

EMPEROR 50 WG

Act No. 36 of 1947 / Wet Nr. 36 van 1947 / SA Reg. No. L11613 / NAM Reg. No. N-AR 2335 / BWA Reg. No. W1301846
READ ATTACHED PACKAGED LEAFLET BEFORE USE • KEEP OUT OF REACH OF CHILDREN AND ANIMALS

GROUP

6

INSECTICIDE

PRODUCT INFO:

A water dispersible granular translaminar stomach insecticide for the control of insect pests on crops as listed.

PRODUK INFO:

'n Waterdispergeerbare korrel translaminêre maaginsekdoer vir die beheer van insekplae op gewasse soos aangedui.

PRECAUTIONARY STATEMENTS:

Wear protective gloves, protective clothing, eye, and face protection.
Wash hands, face, and exposed skin thoroughly after handling. Do not touch eyes.
after handling. Do not touch eyes.



DANGER

HAZARD STATEMENTS:

Harmful if swallowed.
Causes mild skin irritation.
Causes serious eye damage.
May cause damage to organs.
May cause damage to organs through prolonged or repeated exposure.
Very toxic to aquatic life with long lasting effects.

Active Ingredient / Aktiewe Bestanddeel

Emamectin benzoate

50 g/kg

Emamektien bensoaat

Net (g)

SEE CONTAINER

Registration Holder / Registrasiehouer



What is GHS?

ICA International Chemicals (Pty) Ltd. • Reg. No. 2001/013319/07 • 28 Planken Street • Plankenbrug Industrial • STELLENBOSCH • 7600 • SOUTH AFRICA • Tel. +27-21 886 9812 • www.icaonline.co.za

Batch No.
Date of Manufacture
Expiry Date

SEE
CONTAINER

Lot Nr.
Datum van Vervaardiging
Vervaldatum

In case of poisoning, call the following number: Human Poison Helpline +27-861 555 777 • Emergency number: Griffon Poison Information Centre +27-82 446 8946

EMPEROR 50 WG

Wet Nr. 36 van 1947

SA Reg. Nr. L11613 / NAM Reg. Nr. N-AR 2335 / BWA Reg. Nr. W1301846

'n Waterdispergeerbare korrel translaminêre maaginsekoder vir die beheer van insekplae op gewasse soos aangedui.

AKTIEWE BESTANDEEL:

Emaamektien bensoaat 50 g/kg

GEREGISTREER DEUR:

ICA International Chemicals (Pty) Ltd., Reg. Nr. 2001/013319/07
Plankenstraat 28 • Plankenbrug Industrieel • Stellenbosch • 7600 • Suid-Afrika
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WAARSKUWINGS

Skadelik indien ingesluk
Veroorsaak geringe velirritasie
Veroorsaak ernstige oogskade
Mag skade aan organe veroorsaak
Mag skade aan organe veroorsaak deur langdurige of herhaalde blootstelling
Baie giftig vir waterlewende organismes met langdurige gevolge

ONTHOUDINGSPERIODES (Minimum aantal dae tussen laaste toediening en oes):

- ▶ Arbeie 2 Dae
- ▶ Aartappels 14 Dae
- ▶ Appels & Pere 14 Dae
- ▶ Appels & Pere (**tenkmengsel met Marksman 240 SC alleenlik**) 28 Dae
- ▶ Druive (tafel and wyn) 7 Dae
- ▶ Graangewasse (koring en gars) 14 Dae
- ▶ Kanola 14 Dae
- ▶ Koolgewasse (brokkoli, brusselse spruite, kool en blomkool) 7 Dae
- ▶ Mielies & Suikermielies 14 Dae
- ▶ Neutbome (amandels, makadamias, and pekanneute) 14 Dae
- ▶ Neutbome (**makadama neutboorder behandeling**: amandels, kasjoeneute, kastaiings, haselneute, makadamias, okkerneute, pekanneute en pistasieneute) 50 Dae
- ▶ Rissies 5 Dae
- ▶ Sitrus 14 Dae
- ▶ Steenvrugte 7 Dae
- ▶ Tamaties 1 Dag

Nakoming van hierdie onthoudingsperiodes en gebruiksaanwysings sal verseker dat die plaaslike maksimum residu limiete (MRL) nie oorskry word nie, maar mag dalk nie voldoen aan die invoereistes van ander lande nie. Indien die gewas wat behandel gaan word, bestem is vir uitvoer, raadpleeg die betrokke in- of uitvoerder rakende die gebruik van hierdie produk, die MRL en aanbevole onthoudingsperiodes. Alhoewel **EMPEROR 50 WG** as gewasveilig beskou word op meeste van die belangrike kultivars, beteken dit nie dat 'n meer sensitiewe kultivar in die toekoms op die mark kan kom nie. **EMPEROR 50 WG** moet eers op nuwe kultivars getoets word voordat dit oor groot areas aangewend word.

HERBETREDINGSINTERVAL: Moet nie behandelde gebied betree alvorens die spuitneerslag droog is nie, tensy beskermende oorklere gedra word. Klere moet gewas word na elke dag se gebruik.

Alhoewel hierdie middel omvattend onder 'n groot verskeidenheid toestande getoets is, waarborg die registrasiehouer nie dat dit onder alle toestande doeltreffend sal wees nie, aangesien die werking en effek daarvan beïnvloed kan word deur faktore soos abnormale grond-, klimaats- en bergingstoestande, kwaliteit van verdunningswater, verenigbaarheid met ander produkte 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, die omgewing of vir nadelige effekte op mens of dier of vir 'n gebrek aan doeltreffendheid, as gevolg van die versuim van die gebruiker om die etiketaanwysings na te kom of as gevolg van die ontstaan van toestande wat nie kragtens die registrasie voorsien kon word nie. Raadpleeg die verskaffer in geval van enige onsekerheid.

VOORSORGMATREËLS

Indien mediese advies benodig word, hou die produkhouer of -etiket byderhand.
Hou buite bereik van kinders.
Lees sorgvuldig en volg alle instruksies.
Moet nie stof/stuifsel/dampe/spuitstof inasem nie.
Was hande en blootgestelde vel deeglik na hantering.
INDIEN OP VEL: Was met baie water en nie-skurende seep.
Moet nie eet, drink of rook wanneer hierdie produk gebruik word nie.
Vermyn vrystelling in die omgewing.
Dra beskermende handskoene, beskermende klere, oog- en gesigbeskerming.
Was hande en gesig deeglik na hantering. Moet nie aan oë raak nie.
INDIEN INGESLUK: Kry mediese hulp.
INDIEN INGEASEM: Neem slagoffer na vars lug en hou gemaklik vir asemhaling. Kry mediese hulp.
INDIEN IN OË: Spoel onmiddellik met water vir etlike minute. Verwyder kontaklenze, indien aanwesig en maklik om te verwyder. Hou aan met spoel.
INDIEN blootgestel of besorg: Kry onmiddellik mediese noodhulp.

Indien velirritasie ontstaan: Kry mediese hulp.
Verkry mediese hulp indien jy ongestel voel.
Maak stortsel bymekaar.
Berg agter slot en grendel.
Raak ontslae van inhoud en houer volgens nasionale regulasies.

SPOEL DIE LEË HOUER DRIE MAAL SOOS VOLG: Skud al die plaagdoderformulasie uit die houer in die spuit- of mengtenk. Spoel daarna die leë houer drie keer uit met varswater, teen 'n kwart van die houer se volume, en giet die spoelwater in die spuit- of mengtenk. Kap gate in die drie keer gespoelde houer, waarna dit aan 'n goedgekeurde versamelaar of verwerker oorhandig moet word (www.croplife.co.za). Moet nie die houer begrawe, verbrand of aan enige ander partye skenk wat dit as houer vir voedsel of drinkgoed kan gebruik nie.

RELEVANTE STOWWE:

Emamektien bensoaat (Cas no: 155569-91-8) Akute Giftigheid Mondelings Kategorie 3, H301; Akute Giftigheid Vel Kategorie 3, H311; Akute Giftigheid Inaseming Kategorie 3, H331; Ernstige Oogskade Kategorie 1, H318; Spesifieke Teikenorgaangiftigheid, Eenmalige Blootstelling Kategorie 1, H370; Spesifieke Teikenorgaangiftigheid, Herhaalde Blootstelling Kategorie 1, H372; Waterlewend Akut Kategorie 1, H400; Waterlewend Kronies Kategorie 1, H410 (5 % m/m).

Natriumdodesielsulfaat (Cas no: 151-21-3) Akute Giftigheid Mondelings Kategorie 4 H302; Velirritasie Kategorie 2, H315; Ernstige Oogskade Kategorie 1, H318; Waterlewend Kronies Kategorie 3, H412 (< 10 % m/m).

NOODHULP BEHANDELING

In geval van 'n ongeluk of as jy onwel voel, verkry onmiddellik mediese advies (wys hierdie ETIKET waar moontlik)

- INASEMING:**
- Neem die slagoffer weg van die onmiddellike bron van blootstelling. Verskuif die slagoffer na vars lug as dit veilig gedoen kan word en hou gemaklik. Indien die slagoffer ophou asemhaal, pas kunsmatige asemhaling toe.
 - MOET NIE mond-tot-mond-asemhaling toepas indien die slagoffer die stof opgeneem of ingesem het nie; was gesig en mond voordat kunsmatige asemhaling toegepas word. Gebruik 'n sakmasker toegepas met 'n eenrigtingklep of ander geskikte mediese asemhalingtoestel.
 - Dien suurstof toe as die slagoffer se asemhaling moeilik of onreëlmag is. Verkry mediese hulp indien jy ongestel voel.
- VEL:**
- Verwyder en isoleer besmette klere, skoene en leergoedere dadelik en stort.
 - Spoel aangetaste areas (vel) ONMIDDELLIK met nieskurende seep of sagwerkende wasmiddel en groot hoeveelhede lopende water. Was besmette klere voor hergebruik. Kry mediese hulp indien irritasie ontwikkel en voortduur.
- OË:**
- Spoel oë ONMIDDELLIK met skoon lopende water vir ten minste 15 minute terwyl die ooglede vanmekaar gehou word. Verwyder kontaklense na 5 minute indien aanwesig en maklik om te doen.
 - Hou aan met spoel terwyl ooglede vanmekaar gehou word. Kry mediese hulp indien irritasie voortduur.
- OPNEMING:**
- Indien ingesluk, verkry onmiddellik mediese noodhulp. MOET NIE vomering induseer nie, tensy 'n gif-sentrum of dokter opdrag gee om dit te doen. Laat die persoon slukkies water neem indien dit moontlik is om te sluk.
 - Moet nooit iets per mond aan 'n bewustelose persoon gee nie. Indien die persoon wel vomeer, hou aan om vloeistowwe te gee.
- NOTA AAN GENEESHEER:**
- Daar is nie 'n spesifieke teenmiddel nie. Alle behandeling moet gebaseer word op waargenome tekens en simptome van nood by die pasiënt.
- MOONTLIKE GESONDHEIDSGEVOLGE, AKUUT EN VERTRAAGD:**
- Gevolge van blootstelling (inaseming, opneming of velkontak) aan stof kan vertraag wees.

WEERSTANDSWAARSKUWING

Vir weerstandbestuur, **EMPEROR 50 WG** is 'n groeppode (6) insekdoder. Enige insekpopulasie mag individue met 'n natuurlike weerstand teen **EMPEROR 50 WG** of enige ander groeppode (6) insekdoders insluit. Indien hierdie insekdoders herhaaldelik aangewend word, kan die weerstandbiedende individue uiteindelik oorheersend in die insekpopulasie word. Hierdie weerstandbiedende insekte sal nie deur **EMPEROR 50 WG**, of ander groeppode (6) insekdoders, beheer word nie.

OM WEERSTAND TEEN INSEKDODERS TE VERTRAAG:

- ▶ Vermoed die eksklusiewe herhaaldelike gebruik van insekdoders vanuit dieselfde chemiese IRAC groepe.
- ▶ Wissel af met geregistreerde insekdoders vanuit ander IRAC groepe.
- ▶ Gebruik produkte teen hul volle aanbevole dosisse. Verlaagde (sub-dodelike) dosisse versnel die ontwikkeling van populasies met toleransie, terwyl dosisse wat te hoog is, verhoogde seleksiedruk toepas.
- ▶ Inkorporeer ander "IPM" beheermaatreëls (chemies, verbouing, biologies) in die insekdoderprogram.
- ▶ Moniteer insekbevolkings vir die verlies van veld doeltreffendheid.
- ▶ Teiken die mees sensitiewe lewenstadium van die plaag met **EMPEROR 50 WG**, gewoonlik eiers en jong larwes waar moontlik. Hul is baie meer sensitief en word dus meer effektief beheer deur insekdoders as die latere stadiums.
- ▶ Indien beheer misluk, moet nie dieselfde insekdoder toedien nie, maar wissel dit af met 'n insekdoder van 'n ander werkingswyse-groep, en waarteen daar nie [bekende] lokale kruisweerstand is nie.
- ▶ Mengsels mag 'n korttermyn oplossing bied vir weerstandprobleme, maar dit is belangrik dat elke komponent van 'n mengsel 'n ander werkingswyse het, en teen sy volle dosis gebruik word.

Neem asseblief kennis dat beide abamektien en emamektien bensoaat aan die groep (6) insekdoders behoort. Alhoewel hierdie aktiewe bestanddele dieselfde werkingswyse het, teiken hulle verskillende plae waarvan die lewensiklusse dikwels oorvleuel. Om weerstandigheid te vermy/vertraag, vermy tenkmengsels met groep (6) insekdoders, soos abamektien, en moenie binne 30 dae voor of ná mekaar toedien nie. Indien 'n groep (6) insekdoder toegedien is, mag **EMPEROR 50 WG** eers 30 dae daarna toegedien word, en omgekeerd. Veelvuldige toedienings van dieselfde werkingswyse-insekdoder is aanvaarbaar indien dit gebruik word om 'n enkele plaaggenerasie te behandel of as dit binne 'n toedieningsvenster gebruik word. In gevalle waar

geteikende plaë langer lewensiklusse het, moet die wagperiode verleng word om te verseker dat insekte van opeenvolgende generasies nie aan dieselfde werkingwyse-groep insekdoder blootgestel word nie. Dien geregistreerde insekdoders met verskillende werkingwyses toe binne die 30 dae na 'n toediening of bloktoedienings van **EMPEROR 50 WG**. ICA International Chemicals aanvaar geen verantwoordelikheid vir enige verliese wat mag voortspruit uit die versuim om plaë wat teen **EMPEROR 50 WG** bestand is, te beheer nie.

WERKINGSWYSE:

EMPEROR 50 WG is 'n translaminêre insekdoder wat insekverlamming veroorsaak deur die onderdrukking van spierkontraksies, met 'n sterk aksie teen Lepidoptera larwes. Larwes sal na inname voeding staak en binne vier (4) dae doodgaan. **EMPEROR 50 WG** is effektief teen Lepidoptera larwes met weerstand teen organofosfate, piretroïede en insekgroëireguleerders.

GEBRUIKSBEPERKINGS

- ▶ Verhoed dat spuitnewel wegdryf en moet nie direk op ander eetbare gewasse, weiding, riviere, damme en gebiede wat nie onder behandeling is, toedien nie.
- ▶ Die gebruik van hierdie produk op 'n manier of op 'n ander tyd as in ooreenstemming met die aanwysings kan lei tot oormatige residue of ander ongewenste resultate.
- ▶ **Emamektien bensoaat is hoogs toksies vir bye na kontak blootstelling aan spuitstof: MOET NIE toedien terwyl bye aktief is nie. Verhoed direkte toediening of wegdrywing van die spuitmiddel na bye-korwe en/of gewasse/onkruid wat in blom is, terwyl bye aktief is.**
- ▶ Stel byeboere vroeëtydig in kennis om hul korwe na 'n veilige area met 'n onbehandelde nektar bron te skuif, voordat toediening uitgevoer word.
- ▶ MOET NIE toedien indien reën binne 2 uur van aanwending verweg word nie

GEBRUIKSAANWYSINGS – gebruik slegs soos aangedui

VERENIGBAARHEID:

Die verenigbaarheid van **EMPEROR 50 WG** met ander lanbouchemiese produkte hang af van die formulase van die onderskeie produkte sowel as die kwaliteit van die spuitwater wat gebruik word. Dit word dus aanbeveel om 'n kleinskaalse fisiese verenigbaarheidstoets (flës toets) te doen, voordat die tenkmengsel gemaak word, deur relatiewe verhoudings van die tenkmengselbestanddele te gebruik. **EMPEROR 50 WG** is oor die algemeen verenigbaar met ander lanbouchemiesemiddels.

REËN:

MOET NIE toedien indien reën binne 2 uur van aanwending verweg word nie.

LUGTOEDIENING:

Stel alle inwoners in die onmiddellike bespuitingsarea in kennis wanneer daar behandel gaan word en gee die nodige waarskuwings deur. Moet nie dat waterbronne of aanliggende areas deur direkte spuit of spuitnewel gekontamineer word nie. Lugtoediening van **EMPEROR 50 WG** kan slegs deur 'n geregistreerde lugbespuitingsoperateur met 'n korrek gekalibreerde, geregistreerde vliegtuig volgens die instruksies van SANS Kode 10118 (Aerial Application of Agricultural Pesticides) gedoen 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:

1. **Volume:** 'n Spuitmengsel volume van 30 – 50 ℓ per hektaar 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.
2. **Druppel bedekking:** 30 tot 40 druppels per cm² moet op die teikenarea herwin word.
3. **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.
4. **Vlieghoogte:** Handhaaf die spuitbalk 3 – 4 meter bo die teiken. Moet nie spuit wanneer die vliegtuig duik, klim of draai nie.
5. Gebruik geskikte **atomiseringsapparaat** wat die vereiste druppelgrootte en bedekking sal produseer, maar die verlies van produk minimaliseer. Die spuitstelsel moet 'n druppelspektrum met die kleinste moontlike relatiewe span produseer.
6. Plaas al die atomiseerders binne die 60 – 75 % vlerkspan om te verhoed dat druppels in die vlerkpuntvorteks inbeweeg.
7. Die verskil in **temperatuur** tussen die nat- en droëboltermometer van 'n swaaihigrometer, moet nie 8 °C oorskry nie.
8. Staak bespuiting indien die **windspoed** 15 km/h oorskry.
9. Staak bespuiting tydens **turbulente**, onstabiele en droë toestande gedurende die hitte van die dag.
10. Bespuiting onder temperatuur **inversie toestande** (deur bo of binne die inversie laag te spuit) en/of hoë lugvog toestande (relatiewe humiditeit 80 % en hoër) mag tot die volgende probleme lei:
 - a. verlaagde effektiwiteit as gevolg van verdamping van klein druppels (onvoldoende bedekking),
 - b. skade aan nie-teiken gewasse of sensitiewe areas as gevolg van wegdrywing van die spuitwolk na nie-teiken areas.
11. Verseker dat die lugbespuitingsoperateur presies weet watter lande bespuit moet word.
12. Dit is noodsaaklik om 'n versekering van die lugbespuitingsoperateur te kry dat daar aan al die bogenoemde vereistes voldoen sal word en dat relevante data in 'n logboek saamgevat word vir toekomstige verwysing.

MENGINSTRUKSIES:

Voeg die korrekte hoeveelheid **EMPEROR 50 WG** by die ½ van die verlangde watervolume in die spuittenk terwyl dit geroer word om 'n homogene emulsie te vorm. Hou aan met roer en vul die spuittenk met die res van die verlangde water. By die voorbereiding van 'n tenkmengsel met ander verenigbare lanbouchemiesemiddels: Voeg die produkte by ½ van die water in die volgende volgorde – benatbare poeiers, **EMPEROR 50 WG** en ander wateroplosbare korrels, suspensie konsentrate, emulsifiseerde konsentrate en oplosbare konsentrate laaste. Vul mengtenk met skoon water tot by verlangde vlak terwyl voortdurend geroer word. Roer mengsel deeglik voor en tydens toediening. Gebruik spuitmengsel onmiddellik, moet nie in spuittenk vir 'n onbepaalde tyd, bv. oornag, laat staan nie. Maak toedieningsgereedskap skoon na gebruik en gooi die afvalwater op so 'n wyse weg dat dit nie gewasse, weiding, voedsel of water kontamineer nie.

BOORDTOEDIENING:

Deeglike en egalige bedekking van gewasse is noodsaaklik. Moet nie tydens die hitte van die dag of as die plante nat is of tydens reënigerige weer toedien nie. Die spuitvolume wat per hektaar vir hoë- en lae volume toediening by 'n spesifieke groeistadium benodig word, moet akkuraat volgens die boomryvolume (BRV) berekening soos beskryf deur Unrath (Deciduous Fruit Grower, November 1986), bepaal word (verwys na toedieningstabel). Die **EMPEROR 50 WG** dosis per hektaar vir hoë- en lae volume toediening word dan bepaal volgens die spuitvolume per hektaar bereken vir hoë volume toediening.

Alle spuittoedienings moet met geskikte toerusting wat in goeie werkende toestand en korrek gekalibreer is gemaak word, om die gewenste bedekking vir daardie toedieningsmetode te kry.

SUKSESVOLLE BESTUUR VAN KODLINGMOT:

- ▶ Kodlingmot weerstandsvlakke teen organofosfate kan tussen boorde varieer, daarom moet beheertegniese dienoooreenkomstig aangepas word.
- ▶ Dit word aanbeveel dat **EMPEROR 50 WG** in samewerking met die feromoon paringsontwrigting tegniek gebruik word.
- ▶ Gebruik aanbevole spuitvolumes vir beste resultate.
- ▶ Moet nie verbouingspraktyke soos snoei, uitdunning en die wegdoen van uitgedunde en besmette afvalvrugte van die boorde agterweë laat nie.
- ▶ Gebruik insekdoders vanuit 'n ander chemiese groep teen elke motgenerasie.

TOEDIENINGSTABEL		
GEWAS en PLAAG	DOSIS per 100 ℓ water	OPMERKINGS
AARBEIE Afrika bolwurm <i>(Helicoverpa armigera)</i>	180 – 260 g EMPEROR 50 WG /ha + ^a ADJUVANT	<ul style="list-style-type: none"> ▶ Volg voorgestelde inspeksie en moniteringstegniese en begin toediening met die eerste tekens van die pes, soos aangedui deur plaaslike drempelwaardes. Beste effektiwiteit word verkry wanneer daar toegedien word net voor of net na die uitbroei van eiers. ▶ Goeie bedekking van alle blare is van kardinale belang. Die byvoeging van 'n geskikte ^aadjuvant, teen die geregistreerde dosis, word vir beter bedekking aanbeveel. ▶ Tydsberekening van daaropvolgende aanwendings moet gebaseer wees op gereelde veld monitering. ▶ Dien EMPEROR 50 WG as twee (2) bloktoedienings toe, elke blok bestaan uit twee (2) opeenvolgende spuite. Die twee (2) spuite van die eerste bloktoediening kan 10 dae uitmekaar toegedien word. Moenie die tweede bloktoediening binne 21 dae na die eerste bloktoediening doen nie. ▶ Vir die tweede bloktoediening (laat seisoen infestasië), kan twee (2) opeenvolgende EMPEROR 50 WG toedienings 7 dae uitmekaar, met 'n 2 dag onthoudingsperiode, toegedien word. ▶ Gebruik insekdoders met ander werkingswyses vir die toedieningsvensters voor en na die EMPEROR 50 WG toedieningsvensters om insekdoderweerstand te vertraag ▶ <u>Weerstandsbestuur:</u> EMPEROR 50 WG moet nie meer as vier (4) keer op 'n gewas toegedien word nie en in die geval waar meer as een gewas verbou word, moet EMPEROR 50 WG nie meer as vier (4) keer per jaar toegedien word nie. <p>^a Polieter-polimetielsiloksaan-kopolimeer 1000 g/ℓ word aanbeveel.</p>
AARTAPPELS Aartappelmot <i>(Phthorimaea operculella)</i> Herfskommandowurm <i>(Spodoptera frugiperda)</i>	300 g EMPEROR 50 WG /ha + ^a ADJUVANT	<ul style="list-style-type: none"> ▶ Volg voorgestelde inspeksie en moniteringstegniese en begin toediening met die eerste tekens van die pes, soos aangedui deur plaaslike drempelwaardes. Dit word aanbeveel om die eerste toediening te doen wanneer larwes gemiddeld 2 mm en kleiner is. ▶ Dien as 'n voldekbepuiting in 200 – 500 ℓ water per hektaar (afhangel van plantgrootte) toe om deeglike bedekking te verseker. ▶ Dien EMPEROR 50 WG 7 – 14 dae later toe, afhangend van die herinfestasië van die pes. ▶ Die toevoeging van 'n geskikte ^aadjuvant, teen die geregistreerde dosis, word vir beter bedekking aanbeveel. ▶ Gebruik as deel van 'n geïntegreerde plaagbestuur spuitprogram en wissel met insekdoders met ander werkingswyses. ▶ <u>Weerstandsbestuur:</u> EMPEROR 50 WG moet nie meer as twee (2) keer per gewassiklus toegedien word nie. <p>^a Polieter-polimetielsiloksaan-kopolimeer 1000 g/ℓ word aanbeveel.</p>
APPELS EN PERE		<p>BELANGRIKE INLIGTING:</p> <ul style="list-style-type: none"> ▶ Gebruik EMPEROR 50 WG as deel van 'n geïntegreerde plaagbestuur spuitprogram en wissel af met insekdoders met ander werkingswyses. ▶ Dien as 'n hoë volume voldekbepuiting toe. Gebruik verkieslik die boomryvolume (BRV) berekening hieronder. ▶ Veseker dat 'n effektiewe beheerprogram die EMPEROR 50 WG program voorafgaan. ▶ <u>Weerstandsbestuur:</u> EMPEROR 50 WG moet nie meer as vier (4) keer per groeiseisoen, alleen of in tenkmengsels, toegedien word nie.
Kodlingmot (larwes) <i>(Cydia pomonella)</i>	20 g EMPEROR 50 WG + 60 mℓ Marksman 240 SC*	<ul style="list-style-type: none"> ▶ Dien toe aan die begin van die 1^{ste}, 2^{de} of 3^{de} generasie. ▶ Dien spuitmengsel elke 14 dae toe. ▶ Veseker dat 'n effektiewe beheerprogram die EMPEROR 50 WG plus Marksman 240 SC program voorafgaan. ▶ <u>Weerstandsbestuur:</u> Moet nie meer as twee (2) EMPEROR 50 WG plus Marksman 240 SC tenkmengsel toedienings per generasie oorskry nie. Om verdere generasies van die pes te beheer, dien EMPEROR 50 WG alleen toe

		(maksimum 4 toedienings per seisoen) en/of gebruik insekdoders met ander werkingswyses.
	24 g EMPEROR 50 WG	<ul style="list-style-type: none"> ▶ Dien toe aan die begin van die 1^{ste}, 2^{de} of 3^{de} generasie en gebruik EMPEROR 50 WG vir die beheer van slegs een kodlingmot generasie. ▶ Dien EMPEROR 50 WG elke 7 – 10 dae toe indien nodig.
Afrika bolwurm (<i>Helicoverpa armigera</i>)	32 – 40 g EMPEROR 50 WG	<ul style="list-style-type: none"> ▶ Volg voorgestelde inspeksie en moniteringstegnieke en begin toediening met die eerste tekens van bolwurm infestasië. ▶ Dien EMPEROR 50 WG elke 7 – 10 dae toe, indien nodig.

Water volume (ℓ) per hektaar (ha) benodig vir voldekbepuiting volgens boomryvolume (BRV) berekening:

Boomhoogte en -deursnee moet in die somer gemeet word wanneer bome in volle blom is. Gebruik die water volume per hektaar om die vereiste hoeveelheid **EMPEROR 50 WG** per hektaar, afhangende van die verskeie groeistadiums, te bereken. Dit is belangrik dat die korrekte hoeveelheid **EMPEROR 50 WG** per hektaar toegedien word.

- **BRV (Groenpunt tot volblom)**
ℓ water/ha = [(Boomhoogte X Boomdeursnit X 937)/Rywydte] X 60 %
- **BRV (75 % blomblaarval tot een maand later – midseisoen)**
ℓ water/ha = [(Boomhoogte X Boomdeursnit X 937)/Rywydte] X 80 %
- **BRV (Midseisoen tot ná-oes, voor blaarval)**
ℓ water/ha = [(Boomhoogte X Boomdeursnit X 937)/Rywydte] X 100 %

DRUIWE (TAFEL- EN WYN) Valkodlingmot (<i>Thaumatotibia leucotreta</i>) Afrika bolwurm (<i>Helicoverpa armigera</i>)	30 g EMPEROR 50 WG	<p>BELANGRIKE INLIGTING:</p> <ul style="list-style-type: none"> ▶ Dien as 'n voldek, hoë volume bespuiting toe wat deeglike bedekking verseker, volg die toedieningsriglyne hieronder. ▶ Dien EMPEROR 50 WG elke 7 – 10 dae toe, indien nodig. ▶ Dien EMPEROR 50 WG as deel van 'n geïntegreerde plaagbestuursprogram (IPM) toe, en wissel af met insekdoders wat ander werkingswyses het. ▶ Weerstandsbestuur: EMPEROR 50 WG moet nie meer as vier (4) keer per groeiseisoen toegedien word nie. <p><u>Valkodlingmot:</u></p> <ul style="list-style-type: none"> ▶ Begin EMPEROR 50 WG toedien wanneer motvangste in die feromoon lokvalle op 'n infestasië dui. ▶ Vir optimale resultate moet EMPEROR 50 WG toedienings gekombineer word met, of voorafgegaan word deur, ander metodes van beheer, byvoorbeeld paringsontwrigting, biologiese beheerprogramme, goeie sanitasieprogramme en effektiewe insekdoders. <p><u>Afrika bolwurm (larwes):</u></p> <ul style="list-style-type: none"> ▶ Volg voorgestelde inspeksie en moniteringstegnieke en begin toediening met die eerste tekens van die pes, sodra eiers of jong larwes teenwoordig is, maar voordat die larwes die vrugte binnedring.
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Druie (tafel en wyn) toedienings:

- Dien **EMPEROR 50 WG** as 'n hoë volume spuit op wingerd toe.
- Bereken die spuitvolume (ℓ) wat per hektaar (ha) benodig word vir 'n hoë volume toediening gedurende die verskeie groeistadia, deur middel van die volgende riglyne:

Groeistadium	Voorgestelde spuitvolume vir 'n hoë volume toediening	
	Tafeldruie	Wyndruie
2,5 cm tot 25 cm lootlengtes	500 – 750 ℓ/ha	250 – 500 ℓ/ha
25 cm lootlengte tot net voor blom	750 – 1000 ℓ/ha	500 – 750 ℓ/ha
Blom tot ertjekorrelstadium	1000 – 1200 ℓ/ha	750 – 1000 ℓ/ha
Ertjekorrelstadium tot oes	1200 – 1500 ℓ/ha	1000 – 1200 ℓ/ha

GRAANGEWASSE (koring en gars) Afrika bolwurm (<i>Helicoverpa armigera</i>)	200 g EMPEROR 50 WG /ha + ^a ADJUVANT	<ul style="list-style-type: none"> ▶ Volg voorgestelde inspeksie en moniteringstegnieke en begin toediening sodra die eiers uitbroei. ▶ Dien EMPEROR 50 WG elke 7 dae toe, indien nodig. ▶ Verseker goeie bedekking van die plante, dien in minstens 300 ℓ water per hektaar toe. ▶ Die gebruik van 'n geskikte ^aadjuvant word aanbeveel om bedekking en effektiwiteit te verhoog. ▶ Dien EMPEROR 50 WG as deel van 'n geïntegreerde plaagbestuursprogram (IPM) toe, en wissel af met insekdoders met ander werkingswyses. ▶ Weerstandsbestuur: EMPEROR 50 WG moet nie meer as twee (2) keer per groeiseisoen toegedien word nie. <p>^a Enige geskikte adjuvant wat onder Wet 36 van 1947 geregistreer is. Verwys ook na "LUGTOEDIENING"</p>
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<p>KANOLA</p> <p>Afrika bolwurm (<i>Helicoverpa armigera</i>)</p> <p>Ruitrugmot (<i>Plutella xylostella</i>)</p>	<p>200 g EMPEROR 50 WG/ha + ^aADJUVANT</p>	<ul style="list-style-type: none"> ▶ Dien as 'n voldekbepuiting toe en verseker goeie bedekking. Die gebruik van 'n geskikte ^aadjuvant om bedekking te verbeter, word aanbeveel. ▶ Dien EMPEROR 50 WG elke 7 dae toe, indien nodig. ▶ Dien EMPEROR 50 WG as deel van 'n geïntegreerde plaagbestuursprogram (IPM) toe, en wissel af met insekdoders wat ander werkingswyses het. ▶ Volg voorgestelde inspeksie en moniteringstegnieke en begin toediening sodra eiers uitbroei (bolwurm) of wanneer insek waargeneem word (ruitrugmot). ▶ <u>Weerstandsbestuur</u>: EMPEROR 50 WG moet nie meer as vier (4) keer per gewassiklus toegedien word nie. Waar meer as een gewas verbou word moet EMPEROR 50 WG nie meer as vier (4) keer per jaar toegedien word nie. <p>^a Enige geskikte adjuvant wat onder Wet 36 van 1947 geregistreer is. Verwys ook na "LUGTOEDIENING"</p>
<p>KOOLGEWASSE (Insluitend brokkoli, brusselse spruite, kool en blomkool)</p> <p>Afrika bolwurm (<i>Helicoverpa armigera</i>)</p> <p>Ruitrugmot (<i>Plutella xylostella</i>)</p>	<p>250 – 336 g EMPEROR 50 WG/ha</p>	<ul style="list-style-type: none"> ▶ Volg voorgestelde inspeksie en moniteringstegnieke en begin toediening met die eerste tekens van die pes, soos aangedui deur plaaslike drempelwaardes. ▶ Voeg 'n geskikte adjuvant teen die geregistreerde dosis by en dien as 'n voldekbepuiting toe, verseker goeie bedekking. ▶ Dien EMPEROR 50 WG elke 7 dae toe, indien nodig. ▶ Dien EMPEROR 50 WG as deel van 'n geïntegreerde plaagbestuursprogram (IPM) toe, en wissel af met insekdoders wat ander werkingswyses het. ▶ <u>Weerstandsbestuur</u>: EMPEROR 50 WG moet nie meer as vier (4) keer op enige koolgewas toegedien word nie en in die geval waar meer as een gewas verbou word, moet EMPEROR 50 WG nie meer as vier (4) keer per jaar oorskry word nie.
<p>MIELIES & SUIKERMIELIES</p> <p>Herfskommandowurm (<i>Spodoptera frugiperda</i>)</p>	<p>300 g EMPEROR 50 WG/ha + ^aADJUVANT</p>	<ul style="list-style-type: none"> ▶ Volg voorgestelde inspeksie en moniteringstegnieke en begin toediening met die eerste tekens van die pes. Larwes wat reeds die mieliekop gepenetreer het, sal nie deur EMPEROR 50 WG beheer word nie. ▶ Dien as 'n voldekbepuiting in 200 ℓ water per hektaar toe om deeglike bedekking te verseker. ▶ Dien EMPEROR 50 WG 10 – 14 dae later toe, afhangend van die herinfestasië van die pes. ▶ Die toevoeging van 'n geskikte ^aadjuvant, teen die geregistreerde dosis, word vir beter bedekking aanbeveel. ▶ Gebruik as deel van 'n geïntegreerde plaagbestuur spuitprogram en wissel met insekdoders met ander werkingswyses. ▶ <u>Weerstandsbestuur</u>: EMPEROR 50 WG moet nie meer as twee (2) keer per gewassiklus toegedien word nie. <p>^a Polieter-polimietielosiloksaan-kopolimeer 1000 g/ℓ word aanbeveel.</p>
<p>NEUTBOME (amandels, makadamias en pekanneute)</p> <p>Valskodlingmot (<i>Thaumatotibia leucotreta</i>)</p>	<p>22 – 34 g EMPEROR 50 WG</p>	<ul style="list-style-type: none"> ▶ Volg voorgestelde inspeksie en moniteringstegnieke en begin toediening met die eerste tekens van die teenwoordigheid van die pes. Vir optimale resultate begin toediening sodra eiers uitbroei en voordat die neonatale larwes die neutte en stingels penetreer. ▶ Dien EMPEROR 50 WG as deel van 'n geïntegreerde plaagbestuursprogram (IPM) toe, en wissel af met insekdoders met ander werkingswyses. ▶ Dien as 'n voldekbepuiting toe, verseker deeglike bedekking. ▶ Dien EMPEROR 50 WG elke 7 dae toe, indien nodig. ▶ Dien die laer dosis vir lae tot matige infestasiëvlakke toe en die hoogste dosis vir hoë infestasiëvlakke. ▶ <u>Weerstandsbestuur</u>: EMPEROR 50 WG moet nie meer as vier (4) keer per groeiseisoen alleen of in tenkmengsel, toegedien word nie.
<p>(amandels, kasjoeneute, kastaiings, haselneute, makadamias, okkerneute, pekanneute en pistasiëneute)</p> <p>Makadamia neutboorder [<i>Thaumatotibia</i> (sinoniem = <i>Cryptophlebia</i>) <i>batrachopa</i>]</p>	<p>20 g EMPEROR 50 WG + 40 g asetamipried (200 g/kg)</p> <p>OF</p> <p>30 g EMPEROR 50 WG</p>	<ul style="list-style-type: none"> ▶ Volg voorgestelde inspeksie en moniteringstegnieke en begin toediening met die eerste tekens van die teenwoordigheid van die pes. Vir optimale resultate begin toediening sodra eiers uitbroei en voordat die neonatale larwes die neutte en stingels penetreer. ▶ In boorde met 'n geskiedenis van makadamia neutboorder infestasië, of in die geval van voorspelde hoë infestasiëvlakke, moet die eerste twee (2) toedienings met die EMPEROR 50 WG plus asetamipried 200 g/kg tenkmengsel gedoen word, daarna kan EMPEROR 50 WG alleen aangewend word. ▶ Dien as 'n medium dekbespuiting toe, verseker dat die neutte deeglik beskerm word. ▶ Vir optimale resultate, voeg 'n olie by EMPEROR 50 WG toedienings. ▶ Dien EMPEROR 50 WG elke 7 – 10 dae toe, indien nodig. ▶ <u>Weerstandsbestuur</u>: MOET NIE meer as twee (2) EMPEROR 50 WG plus asetamipried 200 g/kg tenkmengsel per groeiseisoen toedien nie. EMPEROR 50 WG moet nie meer as vier (4) keer per groeiseisoen, alleen of in tenkmengsel, toegedien word nie.
<p>RISSIES</p>		<p>BELANGRIKE INLIGTING:</p> <ul style="list-style-type: none"> ▶ Volg voorgestelde inspeksie en moniteringstegnieke en begin toediening met die eerste waarneming van jong larwes. ▶ Dien as 'n voldekbepuiting toe en verseker deeglike bedekking.

		<ul style="list-style-type: none"> ▶ Gebruik as deel van 'n geïntegreerde plaagbestuur spuitprogram en wissel met insekdoders met ander werkingswyses. ▶ Dien EMPEROR 50 WG elke 7 dae toe, indien nodig. ▶ Gebruik 'n penetreerder/benatter of ligte minerale olie saam met EMPEROR 50 WG. Moet nie n kleefmiddel byvoeg nie.
Afrika bolwurm (<i>Helicoverpa armigera</i>)	150 – 336 g EMPEROR 50 WG /ha	<p><u>Afrika bolwurm:</u></p> <ul style="list-style-type: none"> ▶ <u>Weerstandsbestuur:</u> EMPEROR 50 WG moet nie meer as 336 g/ha per toediening oorskry nie en nie meer as 2 017 g/ha in totaal per seisoen toegedien word nie.
Tamatie-blaarmyner (larwes) (<i>Tuta absoluta</i>)	30 – 60 g EMPEROR 50 WG OF 300 – 600 g EMPEROR 50 WG /ha	<p><u>Tamatie-blaarmyner (larwes):</u></p> <ul style="list-style-type: none"> ▶ Dien die hoogste dosis in tye van hoë infestasielakke toe. ▶ <u>Weerstandsbestuur:</u> EMPEROR 50 WG moet nie meer as vier (4) keer per gewassiklus toegedien word nie. <p>Verwys ook na “LUGTOEDIENING”</p>
SITRUS Valskodlingmot (<i>Thaumatotibia leucotreta</i>)	30 – 38 g EMPEROR 50 WG	<ul style="list-style-type: none"> ▶ Begin toediening by die eerste tekens van pes se teenwoordigheid; wanneer die motvangste in die feromoonlokvalle infestasielakke aandui. ▶ Dien toe as 'n voldekbepuiting, verseker deeglike bedekking. ▶ Dien EMPEROR 50 WG elke 7 – 10 dae toe, indien nodig. ▶ Dien EMPEROR 50 WG as deel van 'n geïntegreerde plaagbestuursprogram (IPM) toe, en wissel af met insekdoders met ander werkingswyses. ▶ Vir optimale resultate moet EMPEROR 50 WG toedienings gekombineer word, of voorafgegaan word, met ander metodes vir beheer, byvoorbeeld paringsontwrigting, biologiese beheerprogramme, goeie sanitasieprogramme en effektiewe insekdoders. ▶ <u>Weerstandsbestuur:</u> EMPEROR 50 WG moet nie meer as vier (4) keer per groeiseisoen toegedien word nie.
STEENVRUGTE		<p>BELANGRIKE INLIGTING:</p> <ul style="list-style-type: none"> ▶ Dien toe as 'n voldek, hoë volume bespuiting, verseker deeglike bedekking. ▶ Dien EMPEROR 50 WG elke 7 – 10 dae toe, indien nodig. ▶ Dien EMPEROR 50 WG as deel van 'n geïntegreerde plaagbestuursprogram (IPM) toe, en wissel af met insekdoders met ander werkingswyses. ▶ <u>Weerstandsbestuur:</u> EMPEROR 50 WG moet nie meer as twee (2) keer per groeiseisoen toegedien word nie.
Valskodlingmot (<i>Thaumatotibia leucotreta</i>)	30 – 40 g EMPEROR 50 WG	<p><u>Valskodlingmot:</u></p> <ul style="list-style-type: none"> ▶ Volg voorgestelde inspeksie en moniteringstegnieke en begin met EMPEROR 50 WG aanwendings met die eerste teken van die pes of wanneer motvangste in die feromoonlokvalle infestasielakke van valskodlingmot aandui. ▶ Vir optimale resultate moet EMPEROR 50 WG toedienings gekombineer word met, of voorafgegaan word deur, ander metodes van valskodlingmot beheer, byvoorbeeld valskodlingmot paring ontwrigting, biologiese beheerprogramme, goeie sanitasie programme en effektiewe insekdoders.
Afrika bolwurm (<i>Helicoverpa armigera</i>)	30 g EMPEROR 50 WG	<p><u>Afrika bolwurm:</u></p> <ul style="list-style-type: none"> ▶ Volg voorgestelde inspeksie en moniteringstegnieke en begin toediening met die eerste tekens van die pes, wanneer eiers of jong larwes teenwoordig is, maar voordat die larwes die vrugte binnedring.
TAMATIES		<p>BELANGRIKE INLIGTING:</p> <ul style="list-style-type: none"> ▶ Volg voorgestelde inspeksie en moniteringstegnieke en begin toediening met die eerste waarneming van die pes. ▶ Gebruik as deel van 'n geïntegreerde plaagbestuur spuitprogram en wissel af met insekdoders met ander werkingswyses. ▶ Dien toe as 'n voldekbepuiting in 300 – 1000 ℓ water per hektaar (afhangende van planthoogte), verseker goeie bedekking. ▶ Die gebruik van 'n geskikte ^aadjuvant teen geregistreerde dosis word aanbeveel om bedekking te verbeter. Moet nie 'n kleefmiddel byvoeg nie. ▶ <u>Weerstandsbestuur:</u> EMPEROR 50 WG moet nie meer as vier (4) keer per gewassiklus toegedien word nie. ▶ Gebruik EMPEROR 50 WG ooreenkomstig met CroLife se insekdoderweerstandstrategie. <p>Verwys ook na “LUGTOEDIENING”</p>
Afrika bolwurm (<i>Helicoverpa armigera</i>) Tamatie Semilandmeter (<i>Chrysodeixis acuta</i>)	20 g EMPEROR 50 WG minimum 200 g EMPEROR 50 WG /ha + ^a ADJUVANT	<ul style="list-style-type: none"> ▶ Dien EMPEROR 50 WG as twee (2) bloktoedienings toe, elke blok bestaan uit twee (2) opeenvolgende spuite, 7 dae uitmekaar. Moenie die tweede EMPEROR 50 WG bloktoediening binne 21 dae na die eerste bloktoediening toedien nie. ▶ Wissel EMPEROR 50 WG met produkte soos spinosad (groep 5), chlorfenapir (groep 13) of indoksakarb* (groep 12) af, veral indien her-infestasielakke binne 21 dae na die eerste EMPEROR 50 WG bloktoediening plaasvind. <p>*InCide 300 WG (Wet 36/1947 Reg. Nr. L10524) is 'n indoksakarb bevattende insekdoder wat deur ICA International Chemicals vir die gebruik teen Afrika bolwurm op tamaties geregistreer is.</p>

Tamatie-blaarmyner <i>(Tuta absoluta)</i>	30 g EMPEROR 50 WG Minimum 300 g EMPEROR 50 WG/ha + ^a ADJUVANT	<u>Tamatie-blaarmyner:</u> ▶ Dien toe sodra die pes opgemerk word en herhaal elke 7 dae.
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^a Gebruik slegs geregistreerde produkte in spuitprogram.

***Marksman 240 SC** (Wet 36/1947 Reg. Nr. L10389) is 'n metoksiefenosied bevattende insekdoder wat deur ICA International Chemicals vir gebruik op appels en pere geregistreer is.

SANB-EB-004

EMPEROR 50 WG

Act No. 36 of 1947

SA Reg. No. L11613 / NAM Reg. No. N-AR 2335 / BWA Reg. No. W1301846

A water dispersible granular translaminar stomach insecticide for the control of insect pests on crops as listed.

ACTIVE INGREDIENT:

Emamectin benzoate 50 g/kg

REGISTERED BY:

ICA International Chemicals (Pty) Ltd., Reg. No. 2001/013319/07
28 Planken Street • Plankenbrug Industrial • Stellenbosch • 7600 • South Africa
Tel. +27-21 886 9812 • www.icaonline.co.za

WARNINGS

Harmful if swallowed
Causes mild skin irritation
Causes serious eye damage
May cause damage to organs
May cause damage to organs through prolonged or repeated exposure
Very toxic to aquatic life with long lasting effects.

WITHHOLDING PERIODS (Minimum number of days between last application and harvest):

- ▶ Apples & Pears 14 Days
- ▶ Apples & Pears (**tank mixture with Marksman 240 SC only**) 28 Days
- ▶ Canola 14 Days
- ▶ Cereal Grains (wheat and barley) 14 Days
- ▶ Citrus 14 Days
- ▶ Cruciferae (broccoli, brussels sprouts, cabbages and cauliflower) 7 Days
- ▶ Grapes (table and wine) 7 Days
- ▶ Maize & Sweetcorn 14 Days
- ▶ Peppers 5 Days
- ▶ Potatoes 14 Days
- ▶ Stone Fruit 7 Days
- ▶ Strawberries 2 Days
- ▶ Tomatoes 1 Day
- ▶ Tree Nuts (almonds, macadamias, and pecans) 14 Days
- ▶ Tree Nuts (**macadamia nut borer treatment:** almonds, cashews, chestnuts, hazelnuts, macadamias, pecans, pistachios, and walnuts) 50 Days

Compliance with these withholding periods and application methods will ensure that residues do not exceed local maximum residue limits (MRL) but may not meet the import requirements of other countries. If the crop to be treated is intended for export, consult the relevant importer or exporting body regarding the use of this product, MRL and recommended withholding periods. Although **EMPEROR 50 WG** is regarded as crop-safe on most of the important cultivars, this does not mean that a more sensitive cultivar might be available in future. **EMPEROR 50 WG** must be tested on new cultivars prior to usage over big areas.

RE-ENTRY INTERVAL: Do not enter treated area until spray deposit has dried unless wearing protective clothing. Clothing must be laundered after each day's use.

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, and the environment or harm to man/animal or for lack of performance of the remedy concerned, due to failure of the user to follow the 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

If medical advice is needed, have product container or label at hand.
Obtain, read, and follow all safety instructions before use.
Do not breathe dust/fumes/mist/spray.
Wash hands and exposed skin thoroughly after handling. Do not touch eyes.
IF ON SKIN: Wash with plenty of clean water and non-abrasive soap.
Do not eat, drink or smoke when using this product.
Avoid release to the environment.
Wear protective gloves, protective clothing, eye and face protection.
Wash hands and face thoroughly after handling. Do not touch eyes.
IF SWALLOWED: Rinse mouth and get medical help.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get medical help.
IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

IF exposed or concerned: Get emergency medical help immediately.
IF skin irritation or rash occurs: Get medical help.
Get medical help if you feel unwell.
Collect spillage.
Store locked up.
Dispose of contents and container in accordance with national regulations.

TRIPLE RINSE THE EMPTY CONTAINER AS FOLLOWS: Shake all the pesticide formulation out of the container into the spray or mixing tank. Thereafter, rinse the empty container three times in succession with one quarter of the container volume fresh water and decant the rinsate into the spray or mixing tank. Puncture the triple rinsed container and dispose of via an approved collector or recycler (www.croplife.co.za). Do not bury, burn, or donate the container to any other parties that may use it as a container for food or beverages.

RELEVANT SUBSTANCES:

Emamectin benzoate (Cas no: 155569–91–8) Acute Oral Toxicity Category 3, H301; Acute skin Toxicity Category 3, H311; Acute Inhalation Toxicity Category 3, H331; Eye Damage Category 1, H318; STOT SE Category 1, H370; STOT RE Category 1, H372; Aquatic Acute Category 1, H400; Aquatic Chronic Category 1, H410 (5 % w/w).

Sodium dodecyl sulfate (Cas no: 151-21-3) Acute Oral Toxicity Category 4, H302; Skin Irritation Category 2, H315; Eye Damage Category 1, H318; Aquatic Chronic Category 3, H412 (< 10 % w/w).

FIRST AID TREATMENT

In case of accident or if you feel unwell seek medical advice immediately (show the label where possible)

- INHALATION:**
- Remove the victim from immediate source of exposure. Move victim to fresh air, if it can be done safely, and keep comfortable. If victim's breathing has stopped, perform artificial respiration.
 - DO NOT perform mouth-to-mouth resuscitation if victim ingested or inhaled the substance; wash face and mouth before giving artificial respiration. Use a pocket mask equipped with a one-way valve or other proper respiratory medical device.
 - Administer oxygen if victim's breathing is difficult or irregular. Get medical help if you feel unwell.
- SKIN:**
- Remove and isolate contaminated clothing, shoes, and leather goods immediately and take a shower.
 - Rinse affected areas IMMEDIATELY with non-abrasive soap or mild detergent and large amounts of running water. Wash contaminated clothing before reuse. Get medical help if irritation develops and persists.
- EYES:**
- Rinse eyes IMMEDIATELY with clean running water for at least 15 minutes, while holding eyelids apart. Remove contact lenses after 5 minutes if present and easy to do.
 - Continue rinsing while holding eyelids apart. Seek medical help if irritation continues.
- INGESTION:**
- If swallowed, get emergency medical help immediately. DO NOT induce vomiting, unless instructed to do so by poison control center or doctor. Have person sip a glass of water if able to swallow.
 - Never give anything by mouth to an unconscious person. If vomiting does occur, keep on giving fluids.
- NOTE TO PHYSICIAN:**
- There is no specific antidote. All treatments should be based on observed signs and symptoms of distress in the patient.
- POTENTIAL HEALTH EFFECTS, ACUTE AND DELAYED:**
- Effects of exposure (inhalation, ingestion, or skin contact) to substance may be delayed.

RESISTANCE WARNING

For resistance management, **EMPEROR 50 WG** is a group (6) insecticide. Any insect population may contain individuals naturally resistant to **EMPEROR 50 WG** and other Group (6) insecticides. If these insecticides are used repeatedly, the resistant individuals may eventually dominate the pest insect population. These resistant insects may not be controlled by **EMPEROR 50 WG** or by other group (6) insecticides.

TO PREVENT OR DELAY INSECTICIDE RESISTANCE:

- ▶ Avoid the exclusive repeated use of insecticides from the same IRAC groups.
- ▶ Alternate with products from other IRAC groups.
- ▶ Use products at their full, recommended rates. Reduced (sub-lethal) rates quickly select populations with average levels of tolerance, whilst rates that are too high may impose excessive selection pressures.
- ▶ Incorporate IPM practices (chemical, cultural and biological control) into the pest management programme.
- ▶ Monitor insect populations for loss of field efficacy.
- ▶ Target the most sensitive life stage of the pest with **EMPEROR 50 WG**, typically eggs and small larvae, where possible because these are usually much more susceptible and therefore much more effectively controlled by insecticides than older stages.
- ▶ In the event of a control failure, do not re-apply the same insecticide but change the class of insecticides to one having a different MoA and to which there is no [locally] known cross-resistance.
- ▶ Mixtures may offer a short-term solution to resistance problems, but it is essential to ensure that each component of a mixture belongs to a different insecticide MoA class and is used at its full rate.

Please note that both abamectin and emamectin benzoate belongs to group (6) insecticides. Although these active ingredients have the same mode of action, they target different pests whose life cycles often overlap. To delay the onset of resistance, do not tank mix group (6) insecticides as abamectin or apply them within 30 days prior to or after each other. If an application of other group (6) insecticides is made, an application of **EMPEROR 50 WG** can only be made 30 days thereafter, and vice versa. Multiple applications of the same MoA insecticide are acceptable if they are used to treat a single insect generation or are used within a window. In the case of target pests with longer life cycles, the waiting period should be increased to ensure that insects from consecutive generations are not exposed to the same mode of action group insecticide. Apply registered insecticides with different mode of action groups within the 30 days period following an application or block applications of **EMPEROR 50 WG**. ICA International Chemicals cannot accept responsibility for any losses that may result from the failure to control pests resistant to **EMPEROR 50 WG**.

MODE OF ACTION

EMPEROR 50 WG is a translaminar insecticide that acts by causing insect paralysis through the suppression of muscle contractions, with a strong activity against Lepidoptera larvae. After ingestion, larval feeding ceases and death of larvae occurs within four (4) days. **EMPEROR 50 WG** is effective against Lepidoptera larvae resistant to organophosphates, pyrethroids and insect growth regulators.

USE RESTRICTIONS

- ▶ Do not apply directly to, and prevent spray drift onto, other edible crops, grazing, rivers, dams, and areas not under treatment.
- ▶ Use of this product in a manner or at a time other than in accordance with the directions may cause excessive residues or other undesirable results.
- ▶ **Emamectin benzoate is highly toxic to bees exposed at direct spray contact: DO NOT apply when bees are actively foraging. Avoid direct application or drift of the spray mix onto beehives and/or flowering crops/weeds while bees are foraging.**
- ▶ Before application is made, notify beekeepers to move hives to a safe location with an untreated source of nectar.
- ▶ DO NOT apply if rainfall is expected within 2 hours of application.

DIRECTIONS FOR USE – use only as directed

COMPATIBILITY:

EMPEROR 50 WG compatibility with other agricultural chemicals can be influenced by factors such as dilution water quality and product formulations. It is therefore recommended to always first perform a physical compatibility test (jar test) prior to application. **EMPEROR 50 WG** is generally compatible with other crop protection chemicals.

RAIN:

DO NOT apply if rainfall is expected within 2 hours of application.

AERIAL APPLICATION:

Notify all inhabitants in the immediate vicinity of the area to be sprayed and issue the required warnings. Do not spray over or allow drift to contaminate water or adjacent areas. Aerial application of **EMPEROR 50 WG** may only be done by a registered aerial application operator using a correctly calibrated, registered aircraft according to the instructions of SANS Code 10118 (Aerial Application of Agricultural Pesticides). 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:

1. **Volume:** A spray mixture volume of 30 - 50 ℓ per hectare is recommended. The product has not been evaluated at reduced volume rates and the registration holder cannot guarantee efficacy or held responsible for any adverse effects if the product is applied aerially at a lower rate than recommended above.
2. **Droplet coverage:** 30 – 40 droplets / cm² must be recovered at the target area.
3. **Droplet size:** A droplet spectrum with a VMD of 250 – 280 micron is recommended. Limit the production of fine droplets less than 150 micron (high drift & evaporation potential) to a minimum.
4. **Flying height:** Maintain the height of the spray boom at 3 – 4 m above the target. Do not spray when aircraft is diving, climbing or when banking.
5. Use suitable **atomizing 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.
6. Position all the atomizers within the inner 60 – 75 % of the wingspan to prevent droplets from entering the wingtip vortices.
7. The differences in **temperature** between the wet and dry bulb thermometers, of a whirling hygrometer, should not exceed 8 °C.
8. Stop spraying if the **wind speed** exceeds 15 km/h.
9. Stop spraying under **turbulent**, unstable, and dry conditions during the heat of the day.
10. 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:
 - a) reduced efficacy due to evaporation of small droplets in the air (inadequate coverage),
 - b) damage to other sensitive crops and/or non-target areas through drifting of the suspended spray cloud away from the target field.
11. Ensure that the aerial spray operator knows exactly which fields to spray.
12. Obtain an assurance from the aerial spray operator that the above requirements will be met, and that the relevant data will be compiled in a logbook and kept for future reference.

MIXING INSTRUCTIONS:

Pour the correct quantity of **EMPEROR 50 WG** to ½ of the required water in the spray tank while agitating to form a homogenous emulsion. Fill the spray tank with rest of the water while agitating. When preparing a tank mixture with other compatible agricultural chemicals: while agitating the spray tank water, add the products to ½ of the water in the following sequence – wettable powders, water dispersible granules such as **EMPEROR 50 WG**, followed by suspension concentrates, emulsifying concentrates and soluble concentrates last. Top up the mixing tank with the required quantity of clean water whilst agitating. Agitate constantly before and during application. Use the spray mixture immediately, do not leave in spray tank for a length of time, e.g., overnight. Clean applicator after use and dispose of wash water where it will not contaminate crops, grazing, food, or water.

ORCHARD APPLICATION:

Thorough and even coverage of the crop is essential. Do not apply during the heat of the day or if the plants are wet or if rain is imminent. The spray volume needed per hectare for high and low volume application at a specific growth stage must be determined accurately according to the row-tree-volume-method as described by Unrath (Deciduous Fruit Grower, November 1986), refer to application table. The **EMPEROR 50 WG** rate per hectare for high and low volume application is then determined according to the spray volume per hectare calculated for high volume application.

All spray applications must be made with suitable equipment that is in good working order and correctly calibrated to give the desired coverage for that method of application.

SUCCESSFUL CODLING MOTH CONTROL MANAGEMENT:

- ▶ Codling moth resistance levels against organophosphates may vary between orchards, therefore control techniques should be adjusted accordingly.
- ▶ It is recommended that **EMPEROR 50 WG** be used in conjunction with the pheromone mating disruption technique.
- ▶ Use recommended spray volumes for best results.
- ▶ Do not neglect cultural practices such as pruning, thinning and the discarding of thinned and infested fallen fruit from the orchards.
- ▶ Apply compounds from different chemical groups against each moth generation.

APPLICATION TABLE		
CROP and PEST	DOSAGE per 100 ℓ water	REMARKS
APPLES AND PEARS		<p>IMPORTANT INFORMATION:</p> <ul style="list-style-type: none"> ▶ Apply EMPEROR 50 WG as part of an integrated pest management spray programme, alternating with insecticides with other modes of action. ▶ Apply as a high volume full cover spray. Preferably use the tree row volume (TRV) calculation below. ▶ An effective control programme must proceed EMPEROR 50 WG applications. ▶ <u>Resistance management:</u> EMPEROR 50 WG should not be applied more than four (4) times per growing season, either solo or in the tank-mixture.
Codling moth (<i>Cydia pomonella</i>)	20 g EMPEROR 50 WG + 60 ml Marksman 240 SC*	<ul style="list-style-type: none"> ▶ Commence application at the onset of the 1st, 2nd, or 3rd generation. ▶ Apply spray mixture at 14-day intervals. ▶ Ensure an effective control programme precedes the EMPEROR 50 WG plus Marksman 240 SC programme. ▶ <u>Resistance management:</u> Do not exceed more than two (2) EMPEROR 50 WG plus Marksman 240 SC tank- mix applications per generation. To control further generations of the pest, apply EMPEROR 50 WG as solo applications (max 4 applications per season) and/or use insecticides with other modes of action.
	24 g EMPEROR 50 WG	<ul style="list-style-type: none"> ▶ Commence application at the onset of the 1st, 2nd or 3rd generation and use EMPEROR 50 WG for the control of one generation of codling moth only. ▶ Apply EMPEROR 50 WG at 7 – 10 day intervals, if required.
African bollworm (<i>Helicoverpa armigera</i>)	32 – 40 g EMPEROR 50 WG	<ul style="list-style-type: none"> ▶ Follow recommended scouting and monitoring techniques and commence application at the first signs of bollworm infestation. ▶ Apply EMPEROR 50 WG at 7 – 10 day intervals, if required.
<p>Water volume (ℓ) per hectare required for full cover spray using tree row volume (TRV) calculation:</p> <p>Tree height and diameter to be measured in summer when trees are in full flush. Use the water volume per hectare to calculate the required amount of EMPEROR 50 WG per hectare, depending on the various growth stages. It is important that the correct amount of EMPEROR 50 WG per hectare is applied.</p> <ul style="list-style-type: none"> • <u>TRV (Bud Break to Full Blossom)</u> ℓ water/ha = [(Tree Height X Tree Diameter X 937)/Row Width] X 60 % • <u>TRV (75 % Petal Fall to One Month Later – Mid Season)</u> ℓ water/ha = [(Tree Height X Tree Diameter X 937)/Row Width] X 80 % • <u>TRV (Full Leaf, Mid-Season to Postharvest, Before Leaf Drop)</u> ℓ water/ha = [(Tree Height X Tree Diameter X 937)/Row Width] X 100% 		
<p>CANOLA</p> <p>African bollworm (<i>Helicoverpa armigera</i>)</p> <p>Diamondback moth (<i>Plutella xylostella</i>)</p>	200 g EMPEROR 50 WG /ha + ^a ADJUVANT	<ul style="list-style-type: none"> ▶ Apply as a full cover spray and ensure thorough coverage. The addition of a suitable ^aadjuvant at the appropriate label rate is recommended for improved coverage. ▶ Apply EMPEROR 50 WG at 7-day intervals, if required. ▶ Use as part of an integrated pest management spray programme, alternating with insecticides with other modes of action. ▶ Follow recommended scouting and monitoring techniques and commence application as soon as eggs have hatched (bollworm) or pest is noticed (diamondback moth). ▶ <u>Resistance management:</u> EMPEROR 50 WG should not be applied more than four (4) times per canola crop. Where more than one crop is grown in the field, do not apply more than four (4) EMPEROR 50 WG sprays annually. <p>^a Any suitable adjuvant that is registered under Act 36 of 1947. Also see “AERIAL APPLICATION”</p>
<p>CEREAL GRAINS (wheat and barley)</p> <p>African bollworm (<i>Helicoverpa armigera</i>)</p>	200 g EMPEROR 50 WG /ha +	<ul style="list-style-type: none"> ▶ Follow recommended scouting and monitoring techniques and commence application when the eggs are hatching. ▶ Apply EMPEROR 50 WG at a 7-day interval, if required.

	^a ADJUVANT	<ul style="list-style-type: none"> Ensure good coverage of the plants, applying in at least 300 ℓ water per hectare. The addition of a suitable ^aadjuvant is recommended for improved coverage and effective control. Use as part of an integrated pest management spray programme, alternating with insecticides with other modes of action. <u>Resistance management:</u> EMPEROR 50 WG should not be applied more than two (2) times per growing season. <p>^aAny suitable adjuvant that is registered under Act 36 of 1947. Also see "AERIAL APPLICATION"</p>																	
CITRUS False codling moth (<i>Thaumatotibia leucotreta</i>)	30 – 38 g EMPEROR 50 WG	<ul style="list-style-type: none"> Commence application at the first signs of the pest, when moth catches in pheromone traps indicate an infestation. Apply as a full cover spray, ensuring thorough coverage. Apply EMPEROR 50 WG at 7 – 10 day intervals, if required. Use as part of an integrated pest management spray programme, alternating with insecticides with other modes of action. For optimum results, EMPEROR 50 WG applications should therefore be combined with, or preceded by, other methods of control for example: mating disruption, biological control programmes, good sanitation programmes and effective insecticides. <u>Resistance management:</u> EMPEROR 50 WG should not be applied more than four (4) times per growing season. 																	
CRUCIFERAE (Including broccoli, brussels sprouts, cabbages, cauliflower) Diamondback moth (<i>Plutella xylostella</i>) African Bollworm (<i>Helicoverpa armigera</i>)	250 – 336 g EMPEROR 50 WG/ha	<ul style="list-style-type: none"> Follow recommended scouting and monitoring techniques and commence application at the first signs of the pest, as indicated by thresholds. Add a suitable adjuvant at the registered label rate and apply as a full cover spray, ensuring thorough coverage. Apply EMPEROR 50 WG at 7-day intervals if required. Use as part of an integrated pest management spray programme, with insecticides with other modes of action. <u>Resistance management:</u> EMPEROR 50 WG should not be applied more than four (4) times to any Cruciferae crop. Where more than one crop is grown, do not apply more than four (4) EMPEROR 50 WG sprays annually. 																	
GRAPES (TABLE AND WINE) False codling moth (<i>Thaumatotibia leucotreta</i>) African bollworm (<i>Helicoverpa armigera</i>)	30 g EMPEROR 50 WG	<p>IMPORTANT INFORMATION:</p> <ul style="list-style-type: none"> Apply as a full cover, high volume spray application to ensure thorough coverage, follow application guidelines below. Apply EMPEROR 50 WG at 7 – 10 day intervals, if required. Use as part of an integrated pest management spray programme, alternating with insecticides with other modes of action. <u>Resistance management:</u> EMPEROR 50 WG should not be applied more than four (4) times per growing season. <p><u>False codling moth:</u></p> <ul style="list-style-type: none"> Commence application at the first signs of the pest, when moth catches in pheromone traps indicate an infestation. For optimum results, EMPEROR 50 WG applications should be combined with, or preceded by, other methods of control for example: mating disruption, biological control programmes, good sanitation programmes and effective insecticides. <p><u>African bollworm (larvae):</u></p> <ul style="list-style-type: none"> Follow recommended scouting and monitoring techniques and commence application at the first signs of the pest, as soon as eggs or young larvae are present, but before larvae enter the fruit. 																	
<p>Grapes (table and wine) applications:</p> <ul style="list-style-type: none"> Apply EMPEROR 50 WG as a high volume spray on grapes. Calculate the spray volume (ℓ) per hectare (ha) required for a high volume application during the specified growth stage using the following guidelines: <table border="1"> <thead> <tr> <th rowspan="2">Growth Stage</th> <th colspan="2">Suggested spray volume for high volume application</th> </tr> <tr> <th>Table grapes</th> <th>Wine grapes</th> </tr> </thead> <tbody> <tr> <td>2,5 cm to 25 cm shoot length</td> <td>500 – 750 ℓ/ha</td> <td>250 – 500 ℓ/ha</td> </tr> <tr> <td>25 cm shoot length to just prior to flowering</td> <td>750 – 1000 ℓ/ha</td> <td>500 – 750 ℓ/ha</td> </tr> <tr> <td>Flowering to pea berry stage</td> <td>1000 – 1200 ℓ/ha</td> <td>750 – 1000 ℓ/ha</td> </tr> <tr> <td>Pea berry stage to harvest</td> <td>1200 – 1500 ℓ/ha</td> <td>1000 – 1200 ℓ/ha</td> </tr> </tbody> </table>			Growth Stage	Suggested spray volume for high volume application		Table grapes	Wine grapes	2,5 cm to 25 cm shoot length	500 – 750 ℓ/ha	250 – 500 ℓ/ha	25 cm shoot length to just prior to flowering	750 – 1000 ℓ/ha	500 – 750 ℓ/ha	Flowering to pea berry stage	1000 – 1200 ℓ/ha	750 – 1000 ℓ/ha	Pea berry stage to harvest	1200 – 1500 ℓ/ha	1000 – 1200 ℓ/ha
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Pea berry stage to harvest	1200 – 1500 ℓ/ha	1000 – 1200 ℓ/ha																	
MAIZE & SWEETCORN	300 g EMPEROR 50 WG/ha	<ul style="list-style-type: none"> Follow recommended scouting and monitoring techniques and begin application as soon as pest is first detected. EMPEROR 50 WG will not control larvae which have already entered the cobs. 																	

<p>Fall armyworm (<i>Spodoptera frugiperda</i>)</p>	<p>+ ^aADJUVANT</p>	<ul style="list-style-type: none"> ▶ Apply as a full cover spray in 200 ℓ of water per hectare, ensuring thorough coverage. ▶ Reapply EMPEROR 50 WG 10 – 14 days later, depending on re-infestation of the pest. ▶ The addition of a suitable ^aadjuvant at registered rates is recommended for improved coverage. ▶ Use as part of an integrated pest management spray programme (IPM), alternating with insecticides with different modes of action. ▶ <u>Resistance management:</u> EMPEROR 50 WG should not be applied more than twice (2) per crop cycle. <p>^aPolyether-polymethylsiloxane co-polymer 1000 g/ℓ recommended.</p>
<p>PEPPERS</p>		<p>IMPORTANT INFORMATION:</p> <ul style="list-style-type: none"> ▶ Follow recommended scouting and monitoring techniques and commence application when young larvae are first observed. ▶ Apply as a full cover spray, ensuring thorough coverage. ▶ Use as part of an integrated pest management spray programme, alternating with insecticides with other modes of action. ▶ Apply EMPEROR 50 WG at 7-day intervals, when required. ▶ Use a penetrant/wetter or light mineral oil with EMPEROR 50 WG. Do not add a sticker.
<p>African bollworm (<i>Helicoverpa armigera</i>)</p>	<p>150 – 336 g EMPEROR 50 WG/ha</p>	<p><u>African bollworm:</u></p> <ul style="list-style-type: none"> ▶ <u>Resistance management:</u> EMPEROR 50 WG should not be applied more than 336 g/ha per application and do not apply more than 2 017 g/ha per season.
<p>Tomato leaf miner (larvae) (<i>Tuta absoluta</i>)</p>	<p>30 – 60 g EMPEROR 50 WG OR 300 – 600 g EMPEROR 50 WG/ha</p>	<p><u>Tomato leaf miner (larvae):</u></p> <ul style="list-style-type: none"> ▶ Apply the higher application rate in situations of severe infestations. ▶ <u>Resistance management:</u> EMPEROR 50 WG should not be applied more than four (4) times per crop cycle. <p>Also see “AERIAL APPLICATION”</p>
<p>POTATOES</p> <p>Potato tuber moth (<i>Phthorimaea operculella</i>)</p> <p>Fall armyworm (<i>Spodoptera frugiperda</i>)</p>	<p>300 g EMPEROR 50 WG/ha + ^aADJUVANT</p>	<ul style="list-style-type: none"> ▶ Follow recommended scouting and monitoring techniques and commence application as soon as pest is first noticed. It is recommended to apply first application when larvae are on average 2 mm and smaller. ▶ Apply as a full cover spray in 200 – 500 ℓ of water per hectare (depending on plant size), ensuring thorough coverage. ▶ Apply EMPEROR 50 WG 7 – 14 days later, depending on re-infestation of the pest. ▶ The addition of a suitable ^aadjuvant at registered rates is recommended for improved coverage. ▶ Use as part of an integrated pest management spray programme, alternating with insecticides with other modes of action. ▶ <u>Resistance management:</u> EMPEROR 50 WG should not be applied more than twice (2) per crop cycle. <p>^aPolyether-polymethylsiloxane co-polymer 1000 g/ℓ recommended.</p>
<p>STONE FRUIT</p>		<p>IMPORTANT INFORMATION:</p> <ul style="list-style-type: none"> ▶ Apply as a full cover, high volume spray application to ensure thorough coverage. ▶ Apply EMPEROR 50 WG at 7 – 10 day intervals, if required. ▶ Use as part of an integrated pest management spray programme, alternating with insecticides with other modes of action. ▶ <u>Resistance management:</u> EMPEROR 50 WG should not be applied more than twice (2) per growing season.
<p>False codling moth (<i>Thaumatotibia leucotreta</i>)</p>	<p>30 – 40 g EMPEROR 50 WG</p>	<p><u>False codling moth:</u></p> <ul style="list-style-type: none"> ▶ Follow recommended scouting and monitoring techniques and commence application at the first signs of the pest present, when moth catches in pheromone traps indicate an infestation of false codling moth. ▶ For optimum results, EMPEROR 50 WG applications should be combined with, or preceded by, other methods of false codling moth control for example: False codling moth mating disruption, biological control programmes, good sanitation programmes and effective insecticides.

African bollworm (<i>Helicoverpa armigera</i>)	30 g EMPEROR 50 WG	<u>African bollworm:</u> <ul style="list-style-type: none"> Follow recommended scouting and monitoring techniques and commence application at the first signs of the pest, as soon as eggs or young larvae are present, but before larvae enter the fruit.
STRAWBERRIES African bollworm (<i>Helicoverpa armigera</i>)	180 – 260 g EMPEROR 50 WG/ha + ^a ADJUVANT	<ul style="list-style-type: none"> Follow recommended scouting and monitoring techniques and commence application at the first signs of the pest, as indicated by local spray thresholds. Most effective when applied just before or soon after the hatching of eggs. Good coverage of all foliage is essential. The addition of a suitable ^aadjuvant at registered rates is recommended to improve coverage. Timing of subsequent applications should be based on regular scouting of fields. Apply EMPEROR 50 WG as two (2) block applications, each block consisting of two (2) consecutive applications. For the first block, the two (2) consecutive applications can be applied 10 days apart. Do not apply the second EMPEROR 50 WG block application within 21 days of the first block. For the second block application (late season infestations), two (2) consecutive applications of EMPEROR 50 WG can be applied 7 – 10 days apart, with a 2-day withholding period. To delay insecticide resistance, use an insecticide with a different mode of action for application windows prior to, and following the EMPEROR 50 WG application window. Resistance management: EMPEROR 50 WG should not be applied more than four (4) times per crop and where more than one crop is grown in a field do not exceed four (4) EMPEROR 50 WG applications in any one year. <p>^aPolyether-polymethylsiloxane co-polymer 1000 g/ℓ recommended.</p>
TOMATOES		IMPORTANT INFORMATION: <ul style="list-style-type: none"> Follow recommended scouting and monitoring techniques and commence application immediately when the pest is observed. Use as part of an integrated pest management spray programme, alternating with insecticides with other modes of action. Apply as a full cover spray in 300 – 1000 ℓ of water per hectare (depending on plant height), ensuring thorough coverage. The addition of a suitable ^aadjuvant at registered rates, is recommended for improved coverage, do not add a sticker. Resistance management: EMPEROR 50 WG should not be applied more than four (4) times per crop cycle. EMPEROR 50 WG should be used according to the CropLife insecticide resistance strategy. <p>Also see “AERIAL APPLICATION”</p>
African bollworm (<i>Helicoverpa armigera</i>) Tomato semi-looper (<i>Chrysodeixis acuta</i>)	20 g EMPEROR 50 WG minimum 200 g EMPEROR 50 WG/ha + ^a ADJUVANT	<ul style="list-style-type: none"> Apply in a block of two (2) applications, 7 days apart. Do not apply the second EMPEROR 50 WG block application within 21 days of the first block. Alternate with products such as spinosad (group 5), chlorfenapyr (group 13) or indoxacarb* (group 22) especially if re-infestation occurs within 21 days after the first block of EMPEROR 50 WG applications. <p>*InCide 300 WG (Act 36/1947 Reg. No. L10524) is an indoxacarb containing insecticide registered by ICA International Chemicals for use against African bollworm on tomatoes.</p>
Tomato leaf miner (<i>Tuta absoluta</i>)	30 g EMPEROR 50 WG Minimum 300 g EMPEROR 50 WG/ha + ^a ADJUVANT	<u>Tomato leaf miner:</u> <ul style="list-style-type: none"> Apply as soon as pest is observed and repeat at 7-day intervals
TREE NUTS (almonds, macadamias, and pecans) False codling moth (<i>Cryptophlebia leucotreta</i>)	22 – 34 g EMPEROR 50 WG	<ul style="list-style-type: none"> Follow recommended scouting and monitoring techniques and commence application at the first signs of the pest present. For best results apply soon after pest eggs have hatched and before neonate larvae penetrate the nuts or stems. Use as part of an integrated pest management spray programme, alternating with insecticides with other modes of action. Apply as a full cover spray, ensuring thorough coverage. Apply EMPEROR 50 WG, if necessary, at 7-day intervals. Apply the lower rate for low to moderate infestations and the highest rate for high infestations. Resistance management: EMPEROR 50 WG should not be applied more than four (4) times per growing season, either solo or in the tank-mixture.

<p>(almonds, cashews, chestnuts, hazelnuts, macadamias, pecans, pistachios, and walnuts)</p> <p>Macadamia nut borer [<i>Thaumatotibia</i> (synonym = <i>Cryptophlebia</i>) <i>batrachopa</i>]</p>	<p>20 g EMPEROR 50 WG + 40 g acetamiprid (200 g/kg)</p> <p>OR</p> <p>30 g EMPEROR 50 WG</p>	<ul style="list-style-type: none"> ▶ Follow recommended scouting and monitoring techniques and begin application as soon as the pest is first detected. For best results apply soon after pest eggs have hatched and before neonate larvae penetrate the nuts or stems. ▶ In orchards with a history of macadamia nut borer infestation, or a predicted high infestation level, the first two (2) applications must be made with the EMPEROR 50 WG plus acetamiprid 200 g/kg tank-mix, thereafter, continue with solo applications of EMPEROR 50 WG. ▶ Apply as a medium cover spray, ensuring that all nut clusters are adequately protected. ▶ For optimal results, use a spray oil with the EMPEROR 50 WG solo applications. ▶ Apply EMPEROR 50 WG, if necessary, at 7 – 10 day intervals. ▶ <u>Resistance management</u>: DO NOT exceed more than two (2) EMPEROR 50 WG plus acetamiprid 200 g/kg tank-mix applications per growing season. EMPEROR 50 WG should not be applied more than four (4) applications per growing season, either solo or in the tank-mixture.
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^a Only use registered products as registered in spray programmes.

***Marksman 240 SC** (Act 36/1947 Reg. No. L10389) is a methoxyfenozide containing insecticide registered by ICA International Chemicals for use on apples and pears.