

GARLIC

TAXONOMIC CLASSIFICATION:-

- Phylum :- Magnoliophyta
Class :- Liliopsida
Order :- Asparagales
Family :- Alliaceae
Genus :- Allium
Species :- Allium sativum

SEED PRODUCTION TECHNOLOGY:-

Spathe of inflorescences (umbels) of all the genotypes was opened manually when bulbils along with flowers filled the spathe completely. After opening the spathe, bulbils are removed from the inflorescence with fine forceps. Bulbil removal is a combination of plucking them out with tweezers and rocking them out to dislodge them. Care was taken while bulbils removal that no damage occurred to the developing flowers in the inflorescence. After the initial removal of bulbils, a second removal was done 7 days later to extirpate bulbils that typically remain on the inflorescence during the initial bulbils removal process. The senescence of garlic plants was delayed by giving ample water.

The swelled ovaries are indication of seeds development process. Thereafter, the scapes were cut at the level where pseudostem starts but after successful pollination and fertilization of umbels and thereafter these scapes were kept in water bucket and placed in netted shade nets till the maturity of seed. The scapes lost colour or became slimy toward their base during the lengthy seed maturation process. Therefore, the brownish or slimy portion of the scape was trimmed and shortened as necessary so that a viable part of the scape remains in water and can continue to sustain the umbel. Harvesting was done when the seeds were completely dried

and seed ovaries splits. Dried umbels were threshold to release seeds. Garlic seeds are approximately half the size of onion seeds, resembling them in shape and color.

DISEASES:

1. Purple blotch: Alternaria porri
Symptoms: Appears on the leaves as small, yellow to orange whitish sunken lesions with purple centres that rapidly enlarge.
Manage: Spraying of Mancozeb @ 2.5g/L of water.
2. Stemphylium blight: Stemphylium vesicarium.
Symptoms: Appears as small, yellow to orange flecks or streaks on leaf. These soon develop into elongated, spindle-shaped to ovate elongated diffused spots.
3. Cercospora leaf spot: Cercospora duddae
Symptoms: Appears on leaves as small, ash-coloured and irregular shaped spots scattered on leaf lamina.
Manage: Spraying of Captan @ 2g/L of water or COC @ 0.3g/L of water.
4. Powdery mildew: Leveillula taurica
Symptoms: Distinct pale yellow patches of variable size on abaxial surface of leaf associated with powdery mass.
Manage: Sulphur fungicides @ 2g/L of water if sprayed at regular intervals gives good control.
5. Mosaic Disease:
Symptoms: Chlorotic mottling and strips on first emerging leaf followed by pale-yellow broken stripes, resulting in typical mosaic pattern on matured leaves.
Manage: Since virus is transmitted through aphids, spraying of monocrotophos @ 0.5 mL/L of water.

PESTS:

1. Thrips: Thrips tabaci
Damage: They feed on leaf surfaces, causing them to whiten or silver
Manage: Phorate @ 1kg a.i/ha at planting and 30 days after planting.
2. Stem and bulb nematode: Ditylenchus dipsaci
Sym Damage: The infestation causes the basal portion of mature plants to swell and become spongy and frequently broken by longitudinal splits. The tissue rots, the leaves and stems become rotten and twisted and the plant is stunted.
Manage: Pre-planting soil fumigation with dichloro-propene-dichloropropane mixture @ 500 kg/ha is recommended.
3. Mites: Aceria tulipae
Damage: Twisted leaves with conspicuous yellow or light green streaking. The leaves may not emerge readily from the cloves and leaf blades separate poorly after emergence.