



Sep.19-23 Tropentag 2023

The Role of False Banana (*Ensete ventricosum*) for Sustainable Agriculture in Ethiopia

By: Melesse Zeleke Agegnehu

Debre Markos University in Ethiopia,
Department of Agricultural Economics
Email: melesezeleke9@gmail.com or
melessez.agegnehu@gmail.com

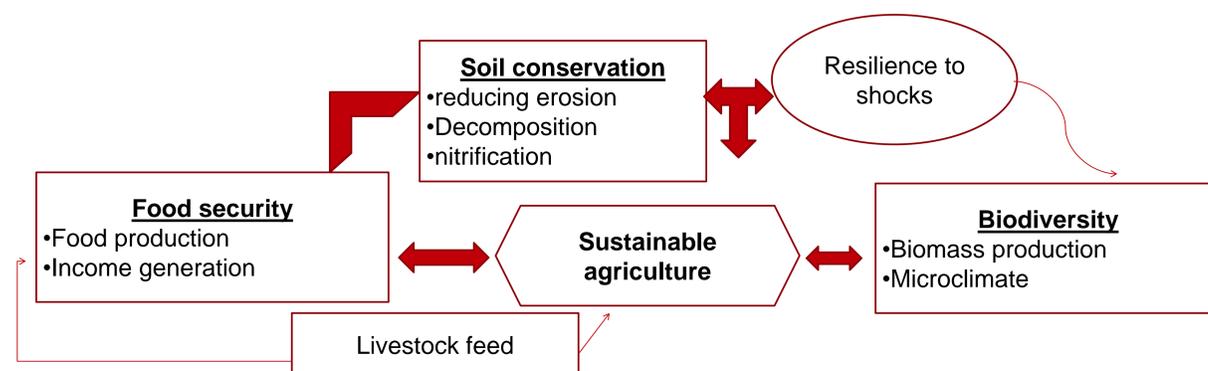
Introduction

- ❖ Agriculture is a crucial part of the economy,
 - 75% of Labor, 40%GDP, & 80% foreign exchange.
 - Inefficient smallholder farming = food insecurity and poverty
- ❖ Good Agricultural Practices like agroforestry systems, and planting food forests,
 - Regenerate food systems, restore degraded lands, reduce rural poverty; foster climate change mitigation and contribute to biodiversity conservation. Hence,
- ❖ Agroforestry with 'false banana' contribute to soil fertility, agricultural productivity, and to food security in Ethiopia

This paper aims

- ❖ To discuss on the value of False Banana for sustainable agriculture, and the opportunities and challenges on smallholders' production in the current farming situation of Ethiopia.

Methods: Conceptual framework



Roles of False banana production in Ethiopia

- Important for sustainable production**
 - False banana has a small ecological footprint,
 - producing 2.3 times more/Ha than cereal crops.
 - It can withstand droughts & flooding
 - Provides ideal microclimate for other plants
 - Its roots hold soil and prevent erosion; leaf litter => soil fertility.
 - It is resilient to shocks
- Important for food security**
 - ❖ False banana, "the tree against hunger"
 - It is a staple; 3 main fiber-based food products:
 - *Kocho*, *Bulla*, & *Amicho* (be stored for up to 3 years)
 - ❖ Parts of the plant = cultural medicine.



Figure 1. Production house of false banana in Ethiopia



Figure 2: Importance of false banana as food sources

Challenges of smallholder's false banana production

- ❖ The fermentation process takes >50 days;
 - Labor-intensive and 1⁰ a woman's crop.
- ❖ Lacks Innovative technology, such as pseudo-stem scrapping, bulla processing, and corm milling,
- ❖ Pests
- ❖ Lack of information on its multiple contributions
- End up in lack of local & international organs involvement



Roles of False banana production in Ethiopia

iii. Income generation and other utilities

- ❖ False banana propagates through vegetative cloning; has "the corm", "pseudo stem", & "leaves".
 - All parts are usable as food, feed, or utilities.
 - "No part of the plant went to waste."
 - Its fiber, is used for preparing sacks, bags, ropes, mats, shelter materials, and clothing.
 - Fresh and green leaves are used for animal feed, sheets, wrapping material, and serving plates.
 - It is grown well with animal manure, making it ideal for livestock farmers.



Figure 3: Advantages of false banana as sources of different utilities/materials

How looks the opportunities of false banana production??

- ❖ False banana has been cultivated for 1000 of years,
- ❖ It is a native plant in less arid highlands,
 - with over 20% of population relying on it,
 - 4.4 Million farmers &
 - production of 2.28 Million metric tons/year,
 - 10% of the National Caloric Intake & 20% of the carbohydrate needs
- ❖ Its potential for growth and consumption in the northwestern region (*Gojjam and Awi*) is significant

Conclusion

- False banana is playing a vital role in sustainable farming;
 - Reducing Hunger-income generation,
 - Biodiversity improvement with high resilience to climate extremes.

Remark

- ♦ Research on the biology of false banana, its secrets from fruiting to fungi, various contributions, and the mechanisms behind its resilience is important.

References

- Ashenafi Duguma Feyisa and Yann de Mey and Miet Maertens 2022. Orphan crops and the vulnerability of rural livelihoods: The case of enset in Ethiopia. <https://doi.org/10.1093/qopen/qoac029>
- Brandt SA, Spring A, Hiebsch C, McCabe JT, Tabogie E, Diro M, WoldeMichael G, Yntiso G, Shigeta M. and Tesfaye S. 2001. The 'Tree Against Hunger': Enset-based agricultural systems in Ethiopia. The report with an extensive list of references can be downloaded from <http://www.aaas.org/international/ssa/enset/>

Supported by the



Technology
Arts Sciences
TH Köln