FARMAG FENVALERATE

Reg. No. L5644 Act/Wet No. 36 of/van 1947

An emulsifiable concentrate contact and residual insecticide for the control of insects as listed.

‘n Emugeerbare konsentraat kontakinsekdoder vir die beheer van insekte soos aangedui.

IRAC INSECTICIDE GROUP CODE	**3**	**IRAC INSEKDODERGROEPKODE**

ACTIVE INGREDIENT/ AKTIEWE BESTANDDEEL:

Fenvalerate (pyrethroid)………….200 g/ℓ………………Fenvaleraat (Piretroïed)

Manufacture date: **Vervaardiginsdatum:**	
Batch No.: **Lotnommer:**	
CONTENTS/INHOUD	**ℓ**

SEE ENCLOSED LEAFLET FOR FULL PARTICULARS
SIEN INGESLOTE VOUBILJET VIR VOLLE BESONDERHEDE

REGISTRATION HOLDER/ REGISTRASIEHOUER

Castle Ag-Chem (Pty) Ltd

Reg. Nr.: Reg. No. **2007/033120//07**
22 Burnside Drive,
Old Mill Industrial Park,
Mount Edgecombe, South Africa, 4000
Tel: 031 538 8700

UN number: 2903

WARNINGS:

- Withholding periods: minimum number of days between last application and harvest or grazing:

Apples and pears……………	14 days	Mangoes……...........	30 days
Beans…………………….....	7 days	Peas…………………	7 days
Cotton (grazing)…………….	28 days	Potatoes…………….....	3 days
Grain sorghum…………......	28 days	Sunflowers…………	28 days
Grapes (table and wine)……..	28 days	Tomatoes……………	2 days
Maize……………………….	14days		

- Handle with care
- Harmful if inhaled, swallowed or absorbed through the skin
- An eye and skin irritant
- Very toxic to fish and harmful to other organisms and other animals
- Toxic to bees. Do not apply when bees are active in crop.
- **FLAMMABLE** – do not store near open flame.
- Store away from food and feedstuffs in a cool, dry place
- Keep out of reach of children, uniformed persons and animals
- Re-entry: Do not enter treated area within 1 day after treatment, unless wearing protective clothing.
- **In case of poisoning call a doctor and make the label available to him**
- **Aerial application:** Notify all inhabitants of the immediate area to be sprayed and issue the necessary warning. Do not spray over or allow drift to contaminate adjacent areas, rivers or dams

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 soil, climatic and storage conditions, quality of dilution water, incompatibility 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 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:

- Avoid inhalation of spray mist and skin and eye contact
- Wear protective clothing, suitable face shield, rubber gloves and rubber boots when handling and mixing the product and whilst applying the spray mixture.
- Do not eat, drink or smoke whilst mixing or applying or before washing hands and face and changing clothing.
- In case of accidental skin contact, wash affected area with soap and water.
- Wash contaminated clothing daily.
- Avoid drift or spray mist onto other crops, grazing, rivers and dams and areas not under treatment
- Clean application equipment after use. Dispose of wash water where it will not contaminate crops, grazing, rivers and boreholes.
- Triple rinse empty containers in the following manner: Invert the empty container over the spray or mixing tank and below to drain for at least 30 seconds after the flow has slowed down to a dip. Thereafter, rinse the container three times with a volume of water equal to a minimum of 10% of that of the container. Add

the rinsings to the contents of the spray tank before destroying the container in the described manner.
- Destroy empty container by perforation, flattening and burying
- Do not use empty container for any other purpose
- Prevent contamination of food, feed, eating utensils and drinking water.

SYMPTOMS OF POISONING:

When ingested: abdominal pain, nausea, vomiting, dizziness, headache, convulsions;
Upon skin contact: redness, burning sensation, numbness, tingling, itching;
Upon eye contact: redness, pain and
Upon inhalation: burning sensation, cough, dizziness, headache, nausea.

FIRST AID TREATMENT:

Eyes: Flush eyes with clean, gentle water for at least 15 minutes. If irritation occurs and persists, obtain medical attention.
Skin: Remove contaminated clothing and rinse contaminated body thoroughly with plenty of soap and cold water, until no evidence of chemical remains. Do not rub skin. Obtain medical attention of irritations occurs or persists.
Inhalation: Move the patient to fresh air. If breathing is difficult or irritation occurs and persists, obtain medical attention.
Ingestion: Do not induce vomiting. If patient is alert, rinse mouth thoroughly with clean water. Do not give anything by mouth if patient is unconscious. If vomiting occurs, prevent vomit being inhaled. Obtain medical attention.

NOTE TO PHYSICIAN:

The pesticide contains as pyrethroid and an aeromatic solvent. If pesticide is aspired into lungs during ingestion or vomiting, mild to severe chemical pneumonia may be caused. The stomach should be emptied as soon as possible by careful gastric lavage.
No antidote is available. Treat symptomatically and supportively. Convulsions should be treated with anti-convulsants.

RESISTANCE WARNING:

For resistance management, **FARMAG FENVALERATE** is a group code 3 insecticide. Any insect population may contain individuals naturally resistant to **FARMAG FENVALERATE** and other group code **3** insecticide. The resistant individuals can eventually dominate the insect population if these insecticides are used repeatedly. These insects may not be controlled by **FARMAG FENVALERATE** or any other group code **3** 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 group 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

Warning against American (Africa) bollworm resistance:
Resistance of African (Africa) bollworm (*Helicoverpa armigera*) to synthetic *pyrethroids* has been confirmed.
Cotton: Synthetic pyrethroids must **only** be applied to cotton during the period 1 January to 28 February.
All other crops: Do not apply more than two applcations per growing season. If a pyrethroid gives poor performace, **do not** respray with any synthetic pyrethroid, even at a corrective dosage rate. Use a product from a different chemical group.

GROUND APPLICATION: (deciduous fruit orchards)

Volume water to be applied per hectare in deciduous fruit orchards:
The volume of water to be applied per hectare in deciduous fruit orchards is calculated according to the Tree Row Volume Formula as described by Unrath:

The formula is as follows: $\frac{\text{Tree height x tree diameter x 937}}{\text{Row width}}$ = volume water to be applied/ha

The measurements used in the formula are those of the tree in full leaf cover. Because deciduous fruit trees are not always in full leaf the water volume to applied per hectare at the earlier growth stages is as follows:

From greet-tip to 30 % blossom	- 60 % of HV to be applied
From ca. full blossom to ca. November	- 80 % of HV to be applied
From ca. beginning of December	- 100 % of HV to be applied

When pesticides are applied as low volume sprays the correct quantity of pesticide, as calculated for high volume application, must be applied per hectare.

AERIAL APPLICATION:

Aerial application of **FARMAG FENVALERATE** may only be done by a registered Aerial Application Operator using a correctly calibrated, registered aircraft according to the instructions of SANS 10118 (Aerial Application of Agriculture Pesticide). 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 30 liter per hectare is recommended. As this product has not been evaluated at a reduced rate, the registration holder cannot guarantee efficacy, or be held responsible for any adverse if this product is applied aerially at a lower volume rate than recommended above
- Droplet coverage: 30 to 40 droplets per cm^2 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 meters above the target. Do not spray when aircraft dives, is in a climb or when banking. 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.
- 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 exec 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 field to spray
- Obtain an assurance from the Aerial Spray Operator that the above requirements will be met and that relevant data will be complied in a logbook and kept for future reference.

DIRECTIONS FOR USE: Use only as indicated.

MIXING INSTRUCTIONS

Half fill the spray tank with clean water. To obtain a good spray mixture, it is recommended to mix the required volume of **FARMAG FENVALERATE** with a small amount of water (one part to five parts of water) before adding it to the water in the spray tank. Start agitating the water in the spray tank and add the pre mixture to the water in the spray tank. Fill the spray tank to the required spray volume with clean water. Maintain agitation until spraying is completed.

CROP / PEST	**DOSAGE RATE / 100 ℓ WATER OR AS INDICATED**	**REMARKS**
ALL CROPS cutworms	0-20 % clay: 100 mℓ/ha > 20 % clay: 125 mℓ/ ha 0-20 % clay: 120 mℓ/ha >20 % clay: 140 mℓ/ha	Apply at planting as a preventive measure or after planting as a corrective measure as soon as pest is noticed Ensure that top 3 cm of soil is moist Ground application Overall spray: apply in 300 ℓ water per ha
APPLES & PEARS	To determine the volume of water in which FARMAG FENVALERATE should be applied per hectare refer '**GROUND APPLICATION:** Volume water to be applied per hectare in deciduous fruit orchards' above	
Codling moth	12 mℓ	Apply first at 75% petal drop and repeat at 14 day intervals. Will also control American (Africa) bollworm and leafrollers if present at application.
Banded fruit weevil (Southbeetle)	10 mℓ	Apply 2 to 3 full cover sprays: the first at 75% petal drop, the second 4 weeks later. If necessary, a third application can be made mid-January. These sprays will also control American (African) bollworm, codling moth and leafrollers if present at application
BEANS & PEAS American (Africa) bollworm		Scout fields when crop is flowering using a sample size of 25 plants per ha. Start spraying when 10% of the plants are infested with an average of 1 to 2 larvae. Scouting after application and after rain is still necessary. If rain falls shortly after application, wait 3 days. Re-scout and

	150 mℓ/ha	respray if necessary **Gound application** Low volume: apply in 300 – 500 ℓ water per ha Refer **'Warning against American (African) bollworm resistance'** under '**RESISTANCE WARNING'**
COTTON	See **'Warning against American (Africa) bollworm resistance' under RESISTANCE WARNING'**. In order to comply with the principles of pest management and integrated control measures, **FARMAG FENVALERATE** is intended to be used during the periods of fruiting from peak flowering until boll split, i.e. approximately 10 to 22 weeks after crop emergence. **FARMAG FENVALERATE** is primarily intended for use as a preventative control measure against all bollworm larvae based on weekly scouting of lands, or regular spray programme applied at 7 day intervals. Normally a bollworm spray programme will commence at the beginning of flowering, i.e about 6 weeks after crop emergence. From then until peak flowering use registered non-pyrethroid remedies.	
American (Africa), red and spiny bollworms Stainers Semi – (Plusia) looper	**Weekly spray programme:** **Preventive treatment:** Base application on scouting of lands. Scout 24 plants at random in lands up to 15 ha at weekly intervals from flowering until boil split. Apply **FARMAG FENVALERATE** when the economic threshold is reached or exceeded i.e. for American (Africa) bollworm an average of 12 eggs or 5 larvae per 24 plants; red bollworm an average of 6 or 12 larvae per 24 plants and spiny bollworm, when 2 or more; average are found during scouting. Strainers and semi-looper will also be controlled with applications for controlled with applications for control of bollworms.	
	125 mℓ/ha 250 mℓ/ha	**Ground application** Plants less than 60 cm high: apply in 100 ℓ water per ha Plants higher than 60 cm: apply in 200 ℓ water per ha Ensure thorough coverage and penetration of spray mixture to achieve optimum results particularly in tall and dense plant populations.
	1 mℓ/100 m row 2mℓ/100 m row	**Tramline application** Plants less than 60cm high: apply in 1 ℓ water per 100 m row Plants higher than 60 cm: apply in 2 ℓ water per 100 m row
American (African) and spiny bollworms only	**Corrective treatment:** Apply as a corrective spray to control an established infestation, i.e. when more than 6 bollworms per 24 plants are found during scouting. The success of a treatment can be related to application, density of crops foliage, crop stand and development stages or larvae. Allow up to 4 days for **FARMAG FENVALERATE** to achieve its full effect. Consider a corrective application as an emergency measure and thereafter the regular programme must be resumed irrespective of the crop stage.	
GRAIN SORGHUM American (Africa) bollworm	200 mℓ/ha	Scout fields at 7 intervals from the time of ear emergence using a sample of 25 plants per 15 ha. Start spraying when 10% of the ears have a mean of one or more larvae. Where cultivars with tight ears are encountered, it is preferable to spray before the ears close up (before the grains fills out completely) Refer **'Warning against American (America) bollworm resistance' under 'RESISTANCE WARNING'**

Grapes **(table & wine)** Weevils (snoutbeetles) (Phlyctinus callosus & Eremnus cerealis)	15 mℓ	High volume application only Apply at the first sign of weevil activity preferably with hand guns Ensure thorough coverage of leaves as well as stems and the soil in immediate contact with the stems. Monitor vineyards regularly for the presence of weevils. Repeat application 3 to 4 weeks later.
MAIZE Stalk borer (Bussiola fusca)	4 mℓ/100 m row	Preventive treatment against young larvae. Apply at funnel stage when small shotholes are evident in youngest leaves before borers have migrated into stalk or 7 to 10 days after eggs are found on 5% or more of the plants. A second application 10 to 14 days later may be necessary. Larvae that have penetrated the stalk or are longer than 10 mm will not be controlled. Apply only to active growing plants. Do not apply after commencement of tassel formation. **Ground application** Apply in 3 ℓ water per 100 m row
MANGOES Mango weevil	30 mℓ	Apply as a full cover high volume application during winter prior to flowering. Repeat when fruit is approximately 15 mm in diameter. NOTE: Use under conditions of high infestation complete control of pest may not be obtained
POTATOES Potato tuber moth **SUNFLOWERS** American (Africa) bollworm	100 mℓ 150 mℓ/ha **Or** 100 mℓ + 450 mℓ Methomyl SL 200g g/litre/ha	Start spraying as soon as plants are one month old or sooner in case of infestation. Repeat application every 14 days. Plants should be ridged at least twice during the growing season **Ground application** Apply 250 to 400 ℓ spay mixture per ha depending on plant size. This dosage rate will also control American (Africa) bollworm and cutworm (in Western Cape) and suppress aphids **Aerial application** Apply in at least 30 ℓ water per ha. Start spraying as soon as eggs or larvae are noticed on the plants (approximately 6 weeks after planting) only effective against larvae on the leaves and on the outside of the heads. Larvae which have already entered the heads or flower parts will not be controlled. **FARMAG FENVALERATE** and methomyl are toxic to bees and should thus not be sprayed in the full-blossom period
TOMATOES American (Africa) bollworm	15 mℓ	High volume application Apply between 1 000 and 4 000 ℓ spray mixture per ha depending on plant size and density. Start spraying as soon as eggs or larvae are noticed. Repeat application at 7 to 10 day intervals Refer **'Warning against American (Africa) bollworm resistance' under 'RESISTANCE WARNING'**

WAARSKUWINGS:

- Onthoudingsperiodes: minimum antal dae tusseb laaste toediening en oes of beweiding:

Appels en pere…………	14 dae	Mango's…………………	30 dae
Bone…………………….	7 dae	Ertjies…………………..	7 dae
Katoen (beweiding)……..	28 dae	Aartappels………………	3 dae
Graan Sorghum…………	28 dae	Sonneblomme…………	28 dae
Druiwe (Tafel en wyn)…	28 dae	Tamaties…………………	2 dae
Mielies…………………..	14 dae		

- Hanteer versigtig
- Skadelik indien ingeasem, ingesluk of deur die vel opgeneem
- 'n Oog – en velirritant.
- Gifitig vir vis en skadelik vir ander waterorganismes en ander diere.
- Gifitig vir bye. Moet nie toedien wanner bye aktief in gewas is nie
- **VLAMBAAR** – Moeat nie naby oop vlam stoor nie
- Bêre weg van voedsel en voer in 'n koel, droë plek.
- Hou buite bereik van kinders, oningeligte persone en diere
- Herbetreding: Moet nie behandelde gebied betree vir 1 dag na bespuiting nie, tensy beskermende oorklere gedra word.
- **In geval van vergifiging, ontbied 'n geneesheer en toon hierdie etiket aan hom.**
- **Lugtoediening:** Stel alle inwoners van die onmiddelike gebied wat bespuiting gaan word, in kennis en reik die nodige waarskuwings uit. Moet nie spuit oor of toelaat dat spuitnewel aangrensende gebiede, riviere of damme besoedel nie.

Alhoewel hierdie middel omvarrend onder 'n groot verskeidenheid toestande getoets is, waarborg registrasiehouer nie dat dit onder alle toestande doeltreffend sal wees nie aangesien die werking en effek daarvan beïnvloed kan word deur faktore soos adnormale grond-, klimaats- en bergingstoestande, kwaliteit van verdunnigswater, verenigbaarheid met ander stowwe wat nie op die etiket aangedui is nie en voorkoms 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 effek op mense en dier of vir 'n gebrek aan prestasie van die betrokke middel as gevolg van die versium deur die verbruiker om etiketaanwysings n ate kom of as gevolg van die onstaan van toestande wat nie kragtens die registrasie voorsien kon word nie. Raadpleeg die verskaffer in die geval van enige onsekerheid.

VOORSORGMAATREËLS

- Vermy inaseming van spuitnewel en aanraking met oë en vel
- Dra beskermende klere, geskikte, rubberhandskoen en-stewels wanneer middel hanteer en gemeng word en gedurende toediening van spuitmengsel
- Moet nie et, drink of rook gedurende menging en toediening of alvorens hande en gesig gewas is en skoon klere aangetrek is nie
- Ingeval van toevallige aanraking met vel, was besoedelde area met seep en water.
- Was besoedelde klere daagliks
- Voorkom die oorwaai van spuitnewel na ander gewasse, weiding, riviere, damme en areas nie onder behandeling nie.
- Maak toedieningsapparaat skoon na gebruik. Doen weg met uitspoelwater waar dit nie gewasse, weiveld, riviere, damme en boorgate sal besoedel nie

- Leë hours moet driekeer as volg uitgespoel word: Keer die leë houer om oor die spuittenk of mengbak en dreineer vir minstens 30 sekondes nadat die vloei tot ‘n gedrup verminder het. Spoel die houer daarna driekeer uit met ‘n volume water gelykstaande aan ‘n minimum van 10 % van die inhoud van die houer. Gooi die spoelwater by die inhoud vn die spuittenk voordat die houer op die vorgeskrewe wyse vernietig word.
- Vernietig leë houer deur gate daarin te kap, plat te druk en te begrawe
- Moet nie leë houer vir enige ander doel gebruik nie.
- Voorkom besoedeling van voedsel, voer, eetgerei en drinkwater

SIMPTOME VAN VERGIFTING:
Indien ingesluk: maagpyn, naarheid, vomering, duiseligheid, kopseer, struiptrekkings;
In aanraking met vel: rooiheid, branderige sensasie, dooie gevoel, tinteling, jeuking;
In aanraking met oë. Rooiheid, pyn en
Met inaseming: branerige sensasie, hoes, duiseligheid, kopseer, naarheid

NOODHULPBEHANDELING:
Oë: Spoel oë met skoon, sagvloeiende water vir ten minnste 15 minute. Indien irritasie voorkom en voortduur, ontbied ‘n geneesheer
Vel: Verwyder besoedelde klere en spoel geaffekteerde liggaamsdele deeglil met volop seep en koue water af tot geen teken van chemikalieë teenwoordig is nie. Moet nie vel hard vyf nie. Kry mediese hulp indien irritasoe voorkom of voortduur.
Inaseming: Neem pasiënt na vars lug. Indien asemhalingsprobleme ondervind word of irritase voorkom en voortduur, kry mediese hulp.
Inname: Moet nie braking veroorsaak nie. Indien pasient by bewussyn is, spoel mond deeglik met water uit: Moet nie iets per mond aan ‘n bewustelose person gee nie. Indien pasient braak, voorkom inaseming van braaksel. Kry medieses hul.

NOTA AAN GENEESHEER:
Hierdie plaagbeheermiddel bevat ‘n piretoied en ‘n oplosmiddel. Indien plaagbeheermiddel, wanneer ingesluk of tydens braking, in long in ingeasem word, kan ligte tot ernistige chemise inflammasie van die longe veroorsaak word.
Die maag behoort so spoedig moontlik leeggmaak te word, deur die maag versigtig uit te spoel.
Geen teenmiddel is beskikbaar nie. Behandel simptomaties en ondersteunend. Behandel stuiptrekkings met ‘n middel daarteen

WEERSTANDSWAARSKUWING:
FARMAG FENVALERATE is ‘n groepkode **3** insekdoder. Enige populasie van ‘n spesifieke insek mag individue insluit wat ‘n natuurlike weerstand teen **FARMAG FENVALERATE** of enige ander groepkode **3** insekdoder het. Indien insekdoder herhaaldelik aangewnd word, kan die weerstandbiedende individue uiteindelik die insek populasie oorheers. Hierdie weerstandbiedende insekte sal waarskynlik nie deur **FARMAG FENVALERATE** of enige ander groepkode **3** insekdoder beheer word nie.

Om weerstand teen insekdoders te vertraag:
- Vermy die esklusiewe herhaaldelike gebruik van insekdoders met dieselfde groepkode. Wissel af met, of gebruik tenkmengsels van produkte in verskillende insekdodergroep kodes.
- Integreer ander beheermaatreëls (chemical, verbouing, biologies) insekbeheer programme.

Vir spesifieke inligting oor weerstandsbestuur kontak die registrasiehouer van hierdie produk.

Waarskuwing teen Amerikaanse (Afrika-) bolwurm bestandheid:
Weerstand van die Amerikaanse (Afrika-) bolwurm (Helicoverpa armigera) teen sinteriese piretroïede is bevestig.
Katoen: Sintetiese pirtroiedes moet slegs gedurende die periode 1 Januarie tot 28 Februarie op katoen toegedien word.
Alle ander gewasse: **Moet nie** meer as twee toedienings per groeiseisoen toedien nie.
As 'n piretroiedbespuiting swak beheer gee **moet nie** met enige sintetiese piretroied, selfs teen 'n korrektiewe dosis, herspuit **nie.** Gebruik 'n produk uit 'n ander chemiegroep.

GRONDTOEDIENING:
Wanneer 'n konvensionele hoe volume spuitapparaat en newelblaser gebruik word, gebruik holkeelspuitpunte wat 'n medium tot fyn druppelgrootte lewer. Die dpuitapparate moet akkuraat gekalibrer word en tydens toediening moet daar seker gemaak word van goeie bedecking van gewas en eweredige verspreiding van spuitmengsel.
Volume water wat in sagte vrugteboorde hektaar toegedien moet word:
Die volume water wat per hektaar in sagte vrugteboorde toegedien moet word, word volgens die Boomryvolume-formule soos deur Unrath beskryf, bereken:

Die formule is as volg:

$$\frac{\text{Boom hoogte x boom diameter x 937}}{\text{Ry wydte}} = \text{Volume water/ha wat toegedien moet word}$$

Die afmetings wat in die formule gebruik word, is die van die boom met volle blaarbedekking. Aangesien sagte vrugtebome nie altyd ten volle met blare bedek is nie, is die volume water wat per hektaar toegedien moet word tydens die vroee groeistadia van die bome, as volg:

Van groenpunt tot 30 % blom	- 60 % van die HV wat toegedien moet word
Van ca. volblom tot ca. November	- 80 % van die HV wat toegedien moet word
Van ca, begin December	- 100 % van die HV wat toegedien moet word

Wanneer plaagbeheermiddels as lae volume bespuiting toegedien word, moet die korrekte hoeveelheid plaagbeheermiddel, soos bereken vir hoe volume bespuitings, per hektaar toegedien word.

LUGTOEDIENING:
FARMAG FENVALERATE kan slegs deur 'n geregistreerde Lugbespuitingsperateur met 'n korrek gekalibreerde, geregistreerde vliegtuig volgens die instruksies van SANS 10118 (Aerial Application of Agricultural Pesticides) 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 volgende vereistes te voldoen:
- Volume: 'n Spuitmengsel volume van 30 liter 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.
- Druppel bedecking: 30 tot 40 druppels per cm^2 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 (hoe drywing en verdampingspotensiaal) tot 'n minimum.
- Vlieghoogte: Handhaaf die hoogte van die spuitbalk bo die teiken op 3 tot 4 meter. Moet nie spuit

wanner
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 spuistelsel moet 'n druppelspektrum met die kleinste montlike 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 droeboltermometer van 'n swaaihigrometer, moet nie 8ºC
oorskry nie.
- Stop besputing indien die windspoed 15km/uur oorskry.
- Stop besputing tydens turbulente, onstabiele en droe toestande gedurende die hitte van die dag.
- Bespuiting onder temperatuur inversie toestande (deur bo of binne die inversie lag te spuit) en/of hoe lugvog toestande (relatiewe humiditeit 80 % en meer) mag tot volgende problem aanleiding gee:
  - Verlaagde effektiwiteit aangesien die druppels as 'n wolk in due lug bly hand en moontlik verdamp (onvoldoende bedecking 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.
Die 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 toekomstig verwysings.

GEBRUIKSAANWYSINGS: Gebruik slegs soos aangedui

MENGINSTRUKSIES

Vul die spuittenk half met skoon water. Om 'n goeie mengsel te verkry, word aanbeveel om die verlangde hoeveelheid **FARMAG FENVALERATE** met 'n klein hoeveelheid water (een deel op vyf dele water) te meng voor dit by die water in die spuittenk gevoeg word. Begin die water in die spuittenk te roer en voeg die voorafgemengde mengsel by die water in die spuittenk. Vul spuittenk met skoon water tot die verlangde spuitvolume en hou vol om mengsel in spuittenk te roer totdat besputing voltooi is.

GEWAS/PLAAG	DOSIS / 100 L WATER OF SOOS AANGEDUI	OPMERKINGS
ALLE GEWASSE snywurms	0-20 % klei: 100 ml/ha >20 % klei: 125 ml/ha 0-20 % klei: 120 ml/ha >20 % klei: 140 ml/ha	Dien met plant as 'n voorkomende maatreel toe of na plant as 'n korrektiewe maatreel sodra plaag opgemerk word Dra sorg dat die boonste 3 cm van die grond klam is **Grondtoediening** Algehele bespuiting: dien in 300 l water per ha toe

		Lugtoediening Dien in 30 l water per ha toe
APPELS & PERE	Om die volume water waarin **FARMAG FENVALERATE** per ha toegedien moet word, te bepaal, lees '**GRONDTOEDIENING:** Volume water wat in sagte vrugteboorde per hektaar toegedien moet word'	
Kodlingmot	12 ml	Dien eertse bespuiting met 75 % blomblaarval toe en herhaal elke 14 dae. Sal ook Amerikaanse bolwurm en bladrollers beheer indien teenwoordig met bespuiting
Gebande vrugtekalander	10 ml 150 ml/ha 150 ml/ha	Dien twee tot drie voldekbespuitings toe: die eerste met 75 % bloomblaarval, die tweede vier weke later. Indien nodig kan 'n derde toediening teen middle Januarie gemaak word. Hierdie bespuiting sal ook Amerikaanse (Afrika-) bolwurm, kodlingmot bladrollers beheer indien teenwoordig met bespuiting Verken lande weekliks wanneer gewas blom deur 25 plante per ha te monster. Begin spuit wanner op 10 % van die plante 'n gemiddeld van 1 tot 2 larwes getel word. Verkennning na bespuiting en na reen is steeds nodig. Indien reen kort na bespuiting val, wag 3 dae, verken en spuit weer indien nodig **Grondtoediening** Lae volume: dien toe in 300 – 500 l water per ha **Lugtoediening** Dien toe in 30 l water per ha Lees '**Waarskuwing teen Amerikaanse (Amerika-) bolwurm bestandheid'** onder **'WEERSTANDWAARSKUWING'**
KATOEN	Lees **'Waarskuwing teen Amerikaanse (Afrika-) bolwurm bestandheid'** onder **'WEERSTANDWAARSKUWING'**. Om te voldoen aan die beginsels van plaagbestuur en geintegreerde beheermetodes word aanbeveel om **FARMAG FENVALERATE** gedurende die vrugvormingperiode, vanaf hoofblom tot bolbares te gebruik, d.w.s. vanaf ongeveer 10 tot 22 weke na opkom van die gewas. Die gebruik van **FARMAG FENVALERATE** is hoofsaaklik bedoel as 'n voorkomende beheermaatreel teen al die bolwurms gebaseer op gereelde weeklikse verkenning van landery of 'n gereelde spuitprogram met 7-dae tusseenposes. Gewoonlik neem 'n spuitprogram aanvang aan die begin van die blomstadium, d.w.s. omtrent 6 weke na opkom van die gewas. Van dan tot hoofblomperiode moet geregistreerde nie-piretroied middels gebruik word.	

<table>
<tr>
<td rowspan="4">Amerikaanse (Afrika-) rooi- en stekelbolwurms
Vlekbesies
Vals- (Plusia) lanmeter</td>
<td colspan="2">Weeks spuitprogram:
Voorkomende behandeling: Baseer toediening op verkenning van landerye. Verken 24 plante ewekansig in landerye tot 15 hektaar groot elke week vanaf blom tot bolbars. Dien FARMAG FENVALERATE toe wanneer ekonomiese drempel bereik of oorskry word en is vir Amerikaanse (Afrika-) bolwurm van 12 eiers of 5 larwes per 24 plante; vir rooibolwurm, ‘n gemiddeld van 6 eiers of 2 larwes per 24 plante en vir stekelbolwurm, wanneer gemiddeld 2 of meer larwes op 24 plante gedurenede verkenning gevind word. Vlekbesies en valslandmeter sal ook beheer word met bolwurmbespuitings</td>
</tr>
<tr>
<td>100 ml/ha
200 ml/ha</td>
<td>Grondtoediening
Plante korter as 60 cm: dien toe in 100 l water per ha
Plante hoer as 60 cm: dien toe in 200 l water per ha
Verseker deeglike bedekking met en binnedringing van spuitmengsel vir optimale resultate veral in hoe, diggroeiende plantpopulasies.</td>
</tr>
<tr>
<td>125 ml/ha
250 ml/ha</td>
<td>Lugtoediening
Plante korter as 60 cm: dien toe in 30 l water per ha
Plante hoer as 60 cm: dien toe in 30 l water per ha</td>
</tr>
<tr>
<td>1 ml/100 m ry
2 ml/ 100 m ry</td>
<td>Spoorlyn-(‘tramline’) toediening
Plante korter as 60 cm: dien toe in 1 l water per 100 m ry
Plante hoer as 60 cm: dien toe in 2 l water per 100 m ry</td>
</tr>
<tr>
<td>Amerikaanse (Afrika) en slegs stekelbolwurms</td>
<td colspan="2">Korrektiewe behandeling: Dien toe as ‘n korrektiewe bespuiting om ‘n gevestigde infestasie te kontroleer, bv. Wanneer meer as 6 bolwurms per 24 plante gevind word gedurende verkenning. Die sukses van ‘n behandeling kan verband hou met die toediening, digtheid van gewasblare, gewasstand en ontwikkeling stadiums van larwe. Laat tot en met 4 dae toe vir FARMAG FENVALERATE om tot sy volle effektiwiteit te bereik. Oorweeg ‘n korrektiewe toediening as ‘n noodmaatstaf en daarna moet die normale program hervat word ongeag van die gewasstadium.

Lugbespuiting
250 mℓ/ha Plante laer as 60 cm hoof: dien toe in 30 ℓwater per ha
500 mℓ/ha Plante hoër as cm: dien toe in 30 ℓ water per ha</td>
</tr>
<tr>
<td>GRAANSORGHUM
Amerikaanse (Afrika-) bolwurm</td>
<td>Aerial application
Plants less than 60 cm high: apply in 30 ℓwater per ha
Plants higher than 60 cm: apply in 30 ℓ water per ha</td>
<td>Verken lande vanaf aanverskyning met 7 dae tussenposes. Gebruik ‘n monstergrootte van 25 plante per 15 ha. Begin spuit wanner ‘n gemiddeld van 1 tot 2 larwes op 10 % van die are getel word. In die geval van kultivars met digte are is dit wenslik om te spuit voordat die are toemaak (voordat korrels heeltemal gevul is)
Lugtoediening
Die toe in 30 l water per ha
Lees ‘Waarskuwing teen Amerikaanse (Afrika-) bolwurm bestandheid’ onder ‘WEERSTANDWAARSKUWING’</td>
</tr>
</table>

DRUIWE **(tafel en wyn)** Kalanders (snuitkewers) (phlyctinus callosus & Eremnus cerealis)	15 ml	<u>Slegs</u> hoe volume besputing Dien toe met die eertse tekens van kalanderaktiwiteit verkieslik met hanstange. Verseker deeglike bedekking van blare sowel as stamme en die grond in direkte aanranking met die stamme. Ondersoek wingerede gereeld vir teenwoordigheig van kalanders. Herhaal bespuiting 3 tot 4 weke later
MIELIES Stronkboorder (Bussiola fusca)	4ml/ 100 m ry	**Voorkomende behandeling teen jong larwes**. Dien toe by kelkstadium wanneer haelskade op jong blare waargeneem word en voor larwes in stamme inbeweeg het of 7 tot 10 dae na eiers op 5% of meer plante gevind is. 'n Tweede toediening, 10 tot 15 dae later, mag nodig wees. Larwes wat reeds die stam binnegedring het of langer as mm is, sal nie beheer word nie. Dien slegs op aftief groeiende plante toe. Moet nie na die pluime begin vorm het, toedien nie **Grontoediening** Dien toe in 3l water per 100 m row
MANGO'S Mango snuitkewer	30 ml	Dien toe as 'n hoe volume voldekbespuiting tydens winter voor die bome blom. Herhaal wanneer die vrugte ongeveer 15mm in deursnee is LET WEL: Indien infestasie hoog is, sal volle beheer van plaag nie verkry nie
AARTAPPELS Aartappelmot	100 ml	Begin spuit sodra plante een maand oud is of vroeer indien infestasie vroeer voorkom. Herhaal toediening elke 14 dae. Plante moet minstens twee keer gedurende die groeiseisoen opge-erd word **Grondtoediening** Dien 250 tot 400 L spuitmengsel per ha toe afhangend van plantgrootte. Die dosis sal ook Amerikaanse (Afrika-) bolwurm en snywurm (in Wes-Kaap) beheer en plantluise onderdruk **Lugtoediening** Dien in minstens 30 L of water per ha toe. Dien dosis sal ook Amerikaanse (Afrika-) bolwurm beheer en plantluise onderuk
SONNEBLOMME Amerikaanse (Afrika-) bolwurm	150 ml/ha **of** 100 ml + 450 ml methomyl SL **of** 100 ml + 100 g Methomyl SP	**Lugtoediening** Dien in minstens 30 l water per ha toe. Begin spuit sodra eiers of larwes op plante waargeneem word. (ongeveer 6 weke na plant) Slegs effektief teen larwes op die blare en aan die buitekant van koppe. <u>Larwes wat reeds die kop of blomdele binnegedring het, sal nie beheer word nie</u>. **FARMAG FENVALERATE** en metomil is giftig vir bye en moet dus nie in die volblom stadium gespuit word nie

TAMATIES Amerikaanse (Afrika-) bolwurm	15 ml	Hoe volume toediening Dien tussen 1 000 en 4 000 l spuitmengsel per ha toe afhangende van plantgrootte en digheid. Begin spuit sodra eiers of larwes waargeneem word. Herhaal toediening met 7 tot 10 dae tussenposses. Lees **'Waarskuwing teen Amerikaanse (Afrika-) bolwurm bestandheid' onder 'WEERSTANDWAARSKUWING'**