Difence

South Africa Reg. No: L 7922 Act No. 36 of 1947

An emulsifiable concentrate systemic fungicide for the control of diseases on crops as indicated.

FRAC FUNGICIDE GROUP CODE: 3

ACTIVE INGREDIENT:

Difenoconazole (triazole)250g/l

Product Information Tel no: 072 678 8226 In case of poisoning: 082 446 8946

www.envirobiochem.co.za



Registration holder:

Erintrade CC t/a RT Chemicals

Reg. No: CK 2001/036403/2344 Kerk Street, Lichten-

North West, South Africa 2740

Tel: +27 87 231 7261

Expiry Date: Batch No:

Date of Manufacture:

UN No. 3082













WARNINGS:

- Allow the following number of days between last application and harvest or feeding:
- Groundnuts (fodder): 21 days Maize: 14 days
- Potatoes: 14 days

 Do not graze or use treated maize as fodder.
- Handle with care.
- Harmful if swallowed, inhaled, or absorbed through the skin.
- May irritate and cause sensitization of skin.
- May cause serious damage to eyes.
- Keep out of reach of children, uninformed persons and animals.
- Store in the original container under lock and key, tightly closed and away from sun and damp in a well ventilated cool area. Avoid storage temperatures below 10°C and above 35°C.
- Store away from food and feed.
- Toxic to fish.
- · Prevent contamination of dams, rivers and any water body.
- Flammable: Keep away from heat and flame.
- <u>Re-entry:</u> Do not enter the treated field until the spray deposit has dried unless wearing protective clothing.
 Aerial application: Notify all inhabitants in the immediate vicinity of the area to be sprayed and issue the necessary warning.
- Do not spray over or allow drift to contaminate water of adjacent areas.

Although this fungicide 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 effected 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 pest against the remedy concerned as well as by the method, time and accuracy of the 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

PRECAUTIONS:

• Do not inhale fumes or spray mist.

event of any uncertainty.

- Avoid contact with skin and eyes.
- Wear protective clothing when handling the concentrate (face shield, rubber boots, gloves).
- In case of accidental contact with eyes, wash with clean water for at least 15 minutes.
 After use and in case of accidental skin contact, wash thoroughly with soap and water.
- Wash contaminated clothing after use.
- Do not eat, drink or smoke whilst mixing or applying or before washing hands and face and change of clothing.
- Prevent contamination of food, feedstuff, eating utensils and drinking water.
- Prevent drift of spray mist onto other crops, grazing, rivers, dams or areas not under treatment.
- Rinse empty 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 prescribed manner.
- Destroy empty container by perforation and flattening and never use for any other purpose.

RESISTANCE WARNING:

For resistance management DIFENCE is a group code 3 fungicide. Any fungus population may contain individuals naturally resistant to DIFENCE and other group code 3 fungicides. The resistant individuals can eventually dominate the fungus population if these fungicides are used repeatedly. DIFENCE or any other group code 3 fungicide may not control these resistant fungi.

To delay fungicide resistance:

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

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

USE RESTRICTIONS:

The uptake and activity of systemic compounds may be reduced when crops are under any form of stress such as drought or nutrient stress conditions. It is therefore not advisable to apply **DIFENCE** during such periods. If in doubt, consult a representative of Erintrade CC or a distributor.

Spray programmes with **DIFENCE** should be preventative unless mentioned otherwise.

General Properties:

DIFENCE is a local systemic fungicide with limited acropetal movement. When applied in a protective spray programme **DIFENCE** effectively controls early leaf spot (*Cercospora arachidicola*), late leaf spot (*Cercosporidium personatum*), web blotch (*Phoma arachidicola*) and rust (*Puccinia arachidis*) in groundnuts; early blight (*Alternaria solani*) in potatoes; and grey leaf spot (*Cercospora zeae-maydis*) and northern leaf blight (*Helminthosporium turcicum*) in maize.

DIRECTIONS FOR USE: Use only as directed.

Compatibility:

The compatibility of **DIFENCE** with other products may be influenced by the formulation of the products involved as well as the quality of the water. A physical compatibility test should always be carried out prior to application. **DIFENCE** is compatible with commonly used fungicides, insecticides and foliar feeds normally used on the various crops for which **DIFENCE** is registered. In potatoes, **DIFENCE** can be tank mixed with **ABAMEC PLUS** (Reg. No. L 5888), captab, chlorothalonil, mancozeb, cyromazine, **SELEFOS** (Reg. No. L 6950) and **CONTROLLER** (Reg. No. L 6783).

Mixing Instructions:

Replace cap after pouring.

Add the required amount of **DIFENCE** to the water in the spray tank. Stir constantly while mixing. When a wettable powder is sprayed as a tank mix with **DIFENCE**, the wettable powder should be mixed first and well agitated after which the **DIFENCE** is added and the spray tank filled to its final volume.

Ensure thorough agitation of the mixture in the spray tank during mixing and spraying.

Mixtures must be sprayed out immediately and not allowed to stand in the spray tank.

Application Techniques

Ground application

Apply in 300 to 500\ell water per hectare.

DIFENCE may be applied using conventional high volume spray equipment. Nozzles should be fitted with hollow cone tips giving medium to fine droplets. Calibrate apparatus before application to ensure that the correct dosage rate per hectare is applied. The distribution of the spray mixture should be uniform throughout the target area.

Aerial Application:

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

- Volume: A spray mixture volume of 30l/ha is recommended. As this product has not been evaluated at a reduced volume rate, the
 registration holder cannot guarantee efficacy, or be held responsible for any adverse effects if this product is applied aerially at a
 lower volume rate than recommended above.
- <u>Droplet coverage:</u> 25 to 35 droplets per cm² must be recovered at the target area.

- <u>Droplet size:</u> A droplet spectrum with a VMD of 280 to 300 microns is recommended. Limit the production of fine droplets less than 150 microns (high drift and evaporation potential) to a minimum.
- Flying height: Maintain the height of the spray boom at 3 to 4 metres above the target. Do not spray when aircraft dives, is in a climb or when banking
- Use suitable <u>atomising equipment</u> that will produce the desired droplet size and coverage, but which will ensure the minimum loss of product. The spraying system must produce a droplet spectrum with the lowest possible Relative Span.
- Position all the atomisers within the inner 60 to 75% of the wingspan to prevent droplets from entering the wingtip vortices.
- The difference in temperature between the wet and dry bulb thermometers, of a whirling hygrometer, should not exceed 8°C.
- Stop spraying if the wind speed exceeds 15km/h.
- Stop spraying under turbulent, unstable and dry conditions during the heat of the day.
- Spraying under temperature inversion conditions (spraying in or above the inversion layer) and/or high humidity conditions (relative humidity 80% and above) may lead to the following:
- reduced efficacy due to suspension and evaporation of small droplets in the air (inadequate coverage).
 damage to other sensitive crops and/or non-target areas through drifting of the suspended spray cloud away from the target field.
- Ensure that the Aerial Spray Operator knows exactly which fields to spray.
- Obtain an assurance from the Aerial Spray Operator that the above requirements will be met and that relevant data will be compiled in a logbook and kept for future reference.

APPLCATION RATES:

DISEASE/CROP	DOSAGE	REMARKS
MAIZE & SWEETCORN Grey leaf spot (Cercospora zeae-maydis) & Northern leaf blight (Helminthosporium turcicum)	<u>Aerial Application:</u> 300mℓ/ha	Grey leaf spot: Commence spraying when disease is present on the lower leaves and before symptoms show on the three leaves immediately below the cob and before symptoms exceed 2% of leaf area. Repeat applications may be necessary 14 to 21 days later. Northern leaf blight: Commence spraying at first signsof disease and before 2% of leaf area is infected with the disease. Repeat sprays should be made 14 to 21 days later.
GROUNDNUTS Early leaf spot (Cercospora arachidicola), Late leaf spot (Cercosporidium personatum), Web blotch (Phoma arachidicola) & Rust	Ground Application - Dryland: 300ml & 200ml/ha Apply 300ml/ha for the first application, and repeat every 10 to 14 days using 200ml/ha OR 325ml/ha every 18 to 21 days	Commence application at the first signs of disease. All spray programmes should continue until the plants start senescence naturally. Add 0.15 % BOOSTER OIL; 150ml/100l water (Reg. No: L 6148) to the DIFENCE spray mix.
(Puccinia arachidis)	Irrigation: 300mℓ/ha every 10 to 14 days OR 400mℓ/ha every 18 to 21 days.	Apply in a protective spray programme. Commence applications at the start of flowering (10 to 12 weeks after planting) or earlier, if the disease(s) starts to develop.

DOSAGE	REMARKS
<u>Aerial Application:</u> 350mℓ/ha	Aerial application are recommended as an emergency measure when conditions are unfavourable for good application. Apply every 14 to 21 days on dryland crops and every 10 to 14 days on irrigated crops.
Ground & Aerial Application: 175mℓ/ha every 7 days OR 250mℓ/ha every 10 days OR 350mℓ/ha every 14 days	Add 0.15 % BOOSTER OIL; 150ml/100l water (Reg. No: L 6148) to the DIFENCE spray mix. Apply in a protective programme. Commence applications immediately before flowering (or earlier if the disease starts to develop) and continue until the plants start to senesce (end of flower drop).
	Aerial Application: 350ml/ha Ground & Aerial Application: 175ml/ha every 7 days OR 250ml/ha every 10 days OR

Alternate every 7 days between **DIFENCE** and a suitable broad spectrum fungicide (e.g. mancozeb, chlorothalonil or copper). Commence applications during the flowering stages (about 8 weeks after transplant) or earlier if the disease starts to develop. Continue with **DIFENCE** into the picking stages (16 to 20 weeks after transplanting) applying a maximum of 8 **DIFENCE** applications per season. During the pre-flowering stages and after the **DIFENCE** treatments are discontinued, apply a suitable broad spectrum

REMARKS:

fungicide.

Ensure complete coverage of the entire plant mass with spray mixture at all times.

DIFENCE does not control late blight (Phytophthora infestans).

The following registrations under Act No. 36 of 1947 are acknowledged: Abamec Plus: contains abamectin: Reg. No. L 5888. RT Chemicals CC.

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Controller: contains cymoxanil and mancozeb; Reg. No. L 6783, RT Chemicals CC. Selefos; contains profenophos; Reg. No. L 6950. RT Chemicals CC.