

Preparation of a Nursery Bed

Recognize the problem

Most horticultural and agroforestry crops have very small and tender seeds. These require a very fine seed bed for good germination and survival through seedling stages, hence the need for any farmer investing in the production of such crops to establish a nursery bed. Unfortunately, the preparation of a good nursery bed is a skill that most farmers have not grasped well. More often than not, a few important steps are skipped which translates into failed seedling growth, death of seedlings or even production of diseased seedlings. It is therefore important that every step be followed.

Background

The purpose of a nursery bed is to raise healthy, vigorous and clean seedlings that are free from pests and diseases. It is therefore important that the site selected is free from both and preferably one that has not been used for crop production before. Since we desire to have high growth vigour, then supply of nutrients comes in handy in the nursery, too much compost will result in excessive vegetative growth and dampness in the nursery which attracts pests and diseases.

It is important to sterilize the soil mixture before sowing to help control soil borne pests and pathogens. The soil should be moistened prior sterilization as water conducts heat faster. Most organisms tend to go into hibernation and/or quiescence under very dry conditions, another reason for moistening it before sterilization. After sterilization, allow the soil to cool before sowing as high temperatures can kill the seed.

Management

- Select a suitable site for nursery bed establishment
- Use fertile top soil, sand and compost or manure. These three should be mixed in a ratio of 2:1:1 respectively
- Make the nursery bed 1 m wide and any desired length but no more than 3 m.
- Moisten the soil to about 60% moisture content. When you squeeze some soil in your hand, water should just wet your palm but not drip out.
- Spread dry mulch evenly on the bed (at least 3 inches thick) and burn to sterilize the soil. Other sterilization methods can be employed depending on availability of resources like solarisation where the moistened soil is covered with a polythene bag in the open sun for about 3-4 weeks. Another option is the use of steam at high pressure. This can be achieved locally by steaming the soil mixture in a metallic container for about 3 hours.
- Allow the soil to cool for 6-7 days before sowing. The soil can also be stuffed in pots of various sizes depending on the type of crop to be raised.

Well prepared nursery bed. (Photo by Idaho farmer in Ethiopia, 2010)



Preparation of nursery bed. (Photo by Second Mile Haiti, 2013)



The recommendations in this factsheet are relevant to: All Countries



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