



Food Justice Project

Agroecology in the City

Haki Talk Series



Soil Health Dialogues

Kangemi Primary School
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Abbreviations

COK: Constitution of Kenya

ESCR: Economic Social and Cultural Rights

4K: Kuungana Kusaidia Kujenga Kenya

KPL: Kenyan Peasants League

Background

Soil is the most important element when it comes to food production. Various soil types have different characteristics and different crops thrive well in different soil types. Examples of types of soil were listed as; loam, sandy and clay soil. Health is part of promoting the right to food. Article 43 (1) (c) of the Constitution of Kenya(COK)-2010, on the Social and Economic Rights(ESCR) states that 'every person has a right to be free from hunger, and to have adequate food of acceptable quality'. For children, nutrition is very important to enable them stay health, strong and to grow. Good nutrition, derived from healthy food also helps children concentrate in class.

Introduction

On 8 January 2021, Kenyan Peasants League -Women's Collective organised a session on soil testing for primary school pupils at Kangemi Primary School. Haki Nawiri Afrika provided technical support in terms of training. The forum brought together 10 participants (4 primary school pupils,6 adults including a school teacher of whom 3 were youth). This is part of an initiative of the 4K Club. The practical skilling on soil health was part of the Haki Talk Series because food is a human right.

School Garden-Kangemi Primary School



Rationale for Soil Health Dialogue

Soil health dialogue aims at raising consciousness among communities about their soil. It involves understanding characteristics of soil, improvement of soil fertility and relationship between soil fertility and agroecology. The Soil Health Dialogue also aimed at imparting knowledge to the school on how to handle soil to ensure healthy food and healthy soil. It was also an opportunity to introduce agroecology to the pupils as well as change the attitude of young people towards farming.

Land preparation



Characteristics of soils

The first session involved a discussion on various types of soils and their characteristics. It was said that the existing characteristics of a soil determine the crops to be grown on that soil. The key characteristics looked at were water retention capacity and texture.

Understanding soil health and soil texture



The characteristics of soil were described as follows:

Sandy Soil	Loam Soil	Clay Soil
<ul style="list-style-type: none">• Low water retention capacity• Sometimes has huge particles other times has soft texture• Low moisture content	<ul style="list-style-type: none">• Good water retention• Contains more moisture• Better drainage system	<ul style="list-style-type: none">• High water retention• Sticky when wet• High moisture content• Low drainage system

It was said that in terms of food production, the best soil is loam soil.

Vegetables grown by pupils at Kangemi Primary School



Agroecology and Soil Fertility

Agroecology was described as originating from two words agro and ecology meaning agriculture and environment. It was mentioned that agroecology is not just about food but also about livestock. The participants were then taken through the principles of agroecology as follows:

- Adapting to local environments
- Providing the most favourable soil conditions
- Promoting biodiversity
- Enhancing beneficial biological interactions
- Minimising losses of energy and water
- Minimising the use of non-renewable external resources
- Maximising the use of farmers' knowledge

Linking agroecology, soil fertility and food production



Rationale for Soil Health Dialogues

Soil dialogues enable sharing knowledge and information about soil. It was mentioned that the dialogues provide a platform to connect young people to the soil. It was said that many young people do not like agriculture despite the fact that everybody is a consumer of food. It was mentioned that it is important for young people to understand soil because, healthy soil. It was described that soil health dialogue aims at creating a platform for learning about soil and at the same time for acquiring information on how to improve our soils. It was explained that soil health also helps in deliberating on how to heal soils including observing changes that take place in our soil.

It was said that soil is an interaction between plants, micro and macro -organisms, roots and nutrients. It was mentioned that soil is a living organism and that is why soil fertility is important at all levels.

Deliberating on Importance of soil health



The participants were then taken through various basic soil testing methods as follows:

Observation of macro-organisms

This was done to identify any living matter on the soil. It was said that presence of earthworms in the soil signifies life. It was emphasized that the most important part of the soil is the top soil which enables food production because of presence of nutrients. It was said that earthworms aerate the soil when they move beneath the surface of the soil, they also enable water penetration as well as distribution of nutrients in the soil. It was said that to observe micro-organisms and other forms of life on the soil, a microscope would be used. It was mentioned that other matter observed on the soil include presence of leave and roots.

Observing macro organisms on the soil



Preparing a Ribbon



Soil properties



Mulching and soil cover

It was said that top soil also mentioned that soil should be kept covered using mulch (grass or green manure). It was explained that mulching helps in retention of water and prevents evaporation during dry seasons.

Planting done by a pupil and a teacher



Soil health and chemical use

It was mentioned that use of fertilisers on the soil is responsible for toxicity and this kills living organisms in the soil. It was said that when chemical fertilisers are used on the soil, these find their way to the food we eat as well as rivers or other water bodies during water and wind erosion. Should be protected at all times from water and wind erosion. It was emphasised that every process on the farm should be done at the right time on the farm. It was said that disrupting the farm's calendar can result into weed infestation on the farm. It was pointed out that to ensure healthy food the soil must be free from chemicals and that the seeds should be indigenous because they are healthy, nutritious and more resilient to climate change.

Food and Education

In wrapping up, it was said that there is a direct correlation between access to food and education. It was mentioned that when children have access to food, their development is assured and they can concentrate in class. It was said that school gardens can provide vulnerable families with sources of food especially vegetables. It was also mentioned that vegetables from school gardens can be sold to local communities and proceeds used to support vulnerable pupils.

Conclusion and Way Forward

The dialogue achieved the set objective of sensitizing school pupils, members of the 4k club about soil and soil health. The pupils and their teacher reported having learnt new skills and gained new information. It was agreed that another session would be held to bring more pupils. It was also concluded that apart from food production, other sessions on human rights and mentoring would be held with the pupils and that Kenyan Peasants League would be organizing sessions on mentorship for the boy child and would be inviting pupils from Kangemi Primary School.