



# THE SEARCH for a new Nematicide

**N**EMATODES ARE MICROSCOPIC WORMS THAT FEED ON THE ROOTS OF PLANTS. DESPITE THEIR SIZE, THEY CAUSE SIGNIFICANT LOSSES IN THE SOUTH AFRICAN SUGAR INDUSTRY, PARTICULARLY IN SANDY SOILS. NEMATICIDES ARE COMMONLY USED TO MANAGE NEMATODES, BUT THESE ARE USUALLY HIGHLY TOXIC AND THEREFORE DANGEROUS TO USE. IN ADDITION, AN ALTERNATIVE NEMATICIDE IS REQUIRED TO REPLACE

TEMIK, WHICH WAS WITHDRAWN FROM THE MARKET EARLIER THAN ANTICIPATED. RESEARCH BY THE SOUTH AFRICAN SUGARCANE RESEARCH INSTITUTE INTO ALTERNATIVE NEMATICIDES WAS FAST TRACKED IN RESPONSE TO THIS EARLY WITHDRAWAL. A SUBSTANTIAL NUMBER OF RESOURCES ARE BEING INVESTED INTO IDENTIFYING A NEW NEMATICIDE FOR THE SUGAR INDUSTRY.

(a) Plant crop

(b) First ratoon

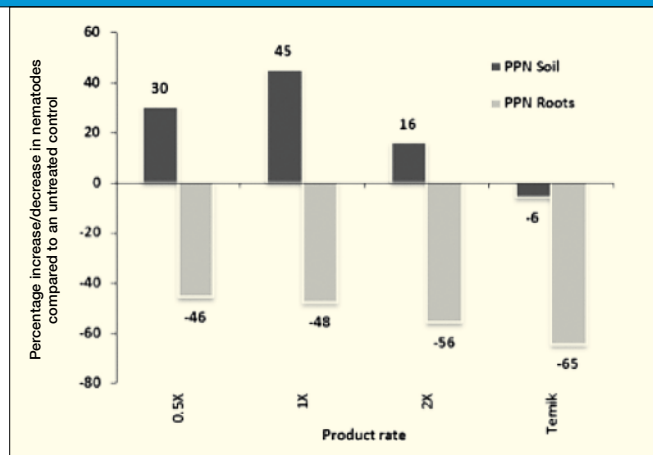
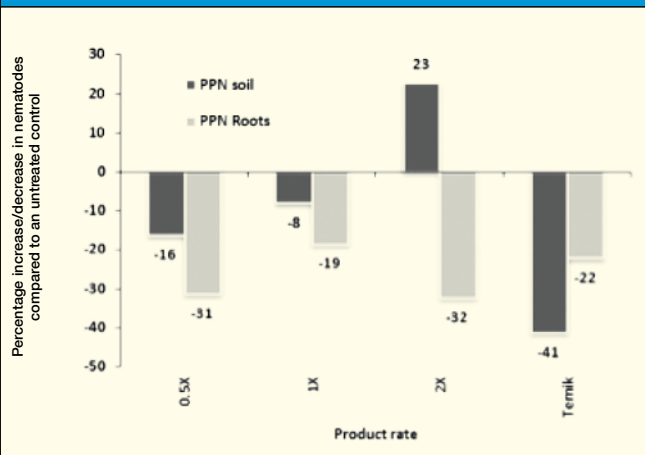


Figure 1. Difference in plant parasitic nematodes (PPN) in the soil and roots expressed as a percentage of the untreated control for the plant crop (a) and first ratoon (b).

(a) Plant crop

(b) First ratoon

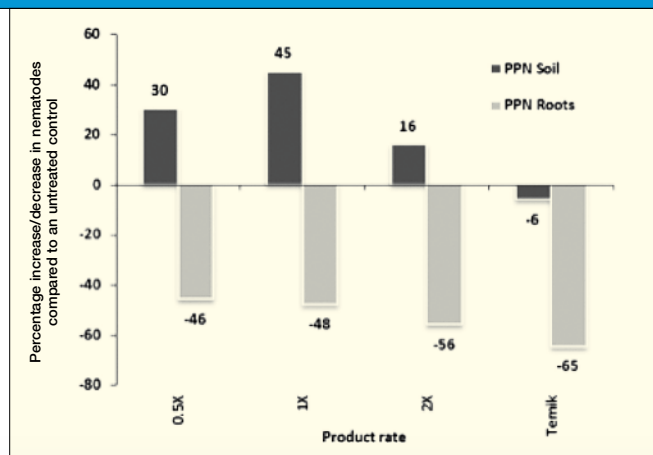
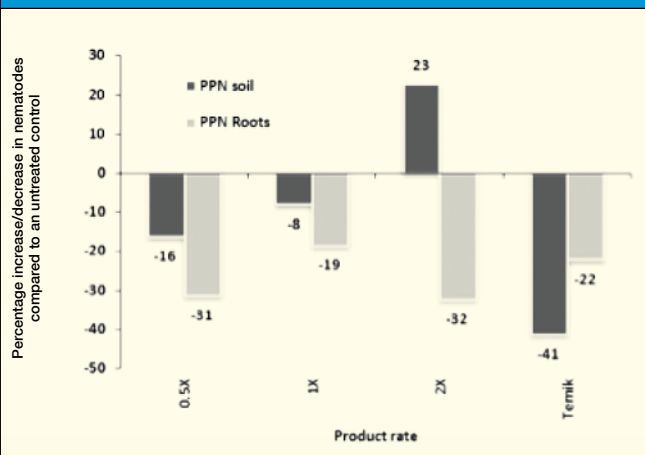


Figure 2. Thrips numbers in the plant crop (a) and first ratoon (b).



One product, a nematicide-insecticide combination, was of particular interest as it consistently reduced nematode numbers, improved growth and also provided some control of thrips.

Initially, fifteen products, both biological and chemical, were tested in pot trials. The products varied from those currently registered in other crops to completely new products or active ingredients, not yet registered for use. From these pot trials, four products (3 liquid and 1 granular) were identified as being effective and were included in field trials to further evaluate their performance.

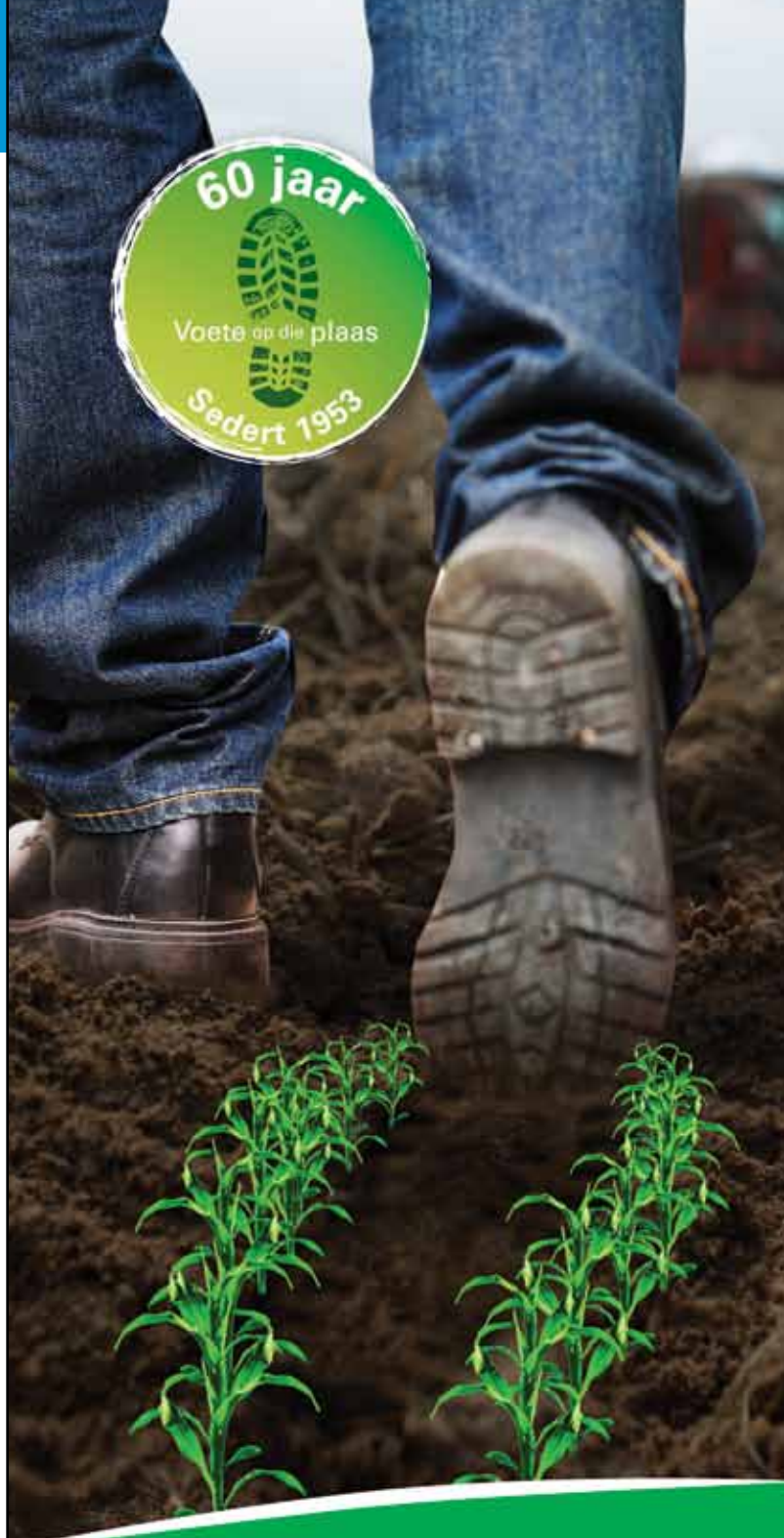
Preliminary results from these trials indicated that all four products provided some nematode control. One product, a nematicide-insecticide combination, was of particular interest as it consistently reduced nematode numbers in the roots (Figure 1), improved growth and also provided some control of thrips (Figure 2).

These field trials are due to be harvested in October and November this year but preliminary results are encouraging. Based on these results, the agrochemical company concerned has asked SASRI to conduct further trials to facilitate registration of the product. These trials commenced in September 2013. This research is on-going and aims to continually identify newer, safer technologies, thereby providing the industry with as many effective alternatives to nematode control as possible. ✓

Prabashnie Ramouath  
Nematologist  
South African Sugarcane Research Institute  
South African Sugar Association



Uvendri Pillay  
Assistant Research Officer  
South African Sugarcane Research Institute  
South African Sugar Association



Ons verstaan wat vir jou saak maak.

Kontak ons 011 709 8778 / 011 709 8916 of jou plaaslike Omnia landboukundige

[www.omnia.co.za](http://www.omnia.co.za)

Omnia Kunsmis, Posbus 69888, Bryanston, 2021  
Reg No: 2006/013996/07

