

This nematode lives in bulbs of various ornamental plants.

Loose smut of wheat (mycelium also remain in embryo of seed. So 52°C for 11 minutes of treatment kills Ustilago tritici.

Hot air treatment of storage organs: on storages for storage of material This treatment is given.

e.g for sweet potatoes $28^{\circ}\text{C} - 30^{\circ}\text{C}$ for two weeks so we avoid Rhizopus infections
 e.g for Barley seeds 72°C for 7-10 days Leaf streak, Black chaff viruses reduced.

Control with certain wavelengths: If wavelength $\geq 360\text{ nm}$ or more than $> 360\text{ nm}$ then botrytis, Alternaria, stemphylium growth of this fungi is blocked.

If in ~~the~~ tunnels & green houses if we apply UV-light absorbing Vinyl films increase the wavelength upto 390 nm & is very effective in control of vegetable diseases.

Drying seed grains and fruits: If by drying if moisture level remains 12% then seeds & fruits are protected from different fungi, bacteric. Also during harvesting, harvest during late hours of dew.

e.g For strawberry, peach, etc. you avoid decaying diseases in this way.

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→ Disease control by refrigeration:

By refrigeration & low cold temp postharvest diseases can be effectively controlled.

& during refrigeration process during transport postharvest diseases of fleshy or succulent fruits decreases.

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→ Disease control using radiations

Rays like UV-light, x-rays, γ -rays

Radiations like α -radiations & β radiations.

γ -rays effectively control postharvest diseases of strawberry, peaches, tomatoes.

But γ -rays themselves destroy the plant tissues so not recommended.

→ Trench Barriers against tree root transmitted diseases:-

Disadvantage: It is highly costly to make trenches. therefore usually non-recommended.

Mostly wilt diseases & some other diseases transfer through roots of tree contact. So

Trenches should be made between rows of trees and trenches should be filled with ^{water} permeable / non permeable material so that roots cannot come in contact.

⇒ Chemical treatment that eradicate or reduce the inoculum:-

→ soil treatment with chemicals:-

The soil in which vegetables, fruit are sown, the soils are frequently treated with chemicals to eradicate nematodes, fungus pathogens

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so that inoculum of nematode & fungal inoculum can be reduced.

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(Verticillium spp., Fusarium spp.)

Three ways to apply chemical.

1) dust & granules form them broadcast it.

2) liquid then apply in drenches with water.

By these ways you can effectively controlled Damping off, seedling blights, crown rot, root rot.

where water is available in large amount and availability of water is not a issue then

Fungigation can also be used.

→ Fungi mix with irrigation water.

Fungicides also be applied through sprinkler method.

Some Soil Fungicides are

Metalxyle, Pentachloronitrobenzene (PCNB),

Capten, Chlorone b, Rizobin (used with irrigation water)

Some nematodes are used as Fungicides which form fumes due to volatile gases & kill nematodes in soil.

Soil fumigants are:

1) Chloropicrin, Methyl bromide, Dazomet,

Metam sodium. These will kill nematodes, insects etc.

→ Some nematicides like Carbofuran, Fenselfothion, Ethoprop, Aldicarb these are low volatile & low fumigants but cheaper in rate.

these should be applied well before the cultivation of crop or well in time before favourable time.

After applying Fumigants, cover the soil with the polythene sheets

Nematicides can be applied through different