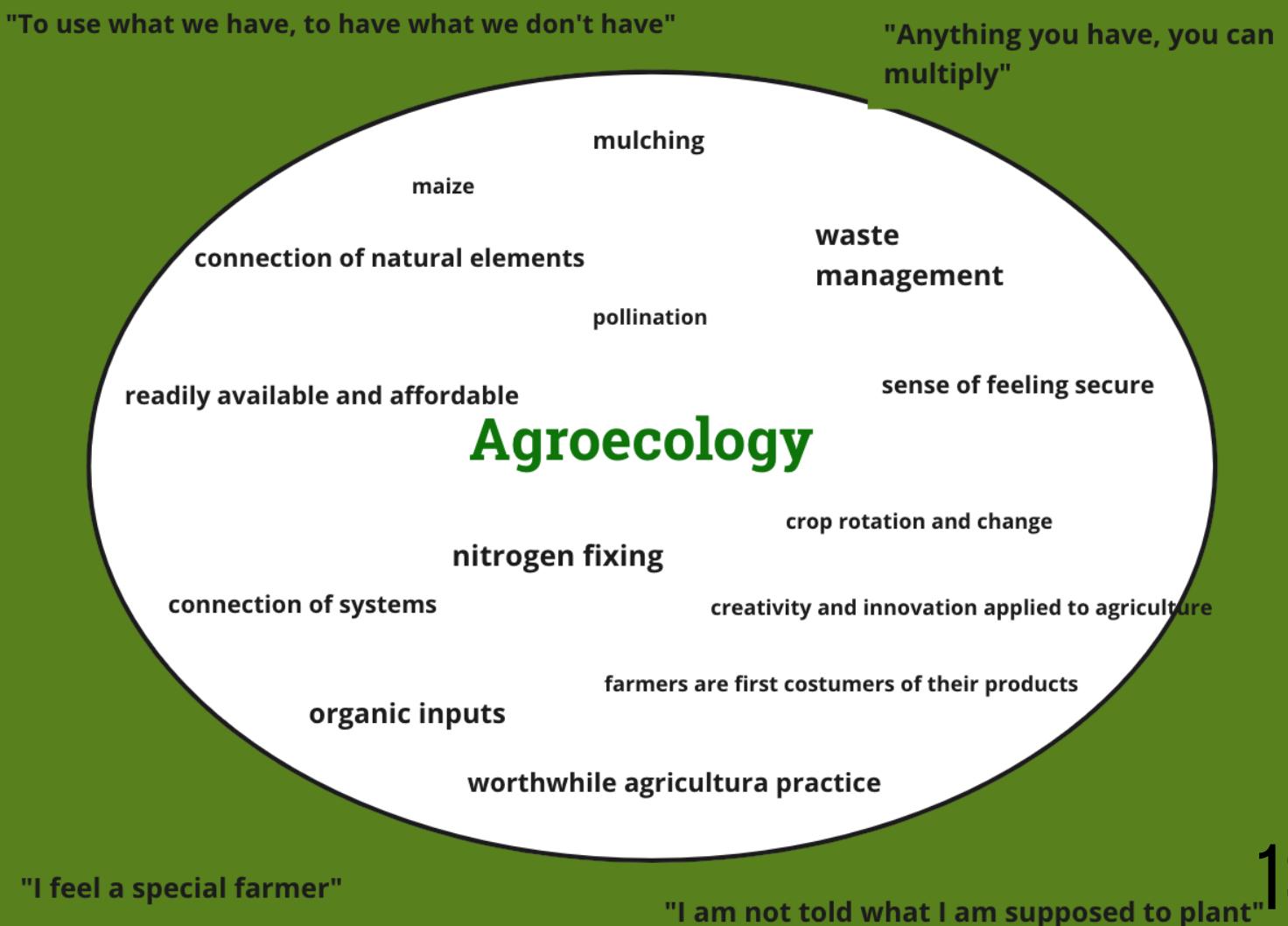
Third-party organic certifications are not only costly, but often neglect local practices and knowledge. Seed Savers Networks Participatory Accountability System (PAS) is a local and context specific quality assurance system, developed by and for SSN farmers. To ensure the benefits of agroecological practices are fairly reaped by both producers and consumers, PAS strives to ensure small-scale farmers can produce, consume, and sell safe and healthy food at a fair price for all. This certification system aims to serve as both a guide for agroecological farming practices for small-holder farmers and to hold SSN's member farmers accountable for the quality and authenticity of such practices.

The PAS was co-created by SSN staff and member farmers to ensure a non-hierarchical certification model with active input from all stakeholders. Based on peer reviewing and knowledge exchange, PAS is based on the belief that ownership and active participation of stakeholders is key to ensure a transparent and efficient mechanism. The required guidelines, standards and sanctions are built on the foundation of knowledge exchange, solidarity, trust, and community building. The guidelines and standards of this peer-reviewed system is adopted through a pledge, and farmer's groups are responsible of creating their own Monitoring Committee and Disciplinary Committee to ensure adoption and compliance. The Agroecological Practices required from farmers to comply with are categorized under the following eight categories: land preparation, land cultivations, seeds, planting and weeding, pest control management, crop diversification, irrigation and harvesting and packaging. All farmers participating in PAS should be trustworthy, open and ready for peer review by the other farmers. Lastly, non-compliance means that further training on Agroecological Practices is needed. Review process should not be targeted at a punishment, but rather at the opportunity for improvement.

MOVING TOWARDS AGROECOLOGY MARKETS

3.1 WHAT DOES AGROECOLOGY MEANS TO FARMERS?

The understanding of agroecology and the farming and living practices that compose it must stem from farmer's knowledge and vision. In line with this approach's idea of social and environmental integrity, we believe that the principles of agroecology must be shaped by farmer's experience and knowledge. Pushing away from external and often foreign meanings of regenerative agricultural practices, we believe the characterization of agroecology and its practices must come from the experts themselves, that is, the farmers whose daily work considers the integration of natural elements into farming practices that advocate for the environment and for farmer's rights. Graph 2 shows what agroecology means to SSN's farmers, including the ideas, practices and notions farmers directly relate to this approach.



3.1 CHALLENGES AS PERCEIVED BY FARMERS

Small-scale farmers in Nakuru face challenges that range from extreme weather conditions, to economic constraints and obviously, access to fair markets. Nevertheless, beyond the more obvious challenges faced by farmers in Kenya's rural areas, understanding the subtleties that farmers in Nakuru face can hint to more sustainable solutions and the construction of local market opportunities. The following information is meant to provide an overview of the main constraints as perceived by farmers themselves.

PRICING

Prices in Nakuru are highly seasonal, and the months of () the market floods with the same products, offering very little room for farmers to set their price. Most farmers do not know how to keep production costs and are constrained to inform the price of their crops by the in-person research they do when going to open-air markets. Often finding themselves at a loss, they even mention not trying to keep production costs in fear of realizing how much they are losing in their farming activities. During planting season farmers have little to no cash, which is why seed saving has become one of the most important agroecological practices in their farming methods. Overall, farmers consider themselves price-takers, and note having to settle for the price provided by either middleman or the markets.



INFORMATION ACCESS AND CONSUMER AWARENESS

Price differentiation for agroecologically grown products in rural areas is a challenge. Although no consumer evidence was gathered, farmers report their clients lack the necessary information to differentiate between agroecologically grown products and others, and consumption preferences are only guided by prices. Although organic products are being sold at higher prices in more urbanized areas, lack of consumer awareness about food safety and health has pushed Nakuru farmers to sell their products at market price, and sometimes even less.

MIDDLEMAN

Farmers mention middleman as one of their biggest challenges. Middleman, who usually have better access to transportation and storage means than farmers, tend to set low prices and refuse to buy farmer's products if price is not met. Middleman don't consider how crops are grown and value equally between organic and inorganic. Furthermore, farmers mention their products are not fairly weighted by middleman.

CLIMATE CONDITIONS AND WATER

Farmers choices are determined by the climate and water conditions; the smallest change in weather patterns has an enormous effect in farmer lives. Farmers report increased uncertainty of when rains will come, which adds stress to farmer's lives and pushes soil health to new limits. This year's (2021) lack of rain has caused major loses in basic crops, such as maize and beans. The latter has a direct effect on farmer's ability to save seeds, since only with a good harvest are farmers able to save the seeds they need for the next planting season. Furthermore, farmers are only able to afford to hire casual labor for 2 or 3 days a year when rains are abundant, and harvest is good. Most farmers own small tanks and water harvesting is only practices in small areas using gutters and simple buckets. Thus, loss of crops due to water scarcity is a major challenge.



PERISHABILITY

Although perishability does not present itself as a main challenge, farmers to not have access to storage, which eventually forces them to sell at the prices dictated by the market at the moment of harvest, when prices are usually not competitive. Currently, farmers are not adding any value to their produce nor preserving or drying vegetables but mention the latter practices as possibilities to sell their products at better prices.

TRANSPORTATION

Farmers rely on boda-bodas and matatus to transport their products, incurring in costly and often cumbersome logistics. Those farmers who do transport their produce and decide to sell in open-air markets, mainly in Gilgil and Nakuru, mention having to compete with farmers using boosters and chemicals to make their produce more appealing,

3.1 FARMERS' COMMENTARIES

Ensuring Nakuru farmer's voice and work is included in the search and development of agroecological markets is crucial for the creation of sustainable and just income generating alternatives. The following commentaries and images were collected during interviews, focus groups, farmer's meetings, and site visits.

"My homestead has become a learning institution"

"When you are using commercial seeds, you have to keep money in your pocket"

"We farmers don't have a say in the price we sell"



"When planting inorganically, you have to think about chemicals the moment you plant a seed."



“Seed Savers transformed us to farmers who used to buy seeds from the agrovets to farmers who save seeds”

“I feel proud, not necessarily because of the money, but knowing that what I am growing is good. I am satisfied and happy”



3.4 WAY FORWARD

Respect for traditional farming systems and ability to grow and consume healthy and safe food must be the guiding principles for the construction of agroecological markets. Beyond pricing and selling, the following set of recommendations emphasize the needed conditions and social structures for farmers' products to be valued in a just and equitable way.



CREATING AWARENESS

Information about the social and environmental benefits of growing agroecologically must be available to both producers and consumers in an equitable manner. Awareness and information sharing about the benefits of agroecology is fundamental for the continuation of agroecological practices by small-scale farmers. The development of just markets that respect the environment and value farmer's rights depends on the ability of main stakeholders to understand and disseminate the benefits of having a diversified diet and of conserving local varieties. Conducting public awareness campaigns can further enhance local authorities' capacity to develop local policies that support small-scale farmers' work.

INCLUSIVE AND EQUITABLE BUSINESS MODELS

The effective inclusion of small-holder farmers into just markets has proven to be one of the major challenges Nakuru farmers face. Organic and fair-trade registration systems in Kenya are often tailored for commercial agriculture, which have a much bigger scale and capacity than the small holder farmers that make up most of the agricultural production in Nakuru. The creation of the Participatory Accountability System is meant to ensure farmers can demonstrate the quality and safety of the food they are producing in a collaborative manner.

Although this collaborative third-party certification system is a work in progress, it facilitates farmers' entry into existing local agroecological markets, and expands their possibilities of selling non-perishables (such as chia seeds and hibiscus) in urban markets.



BUILDING ON EXISTING SOCIAL NETWORKS

Over the past 10 years SSN's farmers have been able to develop a sense of community and exchange knowledge and experience to improve their farming and seed saving techniques. Existing social networks among famers must be leveraged to strengthen collaboration and solidarity when venturing into new business opportunities that might create a conflict of interests. Promoting spaces where farmers can share their experience and challenges openly will prove valuable for transparency and accountability issues. Moreover, farmers are aware of the social and environmental benefits of their farming practices and reported feeling proud about being stewards of their own natural resources. Business models must be unique to each 'set' of farmers or farmer's groups depending on production and organization levels. In this regard, branding and marketing identities must be co-created with farmers, and the end price and destination of their produce must be known. Lastly, involving more youth in the Seed Ambassador Community will be crucial to maintain the vitality in Nakuru farmer's agroecological practices and the sustainability of their new business ventures.



BARGAINING POWER

In Nakuru, intermediates or middleman are considered as unfair by farmers, and relying on these actors to sell their products very often leaves them at a loss. The value of agroecological farmers' products must be understood as a process instead of as a given number. In the construction of agroecological markets, farmers must have a say in pricing their goods, and account for the value of their labor, which is often neglected. Considering the quality and benefits that each product provides to its producers and consumers alike is key in price-determination. Therefore, price setting and information dissemination about the benefits of agroecological practices must go hand in hand. The creation of price-setting committees amongst farmers groups and within the Seed Ambassadors Community will enhance bargaining power and their ability to determine their own prices

TIMED FARMING AND CROP DIVERSIFICATION

Most farmers used to rely on planting maize and beans, and crop diversification has helped in the expansion of farmer's market possibilities. Besides preserving soil fertility and combating erosion, intercropping and crop rotation allows farmers to expand their market possibilities. Given the traditional planting and harvesting seasons have been altered by climate change, and rains have become increasingly unpredictable, the development and adoption of water harvesting systems is necessary in Nakuru. By upcycling and expanding the current gutter harvesting systems most farmers report using, times farming and crop diversification can further enhance. Water availability during dry periods can allow for times farming, and reduce farmer's dependency on seasonal vegetables and fruits, which are often sold at low prices during 'market floods'.

