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APPROVED
By Emmanuel Simwinga at 8:42 am, Feb 06, 2020

Abacus® Advance

A suspo-emulsion of a systemic fungicide for the preventive control of diseases on barley, maize, soyabeans, sugarcane and wheat.

GROUP	3	11	FUNGICIDES

Active ingredients:
Pyraclostrobin 62.5g/L
Epoxiconazole 62.5g/L

HAZARD STATEMENT
Causes mild skin irritation.
Toxic if swallowed.
Very toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS
Wear protective gloves/clothing.
Do not breathe mist or vapour.
Do not eat, drink or smoke when using this product.
Wash contaminated body parts throughly after handling.

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Manufactured by:
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ZEMA PRODUCT NUMBER: .

NET VOLUME:

10 L

® = Registered trademark of BASF

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DANGER

READ THE LABEL BEFORE USING THE PRODUCT

WARRANTY: 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 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, weed or 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 the failure of the user to follow the label instructions or the occurrence of conditions which could not have been foreseen in terms of the registration. Consult the supplier in the event of any uncertainty.

WARNINGS:

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

CROP	DAYS
Barley	70
Maize and Sweet corn	30
Soya beans	39
Sugarcane	60
Wheat	60

- Handle with care.
- Harmful if swallowed.
- May cause skin sensitization.
- Toxic to fish.
- Keep out of reach of children, uninformed persons and animals.
- Harmful to the unborn child
- Store away from food and feed.
- Re-entry: Do not enter treated field within 2 days after application, unless wearing protective clothing.
- Do not graze treated barley, maize, sweet corn or soya bean fields or use as fodder before 70days.

PRECAUTIONS:

- Do not inhale spray mist.
- Wear rubber gloves and boots and face shield when handling concentrate and whilst applying.
- Wash after accidental skin contact.
- Do not eat, drink or smoke whilst mixing and applying or before washing hands and face.
- 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, razing, 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.

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.

FIRST AID MEASURES

Remove contaminated clothing and seek medical advice.
Have the product label/container with you when calling the Doctor.
First Aid providers must wear protective clothing to prevent exposure.
If Inhaled: Keep patient calm, remove to fresh air and seek medical attention.
On skin contact: After contact with skin, wash immediately with plenty of water and soap. If irritation develops, seek medical attention.
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: Do not induce vomiting unless told to by a poison control center or doctor.
Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions.
Rinse mouth and then drink plenty of water.
Seek medical attention.
Note to physician: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

DIRECTIONS FOR USE: USE ONLY AS DIRECTED

COMPATIBILITY:

- The compatibility of Abacus® Advance has been proven with most commonly used pesticides. It is however always recommended that the compatibility of Abacus® Advance with other pesticides have to be tested on a small scale, before used in spray mixtures.
- When tank mixes are to be used, take due note of any instructions given on the respective labels.
- Do not tank mix with organophosphate insecticides.

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 Imiboost in regions where water quality is known to be poor. The only exception is where water quality is [poor, a flowable (50%) high quality ammonium sulphate at a 2% dilution (see applicable label) 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 premix this with at least 10L 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.

RESISTANCE MANAGEMENT:

For resistance management, Abacus® Advance is a Group Code 3 & 11 fungicide. Any fungal population may contain individuals naturally resistant to Abacus® Advance and other Group Code 3 & 11 fungicides.
The resistant individuals can eventually dominate the fungal population if these fungicides are used repeatedly and exclusively in programs. These resistant fungi may not be controlled by Abacus® Advance or any other Group Code 3 & 11 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. 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 applicable individual product labels. For tank mixing or alternation with products in other Fungicide Group Codes, refer to applicable individual product labels.
- Integrate other control methods (chemical, cultural, biological) into disease control programmes. Integrate other control methods (chemical, cultural, biological) into disease control programmes.

FOR SPECIFIC INFORMATION ON RESISTANCE MANAGEMENT, CONTACT THE REGISTRATION HOLDER

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 strobilurin groups.
- Do not reduce the dose rate below what is recommended on the label.
- Never use other DMI (triazole-) or strobilurine fungicides, or related fungicides, in the same programme with Abacus® Advance.
- Do not exceed two applications of Abacus® Advance per season. Do not exceed two applications of Abacus® Advance per season.

GENERAL INFORMATION:

Apart from fungicidal activity, Pyraclostrobin, 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, Pyraclostrobin 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 with low disease pressure occur.

APPLICATION INSTRUCTIONS:

Aerial application:

- Aerial application of Abacus® Advance may only be done by a registered aerial application operator using a correctly calibrated, registered aircraft. 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 40L 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 aerially at a lower volume rate than recommended above.
- Droplet coverage: 50 to 70 droplets per cm^2 must be recovered at the target area.
- Droplet size: A droplet spectrum with a VMD of 250 micron is recommended. Limit the production off 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 to 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 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.

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.

APPLICATION RATES

CROP	DISEASE	DOSAGE RATE	DIRECTIONS FOR APPLICATION
BARLEY	Leaf spot (*Rhynchosporium secalis*)	1.0L/ha	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:** Applying 200–400L water/ha. Apply in 30-40L water/ha.
	Leaf rust (*Puccinia hordei*)	1.0L/ha	Apply as soon as infection is noticed and repeat if necessary 3 – 4 weeks later. **Ground application:** Applying 200–400L water/ha. **Aerial application:** Apply in 30-40L water/ha.
	Net blotch (*Pyrenophora teres*)	1.0L/ha	Apply preventively or at very first signs of disease presence. Repeat the application 3 – 4 weeks later. **Ground application:** Applying 200–400L water/ha. **Aerial application:** Apply in 30-40L water/ha.
	Powdery mildew (*Erisiphe graminis*)	1.0L/ha	Apply as soon as infection is noticed and repeat if necessary 3-4 weeks later. **Ground application:** Applying 200–400L water/ha. **Aerial application:** Applyin30-40L water/ha.
MAIZE and SWEET CORN	Grey leaf spot (*Cercospora zeina*) Northern leaf blight (*Exserohilum turcicum*) Rust (*Puccinia sorghi*)	1.6L/ha 550ml/100L water	Apply the first application of Abacus® Advance at between 4-6 weeks after planting (5–8 leaf stage). A second application of Abacus® Advance is recommended at 21 days or just before tasselling (growth stage 51). If extended disease control is required under continued high disease pressure conditions, a third application with Rex® Duo is recommended, 3 – 4 weeks later. **Ground application:** Apply as a full cover spray in 300–500L water/ha. **Aerial application:** As for recommendations above in 40L water/ha. **Row application:** for low density plantings: This dosage is based on an overall ground application of 1.6L/ha, in 300L water/ha. Do not exceed two applications of Abacus® Advance per season. Row application for low population planting
SOYA BEANS	Soya bean Rust (*Phakopsora pachyrhizi*) Frog eye leaf spot (*Cercospora sojina*) Red leaf Blotch (*Pyrenochaeta glycines*)	1.0L/ha	Spray preventively before first signs of disease development are noticed (normally at onset of flowering) and repeat 21–28 days later. Apply the shorter interval of 21 days when high disease pressure is expected due to weather conditions that favour disease development. **Ground applic**ation: Apply as a full cover spray in 300–500L water/ha. Aerial application: As for recommendations above in 40L water/ha.

CROP	DISEASE	DOSAGE RATE	DIRECTIONS FOR APPLICATION
SUGAR CANE	Brown rust (*Puccininia melanocephala*) Tawny Rust (*Puccinia spp*.)	Two applications of 1.6L/ha each	Apply the first application at 4 weeks after planting /ratoon (4-6 leaf stage) and do the second application 4 weeks after the first application. **Ground application:** Applying 200–400L water/ha. **Aerial application:** Apply in 30-40L water/ha.
WHEAT	Rust (*Puccinia recondita)* Septoria leaf blotch (*Septoria tritici*) Glume Blotch (*Septoria Spp*) Powdery mildew (*Erysiphe graminis f. sp. tritici*) Yelow rust (*Puccinia striformis*)	Two applications of 1.0L/ha each	Commence spraying when the first node is above ground (GS31/33 Zadocks scale) or at first sign of infection. Apply a second application 3 – 4 weeks later If high disease pressure occurs apply a third application of Osiris. **Ground application:** Applying 200–400L water/ha. **Aerial application:** Apply in 30-40L water/ha.