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Vegetable Cultivation

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Seedling nurseries for better vegetable production

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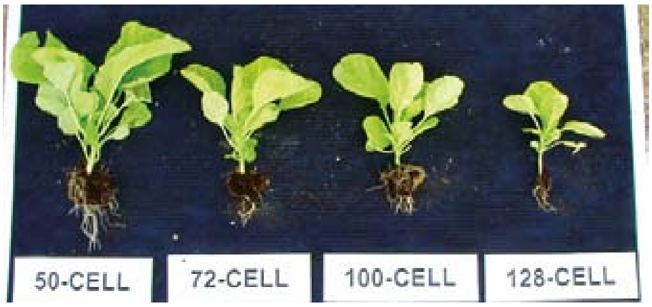
Grow seedlings in a field nursery

- **Use healthy and improved seed** from a reliable seed source. If the seed is not already treated, mix in 2-3 g Thiram per kilogram of seed.
- **Disinfect the nursery area** by solarization: Cover the beds with a plastic sheet for 24-48 hours. After removing the sheet, stir the soil with a disinfected rake.
- **Prepare fine seed beds** about 20 cm high and 1-1.5 m wide.
- **Sow seed in lines** about 5 cm apart, about 1-2 cm deep. Adjust the planting depth according to the seed size. Generally, plant larger seed deeper.
- **Cover the seed** with a fine layer of compost or animal manure. Be sure that compost or animal manure is fully mature or decomposed and free of disease. Mulch the nursery beds with paddy straw or dry leaves.
- **Water the nursery beds** with a sprinkling can twice a day. After seedlings sprout, water once a day.
- **Remove the mulch** immediately after seedlings emerge from the soil.
- **Protect nursery beds** from excessive rain and stagnant water by providing rain shelters. Allow for good air circulation to protect seedlings from damping off and foliar diseases. Protect seedlings from insects and insect-transmitted diseases, especially viruses, by covering nursery beds with 40-mesh nylon net.
- **Harden the seedlings** by withholding water 4-5 days before transplanting. Hardening is facilitated by the application of potassium chloride (KCl) at 1 ml per 250-300 ml of water, or the application of a 10% sucrose solution 7-10 days before transplanting.
- **Drench the nursery beds** with water one day before transplanting.
- **Transplant** 4- to 6-week-old seedlings, preferably in the evening.

Grow seedlings in plug trays

- **Use healthy and improved seed** from a reliable seed source. If the seed is not already treated, mix in 2-3 g Thiram per kilogram of seed.
- **Use clean trays.** Disinfect trays with 1% solution of chlorine bleach. Wash the trays thoroughly with clean water before use.
- **Use the correct cell size** for the crop. For example, cucurbit crops require a larger cell size than other vegetable crops.
- **Prepare growing media** by mixing cocoa peat, perlite, and vermiculite in 3:1:1 ratio. A mixture of peat moss, compost, and coconut coir in equal proportions also can be used.
- **Adjust the pH** of the mixture between 5.5-6.5 with lime to improve micronutrient availability. Avoid mixing soil into the media to minimize the occurrence of soil-borne diseases.
- **Fill the plugs tightly** with the pre-moistened media.
- **Sow one seed** in the center of each cell, about 0.5-1 cm deep, depending upon the seed size. Cover the seeds with the same mixture.



- **Water the trays** thoroughly to moisten the entire plug. This promotes root growth to the bottom of the plug. Avoid watering late in the afternoon to minimize occurrence of foliar diseases.
- **Apply water-soluble fertilizer** with irrigation water at 50-75 g per 100 liters of water at weekly intervals. Do not overfertilize: excessive use of fertilizers makes seedlings leggy.

- **Harden the seedlings** by withholding water 4-5 days before transplanting. If the seedlings are being raised in protected conditions, move them outside for several days to acclimate before transplanting.
- **Drench the plugs** with water one day before transplanting.
- **Transplant** 4- to 6-week-old seedlings, preferably in the evening.

50-cell 72-cell 100-cell 128-cell

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