

BEFORE USING THIS PRODUCT READ THE LABEL CAREFULLY!

Insecticide



# HOCKEY 100 EW

Reg. No. L 9123 Act/Wet No. 36 of/van 1947

1: 26/2/2013 – June2017

*An emulsion oil in water Nematicide for the control of pests on agricultural crops as indicated.*

*'n Emulsie olie in water Aalwurmdoder vir die beheer van plae op landbougewasse soos aangedui.*

### ACTIVE INGREDIENT / AKTIEWE BESTANDDEEL

cadusafos (organophosphate) **100 g/l** kadusafos (organofosfaat)

IRAC INSECTICIDE GROUP CODE **1B** IRAC INSEKODER GROEPKODE



**villa**

Registration holder / Registrasiehouer:  
Universal Crop Protection (Pty) Ltd.  
Co. Reg. No. / Mpy. Reg. Nr. 1983/008184/07  
PO Box / Posbus 801, Kempton Park, 1620  
Tel: 011 396 2233  
Website / Webblad: [www.villacrop.co.za](http://www.villacrop.co.za)

UN Number: 3017



TOXIC /  
GIFTIG

Willow Set & Print 011 394-4486

GEBRUIKSAANWYSYNGS INGESLUIT

VERWYS NA BESONDERHEDE  
GEDRUK OP HOUER/SAK

Date formulated:

Formuleringsdatum:

DIRECTIONS FOR USE ENCLOSED

REFER TO DETAILS PRINTED  
ON CONTAINER/BAG

Batch number:

Lotnommer:



**HOCKEY 100 EW**

Reg. No. L 9123 Act/Wet No. 36 of/van 1947

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**UNIVERSAL CROP PROTECTION (PTY) LTD.**

Co. Reg. No. 1983/008184/07 Mpy. Reg. Nr.

P.O. Box / Posbus 801, KEMPTON PARK, 1620 Tel. (011) 396 2233

**TOXIC****GIFTIG****WARNINGS****Withholding periods:**

Minimum time between last application and harvest or feeding:	
Potatoes	56 days

**NOTE**

**THE MAXIMUM RESIDUE LEVELS (MRL'S) WILL NOT BE EXCEEDED PROVIDED APPLICATIONS ARE APPLIED AS PRESCRIBED. WHEN PRODUCTION IS DESTINED FOR THE EXPORT MARKET, THE EXPORT AGENCY OF CONCERN MUST BE CONTACTED, PRIOR TO THE USE OF HOCKEY 100 EW IN A SPRAY PROGRAMME.**

- Handle with extreme care.
- Very toxic by inhalation, in contact with skin and if swallowed.
- May irritate eyes.
- **Flammable.**
- Very toxic to fish, other aquatic organisms, bees and wildlife.
- Inform staff (labourers, women and children) of the potential danger of **HOCKEY 100 EW** when applied through the micro irrigation system and give full instructions on what to do in case of poisoning. It is advisable to mark treated areas with appropriate danger signs.
- Store under lock and key in cool, dry and well-ventilated place.
- Store away from food, feeds, seed, fertilizers and other agricultural remedies.
- Keep out of reach of children, uninformed persons and animals.
- Re-entry: Do not enter treated area within 2 days after treatment unless wearing protective clothing.
- **In case of poisoning immediately call a doctor and make this label available to him/her.**
- **THE CONTINUOUS USE OF HOCKEY 100 EW IN CERTAIN SOILS MAY RESULT IN AN INCREASE IN THE RATE OF BIO-DEGRADATION OF HOCKEY 100 EW AND THUS REDUCED EFFICACY.**

**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, compatibility with other substances not indicated on the label and the occurrence of resistance of the pests to the remedy concerned, as well as by the method, time and accuracy of application. The registration holder further 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**

- Do not inhale the spray mist or fumes.
- Avoid contact with skin and eyes.
- Wear full protective clothing, suitable respirator, rubber gloves and boots when handling the product, preparing the spray mixture and during application.
- Wash with soap and water after use and after accidental skin contact.
- Wash contaminated clothing after use.

- Do not eat, drink or smoke whilst mixing or applying the product, or before washing hands and face and change of clothing.
- Prevent drift of spray mist onto other crops, grazing, rivers, dams or areas not under treatment or to nearby water sources.
- Do not apply when bees are very active on the crops.
- Thoroughly clean the spraying equipment directly after use and dispose of wash water where it will not contaminate food, grazing, boreholes, rivers or dams.
- **TRIPLE RINSE** empty containers in the following manner: Invert the empty container over the spray or mixing tank and allow draining for at least 30 seconds after the flow has slowed down to a drip. Thereafter, rinse the container three times with a volume of water equal to a minimum of a third of that of the container. Add the rinsing to the contents of the spray tank before destroying the container in the prescribed manner.
- Destroy the empty container by perforation and flattening and dispose of it in a safe way.
- **Never** re-use the empty container for any other purpose.
- Prevent contamination of food, feed, drinking water and eating utensils.
- Don't apply through the overhead, sprinkler or centre pivot irrigation system. Refer to the "**DIRECTIONS FOR USE**" and specific "**CROP INFORMATION**".

### **SYMPTOMS OF POISONING**

Symptoms of **Cadusafos** (a choline-esterase inhibitor) intoxication can include headache, fatigue, faintness, giddiness, excessive sweating, nausea, abdominal pains, vomiting and diarrhoea, tightness of chest, anxiety, blurred vision, muscle twitching, respiratory distress and coma.

### **FIRST AID TREATMENT**

- If poisoning is suspected: Remove the patient from the source of poisoning to a well-ventilated area and keep him/her calm and at rest. Immediately call a physician.
- Skin contact: Remove contaminated clothing and wash the contaminated areas with plenty of soap and cold water for at least 15 to 20 minutes. Do not rub the skin.
- Eye contact: Immediately flush contaminated eyes with plenty of clean cold water, while occasionally lifting upper and lower lids. Obtain medical advice if irritation persists.
- Inhalation: Administer artificial respiration and oxygen, if necessary. Do not apply direct mouth-to-mouth respiration.
- Ingestion: Have the victim rinse mouth thoroughly with clean water. **Do not induce vomiting, due to the aromatic solvent.** Obtain medical advice immediately. If the person is conscious, give large quantities of water to drink. Never give anything by mouth to an unconscious person. Treat respiratory difficulty with artificial respiration and oxygen. Qualified medical personnel must perform administration of oxygen and lavage.
- **TAKE THE PATIENT TO THE NEAREST PHYSICIAN IMMEDIATELY.**

### **NOTE TO PHYSICIAN**

This product contains **Cadusafos**, an organophosphate insecticide.

Although atropine and 2-PAM are antidotal for most organophosphate insecticides, it may provide only slight therapeutic benefit in cases of **Cadusafos** poisoning. An aqueous suspension of activated charcoal can be administered to absorb remaining toxicant. Morphine, phenothiazines, reserpine, theophylline and similar drugs are contra-indicated and not to be used. Avoid aminoglycosides and succinylcholine, which have a blocking effect on the neuromuscular junction.

### **RESISTANCE WARNING**

**HOCKEY 100 EW** is a group code 1B insecticide/nematicide. Any Nematode population may contain individuals naturally resistant to **HOCKEY 100 EW** and other group code 1B insecticides. The resistant individuals can eventually dominate the Nematode population if these insecticides are used repeatedly. These resistant Nematodes may not be controlled by **HOCKEY 100 EW** or any other group code 1B insecticide.

To delay nematicide resistance:

- avoid exclusive repeated use of nematicides 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 Nematode control programmes.

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

## USE RESTRICTIONS

### 1. General use restrictions and information:

- **HOCKEY 100 EW** acts by contact action only and will therefore only control the mobile stages of Nematodes while they are active in the soil. Eggs in the soil and larvae that have already penetrated the roots are not controlled. Correct application and incorporation will provide a barrier layer in the soil and protect tubers and roots within that zone. It is therefore important to obtain correct placement and even distribution of the product in the target zone.
- Sufficient soil moisture must be present at application to activate the product followed by irrigation/rainfall thereafter ( $\pm 20$  to 35 mm). Moisture stress conditions will adversely affect efficacy and root development.
- **Various factors outside the registration holder's control can adversely affect the performance of HOCKEY 100 EW.** Some of these factors include: mono-cropping or a history of Nematode susceptible crops on the field, high Nematode populations, soil type e.g. very sandy soils, soils with a known history of accelerated microbial degradation, sub-optimal or excessive irrigation/rainfall, etc. Where such factors occur, **substantial Nematode damage must be expected.** In the case of **seed and chipping potatoes** that needs to be free from any Nematode damage, do not use **HOCKEY 100 EW** should any such factors be suspected.

### 2. Degradation in soil:

Do not apply the same product/group of compounds repeatedly over the long term to minimize accelerated microbial degradation of the product in the soil.

### 3. Soil condition:

- Do not use in soils with less than 10 % clay.
- Soil pH - do not use in soils with a pH >9.

### 4. Pome fruit:

Prevent contact between the spray mixture and fruit or foliage during application, as this may cause severe scorching and chlorosis.

### 5. Potatoes:

- Crops planted and growing in hot conditions (summer plantings, high temperatures) on very sandy soils, under centre pivot irrigation, in areas with a history of nematode infestations and variable performance of Nematicides and source of irrigation water, are significantly more at risk of high levels of damage.
- In conditions such as the above and specifically for plantings in the Northern Cape and North West Province – Prieska, Hopetown, Douglas, P.K. Le Roux dam irrigation areas, Vaalharts irrigation area, Barkly West, Christiana, Louwna, Vryburg, Coetzersdam and Tosca, the soil **must be fumigated** prior to applying **HOCKEY 100 EW**. Apply the highest rate in areas and under the conditions mentioned above.
- Irrigation alone is insufficient for the incorporation of **HOCKEY 100 EW** to the recommended depth.

## CROP INFORMATION

### 1. Potatoes:

- Always plant certified Nematode-free seed.
- Sufficient soil moisture is essential to activate the product. Moisture levels close to field capacity are therefore needed when **HOCKEY 100 EW** is applied and incorporated.
- Ensure thorough incorporation by mechanical means with an off-set tandem disc or rotorvator operating at a maximum speed of 8 km per hour to a depth of at least 15 cm – the ideal depth is between 15 and 25 cm.
- There must always be a treated layer of soil below the planting depth, to ensure protection of the roots and tubers.
- Ensure that the correct amount of **HOCKEY 100 EW** is evenly distributed over the treated area by using sufficient water (300 to 400 litres per hectare), to obtain good coverage.
- Rainfall/irrigation (20 to 35 mm) after application/incorporation is also essential to supplement mixing with and incorporation into the soil. Incorporation of the product to the recommended depth is insufficient when irrigation alone is used for this action.
- Special care must be taken in sandy soils to avoid over-irrigation and possible wash-off.
- Do not disturb the soil after planting, or else the protective barrier layer of **HOCKEY 100 EW** may be broken.
- The lower part of the root system and/or lower tubers may show Nematode damage in cases of insufficient incorporation/moisture or where applications, soil, climatic and cropping conditions are not optimal.

- In general, a single application of **HOCKEY 100 EW** in potatoes, when applied according to the recommendations above, should provide effective (approximately 80 %) reduction in Nematode numbers for approximately 90 to 100 days. The length of activity is influenced by a multitude of factors and local conditions will vary considerably.
- Potatoes left in the ground for >100 days will be susceptible to attack by Nematodes and will show symptoms of damage. Lift potatoes as soon as the crop potential has been reached, as late infestation can occur. Potatoes are particularly vulnerable to attack once the haulms have been slashed/burnt off as soil temperatures are likely to increase, due to the lack of cover - this may stimulate the Nematode life cycle resulting in a rapid multiplication and infestation of the tubers. If it is intended to keep the potatoes in the ground for a period longer than the residual activity of **HOCKEY 100 EW**, a complementary preventive Nematicide treatment is compulsory.

## 2. Pineapples:

- Apply as an overall broadcast spray before planting and ensure thorough incorporation is followed up with irrigation.

## 3. Citrus:

- Application should be taken place at 2-monthly intervals, starting at the onset of the rainy season.

## 4. Stone & Pome fruit:

- To enhance and protect the formation on new roots, application programmes should commence when this is best achieved. Spring (especially young non-bearing trees) and post-harvest (bearing trees) are two critical periods of root growth that need to be protected preventively.

### **DIRECTIONS FOR USE: Use only as directed.**

#### **Compatibility:**

- Do not apply **HOCKEY 100 EW** in mixtures with other agrochemicals or fertilizers.

#### **Mixing instructions:**

- Half fill the spray tank with clean water.
- Add the required amount of **HOCKEY 100 EW** to the water while agitating.
- Fill the spray tank with water to the required level, while maintaining agitation, to ensure thorough mixing.
- Maintain agitation during application.
- Prepared spray mixture should not be left in the spray tank for any length of time, e.g. overnight.

#### **Application:**

- Use only accurate and properly calibrated application equipment.
- **HOCKEY 100 EW** can be applied with conventional ground spraying equipment. It is important to ensure that the spray equipment is correctly calibrated prior to application and is in a good working order, to ensure that the correct dosage is distributed evenly over the target area.
- **MICRO-JET AND DRIP IRRIGATION SYSTEM (Citrus [micro-jet only], Stone & Pome fruit):**
  1. The system must contain a functional check valve, vacuum relief valve and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
  2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
  3. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
  4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
  5. The irrigation line or water pump must include a functional pressure switch, which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
  6. Systems must use a metering pump, such as a positive displacement injection pump (e.g. Diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

**APPLICATION RATES**

<b>Crop / Pest</b>	<b>Dosage Rate</b>	<b>Remarks</b>
<b>Citrus Nematodes</b> <i>(Tylenchulus semipenetrans)</i>	3 applications of 15 ml / m <sup>2</sup>  <b>OR</b>  2 applications of 20 ml / m <sup>2</sup>	Apply at 2-monthly intervals commencing at the onset of the rainy season. Apply to moist soil. Area to be treated (the number of m <sup>2</sup> treated) depends on the size of the basin area/canopy: Treat the tree basin, under the tree canopy for an overall surface spray <b>OR</b> The area covered by the micro-irrigation system when applied by this method.  The product must be washed into top layer of soil by irrigation or rainfall (20 to 35 mm) immediately after application. Refer to " <b>Applications instructions - Micro-jet and Drip irrigation system</b> " above.
<b>NOTES</b> <ul style="list-style-type: none"> <li>The objective is to protect the newly formed roots. Application programmes should thus be planned to commence when this can best be achieved.</li> <li>Apply <b>HOCKEY 100 EW</b> to a weed and trash free surface. Immediately wash into the top layer of pre-moistened soil preferably by sprinkler/micro-jet irrigation for optimum results.</li> <li>Ensure that the correct amount of <b>HOCKEY 100 EW</b> is evenly distributed over the treated area by using sufficient water, to obtain good coverage.</li> <li>Take note that when <b>HOCKEY 100 EW</b> is applied through the micro-jet irrigation system, it will only control Nematodes present in the area reached by the micro-jet.</li> <li><b>HOCKEY 100 EW</b> may be used as a follow-up application after an initial spring application of a systemic Nematicide.</li> </ul>		
<b>Stone fruit &amp; Pome fruit (Apples &amp; Pears) Nematodes</b> Ring nematode <i>(Criconemella xenoplax)</i>  Dagger nematode <i>(Xiphinema spp.)</i>  Root-knot nematode <i>(Meloidogyne spp.)</i>	<b>VERY IMPORTANT</b> <b>Refer to "USE RESTRICTIONS" and "Application instructions - Micro-jet and drip irrigation systems" above.</b>  15 ml / m <sup>2</sup>  1 to 3 times at 8 to 10 weeks intervals (depending on infestation level)  <b>OR</b>  25 ml / m <sup>2</sup> followed by 25 ml / m <sup>2</sup>  12 weeks later under high infestation pressure conditions	Use the higher rate on heavier infestations. <b>(i) Spring treatment:</b> a) Time application to protect new root flush. Apply follow-up treatment if necessary as determined by nematode soil analyses. <b>(ii) Autumn application:</b> (post-harvest treatment). a) Overall surface spray: apply evenly to the soil in the tree basin under the tree canopy, or b) The area covered by the drip or micro-irrigation system.  The number of m <sup>2</sup> to be treated depends upon the size of basin area/canopy. Application may also be done through a drip or micro-irrigation system. Wash the product into the top layer of soil by sprinkler or micro-irrigation (20 to 35 mm water), if sufficient rain does not fall immediately after application. Optimal results will be obtained within the first 2 years after planting with young trees. <b>Ensure that the product DOES NOT come into contact with foliage and fruit.</b>

Crop / Pest	Dosage Rate	Remarks
<p><b>Potatoes</b>  <b>Root-knot nematodes</b>  <i>Meloidogyne</i> spp  (excluding <i>M. chitwoodi</i>)</p>	<p><b>VERY IMPORTANT</b>  Refer to “USE RESTRICTIONS” and “CROP INFORMATION” above for detailed information regarding the use of HOCKEY 100 EW in potatoes.</p> <hr/> <p><u>Table potatoes:</u>  Soils with &gt;10 % clay  400 ml / 100 m row  (40 ℓ / ha)</p> <hr/> <p><u>Seed potatoes:</u>  Soils with &lt;10 % clay  600 ml / 100 m row  (60 ℓ / ha)</p>	<p><b>Table potatoes:</b>  Apply as an overall broadcast soil treatment before planting (up to approximately 7 to 14 days) and ensure thorough incorporation. Ensure that even distribution is obtained.  Application and incorporation should be followed the same day by irrigation with a minimum 20 mm.  Northern Cape and North West Province (<b>winter plantings</b>) – Prieska, Hopetown, Douglas, P.K. Le Roux dam irrigation areas, Vaalharts irrigation area, Barkly West, Christiana, Louwna, Vryburg, Coetzersdam and Tosca, the soil <b>must be fumigated</b> prior to planting.</p> <hr/> <p><b>Seed potatoes:</b>  Apply at planting and ensure even coverage and thorough mixing with the soil around the seed tuber. Follow all recommendations listed above. Prevent excessive direct contact between the product and seed potatoes.  Northern Cape and North West Province (<b>summer plantings</b>) – Prieska, Hopetown, Douglas, P.K. Le Roux dam irrigation areas, Vaalharts irrigation area, Barkly West, Christiana, Louwna, Vryburg, Coetzersdam and Tosca, the soil <b>must be fumigated</b> prior to planting and application of <b>HOCKEY 100 EW</b> followed by a complimentary foliar applied Nematicide.</p>
<p><b>NOTES</b></p> <ul style="list-style-type: none"> <li>To obtain enhanced control of Nematodes, or if potatoes are expected to remain in the soil for an extended period (100 days plus), use <b>HOCKEY 100 EW</b> in a programme.</li> <li>Application of <b>HOCKEY 100 EW</b> at planting should be followed by a complete foliar application programme of <b>STETSON 310 SL</b> according to the label.</li> </ul>		
<p><b>Pineapples</b>  <b>Nematodes</b>  Lesion nematode  (<i>Pratylenchus brachyurus</i>)</p> <p>Root-knot nematode  (<i>Meleiodogyne javanica</i>)</p> <p>Spiral nematodes  (<i>Helicotylenchus multicinctus</i>,  <i>H. dihystra</i> &amp;  <i>Scutellonema brachyurum</i>)</p>	<p>50 ℓ / ha</p>	<p><b>VERY IMPORTANT</b>  Refer to “USE RESTRICTIONS” above.</p> <p>Spray as an overall application 1 to 2 weeks before planting and incorporate to a depth of ± 15 cm by means of disc ploughing.</p> <p>Ensure thorough irrigation.</p>
<p><b>NOTES</b></p> <ul style="list-style-type: none"> <li>Ensure that the correct amount of <b>HOCKEY 100 EW</b> is evenly distributed over the treated area in the case of overall spraying by using sufficient water (300 to 400 litres per hectare), to obtain good coverage.</li> <li>Optimal results are obtained when <b>HOCKEY 100 EW</b> is followed up by application of another registered Nematicide in a preventive programme</li> <li>The lower part of the root system may exhibit Nematode damage in the case of insufficient incorporation/moisture.</li> </ul>		

The following product mentioned in this label may be replaced with an equivalent product:

- **STETSON 310 SL** (L 7904) = **PLATOON® 310 SL** (L 7913/ N-AR 1106) (**Oxamyl**).

**STETSON 310 SL** is a registered product of / is 'n geregistreerde produk van  
**UNIVERSAL CROP PROTECTION (PTY) LTD.**

**PLATOON® 310 SL** is a registered trade mark of / is 'n geregistreerde handelsmerk van  
**VILLA CROP PROTECTION (PTY) LTD.**