

A Review :

## Methods of quality vegetable seedling production in temperate conditions

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It is said “A good seed sown in a good field results in a very good yield”. Production of healthy seedlings is the most important step of crop management to reap potential yield in vegetables. Healthy seedlings give the required quick start to crop establishment which results in optimum vegetative growth and help in realizing potential yield. In temperate regions, vegetable seedling production is gradually changing from open field nurseries to protected raised bed or seedling tray production in some of the intensive vegetable growing areas.

### **Protective structure for seedling production:**

Seedlings need care and nourishment and a protected enclosure is necessary to grow healthy and quality seedlings. Vegetable seedlings are being grown in low cost polyhouses, net houses, cloches/ low tunnels, cold frames, Hot beds, lath houses, etc which provide control of growing conditions creating a micro-environment congenial for propagation and cultivation of vegetable crops.

### **Hot beds:**

The main objective of hot bed is to raise seedlings earlier and protect them from weather hazards. A hot bed is one where heat is generated by decomposition of fresh manure. The heat generated is utilized for seed germination, which results in early nursery raising, early supply of vegetable produce in the market and more profits. First of all a trench 2 feet deep, 3 feet wide, 6 feet long is prepared. The frame generally made of wood is filled in such a way that from back side it extends upto 30-35 cm and from front side 20-25 cm above the ground. The sides of the frame are

covered with paddy straw to prevent the loss of heat. The trench first filled with fresh manure upto 25-30 cm in two layers each separated with a layer of straw, followed by 10-12 cm thick layer of straw, followed by 10-12 cm thick layer of light soil. The top of the frame is filled with polythene lined lids, used during night and rains.

### **Cloches/low tunnels:**

Cloches or low tunnels are also used for raising vegetable seedlings under unfavorable weather conditions. These cloches or tunnels are made curved and are covered with polythene. The end of these cloches /tunnels can be closed with polythene sheets as per climatic requirement. Cloches prevent both hardening and frozing of land, thereby helps in sowing of seed earlier and when desired.

### **Thatches:**

Thatches are traditional structures used to protect the vegetable nurseries from unfavorable weather conditions both during winter and summer seasons. In winter thatches are erected in a slanting manner at 45° angle from ground level and are oriented in southwest directions. The slanting roof is covered with paddy straw or straw mats. The shade is removed, when the seedlings have come up and have attained one-centimeter height with two or four leaves.

### **Seed panes/ boxes:**

Seed panes/boxes are used to raise delicate kind of seeds. Seed panes are shallow earthen pots about 4 inches high and 14 inches in diameter at the top, with a single hole at the bottom. Seed boxes which are of wood, 16 inches wide 24 inches long and 3-4 inches deep with 6-8

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