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MOS Nbalance

MOS NBALANCE is a combination of organic acids, Pacilomyces fungi and microbes. It is primarily a soil improver formulated for use on soils where certain soil-borne pathogens are present.

MOS NBALANCE controls nematodes by restoring natural balances in the soil. Various species of bacillius bacteria, Azotobacter, Bacillus subtillus and Pacilomyces fungi are used, as well as organic acids.

The purpose of the bacterial species used is primarily to make the biological household in the soil more favorable for the natural pathogens of nematodes, such as the predatory nematodes. For example, if in vitro tests are done, not much will happen to the nematodes, because it is a relatively dead and sterile environment. In soil, which is a dynamic biological environment, there are results.

APPLICATIONS
Where there are heavy infestations of nematodes, it is recommended that conventional chemical pesticides are used first, as it takes time for the natural enemies of nematodes to re-establish and multiply. If Fulvic Acid (98%) is combined at 12 kg/ha, the action of Mos NBalance is accelerated.

Apply 20 l/ha of **MOS NBalance** in combination with 12 kg/ha of Fulvic Acid before planting or as soon as possible afterwards. Irrigate together with application. If the product is sprayed on the ground and only irrigated later in the day, spray in the late afternoon or at night. Because **MOS NBalance** is of natural origin, it is not at all toxic to humans, plants or animals. There is also no withholding period after application. It is important that **MOS NBalance** is part of a biological integrated management program.
Sandy and low pH soils: Combine with Humates at equal amounts as Mos NBalance.

High pH soils: Combine with Mos Woema at 25 l/ha 2 weeks after Mos NBalance application. It can also be applied together.

DO NOT APPLY MORE THAN 20 L/HA **MOS NBALANCE** PER APPLICATION.

FOLLOW-UP APPLICATION 4 WEEKS AFTER PLANTING
15 l/ha **MOS NBalance** WITH 5 kg/ha Fulvic Acid, followed by organic acids as discussed.

Permanent crops
After harvest: 20 l/ha **MOS Nbalance** plus 12 kg/ha Fulvic Acid
After budding (Spring) 20 l/ha **MOS Nbalance** plus 12 kg/ha Fulvic Acid.
December: 20 l/ha **MOS Nbalance** plus 12 kg/ha Fulvic Acid.
If the sodium in the soils is high, replace the fulvic acid with 25 l/ha.

Evaluate results after the first season using soil counts.

POTATO TEST NEMATODE

1. **EXPLANATION OF TRIAL**
   - Divide pivot point in two for trial and control
   - Soil type representatively the same across the entire distribution
   - **Control application:** Temic standard procedure (50kg/ha**)**
   - **Control application:** Standard fertilization as recommended by Kynoch plus 15 liters of MOS.Super at planting and 15 liters at emergence.
   - **Trial application:** With Plant – 12.5 lt MOS.Nema per hectare
     With Emergence – 12.5 lt MOS.Nema per hectare

   Trial application: Standard fertilization as recommended by
   Kynoch plus 15 litres MosNbalance with planting and 15 litres with emergence

2. **PURPOSE OF TRIAL**
   - Compare nematode count between trial and control
   - Take 3 samples during planting season
   - Compare yield between trial and control
   - Compare costs of trial and control

3. **RESULT OF TRAIL AND CONTROL**
   COUNTING DONE BY ARC NELSPRUIT

Nematodes	Count Date	Control	Trial
Root knot nematode	**22-11-2005**	0	0
Spiral nematode		250	150
Lost nematode		0	0
Root knot nematode	**03-12-2005**	250	0
Spiral nematode		350	150
Lost nematode		0	0
Root knot nematode	**14-02-2005**	0	0
Spiral nematode		400	0
Landscap nematode		100	50
Needle nematode		0	50

4. **YIELD EQUATION**
   a. Control block : 59 ton/ha
   b. Trial Block : 64 ton/ha
   c. Increase of 8.5 %

5. **INPUT COST COMPARISON**

   a. Control block : R 2 800.00 per hectare
   b. Trial Block : R 1 485.00 per hectare
   c. Cost savings of R 1 315.00 per hectare

MOS NEMA TRIALS ON APPLES

During 2016 trials were initiated at a Cape Span farm. Pratylenchus nematodes are the biggest problem.

Two treatments were applied 20l/ha Mos Nema and 12 kg/ha Fulvic Acid(72%). The first in September and then again in December 2016.

The control treatment was the standard chemical treatment used on apples, also two applications **Nema trials at Villiersdorp, Western Cape.**

Samples were taken in December 2016 and March 2017

Counts were done in 250 cc soil and 10 g roots

	Free living nematodes	**Pratylenchus**
December samples		
Control soil	6430	820
Contol roots	1760	240
Mos soil	2420	1000
Mos roots	380	320
March samples		
Control soil	2960	3080
Control roots	260	160
Mos soil	8200	300
Mos roots	560	120

The trials were repeated in 2017/2018 season.

Photo’s of the roots were taken in April when samples were taken for evaluation.

Roots of the control: no treatment

Roots of the chemical treatment

Roots of the MOS biological treatment

2017/2018 RESULTS

SAMPLES TAKEN IN MAY 2018

	MOS program	Chemical	Control
Free living	3000	1280	1010
Dagger	0	30	10
Pratylenchus	780	880	1800

For any inquiries, contact our office.
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