Phalombe trees booklet (extract)

Alternative planting techniques

Why promoting alternative techniques?

- Most of the nurseries usually use **polythene tubes** (plastic) to raise seedlings

➔ **That technique presents some disadvantages**

- Plastic pollution
- Difficult access to the polythene tubes in rural area (rare suppliers and high prices)
- Requires nursery construction
- Time consuming for watering and seedlings management during the high field activity peak for the farmers (September – November)

➔ **That is why the project also promotes some alternative techniques that are more sustainable and less time consuming**

Before going further…
Some definitions…

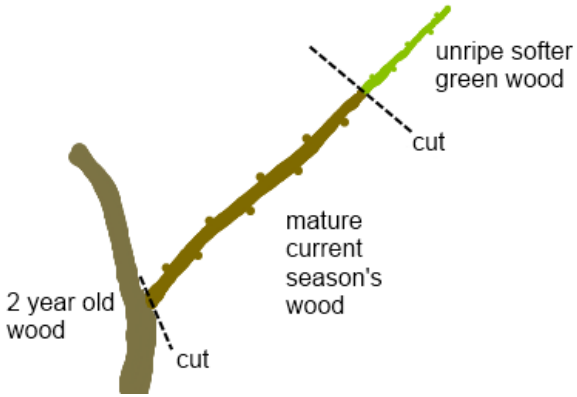
- ***SWAZ BED – bare rooted seedlings:***
  - *A germination bed made of soil in which the seeds are sown in line. The seedlings will be transplanted later to the plot without the soil = bare rooted.*

A farmer sowing Gliricidia sepium seeds in line in the SWAZ Bed

- ***Direct sowing – dry planting***
  - *The seeds, after needed pre-treatment, are sown directly in the soil before the rains starts for a better survival rate. The farmer must dig a big pit and mix with manure to boost the germination. Frequent watering is a key factor for success. The pit should be big enough (min. 30cm) and manure should be added for better result.*

Senna siamea dry direct sowing from October Picture taken in December 2020

- ***Vegetative propagation – cuttings***
  - *The technique entails multiplying vegetative material using cuttings from trees. A 50 cm- mature branch is collected from a mother tree. A cutting should get several nods. Its transport can be made in wet sack or clothes. It is planted at 25 cm deep and watered once a week minimum. Ash can be added to avoid pest.*

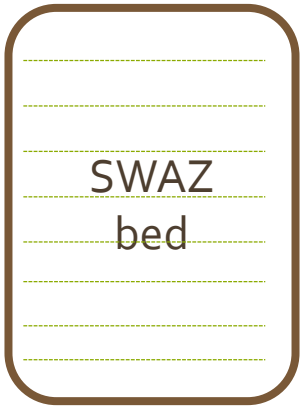


SWAZ BED – Bare rooted seedlings

Gliricidia sepium young seedlings in line in a SWAZ Bed

Advantages	Disadvantages
Gain of space & time	Not suitable for all species *
No use of polythene tubes	Stress for the roots when transplanting (Survival rate is less good than polytubes seedlings for Gliricidia)
	Transport requires wet clothes or dedicated container

Specie	Sowing period
Gliricidia sepium	October – November



Sowing lines every 10cm

The survival rate can be compensated by the large number of seedlings produced

SWAZ Bed of Gliricidia sepium

** Tested : Gliricidia sepium with good results Under test: Acacia polyacantha, Albizia lebbeck*

Direct sowing – dry planting

Magret Yang'anila - Gomani VH in May 2021 –
Senna siamea Dry direct sowing October 2020
After 7 months

Advantages	Disadvantages
Trees grow fast After 6 months average size of 60 cm	Requires frequent watering from October till the rain falls
Trees do not have stress unlike seedlings during transplanting	
High survival rate when well monitored (85%)	

Magret Yang'anila plot – Gomani VH in May 2021
Albizia lebbeck direct sowing October 2020
After 7 months

Vegetative Propagation – Cuttings

Advantages	Disadvantages
Grow very fast after a few months equivalent of 2 years old tree	To plant in dry season = watering once a week minimum
	Transport

Bertha Namhimba- Gomani VH
Gliricidia cuttings planted in October
Picture taken in January 2021
After 3 months

Mr Dunken - Gomani VH
Guava cuttings with
guava fruits -
After 3 months

Benito Sanuwedi - Julius VH
Gliricidia cuttings planted in November
Picture taken in March 2021
After 3 months