

spp. (Fig. 2) suppresses the nematode population and increases the yield.



- Complete disinfection is achieved by double paring followed by a dip in monocrotophos solution at 0.5 % for 30 minutes and later dried under shade for 72 hours before planting (Fig.3).



Fig. 3

### Host reactions

- Cavendish cultivars like Robusta, Grandnaine, Poovan, Rasthali, Ney poovan, Red banana, Virupakshi and Nendran are susceptible. Varieties like Karpooravalli, Monthan Nattupoovan, Kunnan, Pey kunnan, Venetu kunnan, Padali moongil and Pidi Monthan exhibit field tolerance.

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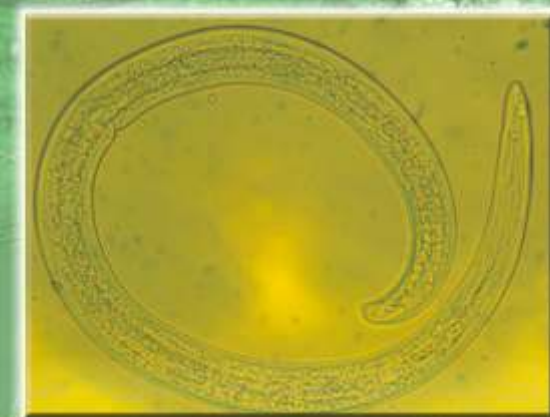
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# Spiral NEMATODE of BANANA

Extension Folder # 7

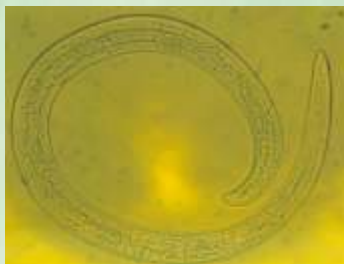


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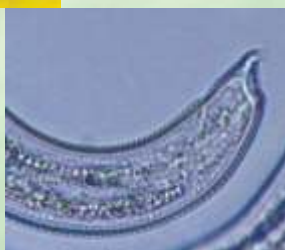
## Spiral nematode

*Helicotylenchus multicinctus* (Cobb, 1893), Golden, 1956

The spiral nematode, *Helicotylenchus multicinctus* is found to infest on all varieties of banana throughout the tropics and subtropics. In subtropical regions such as Israel and Taiwan, *H. multicinctus* may be the major nematode problem where *R. similis* is absent.



Adult nematode



Tail

Among the seventeen *Helicotylenchus* species reported to occur on banana, *H. multicinctus*, *H. dihystra*, *H. africanus* and *H. erythriane* have been reported to be the most important pest in banana causing severe economic loss. It causes serious decline of banana and is responsible for about 34 per cent loss in yield, 56 per cent loss in number of fruits per bunch and delayed flowering 134 days.

## Distribution

The spiral nematode, *H. multicinctus* is the most widely distributed nematode in banana throughout the country whereas *H. dihystra* is more prevalent in Assam regions.

## Survival and Spread

The nematode easily gets introduced into virgin land with banana soil and corms usually brought from old infested plantations.

## Biology

The spiral nematode takes 32-37 days for the completion of the life cycle from egg to adult at a soil temperature ranging from 22.6 to 33° C. All stages of the nematodes except the eggs were observed inside the roots.

## Symptoms

Spiral nematodes tend to feed closer to the surface of the roots than either burrowing or lesion nematodes. They usually found just



Fig. 1

under the epidermis of the root (Fig. 1) and do not penetrate into cortex as it is seen with lesions produced by *R. similis* and *P. coffeae*. It causes extensive root necrosis die-back and functional disturbance leading eventually to the death of the plant. This nematode prefers cooler temperature and predominantly associated with banana where and when *R. similis* is not dominant.

## Nematode management

- Following for three months after banana harvest effectively suppressed the spiral nematode population
- Oil cakes of Neem, Mahua, Castor, Karanji etc. have shown special potential in reducing the nematodes.
- Application of neem cake @ 500g/ plant one at planting and second after four months reduced the population of major nematodes and increased the bunch weight.
- Crop rotation with paddy, sugarcane, green gram, sunhemp or cotton or intercropped with suppressed *Tagetes*



Fig. 2