READ THE LABEL (AND LEAFLET) BEFORE USE
KEEP LOCKED AWAY AND OUT OF REACH OF CHILDREN

Artea®

syngenta

Reg. No. **L6820** Act No. 36 of 1947 **N-AR 1013** (Namibia) **W130355** (Botswana)

An emulsifiable concentrate systemic fungicide for the preventative control of different diseases in crops as listed.

GROUP	3	FUNGICIDE

Active ingredients:
propiconazole (triazole)..... 250 g/ℓ
cyproconazole (triazole)..... 80 g/ℓ

DANGER

Hazard statements: Causes serious eye irritation. May damage the unborn child. Suspected of damaging fertility. May cause damage to organs (liver) through prolonged or repeated exposure. Very toxic to aquatic life with long-lasting effects.
Precautionary statements: Prevention: Obtain special instructions before use. Wear protective gloves/protective clothing/eye protection/face protection/hearing protection. **Response:** If exposed or concerned, get medical advice/attention. If eye irritation persists, get medical advice/attention. Collect spillage. **Storage:** Store locked-up. **Disposal:** Dispose of contents/container to an approved waste disposal plant.

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1. WARNINGS:

Hazard statements: Causes serious eye irritation. May damage the unborn child. Suspected of damaging fertility. May cause damage to organs (liver) through prolonged or repeated exposure. Very toxic to aquatic life with long-lasting effects.

Withholding periods: Minimum number of days between last application and harvest (grazing) of the crops listed below.

BARLEY AND WHEAT.....	**63 days**
GRAIN SORGHUM.....	**21 days** (3 months for grazing)
MAIZE AND SWEETCORN.....	**21 days** (*grazing restriction)
OATS.....	**30 days**
SOYBEANS.....	**40 days**

* Maize and sweetcorn: Allow three (3) months before grazing when low dosage is applied and four (4) months when higher dosage rate is applied.

NOTE: Compliance with these withholding periods will ensure that residues do not exceed local maximum residue limits (MRL).

- Harmful if swallowed, inhaled, or absorbed through the skin.
- Irritating to skin and eyes.
- Toxic to fish and wildlife.
- Store in a cool place.
- Store away from food and feed.
- Keep out of reach of children, uninformed persons and animals.
- **Flammable:** Keep away from open flames and sparks.
- **Re-entry:** Do not enter treated area until 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 warnings. Do not spray over or allow drift to contaminate water or adjacent areas.

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 weed 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 and the environment, or harm to people or animals 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, that could not have been foreseen in terms of the registration. Consult the supplier in the event of any uncertainty.

2. PRECAUTIONS:

Precautionary statements: Prevention: Obtain special instructions before use. Wear protective gloves/protective clothing/eye protection/face protection/hearing protection. **Response:** If exposed or concerned, get medical advice/attention. If eye irritation persists, get medical advice/attention. Collect spillage. **Storage:** Store locked-up. **Disposal:** Dispose of contents/container to an approved waste disposal plant.

- Do not inhale the spray mist.
- Avoid contact with skin and eyes.
- Wash with soap and water after use.
- Wash contaminated clothing after use.
- Do not eat, drink, or smoke while mixing or applying the product or before washing hands and face.
- Avoid spray drift onto other crops, grazing, rivers, dams and areas not under treatment.
- Clean the applicator thoroughly after use. Dispose of rinsate where it will not contaminate crops, grazing, rivers, dams and boreholes.
- Prevent contamination of food, feed, drinking water and eating utensils.
- Triple rinse the empty container in the following manner: Invert the empty container over the spray tank and allow to drain for 30 seconds after the flow has slowed

- down to a drip. Thereafter rinse the empty container three (3) times with a volume of clean water equal to a minimum of 10% of that of the container. Add the rinsate to the contents of the spray tank before destroying the container in the prescribed manner.
- Do not use the empty container for any other purpose.

3. RELEVANT SUBSTANCES:

Chemical name	
tetrahydro-2-furyl-methanol	
Classification	**Concentration (% w/w)**
Eye Irrit. 2; H319 Repr. 1B; H360Df	≥ 50 - < 70
Chemical name	
propiconazole (ISO)	
Classification	**Concentration (% w/w)**
Acute Tox. 4; H302 Skin Sens. 1; H317 Repr. 1B; H360D Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 1	≥ 2,5 - < 10

4. RESISTANCE MANAGEMENT:

ARTEA is a demethylation inhibiting (DMI) fungicide in group code 3. Any fungus population may contain individuals naturally resistant to **ARTEA** and other group code 3 fungicides. The resistant individuals can eventually dominate the fungus population if these fungicides are used repeatedly and exclusively in programs. These resistant fungi may not be controlled by **ARTEA** or any other group code 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.
- Refer to individual product labels when alternating products or when using tank mixtures.
- Integrate other control methods (chemical, cultural, biological) into disease control programs.

For specific information on resistance management contact the registration holder of this product (Syngenta South Africa) or visit the FRAC website at http://www.frac.info/frac/index.html.

4.1 General

- **ARTEA should always be applied preventatively** as prescribed in the recommendations table.
- **ARTEA** must be applied as a full-cover spray.
- Always use the dosage rates recommended on the label.
- Never use **ARTEA** as a corrective or curative application or after an unsuccessful application of any product.

5. USE RESTRICTIONS:

The uptake and activity of systemic compounds may be reduced when crops are under severe drought and/or fertility stress conditions. It is therefore not advisable to apply **ARTEA** during such periods. If in doubt, consult a representative of Syngenta or distributor.

6. PRODUCT PROPERTIES:

Both active ingredients, cyproconazole and propiconazole, are absorbed by the assimilating parts of the plant, the majority within one (1) hour. They are transported acropetally (upwards) in the xylem. This systemic translocation contributes to good distribution of the active ingredients within the plant tissue and prevents them from being washed off.

7. DIRECTIONS FOR USE: Use only as indicated.

7.1 Compatibility

The compatibility of **ARTEA** with other products may be influenced by the formulation of the products involved as well as the quality of the dilution water. Since the formulation of other products may change without the knowledge of Syngenta and the quality of water may vary from farm to farm, a compatibility test should always be carried out prior to application. **ARTEA** is compatible with most commonly used fungicides, insecticides and foliar feeds normally used in the various crops.

7.2 Mixing Instructions

Replace cap after use.

- Fill ¼ - ⅓ of the spray tank with clean water, start agitation and add the calculated and measured quantity of product.
- Continue to fill the spray tank while continuing agitation. When filling the spray tank, the filling hose should always be above water level in order to prevent back-siphoning.

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

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

7.3 Application

Influence of rain on application: Should it rain within two (2) hours after application, the application must be repeated.

7.3.1 Ground application

ARTEA may be applied with conventional high-volume spray equipment. Calibrate the apparatus before application to ensure that the correct dosage is applied. The distribution of the spray mixture must be uniform throughout the target area.

Ensure good coverage of the whole plant (the stems and leaves) by using enough water and suitable spraying equipment.

7.3.2 Aerial application

Avoid chemical drift at all times.

Aerial application of this product may only be done by a registered aerial application operator using a correctly calibrated, registered aircraft according to the instructions of SANS 10118 (Aerial Application of Agricultural Remedies). It is important to ensure that the spray mixture is distributed evenly over the target area and that the loss of spray material during application is restricted to a minimum. It is therefore essential that the following criteria are met:

a) Application parameters:

- **Volume:** A volume of 30 - 40 ℓ/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 the product is applied aerially at a lower volume rate than recommended above.
- **Droplet coverage:** A droplet coverage of 25 - 30 droplets per cm^2 must be recovered at the target.
- **Droplet size:** A droplet spectrum with a VMD of 280 - 300 microns is recommended. Ensure that the production of fine droplets (less than 150 microns - high drift and evaporation potential) is restricted to a minimum.
- **Flying height:** The height of the spray boom should be maintained at 3 - 4 metres above the target. Do not spray when aircraft is in a climb, at the top, during a dive, or when banking.

b) Equipment:

- Use suitable atomising equipment (hydraulic nozzles or rotary atomisers) that will produce the desired droplet size and coverage but which will ensure the minimum loss of product either through endodrift (within target field) or exodrift (outside target field).
- The operator must use a set-up that will produce a droplet spectrum with the lowest possible relative span.
- All nozzles/atomisers should be positioned within the inner 60 - 75% of the wingspan to prevent droplets from entering the wingtip vortices.

c) Meteorological conditions:

- The difference in temperature between the wet and dry bulb thermometers, of a whirling hygrometer, should not exceed 8°C. The addition of a suitable anti-evaporant is recommended if the VMD of the droplets is less than 200 - 250 microns.
- Only spray if the wind speed is between 5 - 15 km/h.
- Aerial application of this product must not be done under turbulent, unstable conditions during the heat of the day when rising thermals and downdraughts occur.
- Also note that the application of this product under temperature inversion conditions (spraying in, or above the inversion layer) 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 the movement of the suspended spray cloud away from the target field.
- Under the following climatic conditions drift could occur more than 3 - 5 km from the nearest spray path of the aircraft:
  - Cloudy weather with relative humidity above 80% and low air movement of less than 5 km per hour. When such conditions prevail, aerial application should **NOT** be carried out.

Ensure that the aerial spray operator knows which fields to spray. Supply the precise identification to the operator of the fields to be sprayed preferably by means of a map or GPS coordinates. Indicate to the operator adjacent environmental sensitive areas or sensitive neighbouring crops, beehives or water sources that could be affected by the pesticide.

Obtain 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.

8. RECOMMENDATIONS:

For the best results, study the sections under 4 and 7 thoroughly.

BARLEY AND WHEAT

Crop/Disease	**Dosage**
BARLEY **Leaf spot** (*Rhynchosporium secalis*) **Net blotch** (*Pyrenophora teres*) **Leaf rust** (*Puccinia hordei*) **Powdery Mildew** (*Erysiphe graminis*)	**Ground and aerial application** 400 - 500 mℓ/ha
Remarks • If infection appears early in the season apply at a rate of 400 mℓ/ha. Do not apply later than the 6-leaf stage (37 - 51 BBCH). • Follow-up with a spray at flag leaf appearance at a rate of 400 or 500 mℓ/ha depending on the prevalent weather conditions. • Apply the higher rate when weather conditions favour disease development. • For a single application, apply 500 mℓ/ha at flag leaf stage.	
WHEAT **Eyespot** (*Pseudocercosporella herpotrichoides*)	**Ground and aerial application** 500 mℓ/ha
Speckled leaf blotch (*Septoria tritici*) **Glume blotch** (*Septoria nodorum*) **Powdery mildew** (*Erysiphe graminis*) **Leaf rust** (*Puccinia recondita*) **Stem rust** (*Puccinia graminis*) **Yellow/stripe rust** (*Puccinia striiformis*)	**Ground and aerial application** 400 - 500 mℓ/ha
Remarks **Eyespot:** • Apply during the stem elongation stages up to the formation of the second node (BBCH 29 - 32).	

WHEAT cont.

- Do not apply after BBCH 32.

Speckled/glume blotch and powdery mildew:

- Apply 400 mℓ/ha using the third leaf as indicator when not more than 5% of the leaf surface is infected.
- Optimum time for this application is at the 6-leaf stage (BBCH 37 - 51).
- Where a second application is justified a dosage rate of 400 mℓ/ha is recommended for ground and aerial applications, usually around flag leaf stage.
- For a single application, use the higher rate of 500 mℓ/ha at flag leaf stage.

Leaf rust, stem rust, yellow/stripe rust:

- Apply at first signs of the disease. In the case of yellow/stripe/stem rust, repeat application three (3) weeks later if conditions favour disease development.

FORESTRY

Disease	Dosage
Wattle (*Acacia* spp.) **Rust** (*Uromycladium* spp.)	**Ground and aerial application** 500 - 1 000 mℓ/ha

Remarks

- Apply two (2) consecutive sprays 21 - 28 days apart when conditions are favourable for disease development (e.g., humid conditions in early spring).
- Do not exceed four (4) applications of **ARTEA** per season.

Spray volume

- **Ground application:** 250 - 1 000 ℓ water/ha
- **Aerial application:** 30 - 40 ℓ water/ha

GRAIN SORGHUM

Disease	Dosage
Northern corn leaf blight (*Exserohilum turcicum*) **Rust** (*Puccinia* spp.)	**Ground and aerial application** 500 mℓ/ha

Remarks

- Apply preventatively or at the first signs of disease and repeat 21 days later. Do not extend the spray interval beyond 28 days.
- A silicone-based adjuvant or wetter could be added at the recommended rate to increase product effectiveness.
- For season long control of foliar diseases, it is important that a spray program be used.
- Do not apply more than two (2) applications of **ARTEA** to grain sorghum in the same season.

Spray volume

- **Tractor application:** 250 - 450 ℓ water/ha
- **Aerial application:** 30 - 40 ℓ water/ha
- **Knapsack sprayer application:** 60 - 70 ℓ water/ha

MAIZE AND SWEETCORN

Crop/Disease	Dosage
MAIZE **Northern corn leaf blight** (*Exserohilum turcicum*) **Rust** (*Puccinia sorghi*) **Grey leaf spot** (*Cercospora zeae-maydis*)	**Ground and aerial application** 500 - 750 mℓ/ha **or** 4.5 - 6.8/100 m row

MAIZE AND SWEETCORN cont.

Crop/Disease	Dosage
SWEETCORN **Northern corn leaf blight** (*Exserohilum turcicum*) **Rust** (*Puccinia sorghi*)	**Ground and aerial application** 500 - 750 mℓ/ha **or** 4.5 - 6.8/100 m row

Remarks

- Start application **before** 3% of the total leaf shows disease symptoms **OR** when symptoms are present on the basal 3 - 5 leaves.
- It is vitally important that applications are purely preventative, i.e., applications are made timeously, for effective disease control.
- Applications must be made at 21 - 28-day intervals. Use the shorter application interval if disease pressure is high.
- With short season hybrids when the first spray is applied after pollination, it will probably be sufficient to control the disease (further sprays may not be necessary).
- For improved control, 500 mℓ/ha mineral oil, e.g., BP Crop Oil may be added to the tank mix.
- For season-long control of foliar diseases, it is important that a spray program be used.
- Do not apply more than two (2) applications of **ARTEA** to maize or sweetcorn in the same season.

Spray volume

- **Tractor application:** 250 - 450 ℓ water/ha
- **High clearance tractor application:** 150 - 300 ℓ water/ha
- **Aerial application:** 30 - 40 ℓ water/ha
- **Knapsack sprayer application:** 60 - 70 ℓ water/ha

OATS

Disease	Dosage
Rust (*Puccinia* spp.) **Powdery mildew** (*Erysiphe graminis*)	**Ground and aerial application** 400 - 500 mℓ/ha

Remarks

- Apply preventatively, or at the first signs of disease and repeat 21 days later. Do not extend the spray interval beyond 28 days.
- If weather conditions favour disease development (temperatures of 15 - 28°C and high humidity) use the shorter interval.
- For season-long control of foliar diseases, it is important that a spray program be used.
- Use an appropriate water volume to ensure complete coverage.
- Do not apply more than two (2) applications of **ARTEA** in the same season.

Spray volume

OATS cont.

- **Tractor application:** 200 - 400 ℓ water/ha
- **Aerial application:** Minimum 30 - 40 ℓ water/ha

SOYBEANS

Disease	Dosage
Soybean rust *(Phakopsora pachyrhizi)*	**Ground and aerial application** 500 mℓ/ha

Remarks

- Apply at first signs of disease or at flowering if no disease is present and repeat 14 - 21 days later. Do not extend the spray interval beyond 21 days.
- If weather conditions favour disease development (temperatures of 15 - 28 °C and high humidity) use the shorter interval.
- For season-long control of foliar diseases, it is important that a spray program be used.
- If the disease appears before or during flowering, more than one (1) spray may be necessary.
- Should the disease appear late in the growing season, a single application will be sufficient.
- Do not apply more than two (2) applications of **ARTEA** to soybeans in the same season.

Spray volume

- **Tractor application:** 300 - 400 ℓ water/ha
- **Aerial application:** 30 - 40 ℓ water/ha

BBCH: Lancashire, P.D. ***et. al.*** (1991). A uniform decimal code for growth stages of crops and weeds. Ann. Appl. Biol. **119**: 561 - 601.

SA Reg.: 2014-12-01