



## Section 24(c) Special Local Need Label

FOR DISTRIBUTION AND USE ONLY WITHIN THE STATE OF MINNESOTA

**Dual Magnum® Herbicide**  
EPA Reg. No. 100-816

EPA SLN No. MN-210005

This label expires and must not be distributed or used in accordance with this SLN registration after December 31, 2025

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**For control of weeds in: Crop Group 1 (Root and Tuber Vegetables):** Beet, garden; Parsnip; Radish; Rutabaga; Sweet Potato; Turnip. **Crop Group 2 (Leaves or Root and Tuber Vegetables)** Beet, garden, leaves. **(Crop Group 3 (Bulb Vegetables):** Chive, Chinese; Chive, fresh leaves; Daylily, bulb; Garlic, bulb; Garlic, great headed, bulb; Leek; Lily, bulb; Onion, Beltsville Bunching; Onion, dry bulb; Onion, green; Onion, pearl; Onion, potato, bulb; Onion, Welsh, tops; Shallot, bulb; Shallot, fresh leaves. **Crop Group 4 (Leafy Vegetables (except Brassica Vegetables) and Crop Group 5 (Brassica (Cole) Leafy Vegetables):** Beet, garden, leaves; Broccoli, transplanted; Broccoli, Raab; Brussels Sprouts, transplanted; Cabbage, transplanted; Cabbage, Chinese (Bok Choy); Cauliflower, transplanted; Cilantro, fresh leaves; Collards; Kale; Mizuna; Mustard Greens; Mustard Spinach; Rape Greens; Spinach; Swiss Chard; Turnip Greens. **Crop Group 8 (Fruiting Vegetables):** Bell Pepper, transplanted; Eggplant, transplanted; Non-bell Pepper, transplanted; Okra, transplanted. **Crop Group 9 (Cucurbits):** Citron Melon; Cucumber; Muskmelon; Pumpkin; Squash, summer; Squash, winter; Watermelon. **Crop Group 13 (Berries):** Blackberry; Blueberry, highbush; Blueberry, lowbush; Currant; Elderberry; Gooseberry; Loganberry; Raspberry, black and red; Strawberry. **Crop Group 22 (Stalk, Stem and Leaf Petiole Vegetables):** Asparagus; Celery, transplanted.

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**KEEP OUT OF REACH OF CHILDREN**  
**CAUTION**

**SYNGENTA'S SPECIAL CONDITIONS, RISKS OF USE AND DISCLAIMER FOR USE OF DUAL MAGNUM HERBICIDE ON CROPS ON THIS 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 OF STATE OF MINNESOTA**

**USE OF DUAL MAGNUM HERBICIDE (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.**

#### **DIRECTIONS FOR USE**

- It is a violation of Federal law to use this product in a manner inconsistent with its labeling.
- This label must be in the possession of the user at the time of application.
- Follow all applicable directions, restrictions, Worker Protection Standard requirements, and precautions on the EPA-registered label.
- Dual Magnum will not control emerged weeds. For effective weed control, Dual Magnum must be applied to clean-tilled soil.

- The risk of 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.

- **Crop Group 1 (Root and Tuber Vegetables)**

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**BEET, garden; PARSNIP; RADISH; RUTABAGA; TURNIP**

- o Preplant Incorporated, Preplant or Preemergence
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Make a single broadcast application of Dual Magnum at 0.67 - 1.0 pt/A (0.64–0.95 lb ai/A) preplant incorporated, preplant surface applied, or preemergence to clean-tilled soil. Use lower rates on coarse-textured soils and higher rates on fine-textured soils. If the soil organic matter is 20% or greater (muck soils), use Dual Magnum at a rate up to 1.3 pt/A (1.24 lb ai/A). In general, the risk of crop injury from the use of Dual Magnum is greater from preplant incorporated than from preplant non-incorporated or preemergence applications. Irrigate after application to activate the herbicide if rainfall is not expected but use only 0.5 inches of water to incorporate the herbicide.

**Precautions:** (1) Excessive irrigation will increase the risk of crop injury. (2) Mechanical incorporation of Dual Magnum will increase the risk of crop injury. (3) It is recommended 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. (4) Not recommended on coarse textured soils with less than 1.5 % OM, as use in these soils increases the risk of crop injury. (5) In soils with greater than 10% organic matter, weed control may be reduced.

**Restrictions:** (1) Make only one application of Dual Magnum per crop. (2) Do not apply more than 1.3 pt/A (1.24 lb ai/A) of Dual Magnum per crop. (3) Harvest these crops at normal timing.

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**SWEET POTATO**

- o Post-Transplant
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For post-transplant, preemergence or use in sweet potatoes only. Apply 1.0 - 1.33 pt/A (0.95–1.27 lb ai/A) broadcast rate of Dual Magnum after the sweet potatoes have been transplanted, but before the target weeds have emerged. Do not incorporate the Dual Magnum following application.

Use the lower Dual Magnum rate on the more coarse-textured soils. Injury risk is higher on sands and loamy sands, especially if a heavy rainfall event occurs shortly after application. If irrigation will be used on the sweet potato crop, do not apply more than 0.5 inches of water for the first irrigation event following the application of Dual Magnum.

To help avoid concentrating Dual Magnum over the top of the sweet potato transplants, fill the transplanter trench prior to applying the Dual Magnum by running a rolling cultivator, or similar device, behind the transplanter. The transplanter trench must be closed prior to the application of Dual Magnum.

Apply Dual Magnum in a minimum of 10 gallons of water per acre.

**Restrictions and Precautions:** 1) **DO NOT** incorporate Dual Magnum following application. 2) **DO NOT** apply Dual Magnum in a way that allows the herbicide to be concentrated over the transplanted row -- this includes soil or water movement into the transplanter trench, or toward the row, following application. 3) **DO NOT** apply through any type of irrigation system. 4) Make only one Dual Magnum application to sweet potatoes per growing season. 5) Do not harvest sweet potatoes within 60 days of a Dual Magnum application.

## Crop Group 2 (Leaves of Root and Tuber Vegetables)

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### **Beet, garden, leaves**

- o Preplant, Preemergence or Postemergence
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Dual Magnum may be used preplant, preemergence or postemergence for residual suppression or control of annual grasses, yellow nutsedge, and small-seeded broadleaf weeds.

**Soil Applications:** Apply 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 (preemergence). Within the Dual Magnum rate range, use lower rates on coarse-textured soils and higher rates on fine-textured soils.

Dual Magnum may also be used as a preplant application prior to planting of beet greens. If applied as a preplant application, do not incorporate Dual Magnum into the soil by mechanical methods or irrigation prior to planting. Following a preplant application, minimize the mixing and incorporation of treated Dual Magnum soil into the seed furrow through the planting operation. Incorporation or mixing of Dual Magnum into the soil prior to planting will significantly increase the risk of crop injury.

Dual Magnum will not control emerged weeds. Control emerged weeds with an appropriate registered foliar herbicide or by mechanical or physical means.

The risk of crop injury increases when 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 Dual Magnum application per crop. (3) Do not harvest for 30 days after the application of Dual Magnum.

## Crop Group 3 (Bulb Vegetables)

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**CHIVE, Chinese, fresh leaves; CHIVE, fresh leaves; DAYLILY, bulb; GARLIC, bulb; GARLIC, great headed, bulb; LEEK; LILY, bulb; ONION, Beltsville Bunching; ONION, green; ONION, pearl; ONION, potato, bulb; ONION, Welsh, tops; SHALLOT, bulb; SHALLOT, fresh leaves**

- o Postemergence
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Apply a broadcast application of Dual Magnum at 0.67 -1.3 pt/A (0.64-1.24 lb ai/A) postemergence starting at the two true-leaf stage of the crop. Within 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.

**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 with Dual Magnum, will increase the risk of crop injury.

**Restrictions:** (1) Make only one application and apply not more than 1.3 pt/A (1.24 lb ai/A) per crop per season. (2) Do not harvest within 21 days of the Dual Magnum application.

### **ONION, dry bulb**

- o Postemergence
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Apply Dual Magnum at 0.67 - 1.3 pt/A (0.64-1.24 lb ai/A) broadcast starting at the two true-leaf stage of onions. Use lower rates on coarse-textured soils and higher rates on fine-textured soils. One additional application may be applied 21 or more days after the first application, if needed. A band application may also be used, applying proportionally less spray mixture on the area 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) 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 no more than two applications of Dual Magnum per crop. (2) Apply not more than 1.3 pt/A (1.24 lb ai/A) in a single application and not more than 2.6 pt/A (2.48 lb ai/A) per crop. (3) The Dual Magnum applications cannot be less than 21 days apart. (4) Do not harvest onions within 60 days of the Dual Magnum application. (5) The harvest of green onions for and the grazing of animals on green forage or stubble are prohibited.

**Crop Group 4 (Leafy Vegetables (except Brassica Vegetables))**  
**Crop Group 5 (Brassica (Cole) Leafy Vegetables)**

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**BROCCOLI, RAAB; CABBAGE, CHINESE (BOK CHOY); COLLARDS; KALE; MIZUNA; MUSTARD GREENS; MUSTARD SPINACH; RAPE GREENS; TURNIP GREENS**

o Preemergence and Postemergence

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**Soil Applied:** Apply a single preemergence broadcast treatment of Dual Magnum at 0.67 - 1.3 pt/A (0.64-1.24 lb ai/A) to the soil surface after planting, but before weeds or crop emerge. 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 for residual control of grasses and small seeded broadleaf weeds. Apply a single broadcast treatment of Dual Magnum at 0.67 - 1.3 pt/A (0.64-1.24 lb ai/A) after crops have between 1-2 true leaves. Dual Magnum will not control emerged weeds, therefore, emerged weeds must be controlled by cultural or chemical methods. 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 1.3 pt/A (1.24 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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**BROCCOLI, *transplanted*; BRUSSEL SPROUTS, *transplanted*; CABBAGE, *transplanted*; CAULIFLOWER, *transplanted*; and CABBAGE, CHINESE (BOY CHOY), *transplanted***

o Preplant, prior to transplanting, or Postemergence, after transplanting

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Apply Dual Magnum at a broadcast rate of 0.5 - 1.3 pt/A (0.48-1.24 lb ai/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. (4) Muck soils require the higher use rates; however, weed control may be reduced on muck soil. (5) The addition of another registered herbicide, especially the herbicide Goal®, will increase the risk of crop injury from postemergence applications. (6) Chinese varieties are more sensitive to injury from Dual Magnum.

**Restrictions:** (1) Make only one application of Dual Magnum per crop. (2) Do not apply more than 1.3 pt/A (1.24 lb ai/A) of Dual Magnum per crop. (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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**CILANTO, *fresh leaves***

- o Preplant, prior to planting
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Dual Magnum is applied for residual suppression or control of annual grasses, yellow nutsedge and small-seeded broadleaf weeds.

**Soil Application:** Apply Dual Magnum at 0.67 - 1.0 pt/A (0.64-0.95 lb ai/A) to the soil surface after planting, but before weeds or crop emerge (preemergence). Within the Dual Magnum rate range, use lower rates on coarse-textured soils and higher rates on fine-textured soils.

Dual Magnum may also be used as a preplant application prior to planting of cilantro. If applied as a preplant application, do not incorporate Dual Magnum into the soil by mechanical methods or irrigation prior to planting of cilantro. Following a preplant application, minimize the mixing and incorporation of treated Dual Magnum soil into the seed furrow through the planting operation. Incorporation or mixing of Dual Magnum into the soil prior to planting will significantly increase the risk of crop injury.

Dual Magnum will not control emerged weeds. Control emerged weeds with an appropriate registered foliar herbicide or by mechanical or physical means.

The risk of crop injury increases when fertilizers or other pesticides are applied with Dual Magnum.

**Restrictions:** (1) Do not apply more than 1.0 pt/A (0.95 lb ai/A) of Dual Magnum per crop. (2) Make only one Dual Magnum application per crop. (3) Do not harvest fresh leaves or stems for 30 days after the application of Dual Magnum. (4) Do not harvest seed for 70 days after the application of Dual Magnum.

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**SWISS CHARD**

- o Preemergence, after planting
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Apply a single broadcast application of Dual Magnum at 0.5 - 1.0 pt/A (0.48-0.95 lb ai/A) to the soil surface, after planting, but before weeds or crop emerge (i.e., preemergence). Use lower rates on relatively coarse-textured soils and higher rates on fine-textured soils. A band application may also be used, applying proportionally less spray mixture on the area 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) In general, the risk of crop injury is greater on lighter textured soils and with higher application rates.

**Restrictions:** (1) Make only one application of Dual Magnum per crop. (2) Do not apply more than 1.0 pt/A (0.95 lb ai/A) of Dual Magnum per crop. (3) Do not harvest Swiss chard within 62 days of the Dual Magnum application. (4) Do not apply as a tank mixture with nitrogen fertilizer solutions, or with other pesticides.

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**SPINACH**

- o Preemergence
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Make a single broadcast application of Dual Magnum at 0.33 - 1.0 pt/A (0.31-0.95 lb ai/A) to clean-tilled soil before weeds or crop emerge (i.e., preemergence). Use lower rates on coarse-textured soils and higher rates on fine-textured soils.

**Precautions:** (1) To help avoid crop injury, it is recommended that the Dual Magnum not be mechanically incorporated. (2) Not recommended on muck soils due to probable poor weed control at these rates. (3) For irrigated spinach, irrigate with sprinkler or furrow irrigation within two days of Dual Magnum application.

**Restrictions:** (1) Make only one application of Dual Magnum per crop. (2) Do not apply more than 1.0 pt/A (0.95 lb ai/A) of Dual Magnum per crop. (3) Do not harvest spinach within 50 days of the Dual Magnum application.

### Crop Group 8 (Fruiting Vegetables)

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#### **BELL PEPPER, *transplanted*; and NON-BELL PEPPER, *transplanted***

- o Preplant, prior to transplanting, or Postemergence
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Apply Dual Magnum at a broadcast rate of 0.5 - 1.0 pt/A (0.48-0.95 lb ai/A) preplant non-incorporated prior to transplanting or broadcast post-emergence application within 48 hours after transplanting. Use lower rates on coarse-textured soils 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.

**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) Preplant incorporated applications are not recommended due to an increased risk of crop injury. (3) Muck soils (>20%) normally require the higher use rate (1.0 pt/A), however, weed control may be reduced on muck soils. (4) The addition of another registered herbicide as a tank mixture with Dual Magnum will increase the risk of crop injury from postemergence applications. (5) 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.

**Restrictions:** (1) Make only one application of Dual Magnum per crop. (2) Do not apply more than 1.0 pt/A (0.95 lb ai/A) of Dual Magnum per crop. (3) Do not harvest peppers within 60 days of the Dual Magnum application.

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#### **EGGPLANT, *transplanted***

- o Preplant, prior to transplanting, or Postemergence
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Apply a broadcast application of Dual Magnum Herbicide at 0.5-1.33 pt/A (0.48-1.27 lb ai/A) prior to transplanting or as a broadcast application within 48 hours after transplanting. Use lower rates on coarse-textured soils and higher rates on fine-textured and muck soils. Dual Magnum Herbicide 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 is greater on lighter textured soils and with higher application rates. (2) Do not mechanically incorporate before transplanting. (4) The use of another registered herbicide as a tank mixture with Dual Magnum Herbicide will increase the risk of crop injury.

**Restrictions:** (1) Make only one application of Dual Magnum Herbicide per crop. (2) Do not apply more than 1.33 pt/A (1.27 lb ai/A) of Dual Magnum Herbicide per crop. (3) Do not harvest eggplant within 60 days of the Dual Magnum Herbicide application.

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#### **OKRA, *transplanted***

- o Post-directed
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Apply Dual Magnum as a post-directed treatment at 1.0 – 2.0 pt/A (0.95-1.91 lb ai/A) after the okra is 4 inches tall but before weeds emerge. The application should be directed to minimize the amount of spray

that contacts 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 higher rates on fine textured soils.

Dual Magnum may also be applied as a row middle application (between the crop rows) at 1.0 – 2.0 pt/A (0.95-1.91 lb ai/A) after the okra is 4 inches tall and before weed emergence.

**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) Excessive irrigation or rainfall (1-2") following application may result in an increased risk for crop injury. (3) Applications of Dual Magnum prior to okra emergence or prior to okra reaching 4 inches in height will increase the risk for significant crop injury. (4) If the okra crop treated with Dual Magnum is lost or destroyed, replanting okra into the treated zone may result in crop injury.

**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 (1.91 lb ai/A) of Dual Magnum per crop per season. (3) Do not harvest okra within 60 days following the application of Dual Magnum.

### Crop Group 9 (Cucurbits)

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#### CITRON MELON; MUSKMELON and WATERMELON

- o **Plastic:** Row-middle/Banned, prior to crop emergence or transplanting
  - o **Without Plastic:** Preemergence, prior to crop emergence or transplanting
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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:

**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:

**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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**CUCUMBER**

o Preemergence or Postemergence

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**Soil Applied:** Apply a single broadcast treatment of Dual Magnum at 0.67 - 1.0 pt/A (0.64-0.95 lb ai/A) to the soil surface after planting, but before weeds or crop emerge (i.e., pre-emergence). Within the rate range, use lower rates on soils relatively coarse-textured and higher rates on fine-textured soils.

**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 - 1.0 pt/A (0.64-0.95 lb ai/A) after cucumbers have between 1-2 true leaves. 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. 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 1.0 pt/A (0.95 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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**PUMPKIN**

o Preemergence

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**Preemergence**

Apply Dual Magnum Herbicide at a rate of 1.0 - 1.33 pints/A (0.95-1.27 lb ai/A) pre-emergence (before the weeds have emerged) to pumpkin. Use the lower Dual Magnum Herbicide rate on soils light in texture (loamy sand or lighter) and low in soil organic matter (less than 3%). If Dual Magnum Herbicide is applied as a broadcast spray over the planted row or hill, injury to the pumpkin crop can occur which may include stand loss, delayed maturity, and even loss of yield. Do not apply Dual Magnum Herbicide after the pumpkin seedlings have emerged.

Dual Magnum Herbicide will not control emerged weeds, and thus should be applied before the weeds emerge. Weeds that are present should be controlled by another means, i.e. by mechanical means or by another herbicide registered for use on pumpkin.

**Precautions:** (1) Do not apply Dual Magnum Herbicide after the pumpkin seedlings have emerged. (2) Do not harvest pumpkins for 30 days following the application of Dual Magnum Herbicide. (3) Do not exceed 1.33 pt/A (1.27 lb ai/A) of Dual Magnum Herbicide per crop. (4) Do not apply during the fall or to frozen soils.

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**SQUASH, summer**

o Preplant, Preemergence, Postemergence & Postemergence-(row-middles)

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

Application Timing	Crop Growth Stage	Rate (pt/A) <sup>1</sup>	Pre-harvest Interval <sup>2</sup>
Preplant <sup>3</sup>	Before planting	0.67 - 1.33 (0.64-1.27 lb ai/A)	30 days
Pre-emergence	Before emergence or transplanting		

Application Timing	Crop Growth Stage	Rate (pt/A) <sup>1</sup>	Pre-harvest Interval <sup>2</sup>
Post-emergence	After emergence or transplanting <sup>4</sup>	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 Herbicide application and crop harvest

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

<sup>4</sup> Must have at least one true leaf

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

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

**Precautions:** (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 Herbicide.

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

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### SQUASH, winter

#### o Preemergence

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Apply Dual Magnum at a rate of 1.0 - 1.3 pt/A (0.95-1.24 lb ai/A) pre-emergence (before the weeds have emerged) to winter squash. Use the lower Dual Magnum rate on soils light in texture (loamy sand or lighter) and low in soil organic matter (less than 3%).

If Dual Magnum is applied as a broadcast spray over the planted row or hill, injury to the winter squash crop can occur. Crop injury may include stand loss, delayed maturity, and even loss of yield. Do not apply Dual Magnum after the winter squash seedlings have emerged.

Dual Magnum will not control emerged weeds, and thus should be applied before the weeds emerge. Weeds that are present should be controlled by another means, i.e. by mechanical means or by another herbicide registered for use on winter squash.

Precautions: (1) Do not apply Dual Magnum after the winter squash seedlings have emerged. (1) Do not harvest winter squash for 30 days following the application of Dual Magnum. (3) Do not exceed 1.3 pt/A (1.24 lb ai/A) of Dual Magnum per crop.

## Crop Group 13 (Berries)

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### **BLACKBERRY; LOGANBERRY; RASBERRY, red and black & cultivars and hybrids of these**

o Banded or Row-Middle

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For summer bearing canes, apply Dual Magnum in the early spring as a banded application to both sides of the plant canes at 1.0 – 2.0 pt/A (0.95-1.91 lb ai/A) prior to weed emergence. For mowed or fall bearing canes, apply as a banded or broadcast application to bare soil in the spring. The application to summer bearing canes 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.

**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 (1.91 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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### **BLUEBERRY, highbush and lowbush; CURRANT; ELDERBERRY; and GOOSEBERRY**

o Banded or Row-Middle

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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 (0.64-1.24 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. 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, 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 1.3 pt/A (1.24 lb ai/A) of Dual Magnum per crop. (3) Do not harvest for 28 days following the Dual Magnum application.

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### **STRAWBERRY, annual and perennial**

o Preplant, Preemergence, Postemergence, Postemergence-(row-middles) & Renovation

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Dual Magnum may be applied 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.

Application Timing	Crop Growth Stage	Rate (pt/A) <sup>1</sup>	Pre-harvest Interval <sup>2</sup>
Preplant <sup>3</sup>	Before transplanting	0.67 - 1.33 (0.64-1.27 lb ai/A)	30 days
Pre-emergence	Dormant before emergence in spring		
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			
Renovation	After harvest	0.67 - 1.33 (0.64-1.27 lb ai/A)	30 days

<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 (2.38 lb ai/A).

**Precautions:** (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:** (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 (2.38 lb ai/A) of Dual Magnum per crop. (3) Do not harvest for 30 days after the application of Dual Magnum.

### Crop Group 22 (Stalk, Stem and Leaf Petiole Vegetables)

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#### ASPARAGUS

- o Preemergence-(post-harvest/dormant)
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Apply a single broadcast treatment of Dual Magnum at 1.33 - 2.0 pt/A (1.27-1.91 lb ai/A) after the harvest season (i.e. post-harvest treatment), or to dormant established asparagus beds in the spring, prior to asparagus emergence. Within this 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) Make only one application of Dual Magnum per crop. (2) Do not apply more than 2.0 pt/A (1.91 lb ai/A) of Dual Magnum per crop. (3) Do not harvest asparagus within 16 days of the Dual Magnum application.

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**CELERY, *transplanted***

- o Preplant-incorporated or Preplant-(prior to transplant) or Postemergence-(after transplant)
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Apply Dual Magnum at 1.0 - 2.0 pt/A (0.95-1.91 lb ai/A) as a broadcast pre-plant surface applied or as a pre-plant incorporated application prior to transplanting or broadcast post-emergence application after transplanting. Use lower rates on coarse-textured soils and higher rates on fine-textured or 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) For applications made before transplanting, injury risk is greater from preplant incorporated than from preplant non-incorporated applications. (3) The addition of another registered herbicide as a tank mixture with Dual Magnum will increase the risk of crop injury from post-emergence 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.

**Restrictions:** (1) Multiple applications to the same crop are allowed, but the total amount of Dual Magnum applied must not exceed 2.0 pt/A (1.91 lb ai/A). (2) Do not harvest celery within 62 days of the Dual Magnum application.

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