



Tonnels Tunnels

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Biologiese beheer van wortelsiektes en insekte in tonnells Biological control of root diseases and insects in tunnels

Bio-Tricho en Bio-insek gee uitstekende beheer teen verskeie peste en plaë by tonnelverboorde produkte. Bio-Tricho beheer wortelsiektes soos Phytophthora, Pythium, Fusarium en Sclerotium, terwyl Bio-Insek peste soos bolwurm en witvlieg op produkte soos tamaties en komkommers beheer.

Bio-Tricho bevat spore van die swam *Trichoderma harzianum*. Hierdie swam leef in simbiose met die plant deurdat dit uitskeidings van die wortels gebruik as voeding en leef en vermeerder ook saproteties op dooie materiaal in die grond in die wortelsone. Die plant word op sy beurt deur hierdie simbiose bevoordeel deurdat die swam 'n parasiet op wortelpatogene is en sodoende die plant teen wortelvrot beskerm en help ook die plant met opname van voedingstowwe. Toediening van Bio-Tricho kan deur die besproeiingsstelsel gedoen word andersins kan die produk in water aangemaak word (400g/100L water) en 100 -150 ml in die plantsak toegedien word.

Bio-Insek bevat spore van die swam *Beauveria basiana*. Hierdie swam is 'n parasiet op 'n wye reeks insekte soos bolwurm, witvlieg, blaaspootjies, roospinnekop ens. Gereelde bespuiting van plante met Bio-Insek sal genoemde insekte op plante beheer.

Die werking van Bio-Insek word geweldig verhoog indien dit saam met Bio-Neem toegedien word. Bio-Neem hou die swamspore vir 'n langer periode nat sodat beter ontkieming van die spore plaasvind.

Bio-Neem het verder 'n afwerende invloed op insekte en indien die insek in kontak met Bio-Neem kom, word die insek se lewensiklus heeltemal ontwig met die gevolg dat dit later doodgaan.

Die Dosis van Bio-Neem is 500ml/100L water. Bio-Insek word teen 400g/100L vermeng. Verseker goeie bedekking van alle plantdele. Bespuiting moet verkieslik vroeg in die oggend of laatmiddag gedoen word.

Bio-Tricho and Bio-insek give excellent control against a variety of insect pests and diseases in tunnels. Bio-Tricho controls root diseases like Phytophthora, Pythium, Fusarium and Sclerotium, while Bio-Insek controls pests like bollworm, whitefly and mites on products like tomatoes and cucumbers.

Bio-Tricho contains spores of the fungus *Trichoderma harzianum*. This fungus lives in symbiosis with the plant by using plant exudates as nutrients and can also live and multiply saprophytically on organic material in the root zone. The plant in turn profits from this symbiosis in that the fungus is a parasite on root pathogens and

thus protects the plant against root rot and it also helps the plant with uptake of nutrients. Bio-Tricho can be applied through the irrigation system or otherwise 100-150ml of a mixture (400g/100L) of the fungus in water can be added to each plant bag.

Bio-Insek contains spores of the fungus *Beauveria basiana*. This fungus is a parasite on a wide range of insects like bollworm, white fly, thrips and red spider mites. Regular weekly sprays of Bio-Insek will give control of these insects. Control of above mentioned insects is enhanced when applied with Bio-Neem. The fungal spores are kept wet for a longer period whereby germination is improved.

Bio-Neem also has a direct influence on the insect by acting as repeller and when taken up by insects it also influences the life cycle on a variety of ways by stopping the insect from eating and development of the life cycle is abrupt and it eventually dies.

Dosage of Bio-Neem is 500g/100L. Bio-Insek must be used at 400g/100L water. Ensure good coverage of all plant parts. Apply early morning or late afternoon.

Blaaspootjies , Thrips

Tydens die proewe met Bio-Neem en Bio-Insek op SNUITKEWER by appels en duiwe, is daar ook 'n drastiese afname van BLAASPOOTJIE en APPELBLOEDLUIS gevind. Daar word verneem, dat BLAASPOOTJIES in sekere areas tans 'n probleem is. In die Grabouw area is daar boorde waar Bio-Neem en Bio-Insek in 2005 toegedien is, met 'n kleiner toediening in September / Oktober 2006 en so te sê skoon is. Vloeibare Bio-Insek is slegs op vooraf-bestelling beskikbaar.

During field trials with Bio-Neem and Bio-Insek on SNOUTBEETLE in apples and grapes, a drastic reduction of THRIPS and APPLE WHOOLY APHID occurred. We were informed that certain areas are currently challenged by THRIPS. In the Grabouw area Bio-Neem and Bio-Insek was applied on some orchards in 2005. In September/Oktobor 2006 another treatment was applied (at reduced dosage). These orchards are basically free from above mentioned problems.

Bio-Insek in liquid form is available only on pre-arranged order.

Sou u van enigiemand weet wat graag ons nuusbriewe sou wou ontvang, laat weet ons asseblief! DANKIE.

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