

BRIDGING DRY SPELLS FOR HIGH VALUE VEGETABLE CROPPING THROUGH SUPPLEMENTAL DRIP IRRIGATION

CHUMVI VILLAGE IN LAIKIPIA COUNTY, KENYA

16TH - 17TH NOVEMBER 2021

Title of the field/outreach activity

BRIDGING DRY SPELLS FOR HIGH VALUE VEGETABLE CROPPING THROUGH SUPPLEMENTAL DRIP IRRIGATION: The case of the agro-pastoral communities of Chumvi village in Laikipia County, Kenya

by **CKK Gachene, PI, NRF Project**



a)



b)



c)

The farmers are experiencing a number of challenges, among them, *lack of good water for irrigation (a)* and *Green algae and silt ladden dam(b)* and *human – wildlife conflict (c)* where for instance, this farmer's crop of miraa, sugarcane and bananas were destroyed by elephants. The research team, led by Prof CKK Gachene (in a white T- shirt) plans to install 1/8 acre plot drip irrigation system. Soil and water samples were collected for assessing their suitability for irrigation.

Brief background and Description of the activity

Kenya is one of the countries most vulnerable to climate change and with least capacity to respond. The nature of Kenya's agriculture, primarily rain-fed, means that production is sensitive to fluctuations in rainfall. In particular, agro pastoralist communities residing in Kenya's arid and semi-arid lands and whose livelihoods highly depend on natural resources are among the most vulnerable to climate change. Potential adaptation strategies such as use of fertilizers, altering planting dates and supplemental irrigation have been suggested to offset negative climate change impacts on food security. This study is been conducted in the agro pastoral production systems in Laikipia County. The project team has hypothesized that due to current rainfall variability, crop production in agro pastoral production systems is limited by drought stress, notably by long dry spells during the critical crop growth stages and that using supplemental drip irrigation is a viable option for bridging dry spells in the Laikipia County.

<p>Project partners</p> <p>The project is multi-institutional and multidisciplinary in nature, involving the a) University of Nairobi, b) Kenya Agricultural and Livestock Research Organization, c) Zeitz Foundation, d) Centre for Training and Integrated Research in ASAL Development (CETRAD), e) farmer groups and f) extension staff at County level.</p>	<p>Objective(s) of the field trip/Activity</p> <p>The first phase of this study involved familiarisation of the project site and holding initiation meetings with the potential stakeholders.</p>
<p>Key Messages</p> <p>There are organised farmer groups that have started practising irrigated agriculture in the surrounding areas. Source of water is mainly from rivers whose source of water is from Mt Kenya. The farmers seem to target two high value vegetable crops, namely onions and tomatoes. Most of the harvested water has grown algae and the recently constructed dam, is heavily silted. This no doubt will affect the type of irrigation system to be used. What came out clearly is that the farmers need training in proper soil and water management practices.</p>	