

Participatory Varietal Selection (PVS) and Scaling of Enset landraces

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Introduction

Enset (*Enset ventricosum* also known as ‘false banana’) is a high value crop that provide various products and services. Enset Xanthomonas wilt (EXW) is a major constraint to enset production in the Ethiopian highlands. In recent years, EXW has pushed farmers to reduce enset cultivation, causing changes in cropping systems and dietary practices in enset growing areas. Addressing the disease and improving enset productivity are serious research and development issues in SNNPR.

Method/Approaches

- Assessment of enset production constraints with 240 hhs
- Awareness creation and training on potentials and challenges of enset production
- Identification of 29 volunteer farmers for PVS
- Candidate enset clones for selection by farmers:
 - Released and Recommended clones (Yanbule, Gewada, Kelisa, & Mazia)
 - Selected Farmers’ clones (Gimbo, Gishra, Unjame, Siskela, Merza)
- Criteria for clone selection include earliness, vigorosity, and pseudostem height and circumference.
- Planting of selected clones
- Suckers multiplication

Results/ achievements

- Contaminated tools, diseased plant debris, animals, animal dung and wind are the etiology of EXW (Table 1).
- Improved clones selected by farmers are Mazia (Disease tolerant), Gewada and Kelisa whereas Gimbo, Unjame and Siskela are farmers preferred clones for the PVS.
- Farmers appreciate EXW tolerance, good kocho and bula quality and quantity, early maturity of the improved as compared to the local clones.
- More than 10,000 suckers multiplied by the farmers within two-year time (2017 and 2018).
- Four famers sold 1500 suckers and earned birr 28,700 (USD 1007 at exchange rate of 1 USD= 28.5 birr) at Jawe and Upper Gana Africa RISING research Kebeles.
- The improved enset clones scaled to more than 300 farmers through selling and provision of gift arrangements.

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Key challenges and lessons

- Weak partnerships along value chains to manage EXW wilt.
- According to farmers’ assessment sucker formation capacity of the improved clones is low as compared to the local ones. On average farmers get 120 suckers from the local mother corms and only 50- 80 clones from the introduced mother corms.



Figure 1. Awareness creation and landrace selection for PVS activity in Lemo woreda.



Figure 2. Suckers multiplication for own use and income diversification in Lemo Africa RISING site, SNNPR, Ethiopia.

Table 1. Farmers’ understanding on EXW etiology, transmission and spread

Variables	Hadiya (%)	Kembata-Tembaro (%)	WolaitaChi square (%)test	Chi square P- value
EXW etiology				
Contaminated farm tools	47.8	33.3	20	70.8 2.27E-10
Animal and Insect	11	6.4	10	
Infected leaf left in enset farm	1.2	12.8	27.5	
Wind	0	24.4	13.7	
Environmental shock	2.5	3.8	11.2	
Animal dung	0	2.6	3.8	
No idea	37.5	16.7	13.8	

Plan for 2019

- Mapping niches for scaling and strengthen scaling of validated enset clones and their management practices.
- Yield and quality assessment of enset products
- Systematic beneficiary tracking
- Capacitate villagers to multiply suckers and sell to other farmers.