



STRANGLER SL

Reg.No. L10062 Act No. 36 of 1947

Reg.Nr. L10062 Wet Nr. 36 van 1947

RESTRICTED USE AGRICULTURAL REMEDY
THIS REMEDY IS RESTRICTED DUE TO ACUTE TOXICITY. THIS REMEDY MAY ONLY BE SOLD TO AND USED BY A REGISTERED PEST CONTROL OPERATOR, OR BY SOMEONE UNDER THE SUPERVISION OF A REGISTERED PEST CONTROL OPERATOR, AND ONLY FOR THOSE USES COVERED BY THE PEST CONTROL OPERATOR'S SCOPE OF REGISTRATION, AND ONLY AS DIRECTED ON THIS LABEL.

BEPERKTE GEBRUIK VIR LANDBOUMIDDEL
HIERDIE MIDDEL IS BEPERK AS GEVOLG VAN AKUTE TOKSISITEIT. HIERDIE MIDDEL MAG SLEGS VERKOOP WORD AAN EN GEBRUIK WORD DEUR 'N GEREISTREERDE PLAAGBEHEER-OPERATEUR, OF DEUR IEMAND ONDER TOESIG VAN 'N GEREISTREERDE PLAAGBEHEER-OPERATEUR, EN SLEGS VIR DAARDIE GEBRUIKE WAT DEUR DIE PLAAGBEHEEROPERATEUR SE OMVANG VAN REGISTRASIE GEDEK WORD, EN SLEGS SOOS AANGEDUI OP HIERDIE ETIKET.

READ ATTACHED LABEL BEFORE USE
KEEP OUT OF REACH OF CHILDREN AND ANIMALS

LEES DIE INGESLOTE ETIKET VOOR GEBRUIK HOU BUITE
BEREIK VAN KINDERS EN DIERE

INSECTICIDE GROUP 1A

A water soluble liquid for the protection of pineapples, potatoes, sugarcane, tobacco and tomatoes against root knot nematodes (*Meloidogyne spp.*), groundnut pod nematode in groundnuts and the suppression of aphids in

INSEKODER GROEP 1A

'n Wateroplosbare vloeistof vir die beskerming van pynappels, aartappels, suikerriet, tabak, en tamaties teen knopwortelaalwurm (*Meloidogyne spp.*), grondboonpeulaalwurm in grondbone en die onderdrukking van plantluise in aartappels soos aangeui.



Hazard Statements:

Highly flammable liquid and vapour. Fatal if swallowed.
Fatal if inhaled. Harmful in contact with skin. Causes damage to organs. Toxic to aquatic life with long-lasting effects.

Precautionary statements:

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Keep container tightly closed. Ground and bond container and receiving equipment. Use explosion-proof equipment. Use non-sparking tools. Do not breathe dust, fumes, mist, vapours or spray. Wash hands, face, and any exposed skin thoroughly after handling. Use only outdoors in a well-ventilated area. Avoid release to the environment. Wear PPE.

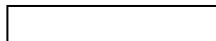
DANGER

ACTIVE INGREDIENT
Oxamyl (carbamate)

310 g/litre

AKTIEWE BESTANDDEEL
Oksamil (karbamaat)

Net Volume



Netto Volume

Registered by/Geregistreer deur:
BITRAD AGRI (PTY) LTD
41 Rudolph Str, Sunderland Ridge, Centurion. Tel: 012 666 7331

BATCH NUMBER
DATE MANUFACTURED

LOTNOMMER
DATUM VERVAARDIG

Expiry date

< 2 years/jaar

Vervaldatum

UN No.
Emergency number

2757
082 446 8946

VN nr.
Noodnommer

National Poisons Centre: 0861 555 777

WARNINGS:

Hazard Statements

Highly flammable liquid and vapour
Fatal if swallowed and inhaled
Harmful in contact with skin
Causes damage to organs
Toxic to aquatic life

PRE HARVEST INTERVALS:

Number of days which must allowed between last application and harvest.

Pineapples.....	120 days
Potatoes.....	40 days
Sugarcane.....	120 days
Tobacco.....	42 days
Tomatoes.....	21 days
Groundnuts.....	80 days

AERIAL APPLICATION:

Notify all inhabitants of the immediate area to be sprayed and issue the necessary warnings.

Although this remedy has been extensively tested under a large variety of conditions the registration holder does not warrant that it will be efficacious under all conditions because the action and effect thereof may be affected by factors such as abnormal climatic and storage conditions, quality of dilution water, compatibility with other substances not indicated on the label and the occurrence of resistance of the pest against the remedy concerned as well as by the method, time and accuracy of application. The registration holder furthermore does not accept responsibility for damage to crops, vegetation, the environment or harm to man or animal or for lack of performance of the remedy concerned due to failure of the user to follow label instructions or to the occurrence of conditions, which could not have been foreseen in terms of the registration. Consult the supplier in the event of any uncertainty.

PRECAUTIONS:

• Prevention

Keep away from heat, hot surfaces open flames, sparks & other ignition sources.
Prevent contamination of food, feed, eating utensils and drinking water
When handling contents, use explosion proof electrical equipment, non-sparking tools.
When handling contents, Ground and bond container and receiving vessels and take action to prevent static discharge
Do not breathe dust, fumes, vapours or spray mist
Wash hands, face and exposed skin thoroughly after handling
Do not eat, drink or smoke when using the product
Use only outdoors in a well-ventilated area
Avoid release to the environment
Wear protective gloves, - clothing, eye - and face protection
Wear respiratory protection

• Response

If swallowed: Immediately get medical help. Rinse mouth
If on skin: Immediately remove contaminated clothing. Wash with plenty of water under safety shower
If inhaled: Remove person to fresh air and keep comfortable for breathing
If exposed or concerned: Get emergency medical help immediately
Remove contaminated clothing and wash it before re-use
In case of fire: Foam or dry chemicals preferred in firefighting.
Specific treatment is urgent. See "Note to Physician"
Collect spillage

• Storage

Store in a well-ventilated place under lock and key.
Keep container tightly closed and cool
Store locked up

• Disposal

Triple rinse empty container in the following manner: Invert the empty container over the spray or mixing tank and allow to drain for at least 30 seconds after the flow has slowed down to a drip. Thereafter, rinse the container three times with a volume of water equal to

a minimum of 10 percent of that of the container. Add the rinsing to the contents of the spray tank
Dispose empty containers to an approved recycling facility in accordance with local and national regulations

RELEVANT SUBSTANCES

Hazardous Component	Weight - %	GHS Classification
Oxamyl	32.8%	Acute Oral & Inhalation Toxicity – Category 2. Acute Toxicity Dermal – Category 4. Aquatic Toxicity Chronic – Category 2.
Methanol	30 - 60%	Flammable Liquids – Category 2 Acute Oral, Dermal & Inhalation Toxicity – Category 3. STOT SE – Category 1 (liver, kidneys, central nervous system, optic nerve).

FIRST AID TREATMENT:

- ALWAYS OBTAIN TREATMENT FROM A PHYSICIAN IMMEDIATELY.
- Remove patient from source of exposure to a well-ventilated area.
- Keep the patient quiet and comfortable.
- Remove contaminated clothing and rinse contaminated body area thoroughly with plenty of soap and water.
- Do not rub skin.
- Flush contamination out of eyes with clean water for at least 15 minutes.
- Administer artificial respiration or closed chest cardiac massage if necessary.
- Do not apply direct mouth-to-mouth respiration.
- Never give anything by mouth to an unconscious person.
- Call a physician immediately and advise him of poisoning, or transport patient to a physician or hospital, whichever is faster.
- SHOW THIS LABEL TO THE PHYSICIAN.

NOTE TO PHYSICIAN - ANTIDOTE:

Preferred treatment of poisoning in adults is Atropine sulphate 1.2 – 2.0 mg, intravenously, repeated at 10 to 30 minute intervals until atropinization (dry flushed skin and tachycardia) appears. Maintain atropinisation until patient recovers. Pralidoxime (2 PAM, Protopam) and other oximes are contra indicated for STRANGLER exposure alone and should not be used. However, for exposure to both STRANGLER and an organophosphorous insecticide, 2 PAM may be used as required to supplement the atropine sulphate treatment as described. Do not use morphine.

DE-ACTIVATION OF STRANGLER SOLUTIONS:

To de-activate excess Oxamyl, add 2.5 kg sodium carbonate per 100 litre spray mixture remaining in spray tank and leave for a minimum period of 12 hours.

RESISTANCE WARNING

For resistance management, **STRANGLER** is a group code **1A** nematocide/insecticide. Any nematode/insect population may contain individuals naturally resistant to **STRANGLER** and other group code **1A** insecticides. The resistant individuals can eventually dominate the population if these products are used repeatedly. These resistant insects may not be controlled by **STRANGLER** or any other group code **1A** insecticide.

To delay insecticide resistance:

- Avoid exclusive repeated use of insecticide from the same insecticide group code.
- Alternate or tank mix with products from different insecticide codes.
- Integrate other control methods (chemical, cultural, biological) into insect control programmes.

For specific information on resistance management contact the registration holder of this product.

MODE OF ACTION

Strangler action relates to nerve impulses. It inhibits the acetylcholinesterase enzyme, which blocks the breakdown of acetylcholine, with resulting excess of latter leading to hyperexcitation.

DIRECTIONS FOR USE:

USE ONLY AS DIRECTED

Oxamyl is extremely sensitive and degrades rapidly in alkaline solutions. Buffer spray water to a pH of 5-6 before adding STRANGLER to spray tank.

Optimal activity of STRANGLER is dependant on the effective translocation of the active ingredient in the treated plant. Reduced efficacy may result when treated plants are subject to any stress factors, which may impair effective translocation.

COMPATIBILITY:

STRANGLER is compatible with most fungicides and insecticides normally used.

IT IS NOT COMPATIBLE WITH ALKALINE MATERIALS.

Do not use in combination with G-49 wetter on tobacco seedbeds or on citrus.

AERIAL APPLICATION:

Aerial application of **STRANGLER** may only be done by a registered Aerial Application Operator using a correctly calibrated, registered aircraft according to the instructions of SANS 10118:2009 (Aerial Application of Agricultural Remedies). Ensure that the spray mixture is distributed evenly over the target area and that the loss of spray material during application is restricted to a minimum. It is therefore essential that the following criteria be met:

- Volume: A spray mixture volume of at least 30 l per hectare is recommended. As this product has not been evaluated at a reduced volume rate, the registration holder cannot guarantee efficacy, or be held responsible for any adverse effects if this product is applied aerially at a lower volume rate than recommended above.
 - Droplet coverage: 30 to 40 droplets per cm² must be recovered at the target area.
 - Droplet size: A droplet spectrum with a VMD of 250 to 280 microns is recommended. Limit the production of fine droplets less than 150 microns (high drift and evaporation potential) to a minimum.
 - Flying height: Maintain the height of the spray boom at 3 to 4 metres above the target. Do not spray when aircraft dives, is in a climb or when banking
 - Use suitable atomising equipment that will produce the desired droplet size and coverage, but which will ensure the minimum loss of product. The spraying system must produce a droplet spectrum with the lowest possible Relative Span.
 - Position all the atomisers within the inner 60 to 75 % of the wingspan to prevent droplets from entering the wingtip vortices.
 - The difference in temperature between the wet and dry bulb thermometers, of a whirling hygrometer, should not exceed 8°C.
 - Stop spraying if the wind speed exceeds 15 km/h.
 - Stop spraying under turbulent, unstable and dry conditions during the heat of the day.
 - Spraying under temperature inversion conditions (spraying in or above the inversion layer) and/or high humidity conditions (relative humidity 80 % and above) may lead to the following:
 - reduced efficacy due to suspension and evaporation of small droplets in the air (inadequate coverage)
 - damage to other sensitive crops and/or non-target areas through drifting of the suspended spray cloud away from the target field.
 - Ensure that the Aerial Spray Operator knows exactly which fields to spray.
- Obtain an assurance from the Aerial Spray Operator that the above requirements will be met and that relevant data will be compiled in a logbook and kept for future reference

MIXING INSTRUCTIONS:

1. Fill spray tank to 90% of needed volume with water.
2. Buffer pH to 5 to 6 with suitable product.
3. Add the required volume of STRANGLER.
4. Fill tank to final volume needed with water.

APPLICATION TABLE:

CROP/PEST	DOSAGE	DIRECTIONS FOR APPLICATION
PINEAPPLES Plant parasitic Nematodes	PLANT CROP: First Application: 640 ml/100 litre water. Further Applications: 320 ml/100 litre water. RATTOON CROP: 320 ml/100 litre water.	If heavy Nematode infestations were present on previous crops, fumigate soil with a registered fumigant before planting. Ensure that adequate soil moisture is present to sustain plant growth. Best results are obtained when plants treated, are still in a healthy condition. Apply first foliar application as soon as root growth commences. Apply 500 litre spray mixture/ha. Direct spray nozzles on planted rows and ensure good wetting. Apply 5 more sprays at 4 week intervals. Gradually increase the spray volume up to 1000 litre/ha to ensure sufficient wetting of plants. Only recommended if previous crops were treated for nematodes. Commence spray programme immediately after harvest. Apply 6 sprays at 4 week intervals. Use 1000 litre spray mixture/ha.
POTATOES Root knot nematode and suppression of Aphids	Ground application: 800 ml/100 litres water Aerial application: 4 litres per ha	Fumigate soil before planting with a registered product. Apply first spray of 250 litre spray mixture per ha – one week after emergence of crop. Repeat after 4 weeks with second spray at rate of 600 litre spray mixture per ha. In case of heavy infestations, a third application of 600 litre spray mixture/ha is needed 4 weeks after second application
SUGARCANE Ratoon Crops Only Nematodes	Ground application: 7.2 – 9.6 litre/ha in 300 litre water/ha. (86 – 115 ml in 3.6 litre water per 100 m linear row length at 1.2 m row spacing. Aerial application: 7.2 – 9.6 litre/ha.	Apply STRANGLER spray solution onto cane foliage with a knapsack, or low pressure tractor mounted boom sprayer. Apply at the 6 – 8 leaf crop stage of new growth after harvest. The use of STRANGLER is only recommended when plants are growing actively Use the 9.6 litre/ha dose rate for soils containing less than 5% clay (weak sands) and in areas where high populations of Nematodes may occur. Apply in 30 litres water/ha. (See detailed instructions above)
TOBACCO Root knot Nematode	SEEDBEDS: Fumigate with registered fumigant prior to seeding.	Fumigate soil with a registered fumigant before planting. Implement the full recommended programme to ensure effective protection against nematode infestation. A neutral soil pH is advisable.

	80 ml /10 litres water AFTER TRANSPLANTING: 800 ml/100 litres water	Drench the seedbeds 24 - 48 hours prior to transplanting with 2 litres of the solution per square meter of seedbed surface. Do not use the solution as transplant water or for dipping seedlings. Where NO nematode control, or inadequate control measures preceded present planting, or where severe nematode infestations may occur – Apply 250 litres spray mixture/ha as a foliar application, 2 weeks after transplanting. Repeat application 3 weeks later with 500 litres spray mixture/ha. Where low nematode infestations normally occur and where effective nematode control measures were applied during the preceding planting season – apply 500 litres spray mixture/ha as a foliar spray, 5 weeks after transplanting.
TOMATOES Root knot Nematode	SEEDBEDS/SEED TRAYS: Fumigate with registered fumigant prior to seeding. 40 ml/10 litres water AFTER TRANSPLANTING: 800 ml/100 litres water	Fumigate soil with a registered product before planting. Implement the full recommended programme to ensure effective protection against nematode infestation. Treat surface area 24 – 48 hours prior to transplanting as follows: SEEDBEDS: Drench 2 litres solution per square meter surface area. SEED TRAYS: Spray 0.5 litre solution per square meter surface area. Apply 250 litres spray mixture/ha as a foliar application, 2 weeks after transplant. Repeat application 3 weeks later with 500 litres spray mixture/ha.
GROUNDNUTS Groundnut pod nematode. (<i>Ditylenchus destructor</i>)	1.2 litres/100 litres water	Apply in at least 250 litres water/ha as a foliar spray at commencement of peg formation. (depending on cultivar, this is approximately 60 days after planting.) Ensure thorough wetting of the foliage

WAARSKUWINGS:

- **Gevaarklousules**

Hoogs vlambare vloeistof en dampe
Dodelik indien ingesluk of ingeasem
Skadelik met velkontak
Veroorsaak skade aan organe
Giftig vir waterlewe

- WAGPERIODES VOOR OES: Aantal dae wat moet verstryk tussen die laaste toediening en oes of weiding (voer)

Pynappels	120 dae
Aartappel	40 dae
Suikerriet	120 dae
Tabak	42 dae
Tamaties.....	21 dae
Grondbone	80 dae

- LUGTOEDIENING - Stel alle inwoners in die nabye omgewing in kennis van die lugbespuitingsarea en reik die nodige waarskuwings uit.

Alhoewel hierdie middel omvattend onder 'n groot verskeidenheid toestande getoets is waarborg die registrasiehouer nie dat dit onder all toestande doeltreffend sal wees nie, aangesien die werking en effek daarvan beïnvloed kan word deur faktore soos abnormale klimaats- en bergingstoestande; kwaliteit van verdunningswater; verenigbaarheid met ander stowwe wat nie op die etiket aangedui is nie en die voorkoms van weerstand van die plaag teen die betrokke middel sowel as die metode, tyd en akkuraatheid van toediening. Verder aanvaar die registrasiehouer nie verantwoordelikheid vir skade aan gewasse, plantegroei, en omgewing of vir nadelige effek op mens of dier of vir 'n gebrek aan prestasie van die betrokke middel as gevolg van die ontstaan van toestande wat nie kragtens die registrasie voorsien kon word nie. Raadpleeg die verskaffer in die geval van enige onsekerheid

VOORSORGMAATREËLS:

- **Voorkoming**

Hou weg van hitte, warm oppervlaktes, oop vlamme, vonke en ander ontbrandingsbronne
Vookom besoedeling van voedsel, voer, eetgerei en drinkwater
Met hantering van inhoud, gebruik vlambestande elektriese toerusting en vonkvrye gereedskap
Met hantering van vloeistof, koppel aarddrade aan lewerings- en ontvangshouers en voorkom ontlading van statiese elektrisiteit
Moet nie stof, dampe of spuitnewel inasem nie
Was hande, gesig en blootgestelde vel deeglik na hantering
Moet nie eet, drink of rook wanneer produk gebruik word nie
Gebruik slegs buitenshuis in goed deurligte areas
Voorkom vrystelling in die omgewing
Dra beskermende handskoene, -klere, oog- en gesigsbeskerming
Dra respirator

- **Reaksie**

Indien ingesluk: Kry onmiddelik mediese hulp. Spoel mond
Indien velkontak: Verwyder besoede klere onmiddelik. Was met baie water onder veiligheidstort.
Indien ingeasem: Verwyder persoon na vars lug en stel gerus vir gemaklike asemhaling
Indien blootgestel en bekommerd: Kry onmiddelik mediese noodhulp
Verwyder besoede klere en was dit voor hergebruik
In Geval van vuur: Gebruik verkieslik skuim of droeë chemikalieë blussers
Spesifieke behandeling is dringend. Verwys Nota aan Geneesheer - Teenmiddel
Versamel gemorsde produk

- **Storing**

Stoor in goed deurlugte plek
Hou houers dig toe en in koel omgewing
Stoor agter slot en grendel

- **Wegdoening**

Spoel die leë houer driekeer as volg: Keer die leë houer om oor die spuit- of mengtenk en dreineer vir minstens 30 sekondes nadat die vloeï tot 'n gedrup verminder het. Spoel die
--

houer daarna driekeer uit met 'n volume water gelykstaande aan 'n minimum van 10 persent van die inhoud van die houer. Gooi die spoelwater by die inhoud van die spuitnek
Verskaf leë houters aa naan goedgekeurde hersikleringsfasiliteit volgens plaaslike en nasionale regulasies

BETROKKE BESTANDELE

Gevaarlike bestandeel	Weight - %	GHS Klassifikasie
Oxamyl	32.8%	Acute Oral - & Inhalation Toxicity – Category 2. Acute Toxicity Dermal – Category 4. Aquatic Toxicity Chronic – Category 2.
Methanol	30 - 60%	Flammable Liquids – Category 2 Acute Oral -, Dermal - & Inhalation Toxicity – Category 3. STOT SE – Category 1 (liver, kidneys, central nervous system, optic nerve).

NOODHULPBEHANDELING:

- VERKRY ALTYD ONMIDDELLIK BEHANDELING VAN 'N GENEESHEER.
- Verwyder persoon van die oorsaak van vergiftiging, na 'n koel en goed geventileerde omgewing.
- Hou die pasient rustig en hou hom stil.
- Verwyder besoedelde klere en spoel die besmette liggaamsdele met baie seep en koue water af.
- Moet nie die vel hard vrywe nie.
- Besmette oë moet vir minstens 15 minute met skoon water uitgespoel word.
- Pas kunsmatige asemhaling of geslote hartmassering onmiddellik toe indien nodig.
- Moet nie direkte mond tot mond asemhaling toepas nie.
- Moet nooit iets per mond aan 'n bewustelose persoon toedien nie.
- 'n Geneesheer moet onmiddellik ontbied word en ingelig word oor die vergiftiging, of die pasiënt moet onmiddellik na die naaste hospitaal of geneesheer vervoer word, afhangende wat die vinnigste is.
- STEL DIE ETIKET BESIKBAAR AAN DIE GENEESHEER.

NOTA AAN GENEESHEER - TEENMIDDEL:

Voorkeur behandeling vir volwassenes is Atropien-sulfaat 1.2 – 2.0 mg, binnears toegedien. Herhaal elke 10 tot 30 minute totdat pasiënt ten volle ge-atropiniseerd is (droë gloeiende vel en tachycardia). Pralidoxime (2 PAM, Protopam) en ander oksieme het die teenoorgestelde uitwerking op blootstelling aan STRANGLER alleen en moet NIE gebruik word nie. In geval van blootstelling aan sowel STRANGLER EN 'n organiese fosfaatinsektmiddel mag 2 PAM gebruik word soos benodig om die voorgeskrewe atropien-sulfaat behandeling aan te vul.

WEERSTANDWAARSKUWING

STRANGLER is 'n groepkode **1A** aalwurmdoder/insekdoder. Enige populasie van 'n spesifieke aalwurm/insek mag individue insluit wat 'n natuurlike weerstand teen **STRANGLER**, of enige ander groepkode **1A** insekdoder het. Indien hierdie produk herhaaldelik aangewend word, kan die weerstandbiedende individue uiteindelik die insekpopulasie oorheers. Hierdie weerstandbiedende insekte/aalwurms, sal waarskynlik nie deur **STRANGLER** of enige ander groepkode **1A** insekdoder beheer word nie

Om weerstand teen insekdoders te vertraag:

- Vermyn die eksklusiewe herhaaldelike gebruik van insekdoders met dieselfde groepkode.
- Wissel af met, of gebruik tenkmengsels van produkte in verskillende insekdodergroepkodes.
- Integreer ander beheermaatreëls (chemies, verbouing, biologies) in insekdoderprogramme

Vir spesifieke inligting oor weerstandsbestuur kontak die registrasiehouer van hierdie produk

WERKINGSMETODE

Strangler het betrekking op senuwee-impulse. Dit inhibeer die ensiem astielcholinesterase, wat die afbraak van asetielcholin verhoed en oormaat astielcholin lei tot hiperaktiwiteit.

GEBRUIKSAANWYSINGS:**GEBRUIK SLEGS SOOS AANGEDUI**

Oxamyl is uiters gevoelig en breek vinnig af in alkaliese oplossings. Buffer spuitwater tot pH 5-6 voordat STRANGLER bygevoeg word in spuittenk.

Optimale aktiwiteit van STRANGLER is afhanklik van effektiewe translokasie van die aktiewe bestanddeel in die behandelde plant. Verlaagde effektiwiteit mag voorkom indien plante onderhewig is aan enige spanningsfaktore, wat effektiewe translokasie kan beperk.

VERENIGBAARHEID:

STRANGLER is verenigbaar met meeste swamdoders en insekmiddels wat normaalweg gebruik word.

DIT IS NIE VERENIGBAAR MET ALKALIESE STOWWE NIE.

Moet nie in kombinasie met G-49 benatter op tabaksaadbeddings gebruik nie.

MENGINSTRUKSIES:

1. Vul spuittenk tot 90% van verlangde volume met water.
2. Buffer pH na 5 tot 6 met geskikte produk.
3. voeg die verlangde volume STRANGLER by.
4. Vul tenk tot finale volume benodig met water.

LUGTOEDIENING:

STRANGLER kan slegs deur 'n geregistreerde Lugbespuitingsoperateur met 'n korrek gekalibreerde, geregistreerde vliegtuig volgens die instruksies van SANS 10118:2009 (Aerial Application of Agricultural Remedies) uit die lug bespuit word. Verseker dat die spuitmengsel eweredig oor die teikenarea versprei word, en die verlies aan spuitmengsel tydens toediening tot 'n minimum beperk word. Dit is daarom belangrik om aan die volgende vereistes te voldoen:

- Volume: 'n Spuitmengsel volume van minstens 30 l per ha word aanbeveel. Hierdie produk is nie teen 'n verlaagde volume getoets nie. Die registrasiehouer kan nie effektiwiteit waarborg, of verantwoordelik gehou word vir enige nadelige effekte indien hierdie produk teen 'n laer volume, as hierbo aanbeveel, toegedien word nie.
- Druppel bedekking: 30 tot 40 druppels per cm² moet op die teikenarea herwin word.
- Druppelgrootte: 'n Druppelspektrum met 'n VMD van 250 tot 280 mikrons word aanbeveel. Beperk die produksie van druppels kleiner as 150 mikrons (hoë drywing en verdampingspotensiaal) tot 'n minimum.
- Vlieghoogte: Handhaaf die hoogte van die spuitbalk bo die teiken op 3 tot 4 meter. Moet nie spuit wanneer die vliegtuig duik nie, uitklim of draai nie.
- Gebruik geskikte atomiseringsapparaat wat die vereiste druppelgrootte en bedekking sal produseer, maar die minste verlies van produk verseker. Die spuitstelsel moet 'n druppelspektrum met die kleinste moontlike Relatiewe Span produseer.
- Plaas al die atomiseerders in die binneste 60 tot 75 % van die vlerkspan om te verhoed dat druppels binne-in die vlerkpuntvorteks beweeg.
- Die verskil in temperatuur tussen die nat- en droëboltermometer van 'n swaaihygrometer, moet nie 8°C oorskry nie.
- Stop bespuiting indien die windspoed 15 km/uur oorskry.
- Stop bespuiting tydens turbulente, onstabiele en droë toestande gedurende die hitte van die dag.
- Bespuiting onder temperatuur inversie toestande (deur bo of binne die inversie laag te spuit) en/of hoë lugvog toestande (relatiewe humiditeit 80% en meer) mag tot volgende probleme aanleiding gee:
 - verlaagde effektiwiteit aangesien die druppels as 'n wolk in die lug bly hang en moontlik verdamp (onvoldoende bedekking op teiken)
 - skade aan nie-teiken gewasse of sensitiewe areas as gevolg van wegdrywing van die spuitwolk na nie-teiken area.
- Verseker dat die Lugbespuitingsoperateur presies weet watter lande bespuit moet word.
- Dit is noodsaaklik om 'n versekering van die Lugbespuitingsoperateur te verkry dat aan al die bogenoemde vereistes voldoen sal word en dat data van belang in 'n logboek saamgevat is vir toekomstige verwysing.

TOEDIENINGSTABEL:

GEWAS/PLAAG	DOSIS	GEBRUIKSAANWYSINGS
PYNAPPELS Aalwurms	NUWE AANPLANTINGS:	Indien swaar aalwurmbesmettings voorgekom het in voorafgaande gewasse, berook die grond met

	Eerste Toediening: 640 ml/100 liter water. Verdere Toedienings: 320 ml/100 litre water. RATOON LANDE: 320 ml/100 litre water.	geregistreerde produk, voordat geplant word. Verseker dat voldoende grondvog beskikbaar is om plantgroei te onderhou. Beste resultate word verkry as plante wat behandel word, steeds in gesonde toestand verkeer. Dien EERSTE blaarbespuiting toe, sodra wortelontwikkeling begin, met spuitvolume van 500 liter spuitmengsel per hektaar. Rig spuitstukke op die plantrye en verseker goeie benatting. Die 5 meer bespuitings toe met 4 weke tussenposes. Vermeerder die spuitvolume geleidelik tot 1000 liter/ha om goeie benatting van plante te verseker. Slegs aanbeveel indien vorige gewas behandel was teen aalwurms. Begin spuitprogram onmiddelik na oes. Dien 6 bespuitings toe met 4 weke tussesposes. Gebruik 1000 liter spuitmengsel/ha.
AARTAPPELS: Knopwortelaalwurm en onderdrukking van plantluise	Grondtoediening: 800 ml/100 litres water Lugtoediening: 4 litres per ha	Berook die grond met 'n geregistreerde produk, voordat geplant word. Doen die eerste bespuiting van 250 liter spuitmengsel per ha – een week na opkoms van gewas. Herhaal na 4 weke met tweede bespuiting teen 600 litre spuitmengsel per ha. In geval van swaar besmettings, word 'n derde bespuiting van 600 liter spuitmengsel/ha benodig, 4 weke na tweede bespuiting.
SUIKERRIET Slegs Ratoonriet Aalwurms	Grondtoediening: 7.2 – 9.6 liter/ha in 300 liter water/ha. (86 – 115 ml in 3.6 liter water per 100 m lengte ry van 1.2 m rypasieëring. Lugtoediening: 7.2 – 9.6 litre/ha.	Dien STRANGLER spuitmengsel toe op die blare met 'n rugsakspuit, of laedruk trekkerspuit met spuitbalk Apply at the 6 – 8 leaf crop stage of new growth after harvest. Die gebruik van STRANGLER word slegs aanbeveel vir aktiefgroeiende plante. Gebruik die 9.6 liter/ha dosis vir gronde wat minder as 5% klei bevat (swak sandgrond) en in gebiede waar swaar besmettings van aalwurm voorkom. Apply in 30 litres water/ha. (Sien instruksies hierbo)
TABAK Knopwortelaalwurm	SAADBEDDINGS: Berook die grond met 'n geregistreerde produk,	Berook die grond met 'n geregistreerde produk, voordat geplant word. 'n Volledige program word aanbeveel, om effektiewe beskerming teen aalwurmbesmettings te verkry. 'n Neutrale grond pH (5-6) word aanbeveel. Deurdrenk saadbeddings 24 tot 48 uur voor uitplanting met 2 liters van die oplossing, per vierkante meter van die

	voordat geplant word. 80 ml /10 litres water NA OORPLANTING: 800 ml/100 litres water	saadbedoppervlak. Moenie die oplossing gebruik om plantjies te doop , of as water om uitplantings te benat nie. Waar GEEN aalwurmbeheer, OF onvoldoende aalwurmbeheer die bestaande aanplanting voorafgegaan het, OF waar swaar aalwurm besmettings mag voorkom – Spuut 250 liters spuitmengsel/ha as blaarbespuiting, 2 weke na uitplanting. Herhaal toediening 3 weke later met 500 liters spuitmengsel/ha. Waar normaalweg lae besmettings van aalwurm voorkom en/oif waar effektiewe aalwurm beheerpraktyke gevolg is die vorige plantseisoen – dien 500 liter spuitmengsel /ha toe as blaarbespuiting, 5 weke na uitplanting.
TAMATIES Knopwortelaalwurm	SAADBEDDINGS/ SAADLAAIE: Berook die grond met 'n geregistreerde produk, voordat geplant word. 40 ml/10 liters water NA OORPLANTING: 800 ml/100 liters water	Berook die grond met 'n geregistreerde produk, voordat geplant word. 'n Volledige program word aanbeveel, om effektiewe beskerming teen aalwurmbesmettings te verkry. Behandel oppervlak area 24 – 48 uur voor uitplant soos volg: SAADBEDDINGS: Deurdrenk met 2 liters oplossing per vierkante meter oppervlak area. SAADLAAIE: Spuut 0.5 liter oplossing per vierkante meter oppervlak area. Dien 250 liters spuitmengsel/ha toe as 'n blaarbespuiting, 2 weke na uitplant. Herhaal toediening 3 weke later met 500 liters spuitmengsel/ha.
GRONDBONE Peulaalwurm (<i>Ditylenchus destructor</i>)	1.2 liter/100 liters water	Dien as blaarbespuiting toe in minstens 250 liters water/ha met aanvang van penvorming (Rhisoomvorming). (Afhangend van kultivar, ongeveer 60 dae na plant.) Verseker goeie benatting van blare.