MAURITIUS SUGAR INDUSTRY RESEARCH INSTITUTE

Recommendation Sheet

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Production of tomato seedlings

Many growers now prefer to raise their tomato crop from seedlings rather than by direct sowing because of the following advantages:

- the crop cycle in the field is reduced by approximately one month
- only the best seedlings are selected for transplantation
- a small nursery for the seedlings is easier to manage
- the use of seeds is optimized

Seedling production methods

Seedlings can be produced on beds, flats or in plastic pots.
Advantages and inconveniences of different methods:

Methods	*Advantages*	*Inconveniences*
Beds	• easy, practical and cheap	• seedlings may need to be watered at transplantation to minimize transplantation shock
Flats	• can be shifted indoors during bad weather • minimal root damage and hence, no transplantation shock	• more expensive than beds • initial growth in the field is slow because seedlings are smaller
Plastic pots	• very good root development • can withstand a short dry spell in the field	• requires labour for filling pots • bulky to transport

Care of seedlings in nursery

- ***Seeds should be sown in a shaded place***
- ***Two weeks after emergence, seedlings must be thinned down to:***

  1 plant / pot or flat cell

  200 plants / m^2 of beds

- ***Pests and diseases should be controlled***

It is important to avoid carrying pests, such as red spider mites, and diseases, especially viruses, to the field.

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1. Insect pests

- Leaf miner
- *Either* ***Agrimek 1.8 E.C @ 0.5 ml*** *or* ***Patron 75 WP @ 0.25 g*** / **litre water**
- Red spider mites
- *Either* ***Agrimek 1.8 E.C @ 0.5 ml*** *or* ***Dicarzol 500 SP @ 1g*** / **litre water**

2. Diseases

- Bacterial speck, bacterial spot and tomato mosaic virus are transmitted by seed.
  They can be eliminated by:
  soaking the seeds in hot water at 50 °C for 25 minutes followed by immersion in a solution of 10% tri-sodium phosphate for 15 minutes.
  After thorough drying, the seeds can be stored and at the time of planting,
  they should be dusted with a fungicide such as Captan 75 at 2 g / kg seed
- To prevent the spread of diseases, it is important to practice crop rotation, sow at low density and avoid clipping and handling of the seedlings
- Against late blight, under cool and wet conditions, it is recommended to apply
  either ***Ridomil Gold MZ68 WP @ 3g + Penncozeb 80 WP @ 2g***
  or ***Folio Gold SC 537.5 @ 3 ml / litre water***

- ***One week before transplantation, seedlings must be hardened by withholding irrigation and progressively exposing them to direct sunlight***

- ***Seedlings are normally ready for transplantation 25-30 days after sowing, when they have reached 10 - 15 cm high***

Care of seedlings at transplantation

- Seedlings should preferably be transplanted under wet conditions; otherwise the field should be watered before and after transplantation; watering should be continued daily for at least 3 days.