News

Cecilia is the next MSc student to graduate in Drylands Transform

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Cecilia Ward received one of the last Minor Field Study scholarships at SLU in 2022. She used it to gather data for her MSc thesis within the Drylands Transform project in Kenya the year after. Now she is presenting her work on 3rd of June 2024 at the Crop Production Ecology Department, SLU.

Information about the presentation

The title of the thesis is:

The knowledge spread and role of kitchen gardens in Kenyan drylands - Including a fertilising experiment with human urine

Venue: Zoom (ask contact person for the link) or F4 in ecology building, SLU Uppsala
Supervisors: Ylva Nyberg, SLU; Kristina Lindvall, Umeå University; Stephen Mureithi, University of Nairobi

Abstract

Drylands covers nearly half of the earths land surface and is home to one third of the world's population, i.e. 2 billion people. Poverty and food insecurity precipitated by land degradation and climate change is not uncommon which leads to malnutrition and other health risk factors for the

people. People have lived in the drylands as pastoralists for many years but the development of increased population, climate changes and conflicts have caused more and more people to seek alternative livelihoods. A large proportion suffer from malnutrition based on lack of variety of the food intake. The farming situation in drylands is mostly based on staple crops as sorghum, millet, and sunflower, which are adapted to the climate and are both highly ranked in their cultural food, and the crop residues can be given to livestock. However, the periods of drought and flooding disturbs the fields more than it should, due to the degradation and instability properties of the soils. To build up and restore the lands and soils again will need both new and old methods to play a role to reduce the vulnerability of farmlands to weather factors.

The results are based on data from individual interviews, a field experiment and a large household survey dataset. The objectives of this study were to understand whether there are differences in food intake and food security in households having a kitchen garden; how the knowledge of kitchen garden farming is shared within the community and to examine the effect of human urine on the growth of kitchen garden vegetables. Data collection was carried out in West-Pokot and Turkana Counties in northern Kenya, as well as in Moroto and Napak districts in Uganda. The fertiliser experiment was carried out in West Pokot County only. The results showed differences between the areas in consumption of vegetables, and Turkana had a significantly higher number of households worrying about having enough food, compared to the other dryland areas. 35% of those that were worried about having enough food had a kitchen garden while it was significantly more (65%) having kitchen gardens among the households who had no worry about having enough food. The vegetable growth experiment did not show any significant results, probably due to poor germination caused by delayed rains. The knowledge sharing process and the adoption of halfmoon-shaped kitchen gardens had spread among the trainer of trainers but not yet in the communities.

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Cecilia in front of some of the half-moons under preparation. The half-moon structure is developed to help the soil hold water longer due to the short rainy periods and the erosion-prone soils. Photo: Ylva Nyberg

Cecilia in front of two photos at the livestock café showing the land before and after the initiation of the project. Photo: Ylva Nyberg

During the field work, the team from Drylands Transform that carried out the household survey were also in the field. Cecilia and Caroline are discussing the different methods used in the project. Photo: Ylva Nyberg

Facts:

Drylands Transform

Drylands Transform (DT) is a research project led by the Swedish University of Agricultural Sciences (SLU) in partnership with an interdisciplinary team from the Intergovernmental Authority on Development (IGAD), Linnaeus University, Makerere University, Umeå University, University of Gothenburg, University of Nairobi, and World Agroforestry (ICRAF).

Visit the website for Drylands Transform.

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Links:

The thesis The knowledge spread and role of kitchen gardens in Kenyan drylands - Including a fertiliser experiment with human urine