



October 14, 2016

New York State Department  
of Environmental Conservation  
Division of Materials Management  
Pesticide Product Registration

Classified for  
"RESTRICTED USE"  
in New York State  
under 6NYCRR Part 326

**Section 24(c) Special Local Need Label**

**FOR DISTRIBUTION AND USE ONLY WITHIN THE STATE OF  
NEW YORK (EXCEPT NASSAU AND SUFFOLK COUNTIES)**

**Dual Magnum®**

EPA Reg. 100-816  
EPA SLN No. NY-110004

**SYNGENTA'S SPECIAL CONDITIONS, RISKS OF USE AND DISCLAIMER FOR  
USE OF DUAL MAGNUM ON CROPS ON THIS SECTION 24(C) LABEL**

**IMPORTANT- READ BEFORE USE**

**THESE CONDITIONS RISKS OF USE AND DISCLAIMER ARE REQUIRED BY  
SYNGENTA CROP PROTECTION LLC AND NOT SPECIFIED BY U.S. EPA OR  
THE STATE OF NEW YORK**

**FOR CONTROL OF WEEDS IN ASPARAGUS, BEETS (GARDEN), BELL PEPPER (TRANSPLANTED), BLUEBERRY (HIGHBUSH), BROCCOLI (DIRECT SEEDDED AND TRANSPLANTED), BRUSSELS SPROUTS (TRANSPLANTED), CABBAGE (DIRECT SEEDDED AND TRANSPLANTED), CANEBERRY CROP SUBGROUP 13A (BLACKBERRY, RED RASPBERRY, AND BLACK RASPBERRY), CARROT, CAULIFLOWER (TRANSPLANTED), CUCUMBER, GARLIC, LEAFY BRASSICA GREENS CROP SUBGROUP 5B (MUSTARD GREENS, BROCCOLI (RAAB), CHINESE CABBAGE (BOK CHOY), COLLARDS, KALE, MIZUNA, MUSTARD GREEDS, MUSTARD SPINACH, AND RAPE GREENS), LETTUCE (HEAD AND LEAF), MELON CROP SUBGROUP 9A (CANTALOUPE, MUSKMELON AND WATERMELON), ONIONS (DRY BULB AND GREEN), PUMPKIN, SPINACH, SQUASH (SUMMER AND WINTER), STRAWBERRY, SWISS CHARD AND TOMATO (PREHARVEST INTERVAL)**

**TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, SYNGENTA CROP PROTECTION, LLC INTENDS THAT THE PRODUCT THAT IS THE SUBJECT OF THIS SECTION 24(C) LABEL BE PURCHASED ONLY BY END USERS WHO AGREE BY ELECTRONIC SIGNATURE ON SYNGENTA CROP PROTECTION'S INTERNET SITE TO THE TERMS AND CONDITIONS REQUIRED BY SYNGENTA CROP PROTECTION, LLC INCLUDING A WAIVER AND RELEASE FROM ALL LIABILITY AND INDEMNIFICATION BY THE USER AND/OR GROWER OF SYNGENTA AND OTHERS FOR FAILURE TO PERFORM AND FOR CROP INJURY, CROP YIELD REDUCTION, AND/OR CROP LOSS FROM USE OF DUAL MAGNUM ON CROPS ON THIS 24(C) LABEL.**

**IF SUCH TERMS AND CONDITIONS ARE UNACCEPTABLE, RETURN THE DUAL MAGNUM AT ONCE UNOPENED OR USE THE DUAL MAGNUM FOR A DIFFERENT APPROVED USE IN ACCORDANCE WITH THE LABEL AFFIXED TO THE PRODUCT CONTAINER.**

**USE OF DUAL MAGNUM (THE "PRODUCT") ON CROPS LISTED (THE "CROP") FOR THIS SPECIAL LOCAL NEED MAY RESULT IN CROP INJURY, CROP YIELD REDUCTION AND/OR CROP LOSS AS FURTHER DISCUSSED BELOW. READ AND UNDERSTAND THESE CONDITIONS AND RISKS OF USE FOR SPECIAL LOCAL NEED BEFORE USING THE PRODUCT ON THE CROP. SYNGENTA RECOMMENDS THAT THE USER TEST THIS PRODUCT TO DETERMINE ITS SUITABILITY FOR SUCH INTENDED USE.**

**Syngenta Crop Protection, LLC makes the Product available for use in the manner described in this Supplemental Labeling on the basis that, in the sole opinion of the user, the benefits and utility derived from the use of the Product on the Crop outweigh the potential risk of Crop injury, Crop yield reduction or Crop loss. The decision to use this Product in the manner described in this Supplemental Labeling must be made by each individual user on the basis of anticipated benefits versus (i) the potential risk of Crop injury, Crop yield reduction and Crop loss, (ii) the severity of the target pest infestation, (iii) the cost and availability of alternative pest controls and (iv) any other relevant factors. Syngenta recommends that the user test this Product to determine its suitability for such intended use.**

**By purchasing the Product for use, or using the Product in the manner described in this Supplemental Labeling, you acknowledge and accept that, to the extent consistent with applicable law:**

- 1) you assume all risk of Crop injury, Crop yield reduction and Crop loss;
- 2) Syngenta Crop Protection, LLC do not make, and do not authorize any agent or representative to make, any representations or recommendations regarding the use of this Product on the Crop other than the statements on this Supplemental labeling;
- 3) Syngenta Crop Protection, LLC do not make, and do not authorize any agent or representative to make, any warranties, express or implied, with respect to the use of the Product on the Crop and disclaim all warranties, expressed or implied, including any implied warranty of merchantability;
- 4) Syngenta Crop Protection, LLC disclaim all liability for any damages, losses, expenses, claims or causes of actions arising out of or relating to Crop injury, Crop yield reduction and/or Crop loss;
- 5) these conditions and Risks of Use for Special Local Need supersede any contrary representations or recommendations by Syngenta Crop Protection, LLC or their respective agents or representatives, and any provisions in or on any Product literature or labeling including any provisions on the label affixed to the Product container.

**If these Conditions and Risks of Use for Special Local Need are not acceptable, the unopened Product may be returned to the seller for a refund or used for a different labeled use in accordance with the label affixed to the Product container.**

**FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR WEED CONTROL, CROP INJURY, OR ILLEGAL RESIDUES.**

It is a violation of federal law to use this product in a manner inconsistent with its labeling.

Follow all applicable directions, restrictions, and precautions including statements pertaining to the Worker Protection Standards, on the EPA-registered Dual Magnum label.

This labeling must be in the possession of the user at the time of herbicide application.

**DO NOT** use this product in Nassau or Suffolk Counties, New York.

Use of adjuvants is prohibited.

**Chemigation: DO NOT** apply this product through any irrigation system unless the labeling for chemigation is followed. Refer to the Dual Magnum label (EPA Reg. No. 100-816) for use directions for chemigation.

Dual Magnum will not control emerged weeds. For effective weed control, Dual Magnum must be applied to clean-tilled soil.

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## **ASPARAGUS**

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Apply a single broadcast treatment of Dual Magnum at 1.33 - 2.0 pt/A after the harvest season (i.e. post-harvest treatment), or to dormant established asparagus beds in the spring, prior to asparagus emergence. In that rate range, use lower rates on soils relatively coarse-textured and higher rates on fine-textured soils. A band application may also be used, applying proportionally less spray mixture on the area actually treated. Make uniform applications in a minimum of 15 gallons of water per treated acre. Dual Magnum will not control emerged weeds. Control emerged weeds with an appropriate registered foliar herbicide or by mechanical or physical means.

**Restrictions:** (1) Make only one application per crop. (2) To avoid possible illegal residues, do not harvest asparagus within 16 days following application.

**Note:** Applications of Dual Magnum may cause significant injury to asparagus resulting in reduced yields. This product is available to the end user/grower solely to the extent that the benefit and utility, in the opinion of the end user/grower, outweigh the extent of potential injury associated with the use of this product. Due to the risk of crop damage, all such use is at the end user/grower's risk.

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## **BEETS (GARDEN)**

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Make a single broadcast application of Dual Magnum at a rate of 0.67 pt/A (0.64 lb ai/A) to the soil surface after planting, but before the weeds or crop emerge (pre-emerge). For effective weed control, Dual Magnum must be applied to clean-tilled soil where existing weeds are controlled by another labeled herbicide. Dual Magnum will not control emerged weeds.

Make uniform applications in a minimum of 15 gallons of water per treated acre. A band application may also be used, applying proportionally less spray mixture on the area actually treated. Irrigate after application to activate the herbicide if rainfall is not expected. If the crop is irrigated, use 0.5 inches of water shortly after planting to incorporate the herbicide. Excessive irrigation may increase the risk of crop injury. Do not mechanically incorporate Dual Magnum. **Do not use Dual Magnum if the planting operation creates a furrow or trough over the seed-row into which rain or irrigation water will collect and thus concentrate the herbicide over the row.**

**Restrictions:** (1) Do not use on coarse textured soils with less than 1.5 % OM. Do not use on soils with greater than 10% OM. (2) Do not exceed a total of 0.67 pt/A of Dual Magnum in any single application, nor in total, per crop. (3) Follow instructions for use of Dual Magnum under Application Procedures on the EPA-registered label.

**Note:** Applications of Dual Magnum may cause significant injury to crops on this label resulting in reduced yields. This product is available to the end user/grower solely to the extent that the benefit and utility, in the opinion of the end user/grower, outweigh the extent of potential injury associated with the use of this product. Due to the risk of crop damage, all such use is at the end user/grower's risk.

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## **BELL PEPPER (TRANSPLANTED)**

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Apply a single broadcast treatment of Dual Magnum at 0.5 - 1.0 pt/A to the soil surface prior to transplanting or a broadcast application within 48 hours after transplanting bell pepper, but before weeds emerge. In that rate range, use lower rates on soils relatively coarse-textured and higher rates on fine-textured soils. Dual Magnum will not control emerged weeds. Control emerged weeds with an appropriate registered foliar herbicide or by mechanical or physical means. Weed control may be reduced on muck soils.

**Restrictions:** (1) Do not incorporate. (2) Do not apply to direct seeded bell peppers. (3) Do not flood or sprinkler irrigate immediately following application. (4) Do not exceed more than 1.0 pt/A Dual Magnum or illegal residues may occur. (5) Do not harvest within 60 days of application or illegal residues may occur.

**Precautions:** (1) In general, the risk of crop injury is less with post-transplant applications than from pre-transplant surface applications, and the risk of crop injury is less with post-directed than from post over-the-top applications. To minimize the risk of crop injury, apply as a post-directed spray in a way that minimizes contact with the crop foliage. (2) Muck soils (>20%) normally require the higher use rate (1.0 pt/A), however, weed control may be reduced on muck soils. (3) The use of a spray adjuvant or the addition of another registered herbicide as a tank mixture with Dual Magnum will increase the risk of crop injury from postemergence applications. (4) The application of Dual Magnum prior to bed formation may result in crop injury due to concentration of Dual Magnum near the transplanted crop's root system.

**Note:** Applications of Dual Magnum may cause significant injury to transplanted bell peppers resulting in reduced yields. This product is available to the end user/grower solely to the extent that the benefit and utility, in the opinion of the end user/grower, outweigh the extent of potential injury associated with the use of this product. Due to the risk of crop damage, all such use is at the end user/grower's risk.

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## **BLUEBERRY (HIGHBUSH)**

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Apply Dual Magnum as a banded treatment to both sides of the blueberry row at 0.67 - 1.3 pt/A (0.64 - 1.26 lb ai/A) prior to weed emergence. The application should be directed to the soil surface in a 3 foot band on each side of the blueberry row to avoid direct contact with the crop foliage or crop injury may occur. When making the banded treatment, apply proportionally less spray mixture on the area actually treated. Use the lower end of the Dual Magnum rate range for soils that are relatively coarse textured and higher rates on fine textured soils.

**Precautions:** (1) Dual Magnum will not control emerged weeds. Control emerged weeds with an appropriate registered foliar herbicide or by mechanical or physical means. (2) Not all blueberry cultivars have been tested so injury may occur on some types of blueberry. Growers are encouraged to treat a few plants as a test and evaluate crop injury. (3) The risk of crop injury from Dual Magnum is greater at the higher use rates. (4) Blueberry plants that have been established for less than one year may be more sensitive to applications of Dual Magnum than those plants established for more than one year. For this reason, the lower rates are suggested on newer plantings. (5) Tank mixing Dual Magnum with other products (pesticides, adjuvants, etc.) will increase the risk for foliar crop injury.

**Restrictions:** (1) Do not make more than one application per crop per season. (2) Do not apply more than 1.33 pt/A (1.27 lb ai/A) of Dual Magnum per crop. (3) Do not harvest for 28 days following the Dual Magnum application.

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## **BROCCOLI (DIRECT SEEDED AND TRANSPLANTED)**

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Apply a single broadcast treatment of Dual Magnum at 0.5 - 1.33 pt/A prior to transplanting or within 72 hours after transplanting, the latter often being less injurious. Apply to direct seeded broccoli only at the four-leaf stage. In that rate range, use lower rates on soils relatively coarse-textured and higher rates on fine-textured soils. Dual Magnum will not control emerged weeds. Control emerged weeds with an appropriate registered foliar herbicide or by mechanical or physical means. Weed control may be reduced on muck soils.

**Restrictions:** (1) Make only one application per crop. (2) Do not incorporate Dual Magnum. (3) Do not use in combination with Goal. (4) Crop maturity may be delayed by Dual Magnum application. (5) To avoid possible illegal residues, do not harvest broccoli within 60 days following application.

**Note:** Applications of Dual Magnum may cause significant injury to broccoli resulting in reduced yields. This product is available to the end user/grower solely to the extent that the benefit and utility, in the opinion of the end user/grower, outweigh the extent of potential injury associated with the use of this product. Due to the risk of crop damage, all such use is at the end user/grower's risk.

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## **BRUSSELS SPROUT (TRANSPLANTED)**

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Apply Dual Magnum to Brussels sprouts at a broadcast rate of 0.5 - 1.33 pt/A preplant non-incorporated prior to transplanting or broadcast postemergence application within 48 hours after transplanting. Use lower rates on coarse textured soils and higher rates on fine textured and muck soils. Dual Magnum will not control emerged weeds. Control emerged weeds with an appropriate registered foliar herbicide or by mechanical or physical means.

**Precautions:** (1) In general, the risk of crop injury from the use of Dual Magnum is less with post-transplant applications than from pre-transplant applications, and the risk of crop injury is less with post-directed than from post over-the-top post-transplanting applications. (2) The application of Dual Magnum prior to bed formation may result in crop injury due to the incorporation and/or concentration of Dual Magnum near the transplanted crop's root system. (3) Muck soils require the higher use rates; however, weed control may be reduced on muck soil. (4) The addition of another registered herbicide, especially the herbicide Goal, will increase the risk of crop injury from postemergence applications.

**Restrictions:** (1) Make only one application of Dual Magnum per season. (2) Do not apply more than 1.33 pt/A of Dual Magnum per season. (3) Do not mechanically incorporate Dual Magnum before transplanting. (4) Do not harvest these crops within 60 days of the Dual Magnum application.

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## **CABBAGE (DIRECT SEEDED AND TRANSPLANTED)**

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Apply a single broadcast treatment of Dual Magnum at 0.5 - 1.33 pt/A prior to transplanting or within 48 hours after transplanting, the latter often being less injurious. Apply to direct seeded cabbage only at the four-leaf stage. In that rate range, use lower rates on soils relatively coarse-textured and higher rates on fine-textured soils. Dual Magnum will not control emerged weeds. Control emerged weeds with an appropriate registered foliar herbicide or by mechanical or physical means. Weed control may be reduced on muck soils.

**Restrictions:** (1) Make only one application per crop. (2) Do not incorporate Dual Magnum. (3) Do not use in combination with Goal. (4) Crop maturity may be delayed by Dual Magnum application. (5) To avoid possible illegal residues, do not harvest cabbage within 60 days following application.

**Note:** Applications of Dual Magnum may cause significant injury to cabbage resulting in reduced yields. This product is available to the end user/grower solely to the extent that the benefit and utility, in the opinion of the end user/grower, outweigh the extent of potential injury associated with the use of this product. Due to the risk of crop damage, all such use is at the end user/grower's risk.

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### **CANEBERRY CROP SUBGROUP 13A: BLACKBERRY, RED RASPBERRY, AND BLACK RASPBERRY**

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Apply Dual Magnum in the early spring as a banded application only to both sides of the plant row at 1.0 - 2.0 pt/A (0.67 - 1.3 lb ai/A) prior to weed emergence. The application should be directed to the soil surface to avoid direct contact with the crop foliage or crop injury may occur. Use the lower end of the Dual Magnum rate range for soils that are relatively coarse textured and the higher rates on fine textured soils. Dual Magnum will not control emerged weeds. For banded applications, using row and band width measurements in inches, calculate the amount to be applied per acre as follows:

$$\frac{\text{Band width in inches}}{\text{Row width in inches}} \times \text{Dual Magnum Rate per acre for a broadcast treatment} = \text{Amount of Dual Magnum needed per acre for a banded treatment}$$

**Precautions:** (1) Dual Magnum will not control emerged weeds. Control emerged weeds with an appropriate registered foliar herbicide or by mechanical or physical means. (2) Not all caneberry types, cultivars or hybrids have been tested so injury from Dual Magnum may occur on some crops. (3) The risk of crop injury from Dual Magnum is greater at the higher use rates. (4) Application of Dual Magnum to crop foliage may result in crop injury and illegal residues. (5) Caneberry plants that have been established for less than one year may be more sensitive to applications of Dual Magnum than those plants established for more than one year. For this reason, the lower rates are suggested on newer plantings.

**Restrictions:** (1) Do not make more than one application of Dual Magnum per crop per season. (2) Do not apply more than 2.0 pt/A (1.3 lb ai/A) of Dual Magnum per crop per season. (3) Do not harvest for 28 days following the Dual Magnum application.

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### **CARROT**

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**Carrots grown on mineral soils:** Make a single broadcast application of Dual Magnum at 0.67 - 1.33 pt/A preemergence to clean-tilled soil. Use lower rates on coarse-textured soils and higher rates on fine-textured soils. In general, the risk of crop injury from the use of Dual Magnum on this crop is greater from preplant incorporated than from preplant non-incorporated or preemergence applications.

**Notes:** (1) Do not apply more than 1.33 pt/A of Dual Magnum per crop. (2) Harvest at normal maturity.

**Carrots grown on muck soils:** For carrots grown on muck soils (>20% organic matter), make a single broadcast application of Dual Magnum at 1.33 - 2.0 pt/A to the soil surface after planting, but before weeds and crop emerge (i.e., preemergence).

**Precautions:** To avoid crop injury, do not apply Dual Magnum in areas where water is likely to "pond". To avoid concentration in the seed furrow, do not make broadcast applications of Dual Magnum to carrots planted in furrows more than 2 inches deep. Band applications may be made to carrots planted in furrows deeper than 2 inches, but the band width should not exceed the width of the bottom of the furrow.

**Restrictions:** (1) Do not apply more than 2.0 pt/A of Dual Magnum per crop. (2) Harvest at normal maturity.

**Note:** Applications of Dual Magnum may cause significant injury to carrots resulting in reduced yields. This product is available to the end user/grower solely to the extent that the benefit and utility, in the opinion of the end user/grower, outweigh the extent of potential injury associated with the use of this product. Due to the risk of crop damage, all such use is at the end user/grower's risk.

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## CAULIFLOWER (TRANSPLANTED)

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Apply Dual Magnum to cauliflower at a broadcast rate of 0.5 - 1.33 pt/A preplant non-incorporated prior to transplanting or broadcast postemergence application within 48 hours after transplanting. Use lower rates on coarse textured soils and higher rates on fine textured and muck soils. Dual Magnum will not control emerged weeds. Control emerged weeds with an appropriate registered foliar herbicide or by mechanical or physical means.

**Precautions:** (1) In general, the risk of crop injury from the use of Dual Magnum is less with post-transplant applications than from pre-transplant applications, and the risk of crop injury is less with post-directed than from post over-the-top post-transplanting applications. (2) The application of Dual Magnum prior to bed formation may result in crop injury due to the incorporation and/or concentration of Dual Magnum near the transplanted crop's root system. (3) Muck soils require the higher use rates; however, weed control may be reduced on muck soil. (4) The addition of another registered herbicide, especially the herbicide Goal, will increase the risk of crop injury from postemergence applications.

**Restrictions:** (1) Make only one application of Dual Magnum per season. (2) Do not apply more than 1.33 pt/A of Dual Magnum per season. (3) Do not mechanically incorporate Dual Magnum before transplanting. (4) Do not harvest these crops within 60 days of the Dual Magnum application.

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## CUCUMBER

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**Soil Applied:** Apply a single broadcast treatment of Dual Magnum at 0.67 - 1.33 pt/A (0.64 - 1.27 lb ai/A) to the soil surface after planting, but before weeds or crop emerge (i.e., pre-emergence). If a pre-plant application is used, do not incorporate the application and minimize the mixing/incorporation of treated soil into the seed furrow through the planting operations, so as to reduce the risk of crop injury. Within the rate range, use lower rates on soils relatively coarse-textured and higher rates on fine-textured soils. Dual Magnum will not control emerged weeds. Control emerged weeds with an appropriate registered herbicide or by mechanical or physical means.

**Post Applied:** Dual Magnum may be applied post-emergence to cucumber for residual control of grasses and small seeded broadleaf weeds. Apply a single broadcast treatment of Dual Magnum at 0.67 - 1.33 pt/A (0.64 - 1.27 lb ai/A) on cucumbers at the 1-2 true leaf stage. Within the rate range, use lower rates on soils relatively coarse-textured and higher rates on fine-textured soils. Dual Magnum will not control emerged weeds, therefore, emerged weeds must be controlled by cultural or chemical methods.

**Precaution:** The risk of crop injury increases when nitrogen sources (e.g. AMS, UAN), fertilizers or other pesticides are applied with Dual Magnum.

**Restrictions:** (1) Do not apply more than 1.33 pt/A (1.27 lb ai/A) of Dual Magnum per crop per season. (2) Make only one application per crop. (2) Do not harvest within 30 days of application.

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## **GARLIC**

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Apply a broadcast application of Dual Magnum at 0.67 - 1.33 pt/A postemergence at the two true-leaf stage of the garlic. In that rate range, use lower rates on soils relatively coarse-textured and higher rates on fine-textured soils. Dual Magnum can be applied as a band application applying proportionally less spray mixture on the area actually treated. Dual Magnum will not control emerged weeds. Control emerged weeds with an appropriate registered foliar herbicide or by mechanical or physical means.

**Precautions:** (1) There is risk of crop injury from the use of Dual Magnum on garlic. In general, the risk of crop injury is greater on lighter textured soils and with higher application rates. (2) The addition of another registered herbicide as a tank mixture with Dual Magnum will increase the risk of crop injury.

**Restrictions:** (1) Make only one application per crop. (2) Do not harvest within 60 days of application or illegal residues may result.

**Note:** Applications of Dual Magnum may cause significant injury to garlic resulting in reduced yields. This product is available to the end user/grower solely to the extent that the benefit and utility, in the opinion of the end user/grower, outweigh the extent of potential injury associated with the use of this product. Due to the risk of crop damage, all such use is at the end user/grower's risk.

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## **LEAFY BRASSICA GREENS CROP SUBGROUP 5B: MUSTARD GREENS, BROCCOLI (RAAB), CHINESE CABBAGE (BOK CHOY), COLLARDS, KALE, MIZUNA, MUSTARD GREENS, MUSTARD SPINACH, AND RAPE GREENS**

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**Soil Applied:** Apply a single broadcast treatment of Dual Magnum at 0.67 - 1.33 pt/A (0.64 - 1.27 lb ai/A) to the soil surface after planting, but before weeds or crop emerge (i.e., pre-emergence). If a pre-plant application is used, do not incorporate the application and minimize the mixing/incorporation of treated soil into the seed furrow through the planting operations, so as to reduce the risk of crop injury. Within the rate range, use lower rates on soils relatively coarse-textured and higher rates on fine-textured soils. Dual Magnum will not control emerged weeds. Control emerged weeds with an appropriate registered herbicide or by mechanical or physical means.

**Post Applied:** Dual Magnum may be applied post-emergence to leafy brassica greens for residual control of grasses and small seeded broadleaf weeds. Apply a single broadcast treatment of Dual Magnum at 0.67 - 1.33 pt/A (0.64 - 1.27 lb ai/A) after leafy brassica greens have at least 1 true leaf. Dual Magnum will not control emerged weeds, therefore, emerged weeds must be controlled by cultural or chemical methods.

**Precaution:** (1) The risk of crop injury increases when nitrogen sources (e.g. AMS, UAN), fertilizers or other pesticides are applied with Dual Magnum.

**Restrictions:** (1) Do not apply more than 1.33 pt/A (1.27 lb ai/A) of Dual Magnum per crop. (2) Make only one application per crop. (2) Do not harvest within 30 days of application.



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**LETTUCE (HEAD AND LEAF)**

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Dual Magnum may be applied to direct seeded or transplanted lettuce for residual control or suppression of annual grasses, yellow nutsedge and small seeded broadleaf weeds. Dual Magnum will not control emerged weeds so use an appropriate registered foliar herbicide or mechanical or physical methods to control emerged weeds.

**Dual Magnum Directions for Use in Lettuce**

<b>Application Timing</b>	<b>Crop Growth Stage</b>	<b>Rate (pt/A)<sup>1</sup></b>
Preplant <sup>2</sup>	Before planting	0.67 - 1.0 (0.64-0.95 lb ai/A)
Pre-emergence	Before emergence or transplanting	
Post-emergence	After emergence or transplanting	0.67 (0.64 lb ai/A)
Post-emergence row middles		

<sup>1</sup>Use lower rates on coarse-textured soils and higher rates on fine-textured soils

<sup>2</sup>No more than 14 days prior to planting

Dual Magnum can be applied as part of a sequential weed control program. If Dual Magnum was applied preplant, pre-emergence or pre-transplant, a second treatment of Dual Magnum can be applied postemergence provided the total per crop does not exceed 1.33 pt/A (1.27 lb ai/A).

**Precautions for leaf and head lettuce:** (1) If a pre-plant application is used, soil incorporation is not recommended. Minimize the mixing of herbicide treated soil into the seed furrow through the planting operations, so as to reduce the risk of crop injury. (2) The risk of post-emergence crop injury increases when adjuvants (e.g. non-ionic surfactants, crop oils, etc.), nitrogen sources (e.g. AMS, UAN), fertilizers or other pesticides are applied with Dual Magnum.

**Restrictions: leaf lettuce:** (1) Do not apply more than 1.0 pt/A (0.95 lb ai/A) of Dual Magnum before crop emergence. (2) Do not apply more than 0.67 pt/A (0.64 lb ai/A) of Dual Magnum after crop emergence. (3) Do not apply more than 1.33 pt/A (1.27 lb ai/A) of Dual Magnum total per crop. (4) Do not harvest for 25 days after the application of Dual Magnum.

**Restrictions for head lettuce:** (1) Do not apply more than 2.0 pt/A (1.9 lb ai/A) of Dual Magnum per crop. (2) Do not harvest for 20 days after the application of Dual Magnum.

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**MELON CROP SUBGROUP 9A: CANTALOUPE, MUSKMELON AND WATERMELON**

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**Melons grown on plastic mulch:**

Apply Dual Magnum as a row middle application (between the crop rows) at 0.67 - 1.27 pt/A (0.64 - 1.21 lb ai/A) before crop emergence or transplanting, before weed emergence, but after the laying of the plastic mulch. For row middle applications, using row and band width measurements in inches, calculate the amount to be applied per acre as follows:

$$\frac{\text{Band width in inches}}{\text{Row width in inches}} \times \text{Dual Magnum Rate per acre for a broadcast treatment} = \text{Amount of Dual Magnum needed per acre for a row middle treatment}$$

**Melons grown without plastic mulch:**

Apply Dual Magnum as a broadcast, pre-emergence treatment at 0.67 - 1.27 pt/A (0.64 - 1.21 lb ai/A) before crop emergence or before transplanting and before weed emergence. Use the lower end of the Dual Magnum rate range for soils that are relatively coarse textured and the higher rates on fine textured soils.

Dual Magnum may also be applied as a banded application (between the crop row) at 0.67 - 1.27 pt/A (0.64 - 1.21 lb ai/A) before crop emergence or before transplanting and before weed emergence. For band applications, using row and band width measurements in inches, calculate the amount to be applied per acre as follows:

$$\frac{\text{Band width in inches}}{\text{Row width in inches}} \times \text{Dual Magnum Rate per acre for a broadcast treatment} = \text{Amount of Dual Magnum needed per acre for a banded treatment}$$

**Precautions:** (1) Dual Magnum will not control emerged weeds. Control emerged weeds with an appropriate registered foliar herbicide or by mechanical or physical means. (2) If an activating rainfall (0.5") does not occur within 7-10 days following application, weed control may be reduced. (3) Irrigation water can be applied following the treatment of Dual Magnum to activate the herbicide and improve weed control. (4) The risk of injury to melons is greater with a broadcast pre-emergence application than with a row middle application. (5) In general, the risk of crop injury will be less with transplanted melons than with direct seeded melons. (6) Direct application of Dual Magnum to emerged melon foliage (from seed or transplant) may result in crop injury and illegal residues. (7) It is recommended not to mechanically incorporate Dual Magnum into the soil as this will increase the risk for crop injury. (8) Muck soils require the higher use rates; however, weed control may still be reduced on muck soil.

**Restrictions:** (1) Do not make more than one application of Dual Magnum per crop per season. (2) Do not apply more than 1.27 pt/A (1.21 lb ai/A) of Dual Magnum per crop per season. (3) Harvest at normal maturity but no closer than 60 days following application.

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## ONION, DRY BULB

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### **Fall Preplant Application**

For pre-emergent control or suppression of yellow nutsedge the following spring in dry bulb onions apply 1 to 1.33 pt/A of Dual Magnum in the fall after the harvest of the previous crop but before freeze-up. Fall applications of Dual Magnum can be surface-applied or incorporated. To reduce the risk of crop injury apply at least 100 days prior to the planting of onion (seed, sets, or transplants).

**Precautions:** 1) In general, the risk of crop injury is greater on lighter textured soils and with higher application rates. 2) The addition of another registered herbicide as a tank mixture or in a program with Dual Magnum can increase the risk of crop injury. 3) Deep tillage in the spring may reduce the effectiveness of fall applications.

**Restrictions:** (1) Make no more than one fall application per crop. (2) Apply not more than 1.33 pt/A in a single fall preplant application. (3) Do not apply this product, for this use, through any types of irrigation system. (4) Do not apply to frozen ground.

**Note:** Applications of Dual Magnum may cause significant injury to dry bulb onions resulting in reduced yields. This product is available to the end user/grower solely to the extent that the benefit and utility, in the opinion of the end user/grower, outweigh the extent of potential injury associated with the use of this product. Due to the risk of crop damage, all such use is at the end user/grower's risk.

### **Postemergent Application to the Crop**

For suppression and control of yellow nutsedge, grass, and some broadleaf weeds (see **Weeds Controlled** on the Dual Magnum label), apply Dual Magnum at the two (2) true leaf stage of onions at rates of 0.67 - 1.33 pt/A (0.64-1.27 lb ai/A) depending on soil type and target weed. Use the lower rate on light, sandy soils and where a general weed spectrum is targeted. The higher rate will provide improved yellow nutsedge control, but comes with an increased risk of crop injury. One additional application of 0.67-1.33 pt/A may be applied 21 days or more after the first treatment, if needed, provided no fall preplant applications of Dual Magnum were made. Dual Magnum provides good to excellent control of yellow nutsedge. **If nutsedge is not a target weed delaying Dual Magnum application until onions have three true leaves may reduce the risk of crop injury.**

Onion tolerance to Dual Magnum increases with increasing onion size. However, growers must weigh the need to control early nutsedge flushes with the potential risk of crop injury.

**Restrictions:** (1) Do not apply within 60 days of harvest. (2) Do not harvest green onions. (3) Do not apply this product through any types of irrigation system. (4) Do not graze animals on green forage or stubble. (5) If a fall preplant application of Dual Magnum was used for nutsedge, only one post-emergent application at a maximum rate of 1.33 pints/A is allowed. (6) Do not apply more than 2.68 pt/A to dry bulb onions as a combined total across all application timings and use patterns to produce that crop.

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## ONION, GREEN

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Apply a broadcast application of Dual Magnum at 0.67-1.33 pt/A postemergence at the two true-leaf stage of the green onions. In that rate range, use lower rates on soils relatively coarse-textured and higher rates on fine-textured soils. A band application may also be used, applying proportionally less spray mixture on the area actually treated. Make uniform applications in a minimum of 15 gallons of water per treated acre. Dual Magnum will not control emerged weeds. Control emerged weeds with an appropriate registered foliar herbicide or by mechanical or physical means.

**Precautions:** (1) There is risk of crop injury from the use of Dual Magnum on green onions. In general, the risk of crop injury is greater on lighter textured soils and with higher application rates. (2) The use of a spray adjuvant, or the addition of another registered herbicide as a tank mixture with Dual Magnum, will increase the risk of crop injury.

**Restrictions:** (1) Make only one application per crop. (2) Do not harvest within 21 days of application.

**Note:** Applications of Dual Magnum may cause significant injury to green onions resulting in reduced yields. This product is available to the end user/grower solely to the extent that the benefit and utility, in the opinion of the end user/grower, outweigh the extent of potential injury associated with the use of this product. Due to the risk of crop damage, all such use is at the end user/grower's risk.

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## PUMPKIN

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Apply Dual Magnum at a rate of 0.67 - 1.33 pt/A preemergence before crop or weeds have emerged, post-transplant (within 72 hr.) or postemergence to a crop having at least 4 true leaves following cultivation. Applications may be made broadcast or to row middles (inter-row). If Dual Magnum is applied as a broadcast spray over the planted row or hill, injury to the pumpkin crop can occur. Under heavy rain conditions, pumpkins may show significant stunting. Low rates, needed for crop safety on low organic matter soils, may not provide season-long weed control. Use the lower Dual Magnum rate on soils light in texture (loamy sand or lighter) and low in soil organic matter (less than 3%).

**Restrictions:** (1) Do not harvest pumpkins for 30 days following the application of Dual Magnum. (2) Do not exceed 1.33 pt/A of Dual Magnum per crop. (3) Do not apply during the fall or to frozen soils.

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## SPINACH

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Dual Magnum will not control emerged weeds. For effective weed control, Dual Magnum must be applied to clean-tilled soil.

Apply Dual Magnum at a broadcast rate of 0.33 - 0.67 pt/A to the soil surface as a preemergence application i.e. prior to crop and weed emergence. In that rate range, use lower rates on soils relatively coarse-textured and higher rates on fine-textured soils. A band application may also be used if the crop is not planted in a trench or depressed bed, applying proportionally less spray mixture on the area actually treated. Dual Magnum will not control emerged weeds. Control emerged weeds with an appropriate registered foliar herbicide or by mechanical or physical means. For irrigated spinach: Irrigate with sprinkler or by furrow irrigation within two days of Dual Magnum application.

**Restrictions:** (1) Do not incorporate. (2) Do not apply this product through any type of irrigation system. (3) Only one application of Dual Magnum permitted per spinach growing season on the same ground in one calendar year or illegal residues may occur. (4) Do not exceed more than 0.67 pt/A Dual Magnum or illegal residues may occur. (5) Do not harvest within 50 days of application or illegal residues may occur.

**Note:** Applications of Dual Magnum may cause significant injury to spinach resulting in reduced yields. This product is available to the end user/grower solely to the extent that the benefit and utility, in the opinion of the end user/grower, outweigh the extent of potential injury associated with the use of this product. Due to the risk of crop damage, all such use is at the end user/grower's risk.

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## **SQUASH (SUMMER AND WINTER)**

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Apply Dual Magnum at a broadcast rate of 0.67 - 1.33 pt/A pre-emergence (before crop or weeds have emerged), post-transplant (within 72 hours) or post-emergence to a crop having at least 4 true leaves. Dual Magnum can be applied either broadcast over-the top or to row middles (inter-row, inter-hill). Use the lower Dual Magnum rate on soils light in texture (loamy sand or lighter) and low in soil organic matter (less than 3%). Weeds that are present at the time of application should be controlled by another means, i.e. by mechanical or by another registered herbicide.

**Precautions:** (1) Dual Magnum applied as a broadcast spray over the planted row or hill, or applications made directly to crop foliage, will increase the risk of injury to the winter squash crop such as stand loss, delayed maturity and even yield loss. (2) To help avoid crop injury, do not apply Dual Magnum in areas where water is likely to "pond". (3) Preplant incorporated applications are not recommended due to an increased risk of crop injury. (4) The use of a spray adjuvant or the addition of another registered herbicide as a tank mixture with Dual Magnum will increase the risk of crop injury from postemergence applications.

**Restrictions:** (1) Make only one application of Dual Magnum per crop. (2) Do not apply more than 1.33 pt/A of Dual Magnum per crop. (2) Do not harvest winter squash within 30 days of the Dual Magnum application.

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**STRAWBERRY**

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Dual Magnum may be applied to strawberries for residual control or suppression of annual grasses, yellow nutsedge and small seeded broadleaf weeds. Dual Magnum will not control emerged weeds so use an appropriate registered foliar herbicide or mechanical or physical methods to control emerged weeds.

**Dual Magnum Directions for Use Strawberry**

<b>Application Timing</b>	<b>Crop Growth Stage</b>	<b>Rate (pt/A)<sup>1</sup></b>	<b>Pre-harvest Interval<sup>2</sup></b>
Preplant <sup>3</sup>	Before transplanting	0.67 - 1.33 (0.64-1.27 lb ai/A)	Normal
Post-emergence	After emergence from dormancy or after transplanting	0.67 - 1.33 (0.64-1.27 lb ai/A)	30 days
Post-emergence to row middles			

<sup>1</sup>Use lower rates on coarse-textured soils and higher rates on fine-textured soils

<sup>2</sup>Time between Dual Magnum application and crop harvest

<sup>3</sup>No more than 14 days prior to transplanting

If crops are grown on plastic mulch, the Dual Magnum pre-emergence application should be made before laying the plastic. Dual Magnum may also be applied as a row middle application after the laying of the plastic mulch.

Dual Magnum can be applied as part of a sequential weed control program. If Dual Magnum was applied as a pre-transplant treatment, a second treatment of Dual Magnum can be applied postemergence provided the total per crop does not exceed 2.5 pt/A (2.4 lb ai/A).

**Precautions:** (1) If a pre-plant application is used, soil incorporation is not recommended. (2) Minimize the mixing of herbicide treated soil into the seed furrow through the planting operations, so as to reduce the risk of crop injury. (3) The risk of post-emergence crop injury increases when adjuvants (e.g. non-ionic surfactants, crop oils, etc.), nitrogen sources (e.g. AMS, UAN), fertilizers or other pesticides are applied with Dual Magnum.

**Restrictions:** (1) Do not apply more than 1.33 pt/A (1.27 lb ai/A) of Dual Magnum in a single application. (2) Do not apply more than 2.5 pt/A (2.4 lb ai/A) of Dual Magnum per crop. (3) Do not harvest for 30 days after the application of Dual Magnum.

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**SWISS CHARD**

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Apply a single broadcast treatment of Dual Magnum at 0.5 - 1.0 pt/A to the soil surface after planting, but before weeds or crop emerge (i.e., preemergence). In that rate range, use lower rates on soils relatively coarse-textured and higher rates on fine-textured soils. A band application may also be used, applying proportionally less spray mixture on the area actually treated. Dual Magnum will not control emerged weeds. Control emerged weeds with an appropriate registered foliar herbicide or by mechanical or physical means.

**Restrictions:** (1) At application, do not exceed 40-psi spray nozzle pressure. (2) Do not apply when temperatures exceed 85°F. (3) Do not apply as a tank mixture with surfactants, nitrogen or fertilizer solutions, or other pesticides, as injury to the crop may result. (4) Do not flood or sprinkler irrigate immediately following application. (5) Do not exceed a total of 1.4 pt/A per year. (6) Do not harvest within 62 days of application.

**Note:** Applications of Dual Magnum may cause significant injury to swiss chard resulting in reduced yields. This product is available to the end user/grower solely to the extent that the benefit and utility, in the opinion of the end user/grower, outweigh the extent of potential injury associated with the use of this product. Due to the risk of crop damage, all such use is at the end user/grower's risk.

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### **TOMATO (PREHARVEST INTERVAL)**

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**Restrictions:**

- (1) When using Dual Magnum on tomato at 1.67 pt/A or less per year, the pre-harvest interval (PHI) is 60 days
- (2) When using Dual Magnum on tomato at 1.68-2.0 pt/A per year, the pre-harvest interval (PHI) is 90 days

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