

DEPARTMENT OF BOTANY

INNOVATIVE PRACTICE: NURSERY MANAGEMENT



NURSERY MANAGEMENT

The botany students (III CBZ) are well trained in nursery management programme, the students got well trained in the following aspects.

1. Soil preparation
2. Layering of Soil
3. Ploughing
4. Queering
5. Construction of Green roof

Containers and in transplant beds, both the potting soil and the pre-filled containers may be watered in advance so that the germinated weeds can be removed in advance of transplanting. For this purpose, containers should be filled up to 4 weeks in advance of transplanting or direct sowing operations if weed free potting soil is not available. A thick hedge around the nursery helps keep out weed seeds that is otherwise brought in by wind. Sixteen plant food nutrients are essential for proper seedling development. Each is equally important to the plant, yet each is required in vastly different amounts.

Among them the primary (macro) nutrients (nitrogen, phosphorus, and potassium) are most frequently required in nursery. Any deficiency of nutrients will be expressed by seedlings through deficiency symptoms; accordingly the relevant fertilizer should be applied as per requirement. For general nutrient support, FYM and compost are mostly used in nurseries where the available soils are either too sandy or too heavy and of low quality. It helps to build a good soil structure, improves water holding capacity of the soil and provides nutrients for plants. It greatly reduces the need for chemical fertilizers and, when mixed with small amounts, dilutes the fertilizer, making it available in much larger useful quantities. It is therefore an economic way of using available chemical fertilizers and is itself a natural fertilizer, very similar to humus.

The leaves of seedlings planted with unfinished compost usually turn yellow because the plant cannot acquire all the nutrients it needs whilst the immature compost continues to absorb what little nitrogen that might be available. Adding of well

decomposed manure in the nursery mixture will assure the production of quality and healthy seedlings. In order to boost the rhizome growth, phosphorous must be added while application of urea will result in good vegetative/ foliar growth of seedlings. Meanwhile, using of bio-fertilizers such as Azatobactor, Azospirillum and Phosphobacteria @ 5 to 10 g and vermicompost, VAM @ 10 to 50 g per container raised seedlings are also suggested to boost the growth of seedlings.

The successful establishment of quality seedling and propagules depends upon the proper planning and timely execution of activities. Even though seed storage facilities, propagation structures for external environment control are available, doing the nursery activities as per natural season will enhance the field planting success of the propagules. Preparation of species level nursery activity calendar will facilitate the seedling production. Following are important points to be remembered for planning of nursery activity. Mature pod/fruit has to be collected just prior to its falling and subsequently seed should be extracted without damage to the seed. Sowing of seed/propagules should be carried out during early morning (7 to 9 am) or evening (3 to 5 pm) hours.