

ACATHRIN EC

BEFORE USING THIS PRODUCT, READ THE LABEL CAREFULLY

GEBRUIKSAANWYSINGS INGESLUIT
VERWYS NA BESONDERHEDE
SOOS OP HOUER / SAK GEDRUK

DIRECTIONS FOR USE ENCLOSED
REFER TO DETAILS AS PRINTED
ON CONTAINER / BAG

ACATHRIN EC
INSECTICIDE


Reg. No. L7629, Act/Wet No. 36 of/van 1947
2: 08/10/2016

An emulsifiable concentrate insecticide with contact and stomach action, for control of the agricultural pests on the crops as listed.

'n Emulgeerbare konsentraat insekdoder met kontak- en maagaksie, vir die beheer van landbouplae op gewasse soos aangedui.

IRAC INSECTICIDE GROUP CODE	3A	IRAC INSEKDODERGROEPKODE
ACTIVE INGREDIENT / AKTIEWE BESTANDDEEL		
Fenpropathrin (pyrethroid)	200 g/ℓ	Fenpropatrien (piretroïed)

Registration Holder / Registrasiehouer
Meridian Agrochemical Company (Pty.) Ltd. / (Edms.) Bpk.
 Reg. No. 2000/010819/07
 P.O. Box / Posbus 436, Modderfontein, 1645, South Africa / Suid-Afrika

5ℓ

PRODUCT INFORMATION / PRODUKINLIGTING: TEL: 011 822 8509
IN CASE OF POISONING / IN GEVAL VAN VERGIFTIGING:
 Griffon Poison Centre: 082 446 8946



UN Number: 2903




TOXIC / GIFTIG





WARNINGS

Allow the following number of days between last treatment and grazing:

Cotton.....	28 days
Citrus.....	28 days

- Handle with extreme care.
- Poisonous by contact, inhalation or swallowing.
- Extremely toxic to fish, bees and wildlife.
- Store under lock and key in a cool place.
- **FLAMMABLE** – Do not store or open container near open flame.
- Store away from food, feed, fertilizer and other agricultural products.
- Keep out of reach of children, uninformed persons and animals.
- Do not use this product in any way contrary to the directions on this label.
- **Re-entry** – Do not enter a treated area within 2 days of application unless wearing protective clothing.
- **Acathrin EC** has been tested on the most important commercial cultivars without any phytotoxic effects. More susceptible cultivars may be released in future which need to be tested; for this apply **Acathrin EC** to a limited test area before commercial applications are made.
- In case of poisoning, call a doctor and show this label to him.
- **Aerial application:** notify all inhabitants of the immediate area to be sprayed and issue the necessary warnings. Do not spray over or allow drift to contaminate adjacent areas or water.

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

- Do not inhale fumes or spray mist.
- Avoid skin and eye contact by wearing full protective clothing when mixing and applying the product.
- Wash with soap and cold water immediately after use and accidental skin contact as well as contaminated clothing.
- Wash contaminated clothing immediately after use.
- All persons in direct contact with the product, including markers must wear protective clothing such as overall, rubber gloves and boots and a face shield.
- Do not eat, drink or smoke while mixing or applying the product or before washing hands and face.
- Avoid drift of spray onto other crops, grazing, rivers, dams and areas not under treatment.
- Clean applicator after use. Dispose of rinsate where it will not contaminate crops, grazing, rivers, dams and boreholes.
- Prevent contamination of food, feeds, drinking water and eating utensils.
- Invert the container over the spray tank and allow as much of the product to drain from the container. Thereafter, rinse the empty container three times with a volume of water equal to a minimum of 10% of that of the container. Add the rinsate to the contents of the spray tank before destroying the container.
- Destroy the empty container by perforation and flattening and do not use for any other purpose.

SYMPTOMS OF HUMAN POISONING

Hypersensitivity, tremors, muscular fibrillation, salivation, incoordination, incontinence of urine, and lacrimation, rapid and/or irregular respiration.

FIRST AID TREATMENT

Skin contact: Remove patient from source of poisoning and keep him quiet and reassured. Remove contaminated clothing as well as shoes and leather goods. Wash body with non-abrasive soap and lots of water. Persons providing first aid must wear gloves to avoid self-contamination. Seek medical advice if necessary.

Eye contact: Flush eyes immediately with large amounts of clean water for approximately 15 minutes. Occasionally lift the upper and lower lids. If eye irritation persists, get medical attention.

Inhalation: Remove patient to a well-ventilated area and loosen clothing around the neck. Perform artificial respiration and administer oxygen if necessary. Keep patient warm and calm. **Seek medical advice immediately.**

Ingestion: If spray mixture (diluted) has been swallowed, induce vomiting by tickling the back of the throat. Repeat this until vomit fluid is clear and free from smell of poison. Gastric lavage can also be applied. If product concentrate has been swallowed, **immediately take patient to the nearest doctor.** Do not induce vomiting. Get medical attention immediately. Administration of gastric lavage or oxygen should be performed by qualified medical personnel.

NOTE TO PHYSICIAN

Treat symptomatically and supportively. Keep patient under observation. Product contains a light aromatic solvent.

RESISTANCE WARNING

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

To delay insecticide resistance:

- Avoid exclusive repeated use of insecticides from the same insecticide group code. Alternate or tank mix with registered 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.

DIRECTIONS FOR USE

Use only as directed.

MIXING INSTRUCTIONS

The efficacy of **Acathrin EC** can be reduced by very hard water (> 1 000 ppm solutes) as well as by water with a high pH. To ensure optimum efficacy, **Acathrin EC** should be applied in water of pH 4.5 – 5.5. Where spray water is outside of this pH range, the water should be buffered to within the recommended pH range by use of a registered pH buffer. Where a pH buffering agent is used, this must be thoroughly mixed into the total spray water volume before the **Acathrin EC** is added.

Should be spray water pH be in the correct pH range, the following procedure may be followed: Half-fill the spray tank with suitable water. Shake the container thoroughly prior to use. Add the required quantity of **Acathrin EC** to the water. Fill the spray tank to the desired volume. **Tank mixtures must be sprayed out immediately and not allowed to stand in the spray tank overnight.** Spraying equipment must be thoroughly flushed out at the end of the spraying operation.

COMPATIBILITY

The compatibility of **Acathrin EC** with other products depends on the formulations of the respective products as well as the quality of the spray water to be used. As formulations change from time to time it is recommended that a physical compatibility test be done prior to the tank mixture being made. Do not make tank mixtures with other agricultural remedies or foliar feed products without first ensuring that no reduction in efficacy or crop damage will result. When mixing **Acathrin EC** with other products, follow all label instructions carefully.

APPLICATION METHODS

Ensure that the equipment is correctly calibrated and is checked regularly during application to ensure even and accurate application. **Constant agitation throughout the spray operation is essential.** Only clean water should be used.

GROUND APPLICATION

- **Acathrin EC** can be applied with conventional high volume spraying equipment fitted with hollow cone nozzles to give medium to fine droplets. Calibrate the apparatus prior to application to ensure that the correct dosage is applied. Ensure that the distribution of the spray is uniform throughout the target area.
- Spray volumes must be adapted according to the size, growing pattern and leaf density of the crop.
- Use an appropriate spray volume to ensure thorough coverage and wetting of all the plant parts. Monitor efficacy within 3 days and reapply if necessary.

AERIAL APPLICATION

Aerial application may only be done by a registered aerial application operator using a registered and correctly calibrated aircraft according to the instructions of SANS 10118 (Aerial Application of Agricultural Remedies). It is important to 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;

Equipment

- Use suitable atomising equipment (hydraulic nozzles or rotary atomisers) that will produce the desired droplet size and coverage of the target area and will ensure the minimum loss of product through drift.
- The operator must use a nozzle set-up that will produce a droplet spectrum with the lowest possible relative span.
- All nozzles and atomisers should be positioned within the inner 75% of the wingspan to prevent droplets from entering the wingtip vortices.

Application Parameters

- A minimum volume of 30 l spray mixture per ha is recommended.
- A droplet coverage of 30 – 40 droplets per sq. cm must be recovered at the target.
- A droplet spectrum with a VMD of 250 – 280 microns is recommended. Ensure that the production of fine droplets, with a VMD less than 150 microns, is restricted to a minimum.
- The height of the spray boom should be maintained at between 3 and 4 m above the target.
- Do not spray when the aircraft is in a climb, at the top of a turn or during a dive or when banking.
- Apply before the crop growth becomes too dense, which will interfere with overall plant coverage.

Meteorological Conditions

- The difference between the wet and dry bulb readings as determined by a whirling hygrometer, must not exceed 8 °C.
- Do not spray under turbulent, unstable conditions nor during the heat of the day when rising thermals and downdraughts occur.
- Do not spray under temperature inversion conditions (spraying in or above the inversion layer).
- Do not spray when the wind speed exceeds 15 km per hour.

General

- Ensure that fields are accurately marked and that the aerial spray operator knows exactly which fields to spray.
- Obtain an assurance from the aerial spray operator that the above requirements will be met.

USE RESTRICTIONS

- **Acathrin EC** is only to be used during the period from first flowering to start of boll burst (weeks 12 – 20 following crop emergence).
- Do not apply **Acathrin EC** to any crop or situation not mentioned in this instruction leaflet.
- Only apply **Acathrin EC** using an accurate and safe application technique.
- If **Acathrin EC** is used in a tank mix with other recommended products, consideration should be given to the restrictions of those respective products.
- Do not apply this product in combination or tank mixture with any other product or agricultural remedy which is not specifically listed on this label. Meridian Agrochemical Company (Pty) Ltd accepts no responsibility for any negative effects experienced if the instructions on this label are not adhered to, unless a Meridian representative was consulted beforehand.

RECOMMENDATIONS

CROP/PEST	APPLICATION RATE	REMARKS
Cotton Red spider mite (<i>Tetranychus urticae</i> and <i>T. lombardini</i>)	Ground application: 250 ml/100 ℓ water Aerial application: a) 250 ml/ha for plants smaller than 60 cm. b) 500 ml/ha for plants taller than 60 cm.	Applications should be based on scouting. Dosage rate depends on physical plant size. Apply in 100 ℓ spray mixture/ha for plants smaller than 60 cm. Apply in 200 ℓ spray mixture/ha for plants taller than 60 cm. Apply in 30 – 50 litres spray mixture/ha. Repeat application when necessary. Use the lower dosage rate for cotton smaller than 60 cm in height and the higher dosage rate for cotton taller than 60 cm in height. Higher rate will also suppress American bollworm.
Roses Red spider mite (<i>Tetranychus urticae</i> and <i>T. lombardini</i>)	High volume application: Apply 100 ml /100 ℓ water	High volume application: Apply as a high volume application as soon as infestation is noticed. Spray to the point of run-off in order to obtain adequate coverage. Repeat application as necessary.
Citrus Thrips	30 – 50 ml / 100 ℓ water	Apply at 90 – 100 % petal fall as a single, medium cover spray to wet the foliage canopy to the point of run-off. The dosage of Acathrin EC is dependent upon the severity of the anticipated Thrip infestation. Use the higher dosage rate when a severe infestation is expected. The expected severity of an infestation can be assessed either by the use of fluorescent yellow traps or by the level of Thrip activity on out-of-season fruit and growth flush. Trees must be kept under observation. If a thrips re-infestation occurs, the application of a registered thripicide is recommended. This treatment should suppress Psylla and should control the following pests if present at the time of the application: African (American) Bollworm, Red spider mite, Red mite, Lowveld mite as well as Bud mite. Subsequent build-up of numbers of the above mentioned mite species should be suppressed. NOTE: Apply Acathrin EC only to orchards in which red scale is already under commercial control, and such control is being maintained with one or more preventative spray treatments i.e., treatments applied before the scale reach the new crop. Do not apply if the previous season's crop is still on the trees.
False codling moth larvae	30 ml / 100 ℓ water	Apply as a medium cover spray 4 – 5 weeks prior to the intended date of harvest. If the application is done earlier, or the fruit are not thoroughly wetted, fruit drop and / or damage to the fruit may occur shortly before harvest.

This application should also control citrus red mite, red spider mite, Lowveld mite and bud mite if present at the time of the application.

NOTE:

This application should only be done on orchards in which red scale is already under commercial control at the intended time of the application. In these orchards, it is recommended that a preventative spray programme for the control red scale (e.g. **PYRILATE EC L 7570**) and mealybug be implemented in the following season.

Do not apply Acathrin EC in orchards where red scale is not under commercial control at the intended time of the application.

Remarks

- **Acathrin EC** is a contact miticide/insecticide and therefore direct contact with the pest/s is essential. To ensure acceptable control, adequate coverage of entire plants and especially under leaf surfaces is essential.

Optimum control will be achieved when **Acathrin EC** is used in a preventative spraying programme starting at flowering peak, based on weekly scouting.

SCOUTING FOR RED SPIDER MITES IN COTTON

Inspect 48 cotton plants randomly in fields of up to 15 ha in size every week from the third week after crop emergence until first boll split ($\pm$ week 20). From each plant, sample 2 leaves from the top and 1 leaf from the middle and record the total number of female mites found on the sample leaves.

Determine the red spider mite population index per plant as follows:

Total number of female mites/3 leaves/plant	Red spider mite population index
0	0
1 – 10	1
11 – 30	2
Over 30	3

Calculate the average over the 48 samples to determine the infestation level across the field.

Economic Threshold Levels

Weeks after crop emergence	3 – 10	12	14	16	18	20
Red Spider Mite population index	0,5	0,8	1,1	1,4	1,7	2,0

WEEKS 8 – 12 following crop emergence (first buds to flowering):

Use any other selective or non-organophosphorous/non-pyrethroid miticide remedy.

Apply 'spot' applications where necessary, but do not apply a full cover spray until the population index reaches 0.5 according to the above scale.

WEEKS 12 – 20 following crop emergence (first flowering to start of boll burst):

Apply when a population increase is noticed from one week to the next, but when the population is still below the economic threshold level for a particular crop growth stage as determined by weekly scouting.

Spray with the aim of keeping the population index below 2, up to and including the boll burst stage (or $\pm$ 20 weeks after crop emergence if boll burst occurs earlier).

ACKNOWLEDGEMENT OF TRADEMARKS

Pyrilate EC

(L 7570)

Meridian Agrochemical Company (Pty) Ltd

WAARSKUWINGS

Laat die volgende aantal dae toe tussen laaste toediening en beweiding:

Katoen.....28 dae
Sitrus.....28 dae

- Hanteer uiters versigtig.
- Giftig wanneer die produk ingesluk, ingeasem of deur die vel opgeneem word.
- Uitsers giftig vir visse, bye en wildlewe.
- Berg agter slot-en-grendel in 'n koel plek.
- **VLAMBAAR** – Moenie naby oop vlamme stoor, of produk daarnaas oopmaak nie.
- Bêre weg van voedsel, voer, kunsmis en ander landbouprodukte.
- Hou buite bereik van kinders, oningeligte persone en diere.
- Moet nie produk op enige manier anders gebruik as wat die aanwysings op die etiket aandui nie.
- **Herbetreding** – moet nie die behandelde gebied binne 2 dae na bespuiting betree nie, tensy beskermende oorklere gedra word nie.
- **Acathrin EC** is sonder enige fitotoksiseitskade op die mees belangrikste kommersiële kultivars getoets. Meer vatbare kultivars mag in die toekoms vrygestel word wat eers getoets moet word; hiervoor moet **Acathrin EC** eers op 'n klein toetsoppervlakte aangewend word, alvorens groot kommersiële bespuitings gemaak word.
- In die geval van vergiftiging, ontbied 'n geneesheer en toon hierdie etiket aan hom/haar.
- **Lugtoediening:** Stel al die inwoners in die onmiddellike omgewing van die gebied wat gespuit gaan word in kennis en reik die nodige waarskuwings uit. Moet nie oor wateroppervlaktes spuit nie en tref voorsorg dat die spuitnewel nie water of aangrensende gebiede besoedel nie.

Alhoewel hierdie middel omvattend onder 'n groot verskeidenheid toestande getoets is, waarborg die registrasiehouer nie dat dit onder alle toestande doeltreffend sal wees nie. Die werking en doeltreffendheid daarvan kan beïnvloed word deur faktore soos abnormale grond-, klimaats- en bergingstoestande; kwaliteit van verdunningswater, verenigbaarheid met ander stowwe wat nie op die etiket aangedui word nie en die voorkoms van weerstand van die plaë teen die betrokke middel, sowel as die metode, tyd en akkuraatheid van die toediening. Verder aanvaar die registrasiehouer nie verantwoordelikheid vir skade aan gewasse, plantegroei, die omgewing of vir nadelige invloede op mens of dier of vir 'n gebrek aan prestasie van die betrokke middel as gevolg van die versuim van die gebruiker om 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 die geval van enige onsekerheid.

VOORSORGMAATREËLS

- Moet nie damp of spuitnewel inasem nie.
- Vermyn kontak met die vel en oë deur beskermende oorklere te dra wanneer die produk gemeng word en gedurende toediening.
- Was met seep en koue water onmiddellik na gebruik en toevallige velkontak; so ook die besoedelde klere.
- Was besoedelde klere onmiddellik na gebruik.
- Alle persone wat in direkte kontak met die middel kom, ook die merkers, moet beskermende oorklere soos oorpakke, rubberstewels, handskoene en 'n gesigskerm dra.
- Moet nie eet, drink of rook tydens vermenging of toediening van die produk of voordat hande en gesig gewas is nie.
- Vermyn wegdrywing van spuitnewel na ander gewasse, weiding, riviëre, damme en plekke wat nie behandel moet word nie.
- Maak toedieningsapparaat skoon na gebruik. Uitspoelwater moet nie gewasse, weiding, riviëre, damme en boorgate besoedel nie.
- Voorkom die besoedeling van voedsel, voer, drinkwater en eetgerei.
- Keer die leë houer om oor die spuittenk of mengbak en laat toe dat so veel moontlik van die produk uitloop. Spoel daarna die leë houer **drie keer** uit met 'n volume water gelyk aan 'n minimum van 10 % van die houer. Voeg spoelwater by die inhoud van die spuittenk voor die houer vernietig word.
- Vernietig die leë houer en moet vir geen ander doel gebruik nie.

SIMPTOME VAN MENSLIKE VERGIFTING

Hipersensitiwiteit, bewing, spiersametrekking, speekselafskieding, gebrek aan koördinasie, onbeheersde urinering, traanafskieding, vinnige en/of onegalige asemhaling.

NOODHULPBEHANDELING

Velkontak: Verwyder persoon van die bron van vergiftiging, stel hom gerus en hou hom stil. Verwyder besoedelde klere, sowel as skoene en leergoedere. Was die hele lyf met 'n sagte seep en baie water. Moenie 'n skuurmiddel gebruik nie. Persone wat noodhulp toedien, moet handskoene dra om self-kontaminasie te voorkom. Verkry mediese advies indien benodig.

Oogkontak: Was oë onmiddellik uit met groot hoeveelhede skoon water vir ongeveer 15 minute. Lig die onderste en boonste ooglede gedurig. Indien oogirritasie aanhou, verkry mediese hulp.

Inaseming: Verwyder die persoon van die bron van vergiftiging na 'n goed geventileerde area en maak klere om die nek los. Pas kunsmatige asemhaling toe en dien suurstof toe indien nodig. Hou pasiënt warm en rustig. **Ontbied onmiddellik mediese hulp indien nodig.**

Mondelike inname: Indien spuitmengsel (verdunde vorm) ingesluk is, induseer braking deur die agterste gedeelte van die keel met u vinger te prikkel. Herhaal totdat braaksel helder is en nie na gif ruik nie. Ontbied onmiddellik mediese hulp indien nodig. Indien konsentraat ingesluk is, **neem pasiënt onmiddellik na u naaste geneesheer.** Moet nie braking induseer nie. Toediening van maagspoeling of suurstof moet net deur opgeleide mediese personeel toegedien word.

NOTA AAN GENEESHEER

Behandel simptome en ondersteunend. Hou pasiënt onder observasie. Produk bevat 'n ligte aromatiese oplosmiddel.

WEERSTANDSWAARSKUWING

Vir weerstandsbestuur is **Acathrin EC** 'n groepkode 3A insekdoder. Enige populasie van 'n spesifieke insek mag individue insluit wat 'n natuurlike weerstand teen **Acathrin EC**, of enige ander groepkode 3A insekdoder het. Indien hierdie insekdoders herhaaldelik aangewend word, kan die weerstandbiedende individue uiteindelik die insekpopulasie oorheers. Hierdie weerstandbiedende insekte sal waarskynlik nie deur **Acathrin EC** of enige ander groepkode 3A insekdoder beheer word nie.

Om weerstand teen insekdoders te vertraag:

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

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

GEBRUIKSAANWYSINGS

Gebruik slegs soos aangedui.

MENGINSTRUKSIES

Die effektiwiteit van **Acathrin EC** kan geaffekteer word deur brak spuitwater (> 1 000 dpm oplosbare sout) sowel as water met 'n hoë pH-waarde. Om optimale effektiwiteit van **Acathrin EC** te verseker, moet dit in water met 'n pH van 4,5 – 5,5 toegedien word. Spuitwater buite hierdie pH-band moet met 'n geregistreerde pH-buffer tot binne die aanbevole pH-waardes gebuffer word. Wanneer 'n pH-buffer gebruik word, moet dit deeglik met die totale spuitmengsel gemeng word, voordat **Acathrin EC** bygevoeg word.

Indien die spuitwater se pH korrek is, moet die volgende prosedure gevolg word: Maak die spuittenk halfvol met geskikte water. Skud die houer goed voor gebruik. Voeg die benodigde hoeveelheid **Acathrin EC** by die water. Maak die spuittenk tot die verlangde volume vol. **Die tenkmengsel moet onmiddellik uitgespuit word en nie toegelaat word om oornag in die spuittenk te staan nie.** Die spuittoerusting moet aan die einde van toediening deeglik uitgewas word.

VERENIGBAARHEID

Die verenigbaarheid van **Acathrin EC** met ander produkte hang van die formulerings van die betrokke produkte af, asook van die kwaliteit van die spuitwater. Aangesien formulerings van tyd tot tyd kan verander, word dit aanbeveel om 'n fisiese verenigbaarheidstoets te doen alvorens 'n tenkmengsel gemaak word. Moet nie tenkmengsels met ander landboubeheermiddels of blaarvoedingsprodukte maak, voordat seker gemaak is dat effektiwiteit van produk nie sal verlaag, of gewasskade sal voorkom nie. Indien **Acathrin EC** met ander produkte gemeng word, moet die betrokke vervaardiger se etiket deeglik gevolg word.

TOEDIENINGSMETODES

Maak seker dat die spuittoerusting korrek gekalibreer is en gereeld tydens toediening nagegaan word om egalige en akkurate toediening te verseker. **Die mengsel moet aanhoudend en deeglik geroer word tydens toediening.** Gebruik slegs skoon water vir toediening.

GRONDTOEDIENING

- **Acathrin EC** kan met konvensionele hoë-volume spuittoerusting, wat met holkeëlsputpunte toegerus is en wat medium tot fyn druppels lewer, toegedien word. Kalibreer die apparaat voor toediening om te verseker dat die regte dosis gelewer word. Versprei die spuitmengsel egalig oor die teikengebied.
- Die spuitvolumes moet aangepas word volgens die grootte, groeipatroon en blaardigtheid van die gewas. Spuit die geskikte spuitvolume om deeglike bedekking en benatting van alle plantdele te verseker. Effektiwiteit moet binne 3 dae bepaal word en indien nodig moet 'n herbespuiting gedoen word.

LUGTOEDIENING

Lugtoediening mag slegs deur 'n geregistreerde lugbespuitingsoperateur met 'n geregistreerde en korrek gekalibreerde vliegtuig volgens die instruksies van SANS 10118 (Aerial Application of Agricultural Remedies) gedoen word. Dit is belangrik om te verseker dat die spuitmengsel eweredig oor die teikenarea versprei word en dat die verlies van spuitmengsel tydens toediening tot 'n minimum beperk word. Die volgende kriteria moet nagekom word:

Toerusting

- Gebruik geskikte atomiseringsapparaat (hidroliese of roterende spuitkoppe) wat die vereiste druppelgrootte en bedekking van die teiken sal produseer, maar wat die minste verlies van produk deur wegdrywing sal verseker.
- Die operateur moet 'n spuitstelsel gebruik wat 'n druppelspektrum met die kleinste moontlike relatiewe span sal produseer.
- Al die spuitkoppe en atomiseerders moet in die binneste 75% van die vlerkspan geplaas word om die beweging van druppels binne-in die vlerkpuntvorteks te beperk.

Toedieningsvereistes

- 'n Minimum volume van 30 l spuitmengsel per ha word aanbeveel.
- 'n Druppelbedekking van 30 - 40 druppels per vk cm moet op die teikenarea herwin word.
- 'n Druppelspektrum met 'n VMD van 250 - 280 mikron word aanbeveel. Verseker dat die produksie van fyn druppels, die wat kleiner as 150 mikron is, tot 'n minimum beperk word.
- Die hoogte van die spuitbalk moet tussen 3 en 4 m bokant die teiken gehandhaaf word.
- Moet nie spuit wanneer die vliegtuig aan die bopunt van 'n draai is of tydens 'n duik of terwyl dit uitklim of draai nie.
- Dien toe voordat die gewas te ruig word aangesien die druppelbedekking op die plante verminder sal word.

Meteorologiese Toestande

- Die verskil tussen die nat- en droëbollesing, soos met 'n swaaihygrometer bepaal, moet nie 8 °C oorskry nie.
- Moenie tydens turbulente en onstabiele weerstoestande toedien, of gedurende die hitte van die dag wanneer stygende en dalende konveksie-windbeweging plaasvind nie.
- Moenie onder temperatuurinversie-toestande (deur bokant of binne-in die inversielaag te spuit) toedien nie.
- Moenie spuit indien die windspoed 15 km per uur oorskry nie.

Algemeen

- Sorg dat die lande akkuraat gemerk is en dat die spuitoperator presies weet watter lande gespuit moet word.
- Verkry 'n versekering van die spuitoperator dat aan die bogenoemde vereistes voldoen sal word.

GEBRUIKSBEPERKINGS

- Vir gebruik in katoen, word **Acathrin EC** slegs aanbeveel vir toediening tussen die tydperk van eerste blom tot die begin van die bolbarsstadium (week 12 – 20 na gewasopkoms).
- Moenie **Acathrin EC** op enige gewas of situasie toedien wat nie op hierdie etiket verskyn nie.
- Dien **Acathrin EC** slegs met akkurate en veilige toedieningsmetodes toe.
- Indien **Acathrin EC** in 'n tenkmengsel met ander aanbevole produkte gemeng word, moet oorweging geskenk word aan die beperkings van daardie betrokke produkte.
- Moet nie hierdie produk toedien of gebruik in kombinasie of tenkmengsel saam met enige ander produk of landboumiddel, wat nie spesifiek op hierdie etiket gelys is nie. Meridian Agrochemical Company (Edms.) Bpk. aanvaar geen verantwoordelikheid vir enige negatiewe gevolge ervaar indien die instruksies op die etiket nie nagekom word nie, tensy 'n Meridian verteenwoordiger vooraf geraadpleeg is.

AANBEVELINGS

GEWAS/PLAAG	DOSIS	OPMERKINGS
Katoen Rooispinmyte (<i>Tetranychus urticae</i> en <i>T. lombardini</i>)	Grondtoediening: 250 ml / 100 l water Lugtoediening: a) 250 ml / ha vir plante kleiner as 60 cm. b) 500 ml / ha vir plante groter as 60 cm.	Toedienings gebaseer op verkenning. Dosis hang van fisiese plantgrootte af. Dien toe in 100 l spuitmengsel/ha op plante kleiner as 60 cm. Dien toe in 200 l spuitmengsel/ha op plante groter as 60 cm. Dien toe in 30 – 50 liter spuitmengsel/ha. Herhaal toediening wanneer nodig. Gebruik die laer dosis op plante kleiner as 60 cm in hoogte en die hoër dosis op plante groter as 60 cm in hoogte. Die hoër dosis sal ook Amerikaanse bolwurm onderdruk.
Rose Rooispinmyte (<i>Tetranychus urticae</i> en <i>T. lombardini</i>)	Hoë-volume bespuiting: Dien 100 ml / 100 l water toe.	Hoë-volume bespuiting: Dien toe in 'n hoë-volume sodra plaag gesien word. Spuit tot die punt van afloop om goeie bedekking te kry. Herhaal indien nodig.
Sitrus Blaaspootjies	30 – 50 ml / 100 l water	Dien toe by 90 - 100% blomblaarval as 'n enkele, medium dekbespuiting om die blaredak tot by die punt van afloop te benat. Die dosis Acathrin EC sal afhang van die ernstigheid van die verwagte Blaaspootjie-besmetting. Gebruik die hoër dosis wanneer 'n ernstige infeksie verwag word. Die verwagte ernstigheid van 'n besmetting kan beoordeel word, óf deur van fluoriserende geel lokvalle gebruik te maak, of deur die vlak van Blaaspootjie aktiwiteit op buite-seisoen vrugte en op die nuwe groei. Bome moet onder observasie gehou word. As 'n blaaspootjie herbesmetting voorkom, word die toediening van 'n geregistreerde blaaspootjiedoder aanbeveel. Hierdie behandeling behoort Silla te onderdruk en behoort die volgende peste, indien teenwoordig ten tye van die toediening, te beheer: Afrika (Amerikaanse) Bolwurm, Rooispinmyt, Rooimyt, Laeveldmyt asook Knopmyt. Daaropvolgende opbou van getalle van die bogenoemde mytspesies behoort onderdruk te word. NOTA: Dien Acathrin EC slegs op boorde waar rooidopluis reeds onder kommersiële beheer is toe, en sodanig volgehou word, deur van een of meer voorkomende bespuitings gebruik te maak, m.a.w. voor die rooidopluis die nuwe vrugte bereik. Moet nie toedien indien die vorige seisoen se vrugte nog aan die bome sit nie.

Vals kodlingmotlarwe	30 ml / 100 l water	Dien toe as 'n medium dekbespuiting 4-5 weke voor die beoogde datum van die oes. As die toediening vroeër gedoen word, of die vrugte word nie deeglik benat nie, kan vrugval en/of skade aan die vrugte kort voor oes plaasvind. Hierdie toediening behoort ook die volgende te beheer: Sitrusrooimyt, Rooispinmyt, Laeveldmyt en Knopmyt indien teenwoordig ten tye van die toediening. NOTA: Hierdie toediening moet slegs gedoen word op boorde waar rooidopluis alreeds onder kommersiële beheer met die beoogde tyd van die toediening is. In hierdie boorde word dit aanbeveel dat 'n voorkomende spuitprogram vir die beheer van rooidopluis (bv. Pyralate EC L 7570) en witluis in die daaropvolgende seisoen gevolg word. Moet nie Acathrin EC toedien in boorde waar rooidopluis nie onder kommersiële beheer by die beoogde tyd van die toediening is nie.
-------------------------	---------------------	---

Opmerkings

- **Acathrin EC** is 'n kontakmytdoder/insekdoder en dus is direkte kontak met die plaë noodsaaklik. Om aanvaarbare plaagbeheer te verseker is deeglike plantbedekking, veral aan die onderkant van die blare, noodsaaklik.

Optimale plaagbeheer word verkry wanneer **Acathrin EC** in 'n voorkomende spuitprogram gebruik word, met begin by blompeikstadium, gebaseer op gereelde weeklikse verkenning.

VERKENNINGSMETODES VIR ROOISPINMYT IN KATOEN

48 katoenplante moet ewekansig in lande tot 15 ha groot vanaf drie weke na gewasopkoms tot bolbars (± week 20) weekliks verken word. Van elke plant moet 2 blaarmonsters van die boonste gedeelte en 1 blaarmonster van die middelste deel van die plant geneem word en die aantal volwasse wyfiespinmyte aangeteken word wat op die blaarmonsters getel word.

Bepaal die spinmytpopulasie-indeks per plant soos volg:

Totale aantal wyfiemyte/3 blare/plant	Rooispinmytpopulasie-indeks
0	0
1 – 10	1
11 – 30	2
Bokant 30	3

Bereken die gemiddelde indekswaarde van die 48 monsters om die infestasiëvlak op die lande te kry.

Ekonomiese Drumpelwaardes

Weke na gewasopkoms	3 – 10	12	14	16	18	20
Rooispinmytpopulasie-indeks	0,5	0,8	1,1	1,4	1,7	2,0

WEKE 8 – 12 na gewasopkoms (eerste bot tot blom):

Gebruik enige ander geregistreerde selektiewe of nie-organofosfaat/nie-piretroïed mytdoder.

Voer “kolbespuitings” uit waar nodig, maar moet nie 'n algehele bespuiting uitvoer voordat die bevolkingsindeks 0,5 volgens die bostaande tabel, bereik is nie.

WEKE 12 – 20 na gewasopkoms (eerste blomtyd tot begin van bolbarsstadium):

Dien toe wanneer daar 'n styging, van een week na die volgende, in die populasie-indekswaarde verkry word, maar wanneer die populasie-indeks nogsteeds onder die ekonomiese drumpelwaarde is.

Beheer moet gerig wees om die populasie-indekswaarde onder 2 te hou tot en met bolbarsstadium (omtrent 20 weke na gewasopkoms as bolbars vroeër plaasvind).

ERKENNING VAN HANDELSMERKE

Pyralate EC (L 7570)

Meridian Agrochemical Company (Edms.) Bpk.