

Workshop: Mainstreaming indigenous fruit trees and food crops for building resilient food systems

Date: 26 August 2022

Venue: University Venda, Limpopo

Time: 0900hrs to 1600hrs

Background

Interest in indigenous fruit trees and food crops has increased in recent years, particularly in arid and semi-arid regions where water has become severely scarce. The promotion of indigenous fruit trees and food crops in water-scarce regions is motivated by the fact that they are adapted to local harsh climatic conditions and offer more ecologically friendly forms of agriculture. Yet, the major commercial crops are increasingly becoming less resilient to worsening climatic conditions. Previous research by the Water Research Commission (WRC) and its strategic partners have shown that indigenous fruit trees and food crops are nutrient-dense, use less water, and contribute to food and nutrition security. Given the need to increase food production by 50% by 2050 under climate change and population growth, current major food crops may not be able to meet projected future food demand. Thus, the need to develop innovative strategies that broaden the current food basket and contribute to future food security in water-scarce regions.

As one of 17 megadiverse countries in the world, South Africa boasts a rich tapestry of agrobiodiversity of which underutilised fruits and crops form part. Indigenous fruit and crops are regarded as ‘future food’ as they are earmarked to sustainably address topical challenges like food and water insecurity under climate change. They can enhance food and nutritional security, resilience, and adaptation to climate change, reduce environmental degradation, stimulate the local economy, and promote employment in poor rural communities.

Over the last decade, the WRC has funded research on (i) drought tolerance and water use of underutilised crops, (ii) water use and nutritional water productivity of indigenous leafy vegetables, (iii) water use of indigenous cereal and legume food crops, (iv) water use of indigenous root and tuber crops, and (v) water use and nutritional value of indigenous fruit crops. The evolving research has focused on (i) identifying the potential of underutilised fruit trees and crops under water scarcity, (ii) determining their potential to contribute to a water-food-nutrition-health nexus, (iii) assessing the opportunities, and (iv) challenges that exist for their promotion. Results showed that indigenous food species are the product of generations of landrace agriculture and are resilient and adapted to the needs of farmers in marginal agricultural environments. Their suitability to niche marginal and low input environments and association with specific gender roles offers economic opportunities in poor rural communities. Evidence also suggested that including indigenous fruit and crops in cropping systems could contribute to agro-ecosystem and dietary diversity to improve nutrition. Their economic and food security potential and status as a subset of agrobiodiversity offer an opportunity to address several of the Sustainable Development Goals (e.g., SDGs 1, 2, 3, 8 & 15). Given that South Africa continues to be affected by poverty, food insecurity at the household level, inequality, climate change, etc., there is a need to consolidate these research gains to sustainably address the poverty-unemployment-

inequality nexus in marginal rural households. Given the government's initiative to reduce poverty and hunger, promoting underutilised crops as part of dryland and irrigated agriculture should contribute to sustainable livelihoods.

Workshop aim

This workshop aims to initiate the research agenda on mainstreaming indigenous underutilised fruit and crops into the main food system and to assess their value as an alternative to water, food, and nutrition security in water-scarce regions.

Expected outcomes

- Develop a research agenda on mainstreaming indigenous underutilised fruits and crops into the main food systems
- Identify the challenges and opportunities of existing research gaps.

Programme

Facilitator: Prof Sylvester Mpandeli

| Time | Topic | Speaker |
|---------------|--|---|
| 09h00 – 09h20 | Welcome – objectives of the workshop | Prof Sylvester Mpandeli |
| 09h20 – 10h00 | Keynote address & Q & A Mainstreaming indigenous fruit trees and food crops for building resilient food systems | Prof Albert Modi or Prof Tafadzwa Mabhaudhi |
| 10h00 – 10h10 | Comfort break | |
| 10h10 – 12h00 | The role of indigenous underutilised fruit and crops under climate change and increasing food demand and depletion. Presenters: Dr. Shonisani Ramashia: Presentation title Dr. Sebinasi Dzikiti: Water use-yield relationships of selected indigenous fruit tree species Prof Tafadzwa Mabhaudhi: Presentation title | Session 1: Facilitator: Dr Samkelisiwe Hlophe-Ginindza |
| 12h00 – 12h45 | Lunch | |
| 12h45 – 14h30 | Session 2: Panel Discussion Facilitator: Dr Luxon Nhamo Main Presenter: Prof Kingsley Ayisi Title: Mainstreaming indigenous fruit and crops into the main food systems | Panelists: Mrs Moloko Mojaepelo Dr. Hintsa Araya Dr. Khathu Tshikolomo Dr Binganidzo Muchara |
| 14h30 – 14h45 | Comfort break | |
| 14h45 – 16h00 | Inputs from key strategic partners: LDA, UNISA, UNIVEN, ARC, UKZN, University of Fort Hare, Stellenbosch University, DALRRD, WRC, Municipalities (Vhembe, etc) | Session 3: Facilitator: Dr Luxon Nhamo |
| | Reflections on the day and Way forward | Prof Stanley Liphadzi |

Who should attend?

All stakeholders in the Water, Health, Agriculture, Biodiversity, Environment, and local government sectors, including members of communities of practice, government departments, academics, water catchment management agencies, non-governmental organisations representatives, and businesses, should attend.