



Damping off disease in chilies

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ABOUT THE STUDY

A soil-borne fungal disease that affects seeds and new seedlings, damping off usually refer to the rotting of stems and root tissues at and below the soil surface. In most cases, infected plants will germinate and come up fine, but within a few days they become water-soaked and mushy, fall over at the base and die. Several fungi can cause decay of seeds and seedlings including species of rhizoctonia, fusarium and phytophthora. However, species of the soil fungus pythium are most often the culprit. Damping off typically occurs when old seed is planted in cold, wet soil and is further increased by poor soil drainage. High humidity levels, rich potting soils and planting too deeply will also encourage its growth. Fungal spores live in the soil and are primarily a problem in seed beds. They can be transported on garden tools and in garden soils taken into the house or greenhouse.

SYMPTOMS

Seedlings killed before emergence. Water soaking and shrivelling of stem. Impact of disease symptoms shown at after sowing of seeds in seed beds. It will reduce the seed germination percentage. Its affects the young seedlings and their stems. Lodging of seedlings due to weaken stems.

TREATMENT

There is no cure for plants that already have damping off. However, you can easily prevent the problem by providing good air circulation. A small fan or simply cracking the lid of the germination tray will suffice. The biological fungicide Mycostop may also be used as a seed treatment to prevent seed or soil-borne diseases. When starting seeds indoors, use good organic potting soil or sterilize your own potting soil in an oven. Make sure your seed starter mix is light and fast-draining.

Plant seedlings so that the soil surface is near the top of the container to insure proper air circulation. Sow seeds thinly to prevent overcrowding which can lead to humid, moist conditions. Seedling trays that provide water from below are preferable to overhead watering. Never water past noon so that the soil surface and the plants are dry by evening. Avoid overwatering tender seedlings. Organocide® Plant Doctor is an earth-friendly systemic fungicide that works its way through the entire plant to combat a large number of disease problems. Apply as a soil drench or foliar spray (3-4 tsp/gallon of water) to prevent and attack many fungal problems, including pythium, fusarium and root rot.

MANAGEMENT

Soil drenching with Copper oxychloride 0.25%. Avoid shade places for nursery establishment. Usage of recommended seed rate. Avoid flooding type of irrigation and maintain optimum moisture level in nursery. Use Thiram or Captan @ 4 g/kg of seeds for seed rate.

PREVENTION

Maintain proper spacing, 12 to 18-inch plant to plant and 24 to 30-inch row to row. Supply adequate moisture but do not over water and avoid working with plants when the soil is wet. Disinfect tools and containers with one part bleach in four parts water or with 70% rubbing alcohol (isopropyl). Solarize the soil for 21 days prior to transplantation with plastic sheet then, remove the plastic and leave the bed for up to 3 days. Keep good air circulation around plant seedlings, and don't plant seeds too deep.