

L1063119 ZAMB/05Y PPE 4121978



Cherokee®

syngenta.

KEEP LOCKED UP OUT OF REACH OF CHILDREN

HARMFUL IF SWALLOWED

Before opening the container, read the safety advice

Shelf life:

At least 2 years from date of manufacturing, in original unopened containers stored in a cool dry well ventilated place.

Batch No. / Date of manufacture:

Please refer to Inkjet print.

Emergency Call Number:

Swiss Toxicological Information Centre
(24 h) +41 44 251 51 51



5 Litres

Product names marked ® or TM, the ALLIANCE FRAME the SYNGENTA Logo and the PURPOSE ICON are Trademarks of a Syngenta Group Company



WARNING



WARNINGS

Allow the following number of days between last application and harvest (or animal grazing) of the crops listed below:

Barley and wheat: 63 days.

- 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 with non-DMI fungicides may delay resistant strain build-up.

Although this remedy has been extensively tested under a large variety of conditions, the registration holder does not guarantee that it will be effective under all conditions. The activity 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 pathogen against the remedy, 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 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.
- Avoid contact with skin and eyes.
- Wash with soap and water after use.
- Wash contaminated clothing after use.
- Do not eat, drink or smoke whilst mixing or applying the product or before washing hands and face.
- Wear protective clothing, i.e. for preparation: impermeable gloves, solid footwear, overalls and eye / face protection, for application: overalls, hat or cap, and solid footwear.
- Avoid spray drift onto other crops, grazing, rivers, dams and areas not under treatment.
- Clean the applicator 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.
- Rinse the empty container three 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.
- Contains propiconazole. May produce an allergic reaction.
- Do not use the empty container for any other purpose.

FIRST AID

If poisoning is suspected, stop work immediately and call a physician. Show label to the physician. In case of contact with skin, remove contaminated clothing, wash the affected body parts immediately with plenty of water and soap. Rinse splashes from eyes with abundant fresh and clean water for several minutes. If inhaled move to clean air. If swallowed, repeatedly administer medicinal charcoal in plenty of water. Seek medical advice if large volume of concentrate was ingested.

Note: Never give anything by mouth to an unconscious patient and do not induce vomiting.

RESISTANCE MANAGEMENT

Cherokee® contains both sterol biosynthesis inhibitors (SBI) and phthalonitrile fungicides. Cherokee® has systemic and preventative properties for control of a wide range of diseases on all commercial varieties of wheat and barley. SBI's inhibit ergosterol biosynthesis and cell wall production. The mode of action is different from other fungicides and there is no known cross resistance to this mode of action in pathogens that have developed reduced sensitivity to other fungicide groups. Chlorothalonil is a multi-site fungicide and shows no cross resistance to other fungicide groups.

Caution: The possible development of resistance to Cherokee® cannot be predicted. Should it occur Cherokee® may not give satisfactory control and no responsibility can be accepted for any loss incurred.

Treatment at early stages of disease development will ensure the best results.

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 with products in fungicide group codes 7, 27, 28, 29, 30 and M.
- Integrate other control methods (chemical, cultural, biological) into disease control programs.

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 severe drought and / or fertility stress conditions. It is therefore not advisable to apply Cherokee® during such periods. If in doubt, consult a representative of Syngenta or distributor.

PRODUCT PROPERTIES

Cherokee® is rainfast 60 minutes after the spray deposit has dried. Rainfall of up to 60 mm after this period has lapsed, will not have a detrimental effect on the efficacy of Cherokee® and will not necessitate a re-application. Cyproconazole and propiconazole are absorbed by the assimilating parts of the plant, the majority within one 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. Applied in a preventive spray programme, Cherokee® effectively controls **leaf spot** (*Rhynchosporium secalis*), **net blotch** (*Pyrenophora teres*), **leaf rust** (*Puccinia hordei*) and **powdery mildew** (*Erysiphe graminis*) in barley, **eyespot** (*Pseudocercosporella herpotrichoides*), **speckled leaf blotch** (*Septoria tritici*), **glume blotch** (*S. nodorum*), **leaf rust** (*P. recondita*) **yellow / stripe rust** (*P. striiformis*), **stem rust** (*P. graminis*) and **powdery mildew** (*E. graminis*) in wheat.

DIRECTIONS FOR USE

(Use only as indicated)

COMPATIBILITY

The compatibility of Cherokee® 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. Cherokee® is compatible with most commonly used fungicides, insecticides and foliar feeds normally used in the various crops.

MIXING INSTRUCTIONS

Replace cap after use.

Fill $\frac{1}{4}$ - $\frac{1}{3}$ of the spray tank with clean water, start agitation, add the calculated and measured quantity of product and continue to fill the spray tank while continuing agitation. Continue agitation during mixing and application to maintain a uniform spray mixture. 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.

APPLICATION TECHNIQUES

Ground Application:

Cherokee® 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.

Aerial Application

Aerial application precautions:

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 Code 0118 (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 minimum volume of 30 litres 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 the product is applied aurally at a lower volume rate than recommended above.
- Droplet coverage: A droplet coverage of 25-30 droplets per cm² 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 & 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 or 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 setup that will produce a droplet spectrum with the lowest possible relative span.

All nozzles / atomisers should be positioned within the inner 60% to 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.

Stop spraying if the wind speed exceeds 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.

It is important to obtain an assurance from the aerial spray operator that the above requirements are met.

APPLICATION RATES

WHEAT AND BARLEY: The efficacy of Cherokee® will be determined by various factors, such as application timing with respect to both crop stage and incidence of disease, coverage and penetration of the spray material within the plant mass, type of disease and susceptibility of the crop (cultivar).

It is advisable to use Cherokee® in conjunction with sound agricultural practices, and the use of cultivars with some degree of tolerance to the most important diseases.

Eyespot: Eyespot is best controlled by applications between growth stages (29-32 BBCH) (i.e. from the end of tillering until the development of the second node stage, 40-60 days after planting).

Foliar Diseases: The development of foliar diseases between the flag leaf and ear emergence stages (37-51 BBCH) will have the greatest impact on yield. It is therefore important to protect the crop during these crucial stages. When Cherokee® is applied at the optimal time, the period of control will generally be sufficient to limit the negative effect of the diseases on both yield and quality of grain.

Ear Diseases: Ear diseases are best controlled by applications made during and just after ear emergence (61 - 67 BBCH).

CROP / DISEASE	DOSAGE
WHEAT Eyespot (<i>P. herpotrichoides</i>) Speckled leaf blotch (<i>S. tritici</i>) Glume blotch (<i>S. nodorum</i>) Powdery mildew (<i>E. graminis</i>) Leaf rust (<i>P. recondita</i>) Stem rust (<i>P. graminis</i>) Yellow/stripe rust (<i>P. striiformis</i>)	2.0 l/ha ground and aerial application *
BARLEY Leaf spot (<i>R. secalis</i>) Net blotch (<i>P. teres</i>) Leaf rust (<i>P. hordei</i>) Powdery Mildew (<i>E. graminis</i>)	2.0 l/ha ground and aerial application **

REMARKS:

* Apply during the stem elongation stages up to the formation of the 2nd node (29-32 BBCH). Do not apply after 32 BBCH for eyespot control.

Use 1.5 l/ha using the 3rd 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 (37-51 BBCH). Where a second application is justified a dosage rate of 2.0 l/ha is recommended for ground and aerial applications, usually around flag leaf stage.

For a stand alone application use the higher rate of 2.0 l/ha at flag leaf stage.

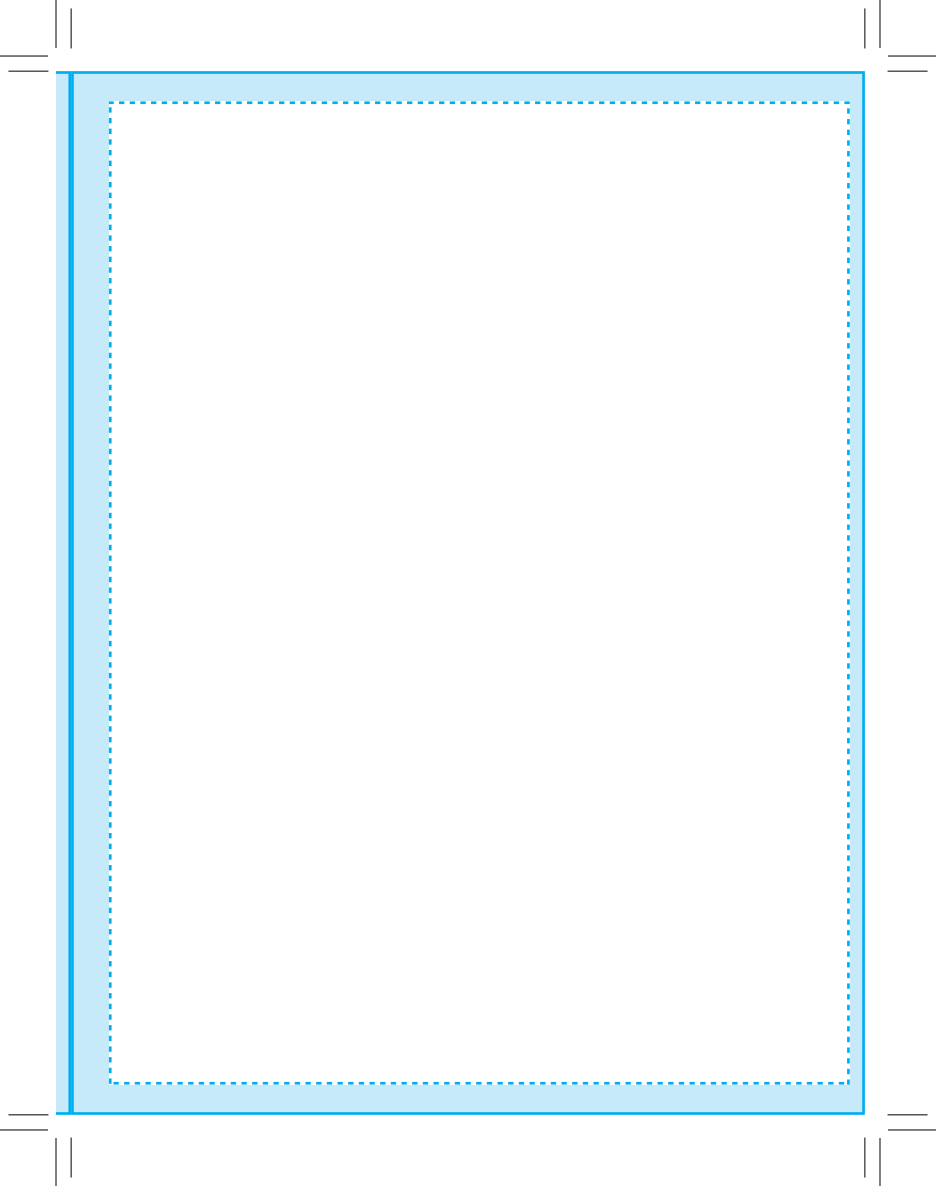
Apply at first signs of the disease. In the case of yellow / stripe / stem rust repeat application 3 weeks later if conditions favour disease development.

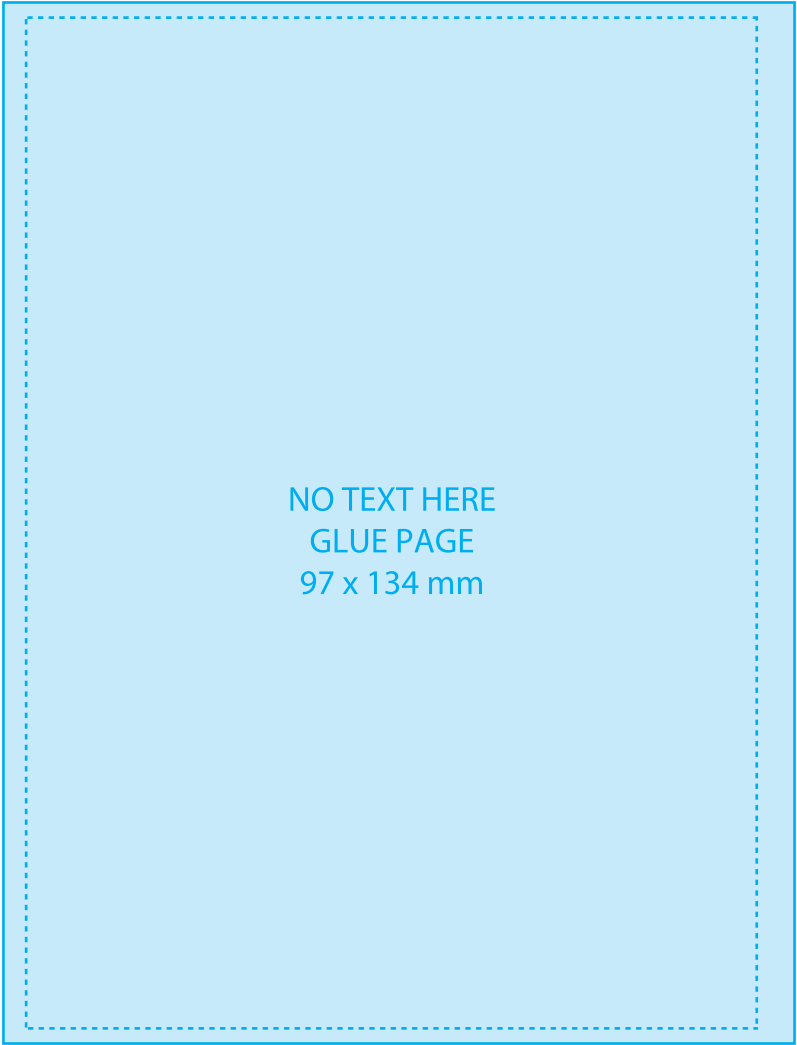
** If infection appears early in the season apply at a rate of 400 ml/ha. Do not apply later than the 6-leaf stage (37-51 BBCH). Follow up with a spray at flag leaf appearance at a rate of 400 or 500 ml/ha depending on the prevalent weather conditions.

Apply the higher rate when weather conditions favour disease development.

For a standalone application apply 2.0 l/ha at flag leaf stage.

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





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