

# Routine Analysis for Plant-Parasitic Nematodes

## Service offered...

Nemlab specialises in the routine analysis of soil and root material as nematodes occur both in the soil and roots. The aim of an analysis is to extract the nematodes from the soil and roots, to identify and count these nematodes and then to make a recommendation.

The results of the routine analyses done by Nemlab are interpreted in a report together with a recommendation regarding the problem, and the most suitable and effective treatment for a specific infestation is given. In the case of certain crops eg. brassicas, hops and figs, Nemlab does a further analysis to identify the possibility of the presence of the cyst nematode.

The routine analyses are recommended to all producers whose objective is the health of their plants. The majority of samples received by Nemlab originate from the vine and fruit industry but Nemlab also receives and tests samples regularly from other producers and role players in the agricultural, turf grass, and nursery sectors.

In addition to the routine analyses Nemlab is authorised to conduct special tests with regard to the Golden cyst nematode (*Globodera rostochiensis*) for potatoes, in terms of the Agricultural Pests Act (Act 36 of 1947) and the dagger nematode (*Xiphinema index*), the latter being compulsory under the Vine Improvement Scheme.

## What has to be done...

Send a clearly marked (block/row number) plastic bag containing a soil sample consisting of approximately 2 kg soil and 10g fine roots to Nemlab. Soil samples should always be taken in the active growing root zone (including fine hair roots) in a sampling area of 3 ha or smaller, and consist of 10-20 thoroughly mixed sub-samples. It is important to follow the correct **SAMPLING PROCEDURE**.

Complete the **FORM** and attach it to the outside of the plastic bag. All the information on the form is of importance (crop, rootstock, plant age, etc.) to ensure a complete analysis and correct recommendation.

### **How does it work...**

Soil samples are analysed according to the existing crop in the soil at the time of sampling. Various crops require different extraction techniques. The recommendation is very specific to your soil, taking into consideration the area, soil type, water source, type of crop currently and previously (in the case of annual plantings) in the soil, plant age and the level of infestation of various plant-parasitic nematodes.

Therefore, to ensure that the correct extraction technique is used and the correct crop information is available when the recommendation is made, the thoroughly completed form is of the utmost importance.

In the case of citrus and persimmons the roots are stained and in the case of apples and pears the important nematodes are only found in the roots. Thus the importance of including 5g fine roots in these types of soil samples is essential.

The extraction techniques used in our laboratory are continuously updated and we always stay up to date with any new developments in the field. Nemlab continually strives to gain new knowledge about nematodes, nematode related problems as well as the most successful way to treat nematode infestations.

**Testing for nematodes in water is not done.**