

BASF
We create chemistry

Abacus® Advance

Reg. No. L9132; N-AR 0950;

Act No. 36 of 1947

READ ATTACHED PACKAGE OR LEAFLET BEFORE USE
KEEP OUT OF REACH OF CHILDREN AND ANIMALS

GROUP	3	11	FUNGICIDES
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A suspo-emulsion contact and translaminar fungicide for the preventive control of diseases on barley, maize, soya beans, sugarcane and wheat.

'n Suspo-emulsie kontak- en translaminêre swamdoder vir die voorkomende beheer van siektes op gars, koring, mielies, sojabone en suikerriet



DANGER

Causes mild skin irritation. Harmful if inhaled.
Toxic if swallowed.
May cause an allergic skin reaction. Suspected of causing cancer.
Suspected of damaging fertility. Suspected of damaging the unborn child.
Very toxic to aquatic life with long lasting effects.
Wear protective gloves, protective clothing and eye protection or face protection.
Do not breathe mist or vapour.

Active ingredients:
Aktiewe bestanddele:

Pyraclostrobin (methoxy-carbamate)... 62,5 g/l
Epoxiconazole (triazole)... 62,5 g/l

Registered by:

BASF South Africa (Pty) Ltd
Co. Reg. No. 66/10235/07
P.O. Box 2801
Halfway House 1685
+27 11 203 2400

Geregistreer deur:

BASF Suid-Afrika (Edms) Bpk
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Batch No. & Date manufactured: Refer to details printed on container
Lotnommer & Datum vervaardig: Verwys na besonderhede gedruk op houer

EMERGENCY NUMBER / NOODNOMMER: +27 82 446 8946

UN No. / VN Nr: 2902

* = Registered trademark of BASF / Geregistreerde handelsmerk van BASF

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ENGLISH

WARNINGS

Hazard Statements

- Causes mild skin irritation.
- Harmful if inhaled.
- Toxic if swallowed.
- May cause an allergic skin reaction.
- Suspected of causing cancer.
- Suspected of damaging fertility. Suspected of damaging the unborn child.
- Very toxic to aquatic life with long lasting effects.

- ALLOW THE FOLLOWING MINIMUM NUMBER OF DAYS, BETWEEN LAST APPLICATION AND HARVEST OR GRAZING:

Barley	70
Maize and sweet corn	30
Soya beans	39
Sugarcane	60
Wheat	60

- Handle with care.
- Keep out of reach of children, uninformed persons and animals.
- Store away from food and feed.
- Re-entry: Do not enter treated area within 1 day after treatment unless wearing protective clothing.
- Do not graze treated barley, maize, sweet corn or soya bean fields or use as fodder, before 70 days after spraying.

Aerial application:

- Notify and warn all inhabitants in the immediate area of the intended application and issue the necessary warnings.
- Do not spray over adjacent areas or water or permit spray, to drift there.

Although this remedy has been 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 disease 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, harm to man or animal, or for lack of performance of the remedy concerned, due 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

Precautionary Statements

- Keep out of reach of children.
- Read carefully and follow all instructions.
- Wear protective gloves, protective clothing and eye protection or face protection.
- Use only outdoors or in a well-ventilated area.
- Obtain special instructions before use.
- Do not breathe mist or vapour.
- Do not handle until all safety precautions have been read and understood.
- Contaminated work clothing should not be allowed out of the workplace.
- Wash contaminated body parts thoroughly after handling.
- Call a POISON CENTER or physician if you feel unwell.
- IF SWALLOWED: Immediately call a POISON CENTRE or physician.
- IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- IF exposed or concerned: Get medical attention.
- IF ON SKIN: Wash with plenty of soap and water.
- If skin irritation or rash occurs: Get medical attention.
- Collect spillage.
- Take off contaminated clothing and wash it before reuse.
- Store locked up.
- Dispose of contents and container to hazardous or special waste collection point.

- Wear rubber gloves and boots and face shield when handling concentrate and whilst applying.
- Prevent spray drift onto other crops, grazing, rivers and dams and areas not under treatment.
- TRIPLE RINSE empty containers in the following manner. Invert the empty container over the spray or mixing tank and allow to drain 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 10% of that of the container. Add the rinsings to the contents of the spray tank, before destroying the container in the prescribed manner.
- Clean applicator after use and do not contaminate crops, grazing, rivers and dams with wash water.
- Destroy empty container and never use for any other purpose.
- Prevent contamination of food, feed, drinking water and eating utensils.

RELEVANT SUBSTANCES

Hazardous ingredients According to UN GHS criteria	CAS number	Concentration (W/W)
epoxiconazole (ISO); (2RS,3SR)-3-(2-chlorophenyl)-2-(4-fluorophenyl)-[(1H-1,2,4-triazol-1-yl)methyl]oxirane	133855-98-8	6,04 %
pyraclostrobin (ISO); methyl N-{2-[1-(4-chlorophenyl)-1H-pyrazol-3-yl]oxymethyl}phenyl}(N-methoxy)carbamate	175013-18-0	6,04 %
Solvent naphtha (petroleum), heavy arom.	64742-94-5	< 20 %
Alcohols, C12-18, ethoxylated propoxylated	69227-21-0	< 10 %
1,2-Benzisothiazol-3(2H)-one	2634-33-5	< 0,01 %
Propane-1,2-diol	57-55-6	< 5 %

FIRST AID TREATMENT

First aid personnel should pay attention to their own safety. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position). Immediately remove contaminated clothing.

ON CONTACT WITH EYES:	Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.
ON INGESTION:	Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.
ON SKIN CONTACT:	Immediately wash thoroughly with soap and water, seek medical attention.
IF INHALED:	Keep patient calm, remove to fresh air, seek medical attention.

Indication of any immediate medical attention and special treatment needed

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote

RESISTANCE WARNING

For resistance management, **Abacus® Advance** is of the Group Codes 11 and 3 fungicide. Any fungal population may contain individuals naturally resistant to **Abacus® Advance** and other Group Codes 11 and 3 fungicides. The resistant individuals can eventually dominate the fungal population, if these fungicides are used repeatedly and exclusively in programmes. These resistant fungi may not be controlled by **Abacus® Advance**, or any other Group Codes 11 and 3 fungicides.

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.
- For tank mixing or alternation with products in other Fungicide Group Codes, refer to the applicable individual product labels.
- Integrate other control methods (chemical, cultural, biological), into disease control programmes.

FOR SPECIFIC INFORMATION ON RESISTANCE MANAGEMENT, CONTACT THE REGISTRATION HOLDER, BASF SA (Pty) Ltd.

DIRECTIONS FOR USE: USE ONLY AS DIRECTED

General information:

Apart from fungicidal activity, **F500®**, one of the active ingredients of **Abacus® Advance**, exhibits the potential to increase plant physiological effects which are beneficial to the crop. In growing number of regions including the USA, UK, Europe, Brazil and Argentina, **F500®** is also registered and recommended as a plant health remedy to increase yields. Research conducted locally has proven that the use of **Abacus® Advance** according to label recommendations, can also increase yield, even in situations when low disease pressure occur.

This product is not recommended for knapsack application.

Silage can be made after one **Abacus® Advance** application on maize, at the soft dough stage.

Compatibility:

The compatibility of **Abacus® Advance** has been proven with Roundup® Powermax (L7769), **Fastac® EC** (L4991) and **Fastac® SC** (L4992). It is however always recommended that the compatibility of **Abacus® Advance** with other herbicides, insecticides and acaricides, have to be tested on a small scale before used in spray mixtures.

DO NOT use any additional wetters, spreaders or other adjuvants as **Abacus® Advance** has already been formulated with optimised amounts of surfactants. The only exception is in regions where water quality is known to be poor, a flowable (50%) high quality ammonium sulphate can be used to ameliorate the water before adding **Abacus® Advance**.

Mixing instructions:

Half fill the tank with clean water. Measure the required quantity of **Abacus® Advance** and pre-mix this with at least 10 ℓ water. Add this mixture to the water in the spray tank while agitating the mixture. Fill the spray tank with water, while maintaining agitation, to ensure thorough mixing of the spray mixture before spraying commences. Maintain agitation during the whole spraying operation. Prepared spray mixture must not be left in the spray tank for any length of time, e.g. overnight.

Anti-resistance strategy:

- In order to maintain the efficacy of **Abacus® Advance**, it is necessary to prevent the development of resistance of the diseases against fungicides of the DMI (triazole-) and QOI-fungicide groups.
- Do not reduce the dose rate below what is recommended on the label.
- Never use other DMI (triazole-) or QOI-fungicide fungicides, or related fungicides, in the same programme with **Abacus® Advance**.
- Do not exceed two applications of **Abacus® Advance** per season.

Aerial application:

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

- **Volume:** A spray mixture volume of 30 – 35 ℓ per hectare 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 aurally at a lower volume rate than recommended above.
- **Droplet coverage:** 50 – 70 droplets per cm² must be recovered at the target area.
- **Droplet size:** A droplet spectrum with a VMD of 250 micron is recommended. limit the production of fine droplets less than 150 micron (high drift and evaporation potential) to a minimum.
- **Flying height:** Maintain the height of the spray boom at 3 – 4 metres above the target. Do not spray when aircraft dives, is in a climb or when banking
- Use suitable atomising 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 – 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 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 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.

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

CROP	DISEASE	DOSAGE t/ha	DIRECTIONS FOR APPLICATION
BARLEY	Leaf spot (<i>Rhynchosporium secalis</i>)	1,0	Apply preventively or at very first signs of disease presence. Apply a second application 3 – 4 weeks later, if high disease pressure occurs. Ground application: Apply in 200 – 400 ℓ water/ha. Aerial application: Apply in 30 – 40 ℓ water/ha.
	Leaf rust (<i>Puccinia hordei</i>)	1,0	Apply as soon as infection is noticed and repeat if necessary 3 – 4 weeks later. Ground application: Apply in 200 – 400 ℓ water/ha. Aerial application: Apply in 30 – 40 ℓ water/ha.
	Net blotch (<i>Pyrenophora teres</i>)	1,0	Apply preventively or at very first signs of disease presence. Repeat the application 3 – 4 weeks later. Ground application: Apply in 200 – 400 ℓ water/ha. Aerial application: Apply in 30 – 40 ℓ water/ha.
	Powdery mildew (<i>Erisiphe graminis</i>)	1,0	Apply as soon as infection is noticed and repeat if necessary 3 – 4 weeks later. Ground application: Apply in 200 – 400 ℓ water/ha. Aerial application: Apply in 30 – 40 ℓ water/ha.
			Do not exceed two applications of Abacus® Advance, per season.
MAIZE and SWEET CORN	Grey leaf spot (<i>Cercospora zeina</i>) Northern leaf blight (<i>Exserohilum turcicum</i>) Rust (<i>Puccinia sorghi</i>)	1,6	Abacus® Advance is recommended in an integrated disease management programme. Consistent and reliable disease control is dependant on preventive fungicide applications. Apply the first application of Abacus® Advance at growth stage 31 (first node detectable above the soil surface, also described as the 5 – 6 leaf stage). A second application of Abacus® Advance is recommended at growth stage 51 (tassel detectable). If extended disease control is required under continued high disease pressure conditions, a third application with Duett® (L5791) is recommended 3 – 4 weeks later. In certain areas/conditions where low disease presence is expected, apply Abacus® Advance between growth stage 31 (first node detectable above soil surface, also described as the 5 – 6 leaf stage) and growth stage 35 (8 leaf stage). Growth stage 35 is regarded as the last possible stage to enter the field with a conventional tractor applicator. If extended disease control is required, revert back to the above mentioned follow – up application of Abacus® Advance . High disease pressure is increased by the following factors: <ul style="list-style-type: none"> • Persistent favourable climatic conditions. • Density of plantings. • Inoculums source (especially under minimum till practices). • Disease susceptibility of variety/hybrid planted. • A delay to initiate the fungicide program. Ground application: Apply as a full cover spray in 150 – 300 ℓ water/ha. Use well maintained quality application equipment, delivering a fine and evenly distributed spray pattern on the plant surface. Aerial application: As for recommendations above in 40 ℓ water/ha.

CROP	DISEASE	DOSAGE ℓ /ha	DIRECTIONS FOR APPLICATION
		550 ml/100 ℓ water	<p>Row application for low density plantings: This dosage is based on an overall ground application of 1,6 ℓ/ha, in 300 ℓ water/ha. Apply using a tandem fitting with two solid- or hollow cone nozzles, mounted on the boom above each row. Use sufficient water (not less than 100 ℓ/ha) to ensure total coverage of the plant.</p> <p>Do not exceed two applications of Abacus[®] Advance, per season.</p>
SOYA BEANS	Soya bean rust (<i>Phakopsora pachyrhizi</i>)	1,0	<p>Spray preventively, before first signs of disease development is noticed (normally at onset of flowering) and repeat 21 – 28 days later. Apply the shorter interval of three weeks when high disease pressure is expected, due to weather conditions that favour disease development. This programme application will also reduce the incidence of Sclerotinia (<i>Sclerotinia sclerotiorum</i>).</p> <p>Ground application: Apply as a full cover spray in 150 – 300 ℓ water/ha. Use well maintained quality application equipment, delivering a fine and evenly distributed spray pattern on the plant surface.</p> <p>Aerial application: As for recommendations above in 40 ℓ water/ha.</p>
SUGARCANE	Brown rust (<i>Puccinia melanocephala</i>) Tawny Rust (<i>Puccinia</i> spp.) Refer to Note below	1,6	<p>Apply two applications. The first application is to be applied at 4 – 6 leaf stage, preventively, or at the first sign of brown rust infection. The second application is to be made one month after the first application.</p> <p>Preventive application for the control of Tawny rust is strongly advised. It is a disease that develops rapidly and curative application may not always provide desired results</p> <p>Ground application: Apply as a full cover spray in 200 ℓ water/ha. Aerial application: Apply in 30 ℓ water/ha.</p>
WHEAT	Speckled leaf blotch and Glume blotch (<i>Septoria</i> spp.) Brown rust/Leaf rust (<i>Puccinia triticina</i>) Stem rust (<i>Puccinia graminis</i>) Powdery mildew (<i>Erysiphe graminis</i>) Yellow rust/Stripe rust (<i>Puccinia striiformis</i>)	1,0	<p>Commence spraying at first sign of infection, but not later than the flag leaf emergence. Apply a second application 3 – 5 weeks later if high disease pressure occurs.</p> <p>Ground application: Apply in 200 – 400 ℓ water/ha. Aerial application: Apply in 30 – 40 ℓ water/ha.</p>

Note:

- Tawny rust (formerly referred to as African rust) can occur through all the production areas of South Africa. Characterization of the species is currently underway. This rust shows unique symptoms and is easily distinguished from brown rust by the following visual characteristics:
 - The rust pustules on the leaf surface once they have burst open are orange in colour.
 - The rust pustules occur on both the upper and lower side of the leaf.
- Severe infection by Tawny rust has been recorded on varieties N25 and N46 and the disease has also been observed on N12, N31, N41, N43, N46, N49, N53.

Conditions of Sale and Warranty

The **Directions for Use** of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and must be followed carefully. However, it is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or use of this product in a manner inconsistent with its labeling, all of which are beyond the control of BASF South Africa (Pty) Ltd. ("BASF") or the Seller. To the extent consistent with applicable law, all such risks shall be assumed by the Buyer.

BASF warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the **Directions for Use**, subject to the inherent risks, referred to above.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BASF MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BUYER'S EXCLUSIVE REMEDY AND BASF'S EXCLUSIVE LIABILITY, WHETHER IN CONTRACT, TORT, NEGLIGENCE, STRICT LIABILITY, OR OTHERWISE, SHALL BE LIMITED TO REPAYMENT OF THE PURCHASE PRICE OF THE PRODUCT.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BASF AND THE SELLER DISCLAIM ANY LIABILITY FOR CONSEQUENTIAL, EXEMPLARY SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.

BASF and the Seller offer this product, and the Buyer and User accept it, subject to the foregoing Conditions of the Sale and Warranty, which may be varied only by agreement in writing signed by a duly authorized representative of BASF.

Duett®, **Fastac® EC**, **Fastac® SC** and **F500®** are Registered Trademarks of BASF.
Roundup® Powermax is a Registered Trademark of Monsanto SA (Pty) Ltd.

AFRIKAANS

WAARSKUWINGS

Gevaarstellings

- Verorsaak ligte velirritasie.
- Skadelik indien ingeasem.
- Giftig indien ingesluk.
- Mag 'n allergiese velreaksie veroorsaak.
- Mag kanker veroorsaak.
- Mag vrugbaarheid benadeel. Mag skadelik wees vir die ongebore kind.
- Baie giftig vir akwatiese organismes met langdurige effek.

LAAT DIE VOLGENDE MINIMUM AANTAL DAE TOE, TUSSEN DIE LAASTE TOEDIENING EN OES OF BEWEIDING:

Gars	70
Koring	60
Mielies en suikermielies	30
Sojabone	39
Suikerriet	60

- Hanteer versigtig.
- Hou buite bereik van kinders, oningeligte persone en diere.
- Bêre weg van kos en voer.
- Herbetreding: Moenie behandelde gebied betree vir een dag na bespuiting, tensy beskermende oorklere gedra word nie.
- Moenie behandelde gars, mielies, suikermielies of sojabone lande laat bewei of as voer gebruik, voor 70 dae na spuit nie.

Lugtoediening:

- Verwittig en waarsku alle inwoners in die onmiddellike gebied van die beoogde toedienings en reik die nodige waarskuwings uit.
- Moenie oor aangrensende gebiede of water spuit of spuitstof daarheen laat oorwaai nie.

Alhoewel hierdie middel onder 'n groot verskeidenheid toestande getoets is, waarborg die registrasiehouer nie dat dit onder alle toestande doeltreffend sal wees nie, aangesien die werking en effek daarvan, deur faktore soos abnormale grond-, klimaats- en bergingstoestande, kwaliteit van verdunningswater, verenigbaarheid met ander stowwe wat nie op die etiket aangedui is nie, en die voorkoms van weerstand van die siekte teen die betrokke middel beïnvloed kan word, die metode, tyd en akkuraatheid van toediening kan ook die werking en doeltreffendheid van die middel beïnvloed. Verder aanvaar die registrasiehouer nie verantwoordelikheid vir skade aan gewasse, plantegroei en die omgewing nie, of vir nadelige effek op mens of dier nie, of vir onvoldoende prestasie van die betrokke middel weens die versuim van die gebruiker om etiketaanwysings na te kom nie, of weens toestande wat nie kragtens die registrasie voorsien kon word nie. Raadpleeg die verskaffer in geval van enige onsekerheid.

VOORSORGMATREËLS

Voorsorgstellings

- Hou buite bereik van kinders.
 - Lees etiket noukeurig en volg alle instruksies.
 - Dra beskermende handskoene, beskermende klere en beskerming vir oë of gesig.
 - Gebruik slegs buite of in 'n goed geventileerde area.
 - Verkry spesiale instruksies voor gebruik.
 - Moenie spuitnewel of dampe inasem nie.
 - Moenie hanteer voordat alle voorsorgmaatreëls gelees en verstaan is nie.
 - Besoedelde klere moet nie buite die werkplek toegelaat word nie.
 - Was besoedelde liggaamsdele deeglig na gebruik.
 - Skakel 'n GIFBEHEËRSENTRUM of geneesheer indien u siek voel.
 - INDIEN INGESLUK: spoel mond uit.
 - INDIEN INGEASEM: Verwyder persoon na vars lug en hou gemaklik sodat persoon kan asemhaal.
 - Indien blootgestel of bekommerd is oor moontlike blootstelling: skakel n GIFSENTRUM of doktor/geneesheer.
 - INDIEN OP DIE VEL: Was met baie seep en water.
 - In die geval van velirritasie of vel uitslag, verkry mediese hulp.
 - Maak produk bymekaar wat gemors / uitgeloop het.
 - Verwyder besoedelde klere en was voor hergebruik.
 - Bêre agter slot en grendel.
 - Raak ontslae van inhoud en houer deur na 'n gevaarlike- of spesiale-afval insamelsplek te besorg.
- Dra rubberhandskoene en -stewels en gesigskerm wanneer konsentraat hanteer word en terwyl gespuit word.
 - Verhoed wegdrywing van spuitnewel na ander gewasse, weivelde, riviere en damme en areas nie onder bespuiting nie.
 - Leë houers moet DRIE KEER UITGESPOEL word soos volg. Keer die leë houer om oor die spuitenk of mengbak en dreineer vir minstens 30 sekondes, nadat die vloeit tot 'n gedrup verminder het. Spoel die houer daarna drie keer uit met 'n volume water gelykstaande aan 'n minimum van 10% van die houer. Gooi die spoelwater by die inhoud van die spuitenk, voordat die houer op die voorgeskrewe wyse vernietig word.
 - Maak toedieningsapparaat skoon na gebruik en moenie gewasse, weivelde, riviere of damme met die waswater besoedel nie.
 - Vernietig leë houer en moet nooit vir enige ander doel gebruik nie.
 - Vermyn besoedeling van voedsel, voer, eetgerei en drinkwater.

RELEVANTE STOWWE

Gevaarlike bestanddele Volgens UN GHS Kriteria	CAS nommer	Konsentrasie (w/w)
epoxiconazole (ISO); (2RS,3SR)-3-(2-chlorophenyl)-2-(4-fluorophenyl)-[(1H-1,2,4-triazol-1-yl)methyl]oxirane	133855-98-8	6,04 %
pyraclostrobin (ISO); methyl N-{2-[1-(4-chlorophenyl)-1H-pyrazol-3-yl]oxymethyl}phenyl (N-methoxy)carbamate	175013-18-0	6,04 %
Solvent naphtha (petroleum), heavy arom.	64742-94-5	< 20 %
Alcohols, C12-18, ethoxylated propoxylated	69227-21-0	< 10 %
1,2-Benzisothiazol-3(2H)-one	2634-33-5	< 0,01 %
Propane-1,2-diol	57-55-6	< 5 %

NOODHULPBEHANDELING

Noodhulppersoneel moet aandag gee aan hul eie veiligheid. As die pasiënt waarskynlik bewusteloos sal raak, plaas en vervoer in 'n stabiele sywaartse posisie (herstelposisie). Verwyder onmiddellik besmette klere.

INDIEN IN DIE OË:	Spoel aangetaste oë vir ten minste 15 minute met lopende water, terwyl die ooglede oopgehou word.
INDIEN INGESLUK:	Spoel mond dadelik uit en drink 200 – 300 ml water, verkry mediese hulp.
INDIEN OP DIE VEL:	Was aangetaste area dadelik deeglik met seep en water, verkry mediese hulp.
INDIEN INGEASEM:	Hou pasiënt kalm en verwyder na vars lug. Verkry mediese hulp.

Aanduiding van enige onmiddellike mediese aandag en spesiale behandeling wat nodig is

Behandeling: Behandel simptome (reinig, belangrikste funksies). Daar is geen spesifieke teenmiddel nie.

WAARSKUWING TEEN WEERSTAND

Abacus® Advance is van die Groepkodes 11 en 3 swamdoder. Enige populasie van 'n spesifieke swam mag individue insluit, wat 'n natuurlike weerstand teen Abacus® Advance, of enige ander Groepkodes 11 en 3 swamdoders het. Indien hierdie swamdoders in herhaaldelike en eksklusiewe programme aangewend word, kan die weerstandbiedende individue uiteindelik die swampopulasie oorheers. Hierdie weerstandbiedende swamme sal waarskynlik nie deur Abacus® Advance, of enige ander Groepkodes 11 en 3 swamdoders, beheer word nie.

Om weerstand teen swamdoders te vertraag:

- Verminder die eksklusiewe herhaaldelike gebruik van swamdoders in dieselfde Swamdodergroepkode. Wissel af met, of gebruik tenkingsels van produkte in verskillende Swamdodergroepkodes.
- Sien toepaslike individuele produkietikette wanneer daar afgewissel word, of tenkingsels gebruik word, met produkte in ander Swamdodergroepkodes.
- Integreer ander beheermaatreëls (chemies, verbouing, biologies), in swamdoderprogramme.

VIR SPESIEFIEKE INLIGTING OOR WEERSTANDBESTUUR, KONTAK DIE REGISTRASIEHOUER, BASF SA (Edms) Bpk.

GEBRUIKSAANWYSINGS: GEBRUIK SLEGS SOOS VOORGESKRYF

Algemene inligting:

Benewens die swamdoderende eienskap, besit **F500®**, een van die aktiewe bestanddele van **Abacus® Advance**, ook die potensiaal om plantfisiologiese effekte te verhoog, tot voordeel van die gewas. In steeds groeiende aantal gebiede, insluitende die VSA, Engeland, Europa, Brazilië en Argentinië, is **F500®** ook geregistreer en word aanbeveel as 'n plantgeneesmiddel, wat opbrengste verhoog. Plaaslike navorsing het getoon dat die gebruik van **Abacus® Advance** volgens etiketaanwysings, ook oesopbrengste kan verhoog, selfs in situasies waar daar lae siektdruk voorkom.

Rugsakspuit met handbalktoediening word nie aanbeveel nie.

Kuilvoer kan gemaak word na een toediening van **Abacus® Advance** tydens die sagte deeg stadium op melies

Verenigbaarheid:

Abacus® Advance is verenigbaar met Roundup® Powermax (L7769), **Fastac® EC** (L4991) en **Fastac® SC** (L4992). Dit word egter nog steeds aanbeveel dat die verenigbaarheid van **Abacus® Advance** eers met ander onkruidodders, insekdoders en mytdoders op 'n klein skaal getoets moet word, voordat 'n tenkingsels voorberei word.

MOENIE addisionele benatters, verspreiders of ander byvoegmiddels saam met **Abacus® Advance** gebruik nie, siende dat dit alreeds met die optimale hoeveelheid byvoegmiddels geformuleer is. Die enigste uitsondering is 'n vloeibare (50 %) hoë kwaliteit ammoniumsulfaat, in streke waar dit bekend is dat die waterkwaliteit swak is, as 'n versagter van die water, voordat **Abacus® Advance** bygevoeg word.

Menginstruksies:

Maak die spuittenk halfvol met skoon water. Meet die benodigde hoeveelheid **Abacus® Advance** af en meng dit vooraf met minstens 10 ℓ water. Voeg hierdie mengsel by die water in die spuittenk terwyl die mengsel geroer word. Vul die spuittenk met water terwyl daar nog steeds geroer word ten einde deeglike vermenging van die spuitmengsel te verseker, alvorens daar begin word met bespuiting. Handhaaf roering gedurende die hele spuitproses. Aangemaakte spuitmengsel moenie in die spuittenk gelaat word vir enige bepaalde tydperk, bv. oornag, nie.

Anti-weerstandbiedendheidsstrategie:

- Dit is belangrik dat om die doeltreffende werking van **Abacus® Advance** vir beheer te handhaaf, moet die ontwikkeling van weerstandbiedendheid van die siektes teen swamdoders van die DMI (triasool-) en QOI-swamdodergroepe voorkom word.
- Moenie die voorgeskrewe dosis, soos aanbeveel op die etiket, verlaag nie.
- Moet nooit ander triasool of DMI (triasool-) QOI-swamdodergroepe, of verwante swamdoders, in dieselfde program met **Abacus® Advance** gebruik nie.
- Moenie meer as twee **Abacus® Advance** bespuitings per seisoen, toedien nie.

Lugtoediening:

Abacus® Advance kan slegs deur 'n geregistreerde lugbespuitingsoperateur met 'n korrek gekalibreerde, geregistreerde vliegtuig volgens die instruksies van SANS Kode 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 die volgende vereistes te voldoen:

- **Volume:** 'n Spuitmengselvolume van 30 – 35 ℓ per ha 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.
- **Druppelbedekking:** 50 – 70 druppels per cm² moet op die teikenarea herwin word.
- **Druppelgrootte:** 'n Druppelspektrum met 'n VMD van 250 mikron word aanbeveel. Beperk die produksie van druppels kleiner as 150 mikron (hoë drywing en verdampingspotensiaal), tot 'n minimum.
- **Vlieghoogte:** Handhaaf die hoogte van die spuitbalk bo die teiken op 3 – 4 meter. Moenie spuit wanneer die vliegtuig duik, uitklim of draai nie.
- Gebruik geskikte atomiseringsapparaat wat die vereiste druppelgrootte en bedekking sal produseer, maar die minste verlies van produk verseker. Die spuitstelsel moet 'n druppelspektrum met die kleinste maonntlike Relatiewe Span produseer.
- Plaas al die atomiseerders in die binneste 60 – 75% van die vlerkspan om te verhoed dat druppels binne-in die vlerkpuntvorteks beweeg.
- Die verskil in temperatuur tussen die nat- en droëboltermometer van 'n swaaihigrometer, moenie 8°C oorskry nie.
- Stop bespuiting indien die windspoed 15 km/uur oorskry.
- Stop bespuiting tydens turbulente, onstabiele en droë toestande gedurende die hitte van die dag.
- Bespuiting onder temperatuur inversie toestande (deur bo of binne die inversie laag te spuit) en/of hoë lugvog toestande (relatiewe humiditeit 80% en meer) mag tot volgende probleme aanleiding gee:
 - Verlaagde effektiwiteit aangesien die druppels as 'n wolk in die lug bly hang en maonntlik verdamp (onvoldoende bedekking 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.
- Dit 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 toekomstige verwysing.

Alle toedienings moet gemaak word, met geskikte toerusting, wat in goeie werkende toestand en korrek gekalibreer is, ten einde die verlangde bedekking te gee, vir die betrokke toedieningsmetode.

GEWAS	SIEKTE	DOSIS ℓ /ha	GEBRUIKSAANBEVELINGS
GARS	Blaarvlek (<i>Rhynchosporium secalis</i>)	1,0	Dien voorkomend toe of onmiddellik sodra infeksiesimptome waargeneem word. Indien 'n hoë infeksiedruk voorkom moet 'n tweede bespuiting, 3 – 4 weke later, toegedien word. Grondtoediening: Dien in 200 – 400 ℓ water/ha toe. Lugtoediening: Dien in 30 – 40 ℓ water/ha toe.
	Bruinroes (<i>Puccinia hordei</i>)	1,0	Dien sodra infeksie waargeneem word toe en herhaal 3 – 4 weke later indien nodig. Grondtoediening: Dien in 200 – 400 ℓ water/ha toe. Lugtoediening: Dien in 30 – 40 ℓ water/ha toe.
	Netvlek (<i>Pyrenophora teres</i>)	1,0	Dien voorkomend toe of onmiddellik sodra infeksiesimptome waargeneem word. Herhaal 3 – 4 weke later. Grondtoediening: Dien in 200 – 400 ℓ water/ha toe. Lugtoediening: Dien in 30 – 40 ℓ water/ha toe.
	Poeieragtige skimmel (meeldou) (<i>Erisiphe graminis</i>)	1,0	Dien sodra infeksie waargeneem word toe en herhaal 3 – 4 weke later indien nodig. Grondtoediening: Dien in 200 – 400 ℓ water/ha toe. Lugtoediening: Dien in 30 – 40 ℓ water/ha toe. Moenie meer as twee Abacus® Advance bespuitings per seisoen, toedien nie.
KORING	Vaalblaar en Bruinaarsiekte (<i>Septoria</i> spp.)	1,0	Begin spuit sodra infeksiesimptome waargeneem word, maar nie later as die ontwikkeling van die vlagblaar nie. Indien 'n hoë infeksiedruk voorkom, moet 'n tweede bespuiting 3 – 5 weke later toegedien word. Grondtoediening: Dien in 200 – 400 ℓ water/ha toe. Lugtoediening: Dien in 30 – 40 ℓ water/ha toe.
	Bruinroes (<i>Puccinia triticina</i>)		
	Stamroes (<i>Puccinia graminis</i>)		
	Poeieragtige skimmel (meeldou) (<i>Erisiphe graminis</i>)		
	Geelroes (Streeproes) (<i>Puccinia striiformis</i>)		

GEWAS	SIEKTE	DOSIS ℓ /ha	GEBRUIKSAANBEVELINGS
MIELIES en SUIKERMIELIES	Grysblaarvlek (<i>Cercospora zeina</i>) Noordelike blaarskroei (<i>Exserohilum turcicum</i>) Roes (<i>Puccinia sorghi</i>)	1,6	<p>Abacus® Advance word as 'n geïntegreerde siektebeheerprogram aanbeveel. Bestendige en betroubare siektebeheer is afhanklik van voorbehoedende swamdoder-toedienings.</p> <p>Dien die eerste Abacus® Advance toediening op groeistadium 31 (eerste knoop sigbaar bo die grondoppervlak, ook die 5 – 6 blaarstadium genoem) toe. 'n Tweede toediening van Abacus® Advance word met groeistadium 51 (pluim sigbaar) aanbeveel. Indien verlengde siektebeheer benodig word gedurende aanhoudende hoë siektedruk, word dit aanbeveel dat 'n derde bespuiting met Duett® (L5791) 3 – 4 weke later toegedien word.</p> <p>In sekere areas/omstandighede waar lae siektedruk ver wag word, moet Abacus® Advance tussen groeistadium 31 (eerste knoop sigbaar bo die grondoppervlak, ook die 5 – 6 blaarstadium genoem) en groeistadium 35 (8-blaarstadium) toegedien word. Groeistadium 35 word gesien as die laaste maontlike stadium waar die land gespuit kan word met 'n konvensionele trekker. Indien verlengde siektebeheer vereis word, moet terug verwys word na bogenoemde opvolgbespuiting van Abacus® Advance.</p> <p>Die volgende faktore verhoog hoë siektedruk:</p> <ul style="list-style-type: none"> • Volgehoue voordelige klimaatstoestande vir swamontwikkeling. • Digtheid van aanplanting. • Bron van innokulum (veral met minimum bewerking). • Siektevatbaarheid van die variëteit/hibried aangeplant. • 'n Vertraging in aanvang van die swamdoderprogram. <p>Grondtoediening: Dien as 'n volbedekking in 150 – 300 ℓ water/ha toe. Gebruik kwaliteit toerusting wat goed onderhou word en 'n fyn eweredige spuitpatroon op die plante lewer.</p> <p>Lugtoediening: Soos aanbevelings hierbo, in ten minste 40 ℓ water/ha.</p> <p>Rytoediening vir laedigheid aanplantings: Hierdie dosis is gebasseer op algehele grondtoediening van 1,6 ℓ/ha in 300 ℓ water/ha.</p> <p>Dien met 'n tandem passing toe met twee solied- of holkeëlsputpunte wat bo-oor elke ry gemonteer is. Gebruik genoeg water (nie minder as 100 ℓ/ha nie) om te verseker dat die hele plant bedek word.</p> <p>Moenie meer as twee Abacus® Advance bespuitings per seisoen, toedien nie</p>
SOJABONE	Sojaboonroes (<i>Phakopsorapachyrhizi</i>)	1,0	<p>Dien, as 'n voorkomende behandeling toe voor die eerste simptome gewaar word (normaalweg met begin blom) en herhaal 21 – 28 dae later. Wanneer weerstoestande bevorderlik is vir die ontwikkeling van 'n hoë siektedruk, moet 'n korter spuitinterval van drie weke gespuit word.</p> <p>Hierdie program sal ook <i>Sclerotinia sclerotiorum</i>, onderdruk.</p> <p>Grondtoediening: Dien as 'n volbedekking in 150 – 300 ℓ water/ha toe. Gebruik kwaliteit toerusting wat goed onderhou word en 'n fyn eweredige spuitpatroon op die plante lewer.</p> <p>Lugtoediening: Soos aanbevelings hierbo, in ten minste 40 ℓ water/ha.</p>

GEWAS	SIEKTE	DOSIS ℓ /ha	GEBRUIKSAANBEVELINGS
SUIKERRIET	Bruinroes (<i>Puccinia melanocephala</i>) Taanroes (<i>Puccinia spp.</i>) Sien Nota hieronder	1,6	Dien twee bespuitings toe. Dien die eerste Abacus® Advance toediening, as 'n voorkomende behandeling op die 4 – 6 blaarstadium toe, of met die eerste tekens van bruinroesinfeksie. Dien die tweede bespuiting, 'n maand later toe. Voorkomende beheer van Taanroes, word ten sterkste aanbeveel. Dit is 'n siekte wat vining ontwikkel en genesende toediening mag nie altyd die gewenste beheer lewer nie. Grondtoediening: Dien as 'n volbedekking in 200 ℓ water/ha, toe. Lugtoediening: Dien in 30 ℓ water/ha toe.

Nota:

- Taanroes (voorheen na verwys as Afrikaroes) kan voorkom in al die suikerrietproduksiegebiede van Suid-Afrika. Beskrywing van die spesie word tans onderneem. Die roes toon unieke simptome en kan maklik onderskei word van bruinroes op grond van die volgende sigbare eienskappe:
 - Die roespuisies vertoon oranje in kleur, sodra hulle oopbars.
 - Die roespuisies kom voor op beide die bo- en onderkant van die blaar.
- Hewige infeksie deur Taanroes is aangeteken op die variëteite N25 en N46 en die siekte is ook al waargeneem op N12, N31, N41, N43, N46, N49, N53.

Verkoopsvoorwaardes en Waarborg

Die **GEBRUIKSAANWYSINGS** van hierdie produk weerspieël die opinie van kundiges, gebaseer op gebruik in die veld en in proewe. Die aanwysings word as betroubaar geag en moet noukeurig nagekom word. Dit is egter onmoontlik om alle risiko's wat inherent met die gebruik van hierdie produk geassosieer word, uit te skakel. Gewasskade, oneffektiwiteit of ander onopsetlike gevolge mag voorkom as gevolg van faktore soos weerstoestande, teenwoordigheid van ander materiale, of wanneer die produk op 'n wyse wat teenstrydig met die etiket is, gebruik word; dit alles is buite die beheer van BASF Suid-Afrika (Edms) Bpk ("BASF") of die Verkoop. In die mate waarin dit in ooreenstemming met toepaslike wetgewing is, sal alle risiko's deur die Koper aanvaar word.

BASF waarborg dat hierdie produk aan die vereistes van die chemiese beskrywing op die etiket voldoen, en is redelikerwys geskik vir die gebruikdoeleindes soos uiteengesit in die **GEBRUIKSAANWYSINGS**, onderhewig aan die inherente risiko's, soos hierbo na verwys.

IN DIE MATE WAT DIT MET TOEPASLIKE WETGEWING OOREENSTEM, GEE BASF GEEN ANDER UITDRUKKING OF GEÏMPLISEERDE WAARBORG VAN GESKIKTHEID OF VERKOOPSVERNUF OF ENIGE ANDER UITDRUKKING OF GEÏMPLISEERDE WAARBORG NIE.

IN DIE MATE WAT DIT MET TOEPASLIKE WETGEWING OOREENSTEM, SAL DIE KOPER SE UITSLUITLIKE REGSMIDDEL EN BASF SE UITSLUITLIKE AANSPREEKLIKHEID, HETSY IN KONTRAK, ONREGMATIGHEID, NALATIGHEID, STRENG AANSPREEKLIKHEID, OF ANDERSINDS, BEPERK WORD TOT TERUGBETALING VAN DIE AANKOOPPRYS VAN DIE PRODUK.

IN DIE MATE WAT DIT MET TOEPASLIKE WETGEWING OOREENSTEM, DOEN BASF EN DIE VERKOPER, AFSTAND VAN ENIGE AANSPREEKLIKHEID TEN OPSIGTE VAN VOORTSPRUITENDE SKADE, SKADEVERGOEDING, SPESIALE OF INDIRECTE SKADE, UIT DIE GEBRUIK OF HANTERING VAN HIERDIE PRODUK.

BASF en die Verkoop bied hierdie produk aan, en die Aankoper en Gebruiker aanvaar dit, onderhewig aan die voorafgaande **Verkoopsvoorwaardes en Waarborg**, wat slegs gewysig mag word deur 'n skriftelike ooreenkoms, wat na behore deur 'n gemagtigde verteenwoordiger van BASF onderteken is.

Duett®, Fastac® EC, Fastac® SC en F500® is Geregisteerde Handelsmerke van BASF. Roundup® Powermax is 'n Geregisteerde Handelsmerk van Monsanto SA (Edms) Bpk.

BASF
We create chemistry

Abacus® Advance

Reg. No. L9132; N-AR 0950;

Act No. 36 of 1947

READ ATTACHED PACKAGE OR LEAFLET BEFORE USE
KEEP OUT OF REACH OF CHILDREN AND ANIMALS

GROUP	3	11	FUNGICIDES
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A suspo-emulsion contact and translaminar fungicide for the preventive control of diseases on barley, maize, soya beans, sugarcane and wheat.

'n Suspo-emulsie kontak- en translaminêre swamdoder vir die voorkomende beheer van siektes op gars, koring, mielies, sojabone en suikerriet



DANGER

Causes mild skin irritation. Harmful if inhaled.
Toxic if swallowed.
May cause an allergic skin reaction. Suspected of causing cancer.
Suspected of damaging fertility. Suspected of damaging the unborn child.
Very toxic to aquatic life with long lasting effects.
Wear protective gloves, protective clothing and eye protection or face protection.
Do not breathe mist or vapour.

Active ingredients:
Aktiewe bestanddele:

Pyraclostrobin (methoxy-carbamate)... 62,5 g/l
Epoxiconazole (triazole)... 62,5 g/l

Registered by:

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