### **TEPHON**

MAPP No. 19652

A growth regulator for use in winter and spring varieties of barley and winter varieties of wheat, rye and triticale.

#### Ethephon, (2-chloroethylphosphonic acid) is an organophosphate. Handle with care.

A soluble concentrate formulation containing 480 g/l (39.9% w/w) Ethephon, (2-chloroethylphosphonicacid).

The COSHH (Control of Substances Hazardous to Health) Regulations may apply to the use of this product at work.

Contents: XXXX

Batch number: XXXX

Production date: DD/MM/YYYY

Approval holder: Sharda Cropchem España S.L. Edificio Atalayas Business Center Carril Condomina nº 3, Planta 12, 30006 Murcia, Spain Tel: +34 868 12 75 89

Marketting company: Clayton Plant Protection U.K. Limited, Unit F10 Bracetown Business Park, Clonee, Dublin 15, D15 YT2T, Republic of Ireland

# SAFETY PRECAUTIONS

#### **Operator Protection**

This product contains an anticholinesterase organophosphorus compound and must not be used by those under medical advice NOT to work with such compounds

Engineering control of operator exposure must be used where reasonably practicable in addition to the following personal protective equipment:

WEAR SUITABLE PROTECTIVE GLOVES AND FACE PROTECTION (FACE SHIELD) when handling the concentrate.

WEAR SUITABLE PROTECTIVE GLOVES when handling contaminated surfaces.

However engineering control may replace personal protective equipment if a COSHH assessment shows they provide an equal or higher standard of protection.

WASH CONCENTRATE from skin or eyes immediately.

AVOID ALL CONTACT BY MOUTH.

WHEN USING DO NOT EAT, DRINK OR SMOKE

WASH HANDS AND EXPOSED SKIN before eating and drinking and after work

#### **Environmental Protection**

Do not contaminate water with the product or its container. Do not clean application equipment near surface water/Avoid contamination via drains from farmyards and roads.

#### Storage and Disposal

KEEP IN ORIGINAL CONTAINER tightly closed in a safe place. KEEP OUT OF REACH OF CHILDREN. KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDING STUFFS. WASH OUT CONTAINER THOROUGHLY, empty washings into spray tank and dispose of safely.

### **Safety Information**

# TEPHON

**MAPP No.** 19652

Contains 480 g/l (39.9% w/w) Ethephon, (2-chloroethylphosphonic acid)



Danger May be corrosive to metals Causes serious eye damage Toxic to aquatic life with long lasting effects

Wear protective gloves/protective clothing/eye protection/face protection IF IN EYES; Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing Immediately call a POISON CENTER or doctor/physician Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste

To avoid risks to human health and the environment, comply with the instructions for use

# **IMPORTANT INFORMATION**

FOR USE ONLY AS A PROFESSIONAL PLANT GROWTH REGULATOR

Crops/situations	Maximum individual dose (L product/Ha)	Maximum Total dose (L product/Ha)	Maximum total number of treatments	Latest time of application
Winter wheat	0.75	0,75	-	Before flag leaf sheath opening stage (GS47)
winter triticale	1.0	1.0	-	Before flag leaf sheath opening stage (GS47)
winter barley	1.0	1.0	-	before 1st spikelet of inflorescence just visible stage (GS 49)
spring barley	0,5	0,5	-	before 1st spikelet of inflorescence just visible stage (GS 49)
winter rye	1.0	1.0	-	before 1st spikelet of inflorescence just visible stage (GS 49)

READ THE LABEL BEFORE USE. USING THIS PRODUCT IN A MANNER THAT IS INCONSISTENT WITH THE LABEL MAY BE AN OFFENCE. FOLLOW THE CODE OF PRACTICE FOR USING PLANT PROTECTION PRODUCTS

## **DIRECTIONS FOR USE**

IMPORTANT: This information is approved as part of the Product Label. All instructions within this section must be read carefully in order to obtain safe and successful use of this product.

TEPHON plant growth regulator reduces straw length and gives greater resistance to lodging and aids harvesting of winter and spring varieties of barley and winter varieties of wheat, rye and triticale. The full benefit of TEPHON treatment will only be obtained on crops which have received adequate inputs (e.g. fertilizer and fungicides).

The best response to TEPHON plant growth regulator is obtained when the crop is growing vigorously. Apply TEPHON plant growth regulator before lodging has started. It is recommended that only crops grown under conditions of high fertility and, therefore, at risk from lodging, should be treated with TEPHON plant growth regulator. Thin crops and particularly those on soils of low fertility are less likely to lodge, and in addition such crops of winter wheat may ripen prematurely.

### RESTRICTIONS

Stress factors reduce crop growth and may also lead to secondary tillering and small grains. TEPHON plant growth regulator if used under stress conditions may lead to these effects being more pronounced, particularly on spring barley.

Cereals can be susceptible to drought stress. Do not spray when the soil is very dry.

Do not use within 10 days of any herbicide or liquid fertilizer treatment.

Do not spray crops heavily diseased or suffering from pest damage, nutrient deficiency or herbicide stress.

Do not spray during cold weather or periods of night frost.

Do not spray where crop is wet or rain is imminent.

Avoid overlapping spray bouts.

Avoid drift of spray to adjoining crops.

### **CROP SPECIFIC INFORMATION**

Use on winter and spring varieties of barley and on winter varieties of wheat, rye and triticale.

**WINTER BARLEY**: TEPHON can be applied to winter barley from the 'second node detectable' stage of crop growth (GS 32) up to and including the 'first awns just visible' stage (GS 49). The greatest resistance to lodging is achieved by treatment at the 'flag leaf just visible' stage of crop growth (GS 37).

**High Lodging Risk Crops:** For the greatest resistance to lodging use a sequential treatment of an approved formulation containing chlormequat followed by TEPHON. Apply chlormequat according to manufacturers' label instructions followed by TEPHON at 0.75 L/ha from the 'flag leaf just visible' stage of crop growth (GS 37) up to and including the 'first awns just visible' stage (GS 49). The optimum time for TEPHON application is at the 'flag leaf just visible' stage of crop growth (GS 37).

Where the crop has not received prior treatment with chlormequat apply TEPHON at 1.0 L/ha from the 'flag leaf just visible' stage of crop growth (GS 37) up to and including 'first awns just visible' stage (GS 49).

TEPHON may also be applied from the second node detectable stage of crop growth (GS 32) but the optimum time for TEPHON application is at the 'flag leaf just visible' stage (GS 37).

**Low Lodging Risk Crops**: Where lodging is not expected to be a severe problem, the crop may be treated with a sequential programme of an approved formulation containing chlormequat followed by a reduced rate of TEPHON. Apply chlormequat according to manufacturers' label instructions followed by TEPHON at 0.5 L/ha from the 'flag leaf just visible' stage of crop growth (GS 37) up to and including 'first awns just visible' stage (GS 49). Where the crop has not received prior treatment with chlormequat apply TEPHON at 0.75 L/ha from the 'flag leaf just visible' stage of crop growth (GS 37) up to and including the 'first awns just visible' stage (GS 49). The optimum time for TEPHON application is at the 'flag leaf just visible' stage of crop growth (GS 37).

**WINTER WHEAT**: For the greatest resistance to lodging use a sequential programme of an approved chlormequat product followed by TEPHON. Apply chlormequat according to manufacturers label instructions, followed by TEPHON at 0.5 L/ha from the 'flag leaf just visible' stage of crop growth (GS 37) up to and including the 'boots swollen' stage (GS 45). Do not spray crops where the leaf sheaths have split and the ears are visible. Where the crop has not received prior treatment with chlormequat apply TEPHON at 0.75 L/ha from the 'flag leaf just visible' stage of crop growth (GS 37) up to and including the 'boots swollen' stage (GS 45). Do not spray crops where the leaf sheaths have split and the ears are visible. Where the crop has not received prior treatment with chlormequat apply TEPHON at 0.75 L/ha from the 'flag leaf just visible' stage of crop growth (GS 37) up to and including the 'boots swollen' stage (GS 45). Do not spray crops where the leaf sheaths have split and the ears are visible.

**WINTER TRITICALE**: TEPHON may be applied at 1.0 L/ha from the 'flag leaf just visible' stage of crop growth (GS 37) up to and including the 'boots swollen' stage (GS 45). Do not spray crops where the leaf sheaths have split and the ears are visible. The best control of lodging will be given if the crop has received prior treatment with chlormequat at the recommended timing.

**WINTER RYE**: Apply TEPHON at a maximum of 1.0 L/ha from the 'flag leaf just visible' stage of crop growth (GS 37) up to and including the 'first awns just visible' stage (GS 49). Crops of winter rye which have received prior treatment with approved chlormequat products may be treated with TEPHON from the 'flag leaf just visible' stage (GS 37) up to and including the 'first awns just visible' stage (GS 49).

**SPRING BARLEY**: Apply TEPHON at 0.5 L/ha from the 'second node detectable' stage of crop growth (GS 32) up to and including the 'first awns just visible' stage (GS 49).

Only crops which have been drilled early, have a high yield potential and are likely to suffer severe lodging should be treated with TEPHON. Crops suffering from stress or likely to be stressed, for example due to soil conditions, should not be treated (see RESTRICTIONS section above) because undesirable side effects may occur, for example secondary (green) tillers, trapped heads, or shrivelled grains. Do not use on the variety Triumph.

### **Sprayer Application**

Apply through a conventional field crop sprayer using medium nozzles at a pressure of 2-3 bar. Good spray coverage is essential. Ensure the sprayer is correctly calibrated before use and adjusted to give adequate and even coverage of the top leaves. Spray immediately after mixing. Spray quality: TEPHON plant growth regulator should be applied as a MEDIUM spray (BCPC category). Water volume: 200-400 L/ha.

TEPHON may also be applied in a reduced water volume of 100 litres per hectare as a FINE spray (BCPC category) provided suitable spray nozzles are selected for this type of operation.

## MIXING

Half fill the spray tank with clean water, add the required amount of TEPHON and agitate during the completion of filling.

#### TANK CLEANING INSTRUCTIONS

After each day of work, drain the sprayer, wash thoroughly with water and liquid detergent and spray out completely.

Ensure that all liquid is removed from the sprayer tank, pump and hoses and ensure nozzles and nozzle filters are clean.

Remove nozzles, open tank and drain pump to allow free access of air to all parts of the system.

# **COMPANY ADVISORY INFORMATION**

# The following does not form part of the product label under the UK Plant Protection Products Regulations.

## CONDITIONS OF SUPPLY

All goods supplied by us are of high grade and we believe them to be suitable but, as we cannot exercise control over their storage, handling, mixing or use or the weather conditions before, during and after application which may affect the performance of the goods, all conditions and warranties, statutory or otherwise, as to the quality or fitness for any purpose of our goods are excluded and no responsibility will be accepted by us or re-sellers for any failure in performance, damage or injury whatsoever arising from their storage, handling, application or use. These conditions cannot be varied by our staff or agents whether or not they supervise or assist in the use of such goods.

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