

MANIPULATOR™

FOR USE AS AN AGRICULTURAL PLANT GROWTH REGULATOR
FOR PROFESSIONAL USE ONLY

A soluble concentrate plant growth regulator formulation (pH buffered) containing 620 g/L (54%w/w) chlormequat and metabolic adjuvants for use on spring and winter wheat, spring and winter barley and spring and winter oats for improved yields and lodging control

SAFETY INFORMATION

Hazard Statements

May be corrosive to metals

Harmful if swallowed

Harmful to aquatic life with long lasting effects

Precautionary Statements

IF SWALLOWED: call a POISON CENTRE or doctor/physician if you feel unwell

Absorb spillage to prevent material damage

Dispose of contents/container to a licensed hazardous waste disposal contractor or collection site except for triple rinsed empty containers which can be disposed of as non-hazardous waste

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

WARNING

PCS No.: 05445



Please see attached leaflet for product use details. Read accompanying instructions before use

APPROVAL HOLDER:



Taminco bvba
Panterschipstraat 207
9000 Gent, Belgium
Tel : 00 32 9 254 1411
Fax : 00 32 9 254 1410

DISTRIBUTOR:



DHM Agrochemicals
Castle Lodge, Kilgobbin Road
Dublin 18
Ireland
Tel. (01) 295 2377
Fax. (01) 295 9399
Email: info@dhm.ie

net contents
5 litre e

Batch No.: See container

Manufacturing date: See container

PROTECT FROM FROST

In case of emergency Tel : +32 9 254 1036 (outside office hours)
Poisons Information Centre of Ireland: Tel : 00 353 (0) 1 809 2566
Tel : 00 353 (0) 1 837 9964

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MANIPULATOR			
Crop	Maximum Single Dose (L/ha)	Maximum Total Dose (L/ha/crop)	Latest time of application
Winter Wheat	1.8	1.8	Before flag leaf fully unrolled (GS39)
Spring Wheat	0.9	0.9	Before flag leaf fully unrolled (GS39)
Winter Barley Oats Rye Triticale	2.3	2.3	Before flag leaf fully unrolled (GS39)
Spring Barley	1.25	1.25	Before four leaves unfolded (GS14)
<p>READ THE LABEL BEFORE USE, USING THE PRODUCT IN A MANNER WHICH IS INCONSISTENT WITH THE LABEL MAY BE AN OFFENCE. FOLLOW THE PRINCIPLES OF GOOD PLANT PROTECTION PRACTICE WHEN USING PLANT PROTECTION PRODUCTS</p>			

SAFETY PRECAUTIONS

OPERATOR PROTECTION:

Engineering control of operator exposure must be used where practicable in addition to personal protective equipment;

WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS) AND SUITABLE PROTECTIVE GLOVES when handling the concentrate or contaminated surfaces.
WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS) when applying the product.

WASH CONCENTRATE from skin or eyes immediately.

DO NOT BREATHE SPRAY

WHEN USING DO NOT EAT, DRINK OR SMOKE

IF YOU FEEL UNWELL, seek medical advice (show label where possible)

WASH HANDS AND EXPOSED SKIN before meals 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). Extreme care must be taken to avoid spray drift on to non-crop plants outside of the target area.

STORAGE AND DISPOSAL:

KEEP IN ORIGINAL CONTAINER tightly closed in a safe place

WASH OUT CONTAINER THOROUGHLY by using an integrated pressure rinsing device or manually rinsing three times. Add washings to sprayer at time of filling and dispose of safely

DO NOT REUSE CONTAINER for any purpose

KEEP OUT OF REACH OF CHILDREN

KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDING STUFFS

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

The application of MANIPULATOR™ can result in yield increase and a reduction in early lodging from a spring application. This control of lodging is more consistent in wheat than in barley

MANIPULATOR™ APPLICATION RATES AND TIMING

Winter wheat

Single application	1.0 l/ha Apply MANIPULATOR™ at GS30–39 to reduce lodging and plant height and increase stem diameter
	1.8 l/ha Use this rate where there is a high risk of lodging
Split dose application	0.8 to 1.0 l/ha followed by 0.8 to 1.0 l/ha Apply MANIPULATOR™ at up to GS39 ensuring that the maximum total dose of 1.8 l/ha is not exceeded.

Winter barley

Single application	2.3 l/ha Apply MANIPULATOR™ at GS30–39 to reduce lodging and plant height and increase stem diameter
Split dose application	1.3 l/ha followed by 1.0 l/ha Apply 1.3 l/ha of MANIPULATOR™ at GS30-32 followed by further application of 1.0 l/ha of MANIPULATOR™ before GS39.

Spring wheat

	0.9 l/ha Apply MANIPULATOR™ during tillering but before the first node is detectable on half of the main stems. This will generally mean treating the crop between 15 and 35 days after 50% emergence, especially in late drilled spring crops.
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Spring barley

	1.25 l/ha Apply MANIPULATOR™ at 2-4 leaves unfolded (GS12-14) for maximum possible yield increase.
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Winter and Spring oats

Single application	2.3 l/ha Apply MANIPULATOR™ from just before the beginning of stem elongation (GS 30) until no later than flag leaf sheath extended stage (GS 39)
Split dose application	1.15 l/ha followed by 1.15 l/ha Apply 1.15 l/ha MANIPULATOR™ from just before the beginning of stem elongation (GS 30) followed by a further application of 1.15 l/ha until no later than flag leaf sheath extended stage (GS 39)

APPLICATION VOLUME

Apply the recommended rate of MANIPULATOR™ in at least 200 litres of water per hectare.

MIXING

SHAKE WELL BEFORE USE. Add MANIPULATOR™ to a half-filled spray tank. Top up the tank to the required volume and ensure thorough mixing before and during spraying.

CLEANING APPLICATION EQUIPMENT

After each days work, drain the sprayer, wash thoroughly with water and liquid detergent and spray out completely. Ensure that all liquid is removed from the spray 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.

APPLICATION CONDITIONS

Do not apply MANIPULATOR™ to crops under significant stress from water-logging, drought or nutrient deficiency. In hot, dry weather a better result might be obtained from application in the early morning or evening.

UNDERSOWN CROPS

MANIPULATOR™ may be used on crops undersown with clovers and grasses.

VARIETAL RESTRICTIONS

There are no varietal restrictions on the use of MANIPULATOR™

CAUTION

Although MANIPULATOR™ may be used under normal seasonal temperatures (down to 1°C) and ground conditions, it should not be sprayed onto plants covered with frost and requires two hours before rain or frost for a good effect to be obtained.

Do not allow MANIPULATOR™ to drift onto neighbouring crops.

The use of poultry manure or slurry on crops may significantly reduce the lodging control obtainable with MANIPULATOR™

USE OF STRAW

Do not use straw from MANIPULATOR™ treated cereals as a horticultural growth medium or as a mulch.

COMPATIBILITY

Provided that all product recommendations are followed, MANIPULATOR™ is compatible with a range of commonly used plant protection products, including other plant growth regulators. For up to date details of compatible tank-mixes contact your distributor/the manufacturer/your agronomist.

When using MANIPULATOR™ with a foliar fertiliser, thoroughly mix MANIPULATOR™ before adding the fertilizer to the spray tank. Do not use in tank mixtures with liquid nitrogen fertilizer.

Most chelated or complexed forms of trace elements are compatible with MANIPULATOR™ but some inorganic forms, especially those of manganese (such as manganese sulphate), can cause problems in tank mixture.