

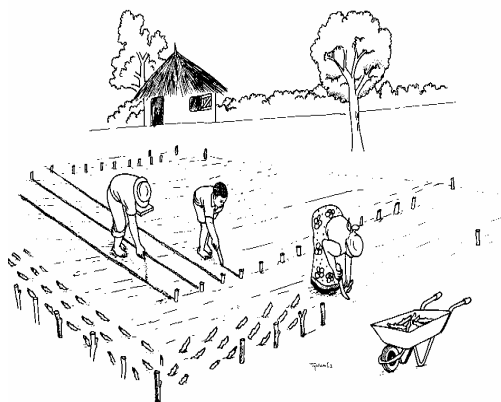
In the Push-Pull strategy Napier grass is planted around maize crop as a trap crop. It pulls stemborer moths away from maize. Stemborers lay their eggs on Napier grass but the grass does not allow their larvae to develop into adults. The desmodium is planted in between the rows of maize. It produces a smell that stemborer moths do not like and are pushed away from the maize crop. Desmodium also improves soil fertility and stops striga weed from growing or attaching its roots on maize roots. Thus maize is saved from stemborers and striga weed when planted in Push-pull strategy.

HOW TO PLANT PUSH-PULL

Step 1. Land preparation

- Clear your land during the dry season
- Plough and harrow your land to fine soil particles before the onset of the rains.
- Desmodium has very small seed; therefore the soil should be carefully prepared so that it is as very fine.
- Demarcate your Push-pull plot to plant 3 rows of Napier grass around the border. (Fig.1)

Fig.1 How to lay out a Push-pull plot

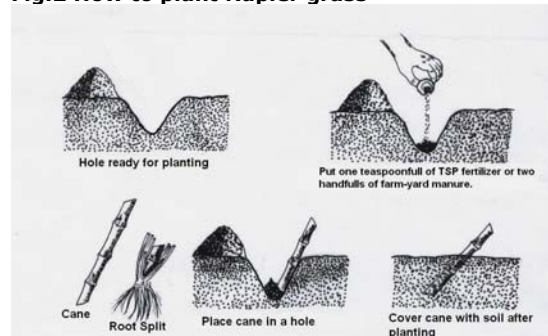


Step 2. Planting Push-pull

Planting Napier grass

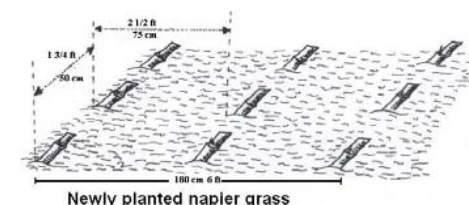
- Plant Napier grass (Bana variety) in a border around the maize plot.
- Plant three rows of Napier all round the maize field. The spacing should be 75cm between rows and 75cm between plants within a row (Fig. 3).
- Apply one tea spoonful of triple super phosphate fertilizer or 2 hand-fulls of well decomposed farmyard manure in each hole before planting Napier grass.
- Place a three node cane ensuring the two nodes are covered into the ground or place the root splits into the planting holes and cover with soil (Fig.2).

Fig.2 How to plant Napier grass



- Napier should be planted in a way that its rows alternate with maize rows (i.e. they should not be on the same row with maize) so that ploughing of the field in the next season will be easy (Fig. 4).

Fig.3. Napier grass plant spacing



Planting Maize:

- Plant your maize in the field already surrounded by Napier grass.
- Ensure that the 1st row of maize is 1 m away from the inner row of Napier grass
- The recommended spacing for maize is 75 cm between rows and 30 cm between hills in a row.
- Apply one tea spoonful of triple super phosphate or two spoonful of single super phosphate per hole

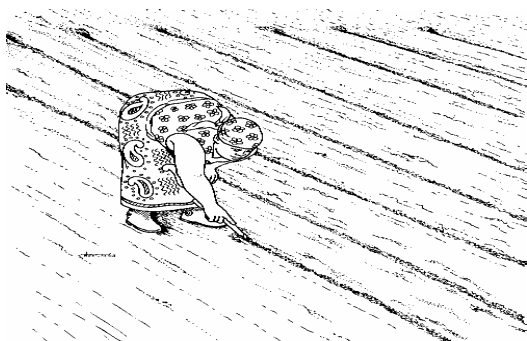
Fig.4 Alternate Napier and maize rows



How to intercrop desmodium

- Desmodium is drilled in between maize rows at 75 cm row to row distance
- Using a strong pointed stick, make a furrow 1-2 cm deep in the middle of the rows where maize will be planted (Fig. 5).

Fig.5 How to make desmodium furrows



- Mix the desmodium with super phosphate fertilizers (about one handful of seed and two handfuls of fertilizer).
- One kilogram (1 kg) of desmodium seed is needed for 1 acre of land.
- If you cannot afford fertilizer, just mix desmodium seed with fine sand. Sow it into the furrows you made and cover with light amount of soil (Fig. 5).
- Desmodium should also be drilled on both sides of the outer rows of maize at an inter-row spacing of 37.5 cm.
- Plant desmodium with the rains for maximum germination.

Step 3. Weeding

1st Weeding and Crop Management

- Early weeding is very important for the successful establishment of a Push-pull plot.
- Carry out the first weeding when maize is 3 weeks old and second weeding when maize is 5 weeks old.
- It is important to distinguish desmodium and weeds. (Figs.6 and 7)

Fig.6 Three and five week old Desmodium seedlings



Fig.7 Hand weeding of desmodium seedlings planted in between maize plants



FARMERS' GUIDE ON PLANTING A PUSH-PULL FIELD

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