

TRIPLE S: WHY PARTICIPATORY TESTING & LOCAL ADAPTATION IS IMPORTANT



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Why Triple S ?

Existing practices of sweetpotato conservation in dry season is mainly

- wet land
- irrigation
- near water source
- under shade

Climate dependent

The ever increasing temperature, shortage of irrigation water in dry season and competition for wet land has posed a great challenge for sweetpotato seed conservation over dry season

Triple S: New PM Conservation Method in SSA



- Sam Namanda and Richard Gibson developed Triple S in Uganda for 3 months of storage and validated in Tanzania to fit for 5 months of storage
- Triple S “Storage in Sand and Sprouting” is then accepted by farmers, NGO and GOs as a climate resilient conservation techniques
- It is important to disseminate the method to areas with harsh and long dry season
- *What lesson is learnt from past participatory testing and local adaptation activities that will support future scaling up?*



Reason for participatory testing?



During FRG formation and FGD

1. Farmers discussed about PM shortage after long dry season
2. Steps of triple s was explained for FRGs
3. Farmers selected local conservation practices to compare with 3T

1. Difference between the original context and the new area

How do you want to adapt your Triple S in the new context?

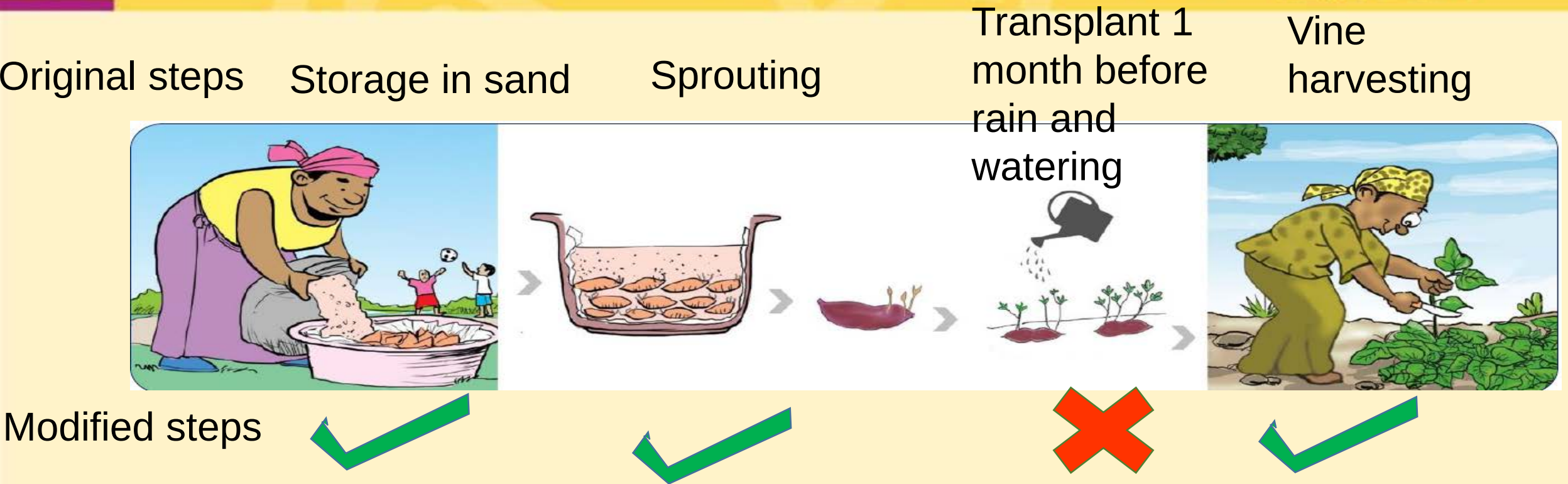
Farmer participation in the design

Study area	Number of dry months	Dry months climate		Local conservation
		T°C	Total RF (mm)	
Hawassa	5	29	149	Enset shade , volunteer
Durame	4	28	64	Enset shade, mulching, volunteer
M/Abaya	6	33	106	Ground pit in backyard
Humbo	3	25	62	Enset shade, mulching, volunteer
Tigray	9			Grain crops (tef, wheat)

**FS = cotton-
millet-maize**

**DS=
3-5 months**

Ex: Farmer in SNNPR modified steps



The steps planting out and watering 1 month before the arrival of rain is replaced by planting out at the arrival of the first rain

Farmers in the selected area do not have water to irrigate their vine production plot

2. Select appropriate best local practices to compare with Triple S

Different local methods were tested in different areas of SNNPR

Location	Local way of planting material conservation	Major problem of PM conservation
Hawassa zuria	Volunteer , Shade Enset	Drought, weevil
Mirab Abaya	Mulching(grass & cow dung), root planting in wet areas	Drought, weevil, animal
Humbo	Shade, Mulching and volunteer	Drought, virus, weevil
Kedida Gamela	Shade, Mulching and volunteer	Drought, Virus, Weevil

There is no local conservation in Tigray but compared different root sizes

3. Let farmer set up the trial by themselves!

Ex: Learning while experimenting about the new technology



Farmer establish their practice in their way

- These treatment is based on farmers practices of harvesting vines from root sprouts after the start of rain.



Farmers selected wet areas in their yard and buried 20 roots in 40 cm depth by using 50 cm x 50 cm spacing

In the picture farmers are planting roots in a 40 cm depth soil

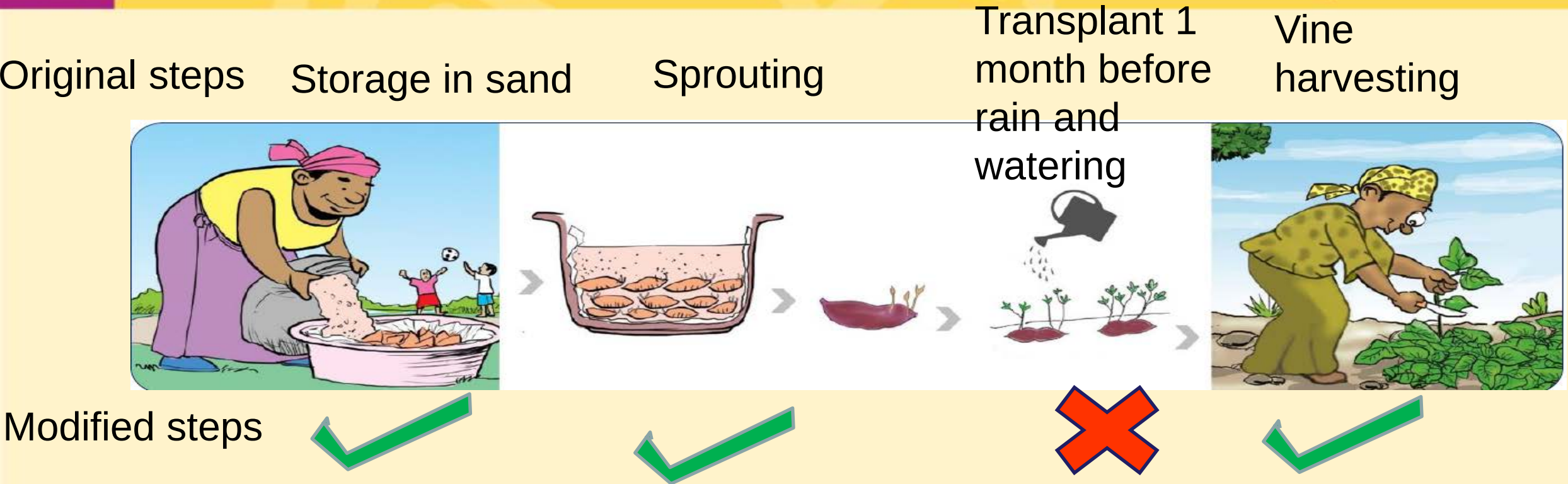
Local adaptation

1. Fit Triple S methods in the local context



- Length of dry season
- Are all inputs available
- When to do what in each area
- Varieties

Ex: Farmer in SNNPR modified steps



The steps planting out and watering 1 month before the arrival of rain is replaced by planting out at the arrival of the first rain

Farmers in the selected area do not have water to irrigate their vine production plot

Triple S is adapted to 9 months of dry season in Tigray

- Two combined method were used to fit Triple S in prolonged dry areas
 - Cyclic sprouting and de-sprouting
 - Size of roots were also tested



Triple S adapted to new varieties



“Kulfo”



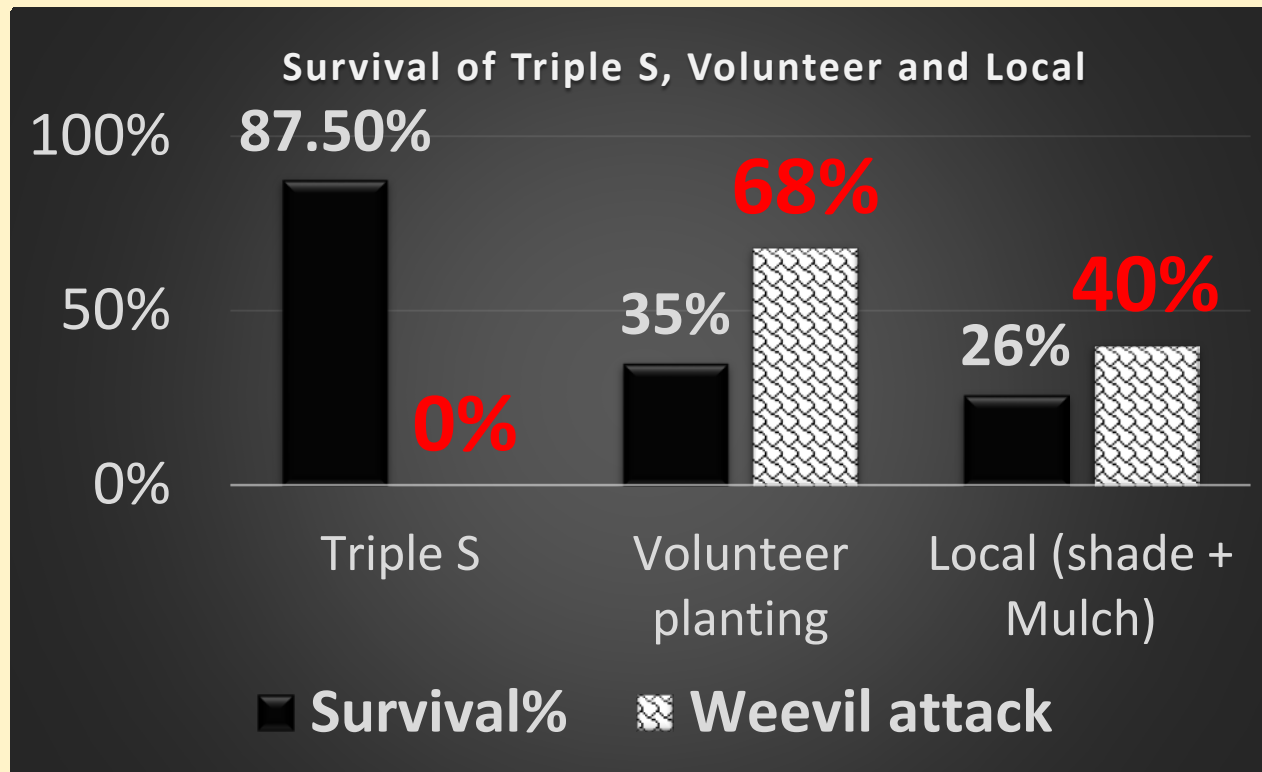
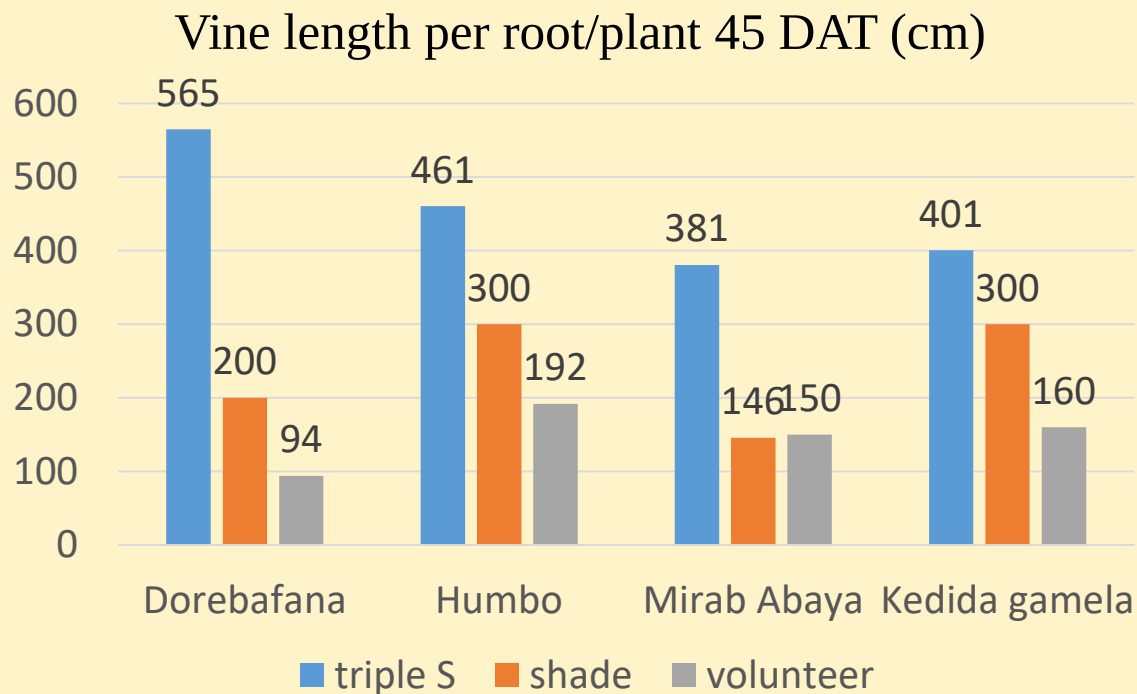
“Hawassa 83”

Triple S based multiplication plot

ACTION FOR SECURITY AND HEALTH IN AFRICA

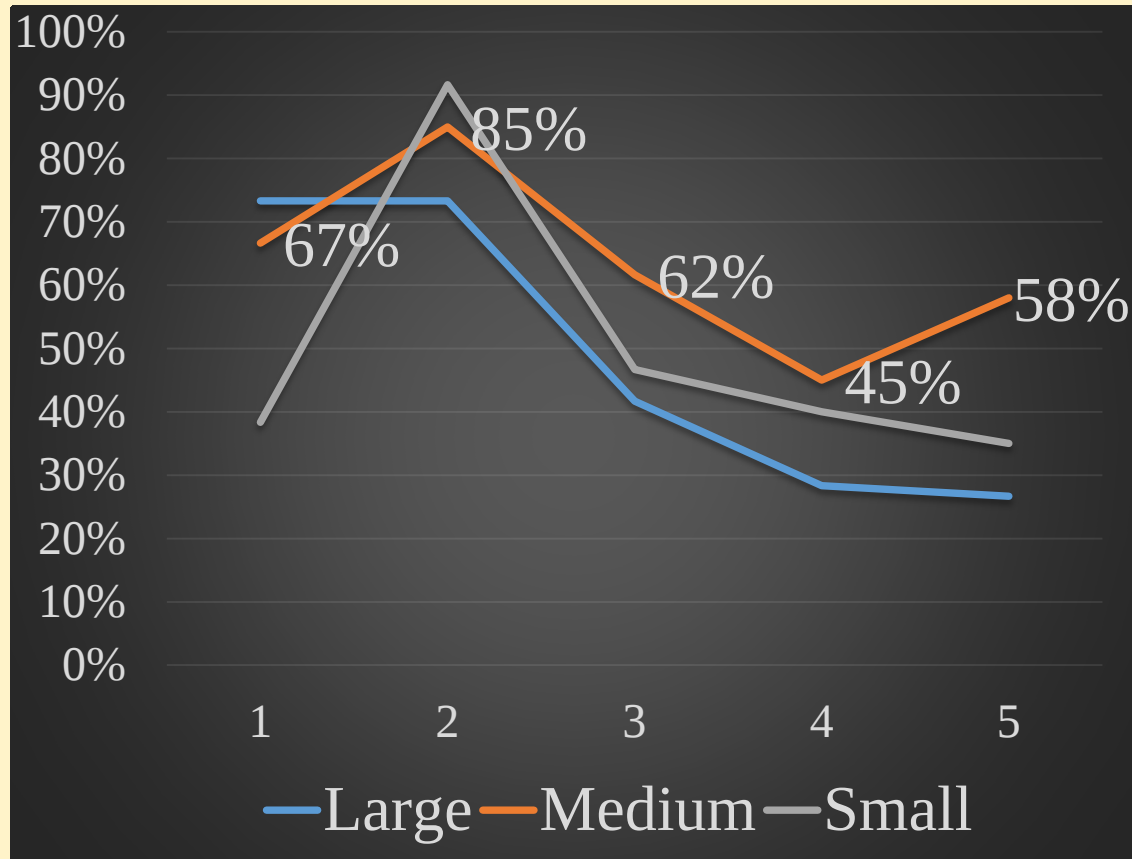
Participatory testing and local adaptation results

1. Triple S is better conservation method than local methods to conserve quality PM



2. Enabled to fit to new environment

Triple S is fitted in 9 months of dry season in Tigray. Medium to large size roots are recommended for Tigray



3. Developed calendar of activities

Activity	Bimodal (3-5 months	Unimodal (6 months)	Tigray (9 months)
Triple S awareness raising,	July	July	August
pegging of healthy plants in the field	August	August	August
Harvesting and loading	November	November	October
Monitoring De Sprouting	December-January	December-March	November-April (6 months)
Planting out roots	Early February	March	Early May
Manage vine multiplication	February – March	April & May	May & June
Vine harvesting	End of March/ April	End of May/June	End of June - July

4. Generation of evidence

Cold Dry



Cold Wet



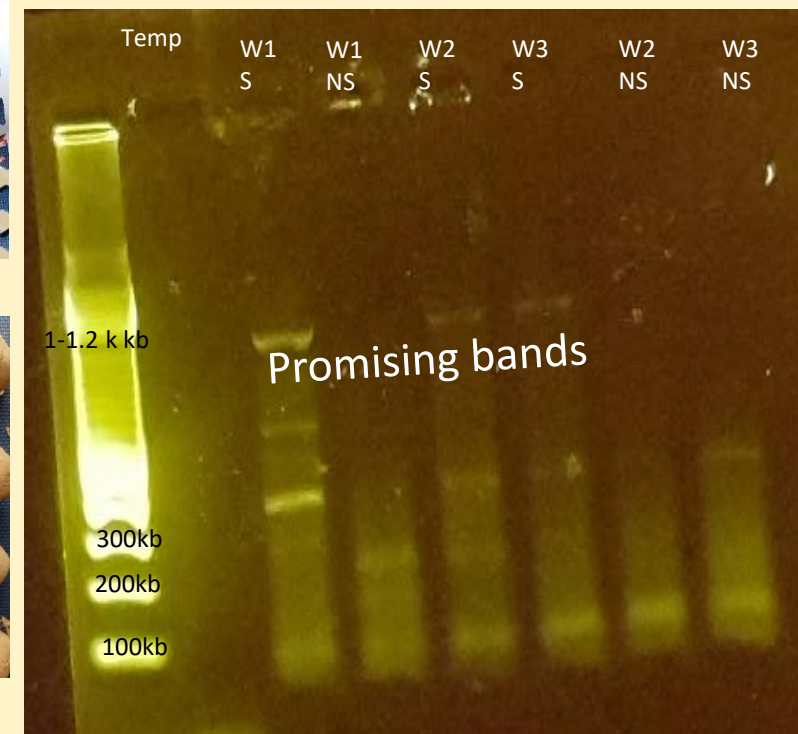
Hot Dry



Hot Wet



Promising results on the activity of ethylen



Bellevue

Beauregard



Genotype is dominant factor followed by temperature and humidity on sprouting **30 DAS**

5. Initial scaling while testing/validating

a. Testing is done in 6 districts in two regions at more than 120 farmers field

- Continued use of participant farmer: There was 83.3% implementation through monitoring and follow up and only 33.3 % implementation if there is no follow ups.



b. Improved take up by NGO and GOs



1. Demonstration was done in 20 sites in SNNPR. Total of 2328 HHs are demonstrated by Emergency, IA, and BPBL projects.
2. ToT training for 119 BoA experts and DA who come from 7 districts of SNNPR is given by emergency projects

Conclusion

Participatory testing and local adaptation enabled to adapt Triple S into new context and paved the way for scaling

Acknowledgement



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Thank you!