

## **Nursery management**

### **General rules and or tips to achieve good seed germination**

1. Avoid sowing vegetable seeds with compound fertilizers. Direct seed-fertilizer contact results in seed burn during the germination process leading to poor seedling emergence
2. Always prepare nursery beds with fine tilth
3. Mulching is always a key in the beds since it prevents direct sunlight, conserve moisture and retain warmth in the beds
4. Always water the beds to maintain the moisture but avoid excess water in the beds
5. When the seedlings have emerged, remove the mulch gradually allowing light to reach the seedlings slowly. Removing the mulch at once will scotch the seedlings with direct sunlight

### **Fertilizer management in the nursery**

- Fertilizer application in the nursery should be done after two weeks of seedling emergence
- Avoid excess application of nitrogenous fertilizers such as urea and AN as this will promote foliar growth at the expense of root development
- The recommended fertilizers to be applied in the nursery are those with high phosphorus that promote root development such as compound D and S. Foliar fertilizers such as Omni boost and quick start

### **How to apply compound D or S as a foliar spray**

- Mix a certain quantity of compound fertilizer, for example, 2kg of compound D or S in 5 Litre of clean water
- Stir the mixture until the compounds have dissolved. This should be done within the second week of seedling emergence

- Take **5ml** of the mixture/solution and mix it with **10 litre** of clean water (10 litred can) and spray the seedlings. This should be done three times per week (Monday, Wednesday and Friday) during the third week
- Take **5ml** of the mixture/solution and mix it with **10 litre** of clean water (10 litred can) and spray the seedlings. This should be done four times per week (Monday, Tuesday, Wednesday and Thursday) during the fourth week. Then, gradually reduce water and fertilizers to harden the seedlings.
- Omni boost rate is 300g per knapsack
- Note that the seedlings are transplanted when they are well hardened and 15cm long.
- Dig a deep planting hole, place basal fertilizer and if well decomposed manure are available, the recommended quantity is 1Litre. The fertilizer and manure should be well covered with enough soils followed by irrigation to field capacity.
- Transplanting should be done at late afternoon or morning but with cloud cover.

### **Seed germination problems**

#### **Seed-fertilizer contact**

**Seed depth**-many seeds planted or sowed too deep will germinate but not emerging. Most of the horticultural seeds have small size hence small food reserves. Seeds planted too deep will not emerge due to limited food storage within the seed. Hence, seeds should be planted to a depth not exceeding the size of the seed

**Improper soil conditions** – heavy compacted such as clay soils make it difficult for seedlings to emerge but have already germinated

**Soil temperature** – Note that nature causes each seed type to awaken at a certain temperature. However, optimum soil temperature boost the germination of seeds reducing the days of germination (germination duration). Prolonged germination period results in seed rot especially with inconsistent availability of conducive germination conditions. Water logging

conditions prevents oxygen from reaching the seed and promotes soil fungal disease development.

**Soil pests-** Some of these soil pests such as mice take seed as food and reduce seed population hence reduce seed germination. For pests such as birds, the seed should be well-covered.

Finally, **poor seed storage conditions** – seed is a living organism and improper storage can kill it before being planted. Generally, seed should be stored in a cool, dark and cool dry place

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