

Container label

MANIPULATOR™ 620

Solution

PLANT GROWTH REGULATOR

For treatment of spring, durum and winter wheat to manipulate apical dominance and produce shorter, thicker, stronger stems for improved lodging resistance.

AGRICULTURAL

GUARANTEE: chlormequat chloride 620 g/L
Contains 1,2-benzisothiazolin-3-one at 0.004% as a preservative

REGISTRATION NO. 31462 PEST CONTROL PRODUCTS ACT

READ THE ENTIRE LABEL AND BROCHURE BEFORE USING
KEEP OUT OF REACH OF CHILDREN



DANGER

POISON

NET CONTENTS: 1- 1050 L

<p>Taminco US LLC. Suite 411 Two Windsor Plaza 7540 Windsor Drive Allentown PA 18195 USA 1 800 223-3258</p>	<p>Distributed by: Engage Agro Corporation 1030 Gordon Street Guelph, Ontario N1G 3R4 1-866-613-3336</p>
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PRECAUTIONS

KEEP OUT OF REACH OF CHILDREN. Fatal or poisonous if swallowed. Do not take internally. Avoid inhalation of vapour, dust, or spray mist and contact with eyes, skin or clothing. Wash thoroughly after handling and before eating, drinking or smoking. Wear protective equipment and clothing, including goggles or face shield, approved respirator, gloves (rubber, PVC, neoprene or nitrile), hat, long-sleeved shirt, trousers and rubber boots. If clothing becomes contaminated, remove and wash separately from household laundry before reuse. Do not contaminate domestic or irrigation water, lakes, streams or ponds by the cleaning of equipment or the disposal of wastes. Do not enter or allow worker entry into treated areas for 12 hours following application. Do not apply where runoff or erosion is likely to occur. Do not apply when environmental conditions may cause drift from treated areas. Clean spray equipment thoroughly after use.

Apply only when the potential for drift to areas of human habitation or areas of human activity such as houses, cottages, schools and recreational areas is minimal. Take into consideration wind speed, wind direction, temperature inversions, application equipment and sprayer settings.

ENVIRONMENTAL HAZARDS

Observe buffer zones specified under DIRECTIONS FOR USE.

The use of this chemical may result in contamination of groundwater particularly in areas where soils are permeable (e.g. sandy soil) and/or the depth to the water table is shallow.

To reduce runoff from treated areas into aquatic habitats avoid application to areas with a moderate to steep slope, compacted soil or clay.

Avoid application when heavy rain is forecast.

Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between area and the edge of the water.

FIRST AID

If swallowed: Call a poison control centre or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person.

If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control centre or doctor for treatment advice.

If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control centre or doctor for further treatment advice.

If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control centre or doctor for treatment advice.

Take the label with you when seeking medical attention.

*IN CASE OF EMERGENCY INVOLVING A POISONING OR MAJOR SPILL,
CALL 1800-424-9300*

TOXICOLOGICAL INFORMATION

Treat symptomatically.

STORAGE

Store in original, tightly closed container. Do not ship or store near food, feed, seed or fertilizers. Store in cool, dry, locked, well-ventilated area without floor drain. Herbicides should be shipped or stored separately from other pesticides to avoid cross-contamination. Protect from freezing.

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DISPOSAL

DO NOT reuse this container for any other purpose. This is a recyclable container, and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site:

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NOTICE TO USER

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Pamphlet label

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DIRECTIONS FOR USE

As this product is not registered for the control of pests in aquatic systems, **DO NOT** use to control aquatic pests.

DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

DO NOT apply by air.

Shake well before using.

Field sprayer application

DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty. **DO NOT** apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE) medium classification. Boom height must be 60 cm or less above the crop or ground.

Use of the following spray methods or equipment **DO NOT REQUIRE** a buffer zone: hand-held or backpack sprayer and spot treatment.

Buffer zones

The buffer zones specified in the table below are required between the point of direct application and the closest downwind edge of sensitive terrestrial habitats (such as grasslands, forested areas, shelter belts, woodlots, hedgerows, riparian areas and shrublands).

Method of Application	Crop	Buffer zones required for the protection of terrestrial habitat
Field Sprayer	Winter Wheat Spring and Durum Wheat	1 metre

GENERAL INFORMATION:

MANIPULATOR™ 620 is a plant growth regulator for use on spring, durum and winter wheat between Zadoks Growth Stages (GS) 12 (the 2-leaf stage) to 39 (the flag leaf collar visible stage). Its influence on plant growth can improve resistance to lodging through reduced plant height, enhanced root structure and improved stem characteristics.

RATE & TIMING OF APPLICATION

Apply Manipulator 620 when risk of lodging is high or when a high nitrogen fertilizer system is used.

Crop Specific Rates and Timing:

WINTER WHEAT

Do not exceed a total of 1.8 L/ha of MANIPULATOR 620 on the winter wheat per year.

Single Application Technique:

Apply MANIPULATOR 620 at 1.8 L/ha as a single dose between GS31-39 (the 1-node stage to the flag leaf collar visible stage)

Split Application Technique:

Apply MANIPULATOR 620 at 1 L/ha between Zadoks GS 12 (the 2-leaf stage) and GS 30 (the beginning of stem elongation stage) followed by a second application of 0.8 L/ha between Zadoks GS 31-39 (the 1-node stage to the flag leaf collar visible stage).

SPRING AND DURUM WHEAT

Do not exceed a total of 1.8 L/ha of MANIPULATOR 620 on the spring and durum wheat per year.

Single Application Technique:

Apply MANIPULATOR 620 at 1.8 L/ha as a single dose between Zadoks GS31 to 32 (the 1- to 2-node stage). If applications are not possible at Zadoks GS 31 to 32 due to environmental or field conditions, do not apply later than GS 39.

Split Application Technique:

Apply MANIPULATOR 620 at 0.8 L/ha between Zadoks GS 12-30 (the 2-leaf stage to the beginning of stem elongation) followed by a second application of 1 L/ha MANIPULATOR 620 at Zadoks GS 31-32. If the second application is not possible at GS 31-32 due to environmental or field conditions, do not apply later than GS 39.

APPLICATION VOLUME

Apply in a minimum of 100 litres of water per hectare. Ensure thorough coverage of the target crop.

APPLICATION CONDITIONS

DO NOT apply MANIPULATOR 620 to crops under stress from waterlogging, drought or nutrient deficiency. In hot, dry weather a better result may be obtained from application in the early morning or evening.

CAUTION

Although MANIPULATOR 620 may be applied under normal seasonal temperatures (down to 1°C) and ground conditions, DO NOT spray onto plants covered with frost. For optimal results, MANIPULATOR 620 requires two hours before rain or frost occurs. Do not allow MANIPULATOR 620 to drift onto neighbouring crops.

Do not use in tank mixture with liquid nitrogen fertilizer.

DO NOT apply later than GS39.

DO NOT graze treated crops or cut for hay.

UNDERSOWN CROPS

MANIPULATOR 620 may be used on crops under-sown with clovers and grasses.

VARIETAL RESPONSE

Where varieties may be more or less prone to lodging under different fertility regimes and field conditions, establish the varietal response initially using a low rate. When a variety has a high risk of lodging use the full rate, a maximum 1.8 L/ha per year.

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