

MAPP 18888

SPATIAL plus

A growth regulator for use on winter wheat, winter and spring barley.

A soluble concentrate formulation containing 150 g/L (19.35 % w/w) ethephon
and 300 g/L (42.11 % w/w) chlormequat.

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

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

Approval Holder

Bayer CropScience Ltd.
230 Cambridge Science Park,
Milton Road, Cambridge CB4 0WB
Telephone: 01 223 226500

Marketing Company

Sumitomo Chemical (UK) plc.
Hythe House
200 Shepherd's Bush Road
London, W6 7NL
Telephone: 020 3538 1539

For 24 hour emergency information contact Bayer CropScience Ltd.
Telephone: 00800 1020 3333 or the National Poisons Information Service (NPIS), Telephone: 0870 600 6266

SAFETY PRECAUTIONS

Operator Protection

Ethephon (2-chloroethylphosphonic acid) is an anticholinesterase organophosphorus compound. DO NOT USE if 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 controls 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. DO NOT BREATHE SPRAY. WHEN USING DO NOT EAT, DRINK OR SMOKE. WASH HANDS AND EXPOSED SKIN before meals and after work. IF YOU FEEL UNWELL, seek medical advice (show label where possible).

Environmental Protection

HARMFUL TO FISH OR OTHER AQUATIC LIFE. 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

DO NOT RE-USE CONTAINER FOR ANY PURPOSE. KEEP IN ORIGINAL CONTAINER tightly closed in a safe place. KEEP OUT OF REACH OF CHILDREN. KEEP AWAY FROM FOOD, DRINK OR ANIMAL FEEDINGSTUFFS. WASH OUT CONTAINER THOROUGHLY, emptying washings into spray tank and dispose of safely.

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Safety information

SPATIAL PLUS

Contains 150 g/L (19.35% w/w) ethephon and 300 g/L (42.11% w/w) chlormequat.



Danger

May be corrosive to metals.

Toxic if swallowed.

Causes serious eye irritation.

Harmful to aquatic life with long lasting effects.

Keep only in original container.

Wear protective gloves/protective clothing/eye protection/face protection.

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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 AN AGRICULTURAL PLANT GROWTH REGULATOR

Crops	Maximum total dose	Latest time of application
Winter wheat	2.4 litres/ha/crop	Before flag leaf ligule/collar just visible
Winter and spring barley	2.4 litres/ha/crop	Before flag leaf ligule/collar just visible

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.

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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.

General Information

Spatial Plus can reduce straw length and give greater resistance to lodging and aid harvesting of winter wheat, winter barley and spring barley. The full benefit from Spatial Plus treatment will only be obtained on crops with high lodging potential and where other inputs are adequate (e.g. fertiliser and fungicides).

RESTRICTIONS

Use only on winter varieties of wheat sown in the autumn, and on winter and spring sown barley.

Stress factors reduce crop growth and Spatial Plus plant growth regulator, if used under stress conditions, may lead to these effects being more pronounced.

Winter cereals can be susceptible to drought stress.

DO NOT spray when the soil is very dry.

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 when the crop is wet or rain is imminent.

DO NOT spray when the leaf sheaths have split and the ear is visible.

Do not use straw from Spatial Plus treated cereals as a horticultural growth medium or as a mulch.

Avoid spray drift onto neighbouring crops.

Wash sprayer and mixing vessels with plenty of clean water.

The appropriate seed merchant should be informed before hand whenever it is intended to use

Spatial Plus on a seed crop grown for certification.

Preferably applications should be by 'Tramlines' as late pesticide applications can cause the production of green side tillers in the wheelings which may be more apparent in shortened crops.

PROTECT FROM FROST

CROP SPECIFIC INFORMATION

Use only on winter barley, spring barley and winter varieties of wheat sown in the autumn.

Application

Apply Spatial Plus in 200 - 400 L/ha of water as a **MEDIUM** spray (BCPC category). Apply through any 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.

Control of lodging in winter wheat, winter barley and spring barley is often difficult because crop growth is influenced throughout the season by many factors which can change the requirement for growth regulation. Spatial Plus has been designed as a flexible treatment to reduce lodging, to enable decisions to be made throughout the season and allow use in sequence with other plant growth regulators. The following table gives rates, timings and sequential applications which can be used:

Crop	TIMING OF APPLICATION (GROWTH STAGE)	SPATIAL PLUS DOSE RATE L/HA	SEQUENTIAL GROWTH REGULATOR TREATMENT REQUIRED
Winter wheat	30 – 34	1.8	CERONE#
	30 – Before 39 (Before flag leaf ligule/collar just visible)	2.4	NONE
	37 – Before 39 (Before flag leaf ligule/collar just visible)	1.2	CHLORMEQUAT##
Winter barley	30 – 34	1.8	CERONE#
	30 – Before 39 (Before flag leaf ligule/collar just visible)	2.4	NONE
	37 – Before 39 (Before flag leaf ligule/collar just visible)	1.2	CHLORMEQUAT##
Spring Barley	32 – 34	1.8	CERONE#
	32 – Before 39 (Before flag leaf ligule/collar just visible)	2.4	NONE

CERONE should be applied at 0.5 L/ha at GS 37-45

Prior treatment with approved salt formulations of chlormequat at manufacturers recommended doses and timings.

NOTE

GS 30 is 'leaf sheath erect' stage of crop growth.

GS 34 is 'fourth node detectable' stage of crop growth.

GS 37 is 'flag leaf just visible' stage of crop growth.

GS 39 is 'flag leaf ligule/collar just visible' stage of growth.

Do not spray crop when the leaf sheaths have split and the ears are visible.

The best response to Spatial Plus is obtained when the crop is growing vigorously. Apply Spatial Plus 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 Spatial Plus. Thin crops and particularly those on soils of low fertility are less likely to lodge, and in addition such crops may ripen prematurely.

MIXING

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

TANK CLEANING INSTRUCTIONS

After each day's 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.

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