



Issued in: November 2009

Serial No. 05/09

FUMIGATION OF NURSERY SOILS FOR NEMATODE ERADICATION*(This Circular cancels Circular No. V4 Serial No. 4/89 issued in February 1989)***1. Introduction**

Parasitic nematodes, once introduced into fields, cannot be eradicated even by chemical means and hence, adopting preventive measures are of paramount importance in the integrated nematode management strategies. As such, in the integrated nematode management strategies, methods of control are largely confined to treatment of nursery soils.

2. Nematode control in nurseries

Nurseries are the usual focal points of spread of nematode infestation. Nematode spread through planting materials has been evident within an estate, from estate to estate, estates to small holdings and even among tea growing areas in different agro ecological regions. Resultantly, poor early establishment and growth, yield decline, and even death of mature plants can occur. This is especially so with the usage of nematode tolerant tea cultivars that may possibly carry nematodes without showing symptoms in the nursery plants. It is therefore, essential to take all precautionary measures to prevent nursery plants from being contaminated with plant parasitic nematodes as there is no curative method and the yield losses cannot be compensated by any other means. Hence, disinfection of nursery soils and the premises is compulsory in all tea growing regions. Amongst various methods, soil fumigation using chemicals is the most effective means of nematode eradication in nursery soils.

All soils for nursery use should be routinely fumigated to eradicate all possible contaminations with nematode pests. Fumigation guarantees nematode free nursery plants and also it helps to boost growth of plants in the nursery.

3. Prerequisites for fumigation

In order to assure effective soil fumigation process and avoid failures, the following prerequisites should strictly be followed with advance planning in addition to the Good Nursery Practices (GNPs) specified in Circular No. PN 2.

3.1 Nursery site

- Select a little elevated location above tea fields and preferably a demarcated area with deep drains to avoid subsequent cross contaminations through runoff water from surrounding nematode infested tea lands.
- Avoid locations with a history of nematodes as far as possible to reduce risk of possible contaminations.
- Reserve an adequate floor space in the nursery site to spread the soil volumes for fumigation purpose, preferably a disinfected area.
- Select the premises away from resident areas and heavy human and animal movements to avoid exposure to the chemicals.

3.2 Raised beds

Always use raised beds to avoid re-contamination through water and worker movements to ensure proper hygiene. Raised beds will improve the drainage of beds as well.