

Assessing the impact of farmers' indigenous seeds and seed conservation practices in Nakuru county, Kenya

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Introduction

Farm-saved seed is existential for agriculture and nutrition in Kenya. Genetically, local cultivars are the result of generations of farmers' intuitive knowledge in plant breeding.

Local cultivars are insufficiently described and threatened with extinction for many reasons:

- **Low attention to local varieties and orphan crops**
- **Little effort towards developing farmer-led plant breeding**
- **Appropriation of traditional seed seed by companies and by research institutions**
- **National law restricts farmers' rights to share and sell own seeds**

Seed Savers Network Kenya together with Agrecol test the suitability of a commons approach, that enables free access via an Open Source Seeds (OSS) license introduced by Agrecol in Germany a few years ago. The concept of OSS is explained quickly via scanning the link to the following 1 minute video.



Results

Improve Seed Access and Food Security to revive the Commons

Criteria	2022	2023	2024
Very good food security	15%	56%	100%
Growing at least 17 different crops	2%	51%	99%
Growing at least 3 drought tolerant crops	10%	39%	92%
At least 5 fruit trees on farm	14%	47%	92%
Production at least 3/4 of food needs up to next season	14%	30%	100%
Strong culture of seed sharing	8%	47%	99%
Average	11%	45%	97%
N	131	131	158

Farmers that advance from subsistence to seed production for sale

Crops	2022	2023	2024
Maize	1%	3%	72%
Beans	8%	24%	88%
Potatoes	5%	22%	68%
Black nightshade	1%	13%	61%
Garden peas	1%	22%	67%
Average	3%	17%	71%
N	132	132	159



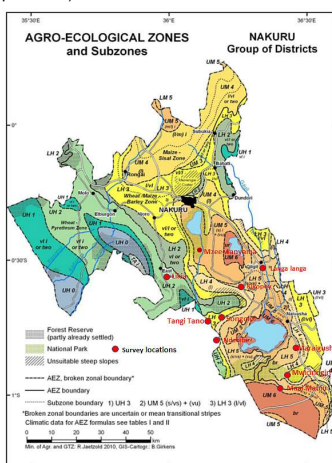
Crops tested in the field for cultivar description

Crop	Cultivars	OSS descriptors
Sweet Potato (<i>Ipomea batata</i>)	11	20
Irish Potato (<i>Solanum tuberosum</i>)	8	23
Pumpkin /Cucubita maxima	8	24
Bean (<i>Phaseolus vulgaris</i>)	7	19
Bean (<i>Phaseolus coccineus</i>)	7	19
Spring Onion (<i>Allium fistulosum</i>)	5	14
Black Night Shade	4	19
Tomato (<i>Solanum lycopersicum</i>)	4	24
Garden Pea (<i>Pisum sativum</i>)	4	21
Swiss Chard, (<i>Beta vulgaris</i>)	4	12
Total	62	195

- The OSS characterization acted like a farmer field school. Farmers became highly motivated, and the learning exceeds the simple description of plants by far.
- The combination of seed banking and characterization of crops brings much more diversity back to the villages.
- Farmers realize that more varieties help them to overcome the challenges of climate change.

Materials and methods

- Data collection from 2022 to 2024.
- Seed study with 244 farmers (68% ♀ and 32% ♂ respondents).



- Characterization trials in 13 villages. 10 crop species with a total of 62 local varieties. Each cultivar was planted in 2 locations.
- Rainfall highly variable from 600mm to 1200mm.
- Altitude between 600 to 2400 metres. Temperature ranging from 24 to 26 C.

Farmers' views



Pauline Njeri (63) and Alice Wanjiru (64) from Langalanga village talk about women's roles in food production:

"without farming we will have no food, and without women we will not have farming. Women do the saving of seeds, making sure that there is enough manure, and making the compost. We do the planting, weeding and harvesting alone. Women have the commitment to take care of the crops. We have a saying that if you get tired, then you don't get anything to eat."

Judy Waitherero (61) and Naomi Waithira (70) from Kikoey share some of their hopes on new varieties:

"we hope to know the differences in varieties, to describe them, learn which seeds grow well here, what variety the soil can support. We learned which can grow fast, how to distinguish all of the varieties, and in particular to see what happens where there is not enough water. Now we can even train other farmers." They find seedbanks very useful: "local seeds are reliable to germinate; this is our guarantee that it will produce; we don't have to look for cash to buy the seeds, when it rains, we pick the seeds from the seedbank and plant. This is the most important thing for us, our joy."

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