RESTRICTED USE PESTICIDE

STATE OF HAWAII
Department of Agriculture
ACCEPTED
LICENSE NO. 9226.471

Sale, use and distribution of this product in Nassau and Suffolk Counties in the State of New York is prohibited.

GROUP 15 HERBICIDE

PULL HERE TO OPEN

Dual II Magnum®

syngenta®

Herbicide

For weed control in beans, peas, and lentils; corn; cotton; grasses grown for seed; horseradish; peanuts; potatoes; pumpkin; rhubarb; safflowers; sweet, grain, or forage sorghum; soybeans; soybeans, immature seed; sugar beets; sunflowers; and tomatoes

Active Ingredient:	
S-metolachlor (CAS No. 87392-12-9)	82.4%
Other Ingredients:	17.6%
Total:	100.0%

Dual II Magnum contains 7.64 lbs. of active ingredient per gallon.

KEEP OUT OF REACH OF CHILDREN.

CAUTION

See additional precautionary statements and directions for use inside booklet.

EPA Reg. No. 100-818

EPA Est. 11773-IA-01

Product of Switzerland
Formulated in the USA

SCP 818A-L1Q 0412
4011735

2.5 gallons
Net Contents

™

FIRST AID	
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 Center or doctor for treatment advice.
If on skin or clothing	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a Poison Control Center or doctor for treatment advice.
If swallowed	• Call a Poison Control Center or doctor immediately for treatment advice. • Do not give any liquid to the person. • Do not induce vomiting unless told to do so by the Poison Control Center or doctor. • Do not give anything by mouth to an unconscious person.
If inhaled	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. • Call a Poison Control Center or doctor for further treatment advice.
Have the product container or label with you when calling a Poison Control Center or doctor, or going for treatment.	
HOT LINE NUMBER For 24 Hour Medical Emergency Assistance (Human or Animal) Or Chemical Emergency Assistance (Spill, Leak, Fire or Accident), Call **1-800-888-8372**	

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION

Causes eye irritation. Harmful if swallowed or absorbed through skin. Avoid contact with eyes, skin, or clothing. This product may cause skin sensitization reactions in some people.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves, such as barrier laminate or Viton®
- Shoes plus socks

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Control Statements

Mixers and loaders supporting aerial applications are required to use closed systems. The closed system must be used in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)]. When using the closed system, the mixers' and loaders' PPE requirements may be reduced or modified as specified in the WPS.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

continued…

PRECAUTIONARY STATEMENTS *(continued)*

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Environmental Hazards

Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash water or rinsate.

Ground Water Advisory

The active ingredient in Dual II Magnum has the potential to leach through soil into ground water under certain conditions as a result of agricultural use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

Surface Water Advisory

The active ingredient in Dual II Magnum has the potential to contaminate surface water through ground spray drift. Under some conditions, the active ingredient may also have a high potential for runoff into surface water (primarily via dissolution in runoff water) for several months post-application. These include poorly drained or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas overlaying extremely shallow ground water, areas with in-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas overlaying tile drainage systems that drain to surface water.

Mixing/Loading Instructions

Care must be taken when using this product to prevent back-siphoning into wells, spills, or improper disposal of excess pesticide, spray mixtures, or rinsates.

Check-valves or antisiphoning devices must be used on all mixing and/or irrigation equipment.

This product may not be mixed or loaded within 50 ft. of perennial or intermittent streams and rivers, natural or impounded lakes, and reservoirs. This product may not be mixed/loaded or used within 50 ft. of all wells, including abandoned wells, drainage wells, and sink holes. Operations that involve mixing, loading, rinsing, or washing of this product into or from pesticide handling or application equipment or containers within 50 ft. of any well are prohibited, unless conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be positioned on or moved across the pad. Such a pad shall be designed and maintained to contain any product spills or equipment leaks, container or equipment rinse or wash water, and rain water that may fall on the pad. Surface water shall not be allowed to either flow over or from the pad, which means the pad must be self-contained. The pad shall be sloped to facilitate material removal. An unroofed pad shall be of sufficient capacity to contain at a minimum 110% of the capacity of the largest pesticide container or application equipment on the pad. A pad that is covered by a roof of sufficient size to completely exclude precipitation from contact with the pad shall have a minimum containment capacity of 100% of the capacity of the largest pesticide container or application equipment on the pad. Containment capacities as described above shall be maintained at all times. The above-specified minimum containment capacities do not apply to vehicles when delivering pesticide shipments to the mixing/loading site.

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of SYNGENTA CROP PROTECTION, LLC or Seller. To the extent consistent with applicable law, Buyer and User agree to hold SYNGENTA and Seller harmless for any claims relating to such factors.

SYNGENTA warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. To the extent consistent with applicable law: (1) this warranty does not extend to the use of the product contrary to label instructions or under conditions not reasonably foreseeable to or beyond the control of Seller or SYNGENTA, and (2) Buyer and User assume the risk of any such use. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, SYNGENTA MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS WARRANTED BY THIS LABEL.

To the extent consistent with applicable law, in no event shall SYNGENTA be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF SYNGENTA AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF SYNGENTA OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

SYNGENTA and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of SYNGENTA.

DIRECTIONS FOR USE

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

Dual II Magnum should be used only in accordance with recommendations on this label or in separately published EPA accepted supplemental labeling recommendations for this product.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 24 hours. Exception: If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:

- Coveralls
- Chemical-resistant gloves, such as barrier laminate or Viton
- Shoes plus socks

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

To avoid spray drift, do not apply under windy conditions. Avoid spray overlap, as crop injury may result.

Sale, use and distribution of this product in Nassau and Suffolk Counties in the State of New York is prohibited.

PRODUCT INFORMATION

Observe all precautions and limitations on the labels of each product used in tank mixtures. Tank mixtures are permitted only in those states where the tank mix partner is registered. Refer to and follow the label for each tank mix product used for precautionary statements, directions for use, geographic and other restrictions.

Dual II Magnum is a selective herbicide recommended as a preplant surface-applied, preplant incorporated, or preemergence treatment in water or fluid fertilizer for control of most annual grasses and certain broadleaf weeds in beans, peas, and lentils; corn (all types); cotton; grasses grown for seed; peanuts; potatoes; safflowers; sweet, grain, or forage sorghum; soybeans; soybean, immature seed; sugar beets; sunflowers; and tomatoes.

Restrictions: Do not use in nurseries, turf, or landscape plantings.

Do not apply under conditions which favor runoff or wind erosion of soil containing this product to nontarget areas.

To prevent off-site movement due to runoff or wind erosion:

1. Avoid treating powdery dry or light sand soils when conditions are favorable for wind erosion. Under these conditions, the soil surface should first be settled by rainfall or irrigation.
2. Do not apply to impervious substrates, such as paved or highly compacted surfaces.
3. Do not use tailwater from the first flood or furrow irrigation of treated fields to treat nontarget crops, unless at least 1/2 inch of rainfall has occurred between application and the first irrigation.

Where directions specify a Dual II Magnum tank mixture with AAtrex® formulations, other brands of atrazine may be used. Follow the rates, recommendations, and limitations on the AAtrex or respective atrazine product label, if other brands of atrazine are used.

Restrictions: Certain states may have established rate limitations for atrazine within specific geographical areas. Consult your state lead pesticide control agency for additional information. It is a violation of this label to deviate from state use regulations.

If Dual II Magnum is incorporated, any supplemental tillage before planting must not exceed the depth of incorporation.

Dry weather following preemergence application of Dual II Magnum or a tank mixture may reduce effectiveness. Cultivate if weeds develop.

Where reference is made to weeds partially controlled, partial control can either mean erratic control from good to poor, or consistent control at a level below that generally considered acceptable for commercial weed control.

Precaution: Injury may occur following the use of Dual II Magnum under abnormally high soil moisture conditions during early development of the crop.

SOIL TEXTURES AND HERBICIDE RATES

Where rates are based on coarse-, medium-, or fine-textured soils, it is understood that soil textural classes are generally categorized as follows:

COARSE	MEDIUM	FINE
Sand	Loam	Sandy clay loam
Loamy sand	Silt loam	Silty clay loam
Sandy loam	Silt	Clay loam
		Sandy clay
		Silty clay
		Clay

Within rate ranges in the rate tables and elsewhere on this label, use the lower rate on soils relatively coarse-textured or low in organic matter; use the higher rate on soils relatively fine-textured or high in organic matter.

Restrictions: Dual II Magnum may be applied preemergence alone, or in combination with tank mix partners specified on this label, following preplant incorporated herbicides when used according to their label recommendations, provided that such use is not prohibited on the respective labels.

Thoroughly clean sprayer or other application device before using. Dispose of cleaning solution in a responsible manner. Do not use a sprayer or applicator contaminated with any other materials, or crop damage or clogging of the application device may result.

DUAL II MAGNUM APPLIED ALONE

Weeds Controlled

Dual II Magnum is taken up by the shoots and/or roots of emerging weeds. This uptake results in the inhibition of shoot and root tissue growth soon after weed germination. Because of this, Dual II Magnum will not control emerged weeds and should be applied prior to weed emergence.

If Dual II Magnum is incorporated, do not exceed a 2- to 3-inch depth. Any tillage after the Dual II Magnum incorporation and before planting should not exceed 2-3 inches.

Dry weather following application of Dual II Magnum may reduce weed control. Cultivate if weeds develop.

Where reference is made to weeds partially controlled, partial control can either mean erratic control from good to poor or consistent control at a level below that generally considered acceptable for commercial weed control. Control of these weeds can be erratic, due partially to variable weather conditions. The following procedures may improve the control of weeds listed as partially controlled in Table 1:

1. Thoroughly till soil to destroy germinating and emerged weeds.
2. Plant crop into moist soil immediately after tillage. If Dual II Magnum is to be used preemergence, apply at planting or immediately after planting.
3. If available, sprinkler irrigate within 2 days after application. Apply 1/2-1 inch of water. Use lower water volume (1/2 inch) on *coarse-textured soils* and higher volume (1 inch) on *fine-textured soils*. Also, refer to the section on **Center Pivot Irrigation Application** for this method of applying Dual II Magnum.
4. If irrigation is not possible and rain does not occur within 2 days after planting and application, weed control may be decreased. Under these conditions, a uniform, shallow cultivation is recommended as soon as weeds emerge.

Table 1: Weeds Controlled or Partially Controlled by Dual II Magnum Applied Prior to Weed Emergence

Common Name	Scientific Name	Weed Type	Control (C) or Partial Control (PC)
Barnyardgrass	*Echinochloa crus-galli*	Grass	C
Crabgrass, large	*Digitaria ischaemum*	Grass	C
Crabgrass, smooth	*Digitaria sanguinalis*	Grass	C
Crowfootgrass	*Dactyloctenium aegyptium*	Grass	C
Cupgrass, Prairie	*Eriochloa contracta*	Grass	C
Cupgrass, Southwestern	*Eriochloa acuminata*	Grass	C
Cupgrass, woolly	*Eriochloa villosa*	Grass	PC[1]
Foxtail, bristly	*Setaria verticillata*	Grass	C
Foxtail, giant	*Setaria faberi*	Grass	C
Foxtail, green	*Setaria viridis*	Grass	C
Foxtail, millet	*Setaria italica*	Grass	C
Foxtail, yellow	*Setaria pumila*	Grass	C
Goosegrass	*Eleusine indica*	Grass	C
Johnsongrass (seedling)	*Sorghum halepense*	Grass	PC
Millet, wild-proso	*Panicum miliaceum*	Grass	PC[1]
Panicum, fall	*Panicum dichotomiflorum*	Grass	C
Panicum, Texas	*Panicum texanum*	Grass	PC
Rice, red	*Oryza punctata*	Grass	C
Sandbur, field	*Cenchrus spinifex*	Grass	PC
Ryegrass, Italian	*Lolium multiflorum*	Grass	C
Sandbur, Southern	*Cenchrus spinifex*	Grass	PC
Shattercane	*Sorghum bicolor*	Grass	PC
Signalgrass, broadleaf	*Urochloa platyphylla*	Grass	C
Sorghum (volunteer)	*Sorghum bicolor*	Grass	PC
Witchgrass	*Panicum capillare*	Grass	C
Amaranth, Palmer	*Amaranthus palmeri*	Broadleaf	C
Amaranth, Powell	*Amaranthus powellii*	Broadleaf	C
Beggarweed, Florida	*Desmodium tortuosum*	Broadleaf	PC
Carpetweed	*Mollugo verticillata*	Broadleaf	C
Eclipta	*Eclipta prostrata*	Broadleaf	PC
Galinsoga, hairy	*Galinsoga quadriradiata*	Broadleaf	C
Galinsoga, smallflower	*Galinsoga parviflora*	Broadleaf	C
Nightshade, Eastern black	*Solanum ptychanthum*	Broadleaf	C
Nightshade, hairy	*Solanum physalifolium*	Broadleaf	PC
Pigweed, prostrate	*Amaranthus blitoides*	Broadleaf	C
Pigweed, redroot	*Amaranthus retroflexus*	Broadleaf	C

Common Name	Scientific Name	Weed Type	Control (C) or Partial Control (PC)
Pigweed, smooth	*Amaranthus hybridus*	Broadleaf	C
Pigweed, tumble	*Amaranthus albus*	Broadleaf	C
Purslane, common	*Portulaca oleracea*	Broadleaf	PC
Pusley, Florida	*Richardia scabra*	Broadleaf	C
Spiderwort, tropical	*Commelina benghalensis*	Broadleaf	C
Waterhemp, common	*Amaranthus rudis*	Broadleaf	C
Waterhemp, tall	*Amaranthus tuberculatus*	Broadleaf	C
Nutsedge, yellow	*Cyperus esculentus*	Sedge	C

[1]Refer to the corn section of this label for additional recommendations.

REPLANT AND ROTATIONAL CROPS SECTION

Replanted Crop Directions

This section covers replant crops that may be planted following a lost crop that has had an application of Dual II Magnum.

If a crop treated with Dual II Magnum is lost, any crop on this label, or on a supplemental Dual II Magnum label, may be replanted immediately provided that the rate of Dual II Magnum applied to the previous crop was not greater than the labeled rate for the crop to be replanted. If the first application was banded and the replant crop is planted in the center of the untreated bands, a second banded treatment may be applied at the rate for the use pattern for the replant crop, provided the application does not overlap the first application band.

Rotational Crop Directions

Do not rotate to food or feed crops other than those listed below. For all crops not listed, wait at least 12 months following the last application of Dual II Magnum before planting.

Barley, oats, rye, or wheat may be planted 4 1/2 months following treatment.

Alfalfa may be planted 4 months following application. Clover may be seeded 9 months following application.

Restrictions: To avoid injury to rotational alfalfa or clover, (1) Do not apply more than 1.9 lbs. active ingredient per acre (2.0 pts. of Dual II Magnum) in the previous crop, and (2) Do not make lay-by or other postemergent applications of Dual II Magnum in the previous crop.

Tobacco, buckwheat, and rice may be planted in the next spring following treatment.

Below in the rotational crop subsections A through C is a listing of rotational crop options that are made possible through *S*-metolachlor tolerances which were established by the EPA as crop groupings.

Precautions: 1) Rotating to crops within these crop groupings at less than 60 days may result in crop injury. 2) If the rate of Dual II Magnum applied in the previous crops was greater than the rate listed here (Sections A-C below), these crops cannot be planted until the following spring.

A. If not more than 1.33 pts./A of Dual II Magnum was applied to the field, the following crops (as well as those listed under subsections B or C below) may be planted 60 days after the last application. A second application of an *S*-metolachlor-containing product to the following crops is prohibited within 60 days of the original application.

Crop Subgroup 1B - Root Vegetables: garden beet, edible burdock, carrot, celeriac, turnip-rooted chervil, chicory, ginseng, horseradish, turnip-rooted parsley, parsnip, radish, oriental radish, rutabaga, salsify, black salsify, Spanish salsify, skirret, and turnip.

Crop Subgroup 3 Bulb Vegetables (if to be harvested green) – garlic, great-headed garlic, leek, green onion, Welsh onion, shallot.

Winter squash (including pumpkins).

B. **If not more than 1.67 pts./A of Dual II Magnum was applied to the field, the following crops (as well as any listed under subsection C below) may be planted 60 days after the last application. A second application of an *S*-metolachlor-containing product to the following crops is prohibited within 60 days of the original application.**

Crop Group 8 – Fruiting Vegetables, except Cucurbits and Tabasco Peppers: eggplant, groundcherry (*Physalis* spp.), pepino, peppers (bell, chili, cooking, pimento, and sweet), tomatillo, and tomato.

C. **If not more than 2.0 pts./A of Dual II Magnum was applied to the field, the following crops may be planted 60 days after the last application. A second application of an *S*-metolachlor-containing product to the following crops is prohibited within 60 days of the original application.**

Crop Subgroup 1C – Tuberous and Corm Vegetables: arracacha; arrowroot; Chinese artichoke; Jerusalem artichoke; edible canna; bitter and sweet cassava; chayote (root); chufa; dasheen (taro); ginger; leren; potato; sweet potato; tanier; tumeric; yam bean; and yam, true.

Crop Group 3 Bulb Vegetables (if to be harvested dry) – garlic, great-headed garlic, leek, dry bulb and green onion, Welsh onion, shallot.

Crop Subgroup 4B – Leaf Petiole Vegetables: cardoon, celery, Chinese celery, celtuce, Florence fennel, rhubarb, and Swiss chard.

Crop Subgroup 5A – Head and Stem Brassica Vegetables: broccoli, Chinese broccoli, Brussels sprouts, cabbage, Chinese (Napa) cabbage, Chinese mustard, cauliflower, cavalo broccolo, and kohlrabi.

APPLICATION PROCEDURES

APPLICATION TIMING

Dual II Magnum alone or in some tank mixtures with other labeled herbicides may be applied for weed control in certain crops at various times. Refer to the given crop section of the label to determine if application timings listed below are recommended.

Preplant Surface-Applied: For minimum-tillage or no-tillage systems only, Dual II Magnum alone and some Dual II Magnum tank mixtures may be applied up to 45 days before planting certain crops. Use only split applications for treatments made 30-45 days before planting, with 2/3 the recommended broadcast rate for the crop and soil texture applied initially and the remaining 1/3 at planting. Treatments less than 30 days before planting may be made either as a split or a single application. Refer to individual crop section on this label to determine if early preplant surface application is recommended. If weeds are present at the time of treatment, apply in a tank mixture combination with a contact herbicide (for example, Gramoxone Inteon®, Touchdown® brands, or Roundup® brands). Observe directions for use, precautions, and restrictions on the label of the contact herbicide. To the extent possible, do not move treated soil out of the row or move untreated soil to the surface during planting, or weed control will be diminished.

Preplant Incorporated: Apply Dual II Magnum to the soil and incorporate into the top 2 inches of soil within 14 days before planting, using a finishing disk, harrow, rolling cultivator, or similar implement capable of providing uniform 2-inch incorporation. Use a preplant incorporated application if furrow irrigation is used or when a period of dry weather after application is expected. If crop will be planted on beds, apply and incorporate Dual II Magnum after bed formation, unless specified otherwise.

Preemergence: Apply Dual II Magnum during planting (behind the planter) or after planting, but before weeds or crops emerge.

Postemergence: Dual II Magnum will not control emerged weeds so it must be applied to a weed-free soil surface or in tank mixture with products that provide postemergence control of weeds present at the time of application. Refer to the individual crop section of this label if a postemergence application is recommended.

SPECIAL APPLICATION PROCEDURES

CA Only (Beans, Peas, and Lentils; Corn; Safflowers): Preplant Incorporated: Broadcast Dual II Magnum alone or with tank mix partners listed on this label to the soil and thoroughly incorporate with a disk or similar implement set to till 4-6 inches deep. For more thorough incorporation, till the soil in 2 different directions (cross-till). Crops may be planted on flat surface or on beds. Use caution when forming the beds that only soil from the Dual II Magnum treated zone is used (i.e., untreated soil should not be brought to soil surface). If the application is made to preformed beds, incorporate

Dual II Magnum with a tillage implement set to till 2-4 inches deep. Care should be taken during tilling to keep the tilled (Dual II Magnum-treated) soil on the beds. **Preemergence:** Apply Dual II Magnum after planting. Water with sprinkler or flood irrigation within 7-10 days.

Fall Application for Spring Weed Control (Only in IA, MN, ND, SD, WI, and portions of NE and IL - See specific instructions in the Beans, Peas, and Lentils; Corn; and Soybeans sections of this label for timing of application and other information): Do not apply to frozen ground. Use on medium and fine soils with greater than 2.5% organic matter that will be planted to corn or soybeans the next spring. Ground may be tilled before or after application. Do not exceed a 2 to 3-inch incorporation depth if tilled after treatment. **Restrictions:** If a spring application is made, the total rate of the fall plus spring applications must not exceed the maximum total rate for the specific crop, or illegal residues may result.

Fall Application for Italian Ryegrass Control (Corn, Cotton, Grain and Forage Sorghum, and Soybean Only – See specific instructions in the Corn, Cotton, Grain and Forage Sorghum, and Soybean sections of this label for timing of application and other information): Dual II Magnum may be applied in the fall (September 1-December 1) for residual control of glyphosate-resistant Italian ryegrass (*Lolium multiflorum*). A tillage operation may precede the application. Do not incorporate to a depth greater than 2-3 inches if tillage follows the application of Dual II Magnum. **Restrictions:** 1) Do not apply Dual II Magnum to frozen ground. 2) All crops on the Dual II Magnum label may be planted the following spring after application. 3) If a spring application is made, the combined total amount of Dual II Magnum applied in the fall plus the spring must not exceed the maximum seasonal *S*-metolachlor rate for the specific crop planted, or illegal residues may result. 4) Refer to the crop sections on this label for specific directions.

Ground Application: Apply Dual II Magnum alone or in tank mixtures by ground equipment in a minimum of 10 gals. of spray mixture per acre, unless otherwise specified.

Use sprayers that provide accurate and uniform application. For Dual II Magnum tank mixtures with wettable powder or dry flowable formulations, screens and strainers should be no finer than 50-mesh. Rinse sprayer thoroughly with clean water immediately after use.

Calculate the amount of herbicide needed for band treatment by the formula:

$$\frac{\text{band width in inches}}{\text{row width in inches}} \times \text{broadcast rate per acre} = \text{amount needed per acre of field}$$

For information on applying in lower volumes of carrier, see **Low Carrier Application** section.

For application by air or through center pivot systems, see **Aerial Drift Management** and **Aerial Drift Reduction Advisory Information** sections.

For information on impregnating dry fertilizer, see **Dry Bulk Granular Fertilizer** section.

For information on application using variable-rate technologies, see **Variable-Rate Application** section.

SPRAY EQUIPMENT

LOW CARRIER APPLICATION

For Broadcast Ground Application Only

Use sprayers, such as Ag-Chem RoGator®, Hagie, John Deere Hi-Cycle™, Melroe Spra-Coupe, Tyler Patriot™, or Willmar Air Ride®, that provide accurate and uniform application. **Only water may be used as a carrier.** Screens in suction and in-line strainers should be 50-mesh. Manufacturers may require that tip screens as fine as 100-mesh be used with some nozzles. Use a pump with capacity to: (1) maintain up to 35-40 psi at the nozzles, and (2) provide sufficient agitation in tank to keep mixture in suspension. Use a minimum of 5.0 gals. of spray mixture per acre. Maximum recommended sprayer speed is 15 mph. Rinse sprayer thoroughly with clean water immediately after each use.

Restrictions: Low pressure nozzles are recommended to reduce drift and increase application accuracy. Care should be taken when using automatic rate controlling devices to spray the material within the rated working pressure and flow ranges of the nozzles selected. Nozzle screens should be used when recommended by the manufacturer. All nozzles should be placed on 20-inch centers, except flooding types which should be placed on 40-inch centers. When Flat Fan-type nozzles are used, angles of 80° or 110° are recommended. Always read and follow the manufacturer's directions for optimum setup and performance of their nozzles or tips.

AERIAL APPLICATION

Apply Dual II Magnum in water alone or in tank mixtures with AAtrex, Lorox®, or Sencor® in a minimum total volume of 2.0 gals./A by aircraft. Dual II Magnum may also be applied by air in combination with Balan®, Prowl®, or Treflan®. Avoid application under conditions where uniform coverage cannot be obtained or where excessive spray drift may occur. In order to assure that spray will be controllable within the target area when used according to label directions, make applications at a maximum height of 10 ft., using low-drift nozzles at a maximum pressure of 40 psi, and restrict application to periods when wind speed does not exceed 10 mph. To assure that spray will not adversely affect adjacent sensitive nontarget plants, apply Dual II Magnum alone or Dual II Magnum + AAtrex by aircraft at a minimum upwind distance of 400 ft. from sensitive plants, or apply Dual II Magnum + Lorox or Sencor at a minimum upwind distance of 300 ft. from sensitive plants.

AERIAL DRIFT MANAGEMENT

The interaction of many equipment- and weather-related factors determines the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses, or to applications using dry formulations.

1. The distance of the outermost nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downward more than 45 degrees.

Where states have more stringent regulations, they must be observed.

The applicator should be familiar with and take into account the information covered in the **Aerial Drift Reduction Advisory Information** section below.

Aerial Drift Reduction Advisory Information

Information on Droplet Size

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see **Wind, Temperature and Humidity**, and **Temperature Inversions**).

Controlling Droplet Size

- **Volume** – Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure** – Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- **Number of nozzles** – Use the minimum number of nozzles that provide uniform coverage.
- **Nozzle Orientation** – Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- **Nozzle Type** – Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

Application Height

Applications should not be made at a height greater than 10 ft. above the top of the largest plants, unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

Swath Adjustment

When applications are made with a crosswind, the swath will be displaced downward. Therefore, on the upwind and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase with increasing drift potential (higher wind, smaller drops, etc.).

Wind

Drift potential is lowest between wind speeds of 2-10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. **Restrictions:** Local terrain can influence wind patterns.

Temperature and Humidity

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is greatest when conditions are both hot and dry.

Temperature Inversions

Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Sensitive Areas

The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, nontarget crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

Avoid application to humans or animals. Flagmen and loaders should avoid inhalation of spray mist and prolonged contact with skin.

CENTER PIVOT IRRIGATION APPLICATION

Dual II Magnum alone or in tank mixture with other herbicides on this label, which are registered for center pivot application, may be applied in irrigation water preemergence (after planting, but before weeds or crop emerge) at rates recommended on this label. Dual II Magnum also may be applied postemergence to the crop and preemergence to weeds in crops where postemergence applications are allowed on this label. Follow all restrictions (height, timing, rate, etc.) to avoid illegal residues. Apply this product only through a center pivot irrigation system. Do not apply this product through any other type of irrigation system. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water. If you have questions about calibration, you should contact State Extension specialists, equipment manufacturers, or other experts. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system, unless the pesticide label-prescribed safety devices for public water systems are in place. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Operating Instructions

1. The system must contain a functional check-valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water-source contamination from backflow.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check-valve to prevent the flow of fluid back toward the injection pump.

3. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump or piston pump), effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. Do not apply when wind speed favors drift beyond the area intended for treatment.
8. Prepare a mixture with a minimum of 1 part water to 1 part herbicide(s) and inject this mixture into the center pivot system. Injecting a larger volume of a more dilute mixture per hour will usually provide more accurate calibration of metering equipment. Maintain sufficient agitation to keep the herbicide in suspension.
9. Meter into irrigation water during entire period of water application.
10. Apply in 1/2-1 inch of water. Use the lower water volume (1/2 inch) on *coarse-textured soils* and the higher volume (1 inch) on *fine-textured soils*. More than 1 inch of water at application may reduce weed control by moving the herbicide below the effective zone in the soil.

Precaution for center pivot applications: Where sprinkler distribution patterns do not overlap sufficiently, unacceptable weed control may result. Where sprinkler distribution patterns overlap excessively, crop injury may result.

DRY BULK GRANULAR FERTILIZERS

Many dry bulk granular fertilizers may be impregnated or coated with Dual II Magnum alone or selected Dual II Magnum tank mixtures which are registered for preplant incorporated or preplant surface applications which are used to control weeds in crops on the Dual II Magnum label and are not prohibited from use on dry bulk granular fertilizers.

When applying Dual II Magnum or Dual II Magnum mixtures with dry bulk granular fertilizers, follow all directions for use and precautions on the respective product labels, regarding target crops, rates per acre, soil texture, application methods (including timing of application), and rotational crops.

All individual state regulations relating to dry bulk granular fertilizer blending, registration, labeling, and application are the responsibility of the individual and/or company selling the herbicide/fertilizer mixture.

Prepare the herbicide/fertilizer mixtures by using any closed drum, belt, ribbon, or other commonly used dry bulk fertilizer blender. Nozzles used to spray Dual II Magnum and Dual II Magnum mixtures onto the fertilizer must be placed to provide uniform spray coverage. Care should be taken to aim the spray directly onto the fertilizer only and to avoid spraying the walls of the blender.

If the herbicide/fertilizer mixture is too wet, add a highly absorptive material, such as Agsorb® or Celatom MP-79®, or similar granular clay or diatomaceous earth materials, to obtain a dry, free-flowing mixture. Add absorptive materials only after the herbicide has been thoroughly blended into the fertilizer mixture. Best application results will be obtained by using a granule of 6/30 particle size or of a size similar to that of the fertilizer material being used. Generally, less than 2% by weight of absorptive material will be needed. Avoid using more than 5% absorptive material by weight.

Calculate amounts of Dual II Magnum, AAtrex, AAtrex + Princep®, Balance® Pro, Princep, Sencor, or Sonalan® by the following formula:

$$\frac{2{,}000}{\text{lbs. of fertilizer per acre}} \times \text{pts./A of liquid or flowable product} = \text{pts. of liquid or flowable product per ton of fertilizer}$$

$$\frac{2{,}000}{\text{lbs. of fertilizer per acre}} \times \text{lbs./A of dry product} = \text{lbs. of dry product per ton of fertilizer}$$

Pneumatic (Compressed Air) Application (Dual II Magnum Alone): High humidity, high urea concentrations, low fertilizer use rates, and dusty fertilizer may cause fertilizer mixture to build up or plug the distributor head, air tubes, or nozzle deflector plates. To minimize buildup, premix Dual II Magnum with Exxon Aromatic 200 at a rate of 1.0-4.0 pts./gals. of Dual II Magnum. Aromatic 200 is a noncombustible/nonflammable petroleum product. Aromatic 200 may be used in either a fertilizer blender or through direct injection systems. Drying agents should not be used when using Aromatic 200.

Restrictions: (1) Mixtures of Dual II Magnum and Aromatic 200 must be used on dry fertilizer only. Poor results or crop injury may result if these mixtures are used in water or liquid fertilizer solutions for spraying applications. (2) When impregnating Dual II Magnum in a blender before application, a drier mixture can be attained by substituting a drying agent for Aromatic 200. The use of Agsorb FG or drying agents of 6/30 particle size are recommended. (3) Drying agents are not recommended for use with On-The-Go impregnation equipment.

Precautions: To avoid potential for explosion, (1) Do not impregnate Dual II Magnum or Dual II Magnum mixtures on ammonium nitrate, potassium nitrate, or sodium nitrate, either alone or in blends with other fertilizers. (2) Do not use Dual II Magnum or Dual II Magnum mixtures on straight limestone, since absorption will not be achieved. Fertilizer blends containing limestone can be impregnated.

Application

Apply 200-700 lbs. of the herbicide/fertilizer mixture per acre. For best results, apply the mixture uniformly to the soil with properly calibrated equipment immediately after blending. Uniform application of the herbicide/fertilizer mixture is essential to prevent possible crop injury. Nonuniform application may also result in unsatisfactory weed control. In areas where conventional tillage is practiced, a shallow incorporation of the mixture into the soil may improve weed control. On fine- or medium-textured soils in areas where soil incorporation is not planned, i.e., reduced tillage situations or in some conventional till situations, make applications approximately 30 days before planting to allow moisture to move the herbicide/fertilizer mixture into the soil. On coarse-textured soils, make applications approximately 14 days prior to planting.

Precaution: To avoid crop injury, do not use the herbicide/fertilizer mixture on crops where bedding occurs.

MIXING INSTRUCTIONS

Dual II Magnum Alone: Mix Dual II Magnum with water or fluid fertilizer and apply as a spray. Fill the spray tank 1/2-3/4 full with water or fluid fertilizer, add the proper amount of Dual II Magnum, then add the rest of the water or fluid fertilizer. Provide sufficient agitation during mixing and application to maintain a uniform emulsion.

Tank Mixtures: Fill the spray tank 1/4 full with water, and start agitation; add 2,4-D, AAtrex, Balan, Balance Pro, Banvel®, Basagran®, Butoxone®, Butyrac®, Canopy®, Caparol® 4L, Command®, Cotoran®, Eptam®, Liberty® Herbicide, Liberty® ATZ Herbicide, Lorox, Marksman®, MSMA, Princep, Prowl, Pursuit®, AAtrex + Princep, Scepter®, Sencor, Sonalan, or Treflan, and allow it to become dispersed; then add Dual II Magnum; then add Gramoxone Inteon, Landmaster® BW, or Touchdown or Roundup (glyphosate products) if these products are being used; and finally the rest of the water. For tank mixtures with AAtrex, Balance, Banvel, Canopy, Caparol 4L, Command, Cotoran*, Eptam, Lorox, Marksman, Princep, Prowl*, Pursuit, AAtrex + Princep, Scepter, Sencor, Sonalan, or Treflan, fluid fertilizers may replace all or part of the water as carrier, except in the AAtrex postemergence and the Banvel postemergence tank mixes. For tank mixtures with AAtrex, see additional mixing instructions on the AAtrex label. For each mixture, check compatibility with fluid fertilizer, as described below, before mixing in spray tank. For all tank mixtures, agitate during mixing and application to maintain a uniform suspension.

*See **Special Mixing Instructions** for tank mixtures with Cotoran and with AAtrex or Princep + Prowl under the appropriate tank mixture section.

For directions on how to conduct a compatibility test, see the **Compatibility Test** section.

COMPATIBILITY TEST

A jar test is recommended before tank mixing to ensure compatibility of Dual II Magnum with other pesticides. The following test assumes a spray volume of 25 gals/A. For other spray volumes, make appropriate changes in the ingredients.

Restrictions: Nitrogen solutions or complete fluid fertilizers may replace all or part of the water in the spray. Because liquid fertilizers vary, even within the same analysis, **always check compatibility with pesticide(s) before use**. Incompatibility of tank mixtures is more common with suspensions of fertilizer and pesticides.

Test Procedure

1. Add 1.0 pt. of carrier (fertilizer or water) to each of 2 one qt. jars with tight lids. **Restrictions:** Use the same source of water that will be used for the tank mix and conduct the test at the temperature the tank mix will be applied.
2. To one of the jars, add 1/4 tsp. or 1.2 milliliters of a compatibility agent approved for this use, such as Compex® or Unite® (1/4 tsp. is equivalent to 2.0 pts./100 gals. spray). Shake or stir gently to mix.
3. To both jars, add the appropriate amount of pesticide(s) in their relative proportions based on recommended label rates. If more than one pesticide is used, add them separately with dry pesticides first, flowables next, and emulsifiable concentrates last. After each addition, shake or stir gently to thoroughly mix.
4. After adding all ingredients, put lids on and tighten, and invert each jar ten times to mix. Let the mixtures stand 15-30 minutes and then look for separation, large flakes, precipitates, gels, heavy oily film on the jar, or other signs of incompatibility. Determine if the compatibility agent is needed in the spray mixture by comparing the two jars. If either mixture separates, but can be remixed readily, the mixture can be sprayed as long as good agitation is used. If the mixtures are incompatible, test the following methods of improving compatibility: (a) Slurry the dry pesticide(s) in water before addition, or (b) add 1/2 the compatibility agent to the fertilizer or water and the other 1/2 to the emulsifiable concentrate or flowable pesticide before addition to the mixture. If incompatibility is still observed, do not use the mixture.
5. After compatibility testing is complete, dispose of any pesticide wastes in accordance with the **Storage and Disposal** section in this label.

CROP USE DIRECTIONS

CORN (ALL TYPES) – DUAL II MAGNUM ALONE

Apply Dual II Magnum, either preplant surface, preplant incorporated, preemergence, postemergence, or lay-by, using the appropriate rate specified below.

PREPLANT SURFACE-APPLIED

Refer to instructions for use of Dual II Magnum alone under Application Procedures.

Fall Application for Spring Weed Control:

1. Apply after September 30 in ND, SD, MN, WI, and north of Route 30 in IA.
2. Apply after October 15 north of Route 91 in NE and south of Route 30 in IA.
3. Apply after October 31 north of Route 136 in IL.

In all locations, apply to crop stubble after harvest when the sustained soil temperature at a 4-inch depth is less than 55°F and falling. In minimum-till or no-tillage systems on soils having greater than 2.5% organic matter, use 1.67-2.0 pts./A on *medium-textured* and 2.0 pts./A on *fine-textured soils*. Do not apply to frozen ground. A tillage operation may precede the application. A fall and/or a spring tillage may follow application, but do not exceed an incorporation depth greater than 2-3 inches. Minimize furrow and ridge formation in the tillage operations. **Restrictions:** If a spring application is made, the total rate of the fall plus spring applications must not exceed the maximum total rate for corn, or illegal residues may result.

Fall Application for Italian Ryegrass Control: Dual II Magnum may be applied for residual control of glyphosate-resistant Italian ryegrass (*Lolium multiflorum*). Apply Dual II Magnum at 1.33-1.67 pts./A in the fall (September 1-December 1) after harvest of the previous crop and prior to Italian ryegrass emergence. Use the lower Dual II Magnum rate for coarse-textured soils and the higher rate for fine-textured soils. A tillage operation may precede the application. Do not incorporate to a depth greater than 2-3 inches if tillage follows the application of Dual II Magnum. For fall applications after emergence of glyphosate-resistant Italian ryegrass, Gramoxone Inteon can be tank mixed with Dual II Magnum to control emerged ryegrass. Refer to the Gramoxone Inteon label for specific rates, application instructions, and restrictions. Other registered herbicides may be tank mixed with Dual II Magnum for control or improved control of other weeds present at the time of application. *Precautions: 1) Do not apply Dual II Magnum to frozen ground. 2) If a spring application is made, the combined total amount of Dual II Magnum applied in the fall plus the spring must not exceed the maximum seasonal S-metolachlor rate for corn (3.9 pts./A, depending on soil texture), or illegal residues may result.*

Fall Application for Control or Suppression of Yellow Nutsedge (ID, OR, and WA only): For preemergent control or suppression of yellow nutsedge the following spring, apply 1.33 pts./A of Dual II Magnum in the fall after the harvest of the previous crop but before freeze-up. Fall applications of Dual II Magnum can be surface-applied or incorporated. **Restrictions:** (1) Make no more than one fall application per crop. (2) Apply not more than 1.33 pts./A in a single fall preplant application. (3) Do not apply to frozen ground. (4) If a spring application is made, the combined total amount of Dual II Magnum applied in the fall plus the spring must not exceed the maximum season *S*-metolachlor rate for corn (3.9 pts./A, depending on soil texture), or illegal residues may result.

EARLY PREPLANT APPLICATIONS

Use on medium- and fine-textured soils with minimum-tillage or no-tillage systems in CO, IA, IL, IN, KS, KY, MN, MO, MT, ND, NE, SD, TN, WI, and WY. Apply $^{2}/_{3}$ the recommended rate of Dual II Magnum (1.67 pts./A on *medium soils* and 2.0 pts./A on *fine soils*) as a split treatment 30-45 days before planting and the remainder at planting. Applications made less than 30 days prior to planting may be as either a split or single treatment. Apply 1.33 pts./A on *coarse soils* not more than 2 weeks before planting. **Restrictions:** If a spring application is made, the total rate of the fall plus spring application must not exceed the maximum total rate for corn, or illegal residues may result.

On medium- and fine-textured soils with minimum- or no-tillage systems in CT, DE, MA, MD, ME, MI, NH, NY, OH, PA, RI, VA, VT, and WV, preplant surface applications may be applied following the directions for use above. If the amount of rainfall results in unsatisfactory length of weed control following the earlier treatment, a postemergence application of an appropriately labeled broadleaf and/or grass weed herbicide may be used, i.e., AAtrex, Beacon®, Bicep Magnum®, Bicep II Magnum®, Exceed®, Accent®, Banvel, Basagran, bromoxynil (Brominal® or Buctril®), or 2,4-D. If the postemergence treatment includes the herbicide used preplant surface-applied, do not exceed the total labeled rate for corn on a given soil texture. Observe all directions for use, precautions, and limitations on the label of the postemergent herbicide.

PREPLANT INCORPORATED OR PREEMERGENCE

Follow instructions for use of Dual II Magnum alone under **Application Procedures**. On *coarse soils*, apply 1.0-1.33 pts./A of Dual II Magnum if organic matter content is less than 3%, or 1.33 pts./A if organic matter content is 3% or greater. On *medium soils*, apply 1.33-1.67 pts./A of Dual II Magnum. On *fine soils*, apply 1.33-1.67 pts./A of Dual II Magnum if organic matter content is less than 3%, or 1.67-2.0 pts./A if organic matter content is 3% or greater.

POSTEMERGENCE OR LAY-BY

To extend the duration of weed control in corn, a maximum rate of 2.0 pts./A of Dual II Magnum may be applied after corn emergence until the corn plants reach 40 inches in height, following any preplant surface-applied, preplant incorporated, or preemergence herbicide application, including Dual II Magnum. For best results, applications should be made to soil free of emerged weeds and directed toward the base of corn plants in excess of 5 inches tall. The total Dual II Magnum rate applied on corn during any one crop year should not exceed 3.9 pts./A, depending on soil texture.

Restrictions for all applications to corn: To avoid possible illegal residues, (1) do not graze or feed forage from treated areas for 30 days following application and (2) do not harvest sweet corn ears from treated areas for 30 days following application.

PROBLEM WEED CONTROL DIRECTIONS

Shattercane, Wild Proso Millet, Woolly Cupgrass, and Eclipta – Partial Control: For more consistent partial control of shattercane, wild proso millet, woolly cupgrass, or eclipta, apply 1.0-1.33 pts./A of Dual II Magnum preplant incorporated followed by 1.0-1.33 pts./A of Dual II Magnum preemergence. Make the preemergence application during or after planting, but before weeds and corn emerge. Apply the 1.33 pts./A rate of Dual II Magnum when a heavy infestation of shattercane, wild proso millet, woolly cupgrass, or eclipta is expected. A shallow cultivation may be needed to control any late emerging weeds.

Woolly Cupgrass and Wild Proso Millet Control Program: For control of these species, use the following 3-step program: (1) Apply Dual II Magnum early preplant, preplant incorporated, or preemergence at 1.67 pts./A on *medium soils* and 2.0 pts./A on *fine-textured soils*, up to the maximum label rate. Lightly incorporate with a rotary hoe if rainfall does not occur within 5-7 days; (2) Apply a postemergence tank mix of Beacon at 0.38 oz./A or Exceed at 1 packet per 4 acres plus Accent SP at 0.33 oz./A plus 1.0 qt. of crop oil concentrate plus 1.0 gal./A of 28% nitrogen, or the equivalent amount of ammonium sulfate, when grasses are 2-3 inches tall and the corn is at least 4 inches tall; and (3) Cultivate 14-21 days after the postemergence application.

Restrictions: (1) Do not apply more than the labeled application rate for a given soil texture per year, either as a single or split treatment, or illegal residues may result. (2) In corn, use up to 2.5 pts./A of Dual II Magnum preplant surface, preplant incorporated, or preemergence treatment on soils having an organic matter content between 6% and 20%. (3) In the event of escape of annual weeds following a preplant surface, preplant incorporated, or preemergence treatment of Dual II Magnum, follow with a postemergence application of an appropriately labeled broadleaf and/or grass weed herbicide, i.e., AAtrex, Beacon, Bicep II Magnum, Exceed, Accent, Banvel, Basagran, Brominal, Buctril, or 2,4-D. If the postemergence treatment includes the herbicide used in the earlier treatment, do not exceed the total labeled rate for corn on a given soil texture. (4) Brominal or Buctril may be applied postemergence alone or in tank mix combination with AAtrex. Do not exceed 1.2 lbs. a.i./A of AAtrex in tank mix combination with Brominal or Buctril postemergence. Refer to the AAtrex, Brominal, and Buctril labels for specific rates and precautions. (5) Do not use Dual II Magnum on peat or muck soils.

CORN – DUAL II MAGNUM COMBINATIONS

Dual II Magnum in any tank mixture for corn may be applied in water or fluid fertilizer before corn emerges. Use only water as a carrier when Dual II Magnum is applied after corn emergence.

Restrictions: For all applications to corn, (1) do not graze or feed forage from treated areas for 30 days following application, and (2) do not harvest sweet corn ears from treated areas for 30 days following application or possible illegal residues may result.

IMPORTANT: FOR TANK MIXTURES WITH AATREX (OR OTHER BRANDS OF ATRAZINE) – IF APPLYING DUAL II MAGNUM IN TANK MIXTURE WITH AATREX, ALL THE RESTRICTIONS AND RATE LIMITATIONS ON THE AATREX LABEL MUST BE FOLLOWED IF MORE RESTRICTIVE/PROTECTIVE THAN THOSE ON THIS LABEL. IN ADDITION, IF AATREX IS/MUST BE APPLIED AT RATES LOWER THAN THOSE RECOMMENDED ON THIS LABEL, BROADLEAF WEED CONTROL MAY BE AFFECTED. REFER TO THE AATREX LABEL FOR WEEDS CONTROLLED AT THE REDUCED RATES.

Table 2: Dual II Magnum Tank Mixtures for Corn – Additional Weeds Controlled and Special Instructions

	Dual II Magnum + AAtrex and/ or Princep (Preplant Surface, PPI, PRE)	Dual II Magnum + AAtrex (Post)	Dual II Magnum + Banvel (Field Corn)	Dual II Magnum + AAtrex + Lorox	Dual II Magnum + AAtrex or Princep + Prowl	Dual II Magnum + Marksman	Dual II Magnum + Balance Pro
Special Mixing Instructions					1		
Comments	2,3,4,5,7,8	2,3,4,5		2,3,4,5,6	2,3,4,5	7	2,3,7
Browntop panicum	X			X	X		X
Cocklebur	X	0	0	X	X		0-X
Common purslane	X			X	X	X	X
Hairy nightshade	X			X	X		X
Jimsonweed		X	0			X	X
Kochia		X				X	X
Lambsquarters	X	X	X	X	X	X	X
Morningglory	X	0	0	X	X		X
Mustard		X				X	X
Pigweed				X	X	X	X
Prickly sida		X					
Ragweed	X	X	X	X	X	X	X
Smartweed	X	X	X	X	X	X	X
Velvetleaf	X	X	0	X	X	0-X	0-X

X = control; 0 = partial control; 0-X = partial to full control depending on ratio of products used or on weed population

Comments

1. Special Mixing Instructions for Dual II Magnum + AAtrex or Princep and Prowl

   (1) Fill the spray tank 1/4 full with water or fluid fertilizer and start agitation. (2) To aid compatibility, add a compatibility agent, such as Unite or X-77®, at 4.0 pts./100 gals. of spray mixture. (3) Then add the AAtrex or Princep and allow it to become dispersed. (4) Then add Dual II Magnum and Prowl 4E. (5) Add the rest of the water.

2. Although a single formulation for AAtrex or Princep is listed in the rate tables, other formulations may be substituted, using the following formula:

   - 1.0 lb. of AAtrex® Nine-O® or Princep® Caliber 90® = 1.8 pts. of AAtrex 4L or Princep 4L.

3. Although directions specify AAtrex formulations in tank mixture with Dual II Magnum, other brands of atrazine may be used. Follow the rates, recommendations, and limitations on the atrazine label.

4. See additional mixing instructions on the AAtrex label.
5. *Precaution: Do not exceed a total of 2.5 lbs. a.i. of atrazine per acre per year. However, certain states may have established rate limitations for atrazine within specific geographical areas. Consult your state lead pesticide control agency for additional information. It is a violation of this label to deviate from state use regulations.*
6. Other formulations of Lorox can be used: 1.0 lb. of Lorox DF = 1.0 pt. of Lorox L.
7. In Minimum-Tillage and No-Tillage systems, mix with Gramoxone Inteon for control of most emerged annual weeds and suppression of perennial weeds; or with Landmaster BW for suppression of emerged field bindweed and control or suppression of annual weeds; or with Touchdown brands or Roundup brands for control of most emerged annual and perennial weeds.
8. Refer to the **Corn – Dual II Magnum Combinations – Tank Mixture with AAtrex; or AAtrex + 2,4-D; or AAtrex + 2,4-D + Banvel for Minimum-Tillage or No-Tillage Systems** sections for specific directions for 2,4-D or Banvel burndown combinations in Minimum-Tillage and No-Tillage systems.

Dual II Magnum in any tank mixture for corn may be applied in water or fluid fertilizer, except as noted.

Restrictions: (1) For all applications to corn, do not graze or feed forage from treated areas for 30 days following application and do not harvest sweet corn ears from treated areas for 30 days following application, or possible illegal residues may result. (2) When applying Dual II Magnum in tank mixture with AAtrex, do not exceed a total of 2.5 lbs. a.i. of atrazine per acre per year. (3) Refer to **Corn (All Types) – Dual II Magnum Alone** for recommended sequential postemergence treatments if escape weeds develop.

TANK MIXTURE WITH AATREX OR PRINCEP, OR AATREX + PRINCEP – PREPLANT SURFACE, PREPLANT INCORPORATED, OR PREEMERGENCE

In addition to the weeds controlled by Dual II Magnum alone, Dual II Magnum + AAtrex or Princep, or Dual II Magnum + AAtrex + Princep, applied preplant surface, preplant incorporated, or preemergence, also controls the following weeds: browntop panicum, cocklebur, common purslane, hairy nightshade, lambsquarters, morningglory, ragweed, smartweed, and velvetleaf.

Apply Dual II Magnum + AAtrex or Princep, or Dual II Magnum + AAtrex + Princep either preplant surface, preplant incorporated, or preemergence.

Preplant Surface-Applied: Follow instructions for use of Dual II Magnum alone under **Application Procedures** and under application instructions for Dual II Magnum alone on corn. Apply Dual II Magnum + AAtrex or Princep, or Dual II Magnum + AAtrex + Princep on *medium soils* (1.67 pts./A of Dual II Magnum + 3.2-4.0 pts./A of AAtrex 4L or Princep 4L, or AAtrex 4L + Princep 4L combined) and on *fine soils* (1.67-2.0 pts./A of Dual II Magnum + 4.0 pts./A of AAtrex 4L or 4.0-5.0 pts./A of Princep 4L, or AAtrex 4L + Princep 4L combined) in minimum-tillage and no-tillage systems in CO, IA, IL, IN, KS, KY, MN, MO, MT, ND, NE, SD, TN, WI, and WY. Apply the tank mixtures as a split or single treatment in those states and as indicated in the **Dual II Magnum Alone – Preplant Surface-Applied** section of the label for corn. On *coarse soils*, apply 1.33 pts./A of Dual II Magnum and 3.2 pts./A of AAtrex 4L or Princep 4L, or AAtrex 4L + Princep 4L combined.

Preplant Incorporated or Preemergence: Follow instructions for use of Dual II Magnum alone under **Application Procedures**. Apply Dual II Magnum + AAtrex or Princep, or Dual II Magnum + AAtrex + Princep, using the appropriate rates from Table 3.

Restrictions: Do not apply more than the labeled rate for a given soil texture per year, either as a split or single treatment, or illegal residues may result.

Shattercane and Wild Proso Millet – Partial Control

For more consistent partial control of shattercane or wild proso millet where Dual II Magnum is applied in tank mixture or sequentially with other registered corn herbicides, the following applications may be made:

1. Apply 1.0-1.33 pts./A of Dual II Magnum + 2.0 lbs. a.i./A of AAtrex or Princep preplant incorporated, followed by 1.0-1.33 pts./A of Dual II Magnum preemergence. Make the preemergence application during or after planting, but before weeds and corn emerge.
2. Apply Dual II Magnum at 1.33 pts./A alone or in tank mix combination with up to 2.0 lbs. a.i./A of AAtrex, or Princep, preplant incorporated. Do not exceed the total rate of triazine herbicide recommended in combination with Dual II Magnum for corn grown on a given soil texture. Follow with a post-directed application of Evik® 80W at 2.5 lbs./A. Refer to the Evik 80W label for specific directions for the post-directed application.

3. Apply Eradicane® (or equivalent EPTC or butylate formulations) at labeled rates preplant incorporated, followed by a preemergence application of Dual II Magnum at 1.0-1.33 pts./A. Do not use Eradicane on soils where rapid degradation has been shown to occur. Make the preemergence application during or after planting, but before weeds and corn emerge.

Precaution: When following the application regimes in numbers 1-3 above, a shallow cultivation may be needed after the preemergence or postemergence application to help control any late emerging shattercane or wild proso millet plants.

Restrictions: Do not exceed a total of 1.9 lb. a.i./A (2.0 pts. of Dual II Magnum) in the preplant incorporated plus preemergence application on soils with less than 6% organic matter, or crop injury may result.

Table 3: Dual II Magnum + AAtrex or Princep, or Dual II Magnum + AAtrex + Princep, Preplant Incorporated or Preemergence – Corn (All Types)

	Broadcast Rates Per Acre			
	Less than 3% Organic Matter		3% Organic Matter or Greater	
Soil Texture	**Dual II Magnum + AAtrex Nine-O* or Princep Caliber 90***	**OR Dual II Magnum + AAtrex Nine-O** + Princep Caliber 90****	**Dual II Magnum + AAtrex Nine-O** or Princep Caliber 90***	**OR Dual II Magnum + AAtrex Nine-O** + Princep Caliber 90****
COARSE	0.8-1.0 pt. + 1.1-2.2 lbs.	0.8-1.0 pt. + 0.6-1.1 lbs. + 0.6-1.1 lbs.	1.0 pt. + 1.3-2.2 lbs.	1.0 pt. + 0.7-1.1 lbs. + 0.7-1.1 lbs.
MEDIUM	1.0-1.33 pts. + 1.3-2.2 lbs.	1.0-1.33 pts. + 0.7-1.1 lbs. + 0.7-1.1 lbs.	1.33 pts. + 1.8-2.2 lbs.	1.33 pts. + 0.9-1.1 lbs. + 0.9-1.1 lbs.
FINE	1.33 pts. + 1.8-2.2 lbs.	1.33 pts. + 0.9-1.1 lbs. + 0.9-1.1 lbs.	1.33-1.67 pts. + 1.8-2.2 lbs.***	1.33-1.67 pts. + 0.9-1.1 lbs.*** + 0.9-1.1 lbs.***
Muck or Peat (soils with more than 20% organic matter)	DO NOT USE			

*Use Princep in preference to AAtrex when heavy infestations of crabgrass or fall panicum are expected. On soils having between 6% and 20% organic matter, Dual II Magnum may be used up to 2.33 pts./A in tank mix combination with 2.2 lbs./A of AAtrex Nine-O, or equivalent rates of AAtrex 4L. Refer to the AAtrex label for weeds controlled at this reduced rate.

**When using the tank mixture of Dual II Magnum + AAtrex Nine-O + Princep Caliber 90, use equal rates of each as shown when heavy broadleaf weed infestations are expected. When heavy infestations of crabgrass or fall panicum are expected, use a 1:2 ratio of AAtrex + Princep instead of the 1:1 ratio given in Table 3. (*Example:* Total AAtrex Nine-O + Princep Caliber 90 = 1.2 lbs./A, use 0.4 lb. of AAtrex + 0.8 lb. of Princep, respectively.) Refer to Comment No. 2 following Table 2 for AAtrex 4L and Princep 4L conversions.

***For cocklebur, yellow nutsedge, and velvetleaf control on *fine-textured soils* above 3% organic matter, apply 2.25 lbs./A of AAtrex Nine-O, or equivalent rates of AAtrex 4L, or the same total amount of AAtrex + Princep with 1.33-1.67 pts./A of Dual II Magnum.

TANK MIXTURE WITH AATREX - POSTEMERGENCE

Weeds Controlled			Weeds Partially Controlled
barnyardgrass (watergrass)	green foxtail	pigweed	cocklebur
crabgrass	yellow foxtail	prickly sida	morningglory
crowfootgrass	jimsonweed	purslane	yellow nutsedge
fall panicum	kochia	ragweed	
giant foxtail	lambsquarters	smartweed	
	mustard	velvetleaf	

Apply 1.0 pt./A of Dual II Magnum + 1.3 lbs./A of AAtrex Nine-O* on *coarse soils*, 1.33 pts./A of Dual II Magnum + 1.8 lbs./A of AAtrex Nine-O on *medium soils*, or 1.33-1.67 pts./A of Dual II Magnum + 1.8-2.2 lbs./A** of AAtrex Nine-O on *fine soils*. Apply this tank mixture before grass and broadleaf weeds pass the 2-leaf stage and before corn exceeds 5 inches in height. Application to weeds larger than the 2-leaf stage will generally result in unsatisfactory control.

Lay-by: Apply to corn plants not more than 12 inches tall. Applications to corn in excess of 5 inches should be directed to the base of the corn plants; whereas, applications to corn plants less than 5 inches tall may be made over the top. Occasionally, some corn leaf burn may result, but this should not affect later growth or yield. Do not apply this postemergence tank mixture in fluid fertilizer, or severe crop injury may occur.

*When using AAtrex 4L, use equivalent rates. One lb. of AAtrex Nine-O = 1.8 pts. of AAtrex 4L.

**For better control of cocklebur, morningglory, velvetleaf, and yellow nutsedge on *fine-textured soils* above 3% organic matter, apply 2.2 lbs./A of AAtrex Nine-O, or equivalent rate of AAtrex 4L, with 1.33-1.67 pts./A of Dual II Magnum.

Tank mixtures of Dual II Magnum + AAtrex may be applied following use of any registered preplant surface-applied, preplant incorporated, or preemergence corn herbicide, including Dual II Magnum + AAtrex.

Restrictions: The total Dual II Magnum rate should not exceed 3.9 pts., nor the AAtrex rate more than 2.5 lbs. a.i./A during any one crop year, or illegal residues may result. Refer to the AAtrex label for geographic, soil-texture, and rotational restrictions.

TANK MIXTURE WITH BANVEL

Preemergence: Use this tank mixture only on field corn which is flat-planted (no furrows) in CO, IA, IL, IN, KS, MN, NE, OH, SD, and WI.

In addition to the weeds controlled by Dual II Magnum alone, Dual II Magnum + Banvel, applied preemergence, also controls lambsquarters, ragweed, smartweed, cocklebur*, jimsonweed*, morningglory*, and velvetleaf*.

*Partially controlled.

Apply Dual II Magnum + Banvel preemergence. Broadcast 1.0 pt./A of Banvel with 1.33 pts./A of Dual II Magnum on *medium soils*, or with 1.33-1.67 pts./A of Dual II Magnum on *fine soils*. Do not apply on *coarse soils* or on soils with less than 2.5% organic matter. Apply this tank mixture to the soil surface at planting or after planting, but before corn emerges. Plant corn at least 1.5 inches deep and apply behind planting equipment, avoiding incorporation by the planter wheel or other seed covering device. Do not incorporate before corn emergence. If it is necessary to rotary hoe to break the soil crust, do not disturb the soil more than 1/2 inch deep.

Precautions: (1) Avoid drift to sensitive nontarget plants, such as soybeans, during application, or injury may occur. (2) Do not apply with aircraft.

Postemergence for Control of Pigweed (Mid-Atlantic states, including DE, MD, PA, VA, and WV): Apply 1.0-1.5 pts./A of Dual II Magnum + 0.5-1.0 pt./A of Banvel or Clarity® by ground equipment when pigweed plants are less than 3 inches tall and before corn exceeds 5 inches in height in a minimum of 20 gals. of spray per acre. Use the lower rate on coarse-textured and low organic matter soils. Use the higher rate on fine-textured and high organic matter soils.

Precautions: (1) Avoid drift to sensitive nontarget plants, such as soybeans, during application, or injury may occur. (2) Do not apply with aircraft.

TANK MIXTURE WITH AATREX OR PRINCEP + PROWL FOR PROLONGED CONTROL OF LAMBSQUARTERS AND PIGWEED IN FIELD CORN ONLY (NORTHEAST U.S., INCLUDING MI, IN, KY, AND STATES EAST OF THESE)

For prolonged control of lambsquarters and pigweed, in addition to a broad spectrum of annual broadleaf and grass weeds, Dual II Magnum in tank mix combination with AAtrex* or Princep + Prowl 4E may be applied after planting, but before corn or weeds emerge. Apply by ground equipment in a minimum of 10 gals. of water or 20 gals. of liquid fertilizer. Apply by air in a minimum of 5.0 gals. of water. Refer to Table 3 of this label for rates of Dual II Magnum, AAtrex, or Princep to be applied. Apply Prowl 4E according to the rates in Table 4.

*Do not apply Dual II Magnum in tank mix combination with AAtrex 80W + Prowl, as this combination is not compatible. Other AAtrex formulations may be used.

Mixing Instructions: See Comment No. 1 following Table 2.

Table 4: Prowl 4E – Broadcast Rates Per Acre

	Percent Organic Matter in Soil		
Soil Texture	**Less Than 1.5%**	**1.5-3%**	**Over 3%**
COARSE	1.5-2.0 pts.	2.0 pts.	3.0 pts.
MEDIUM	2.0 pts.	3.0 pts.	3.0 pts.
FINE	2.0 pts.	3.0 pts.	3.0 pts.

Observe all directions for use, precautions, and limitations on the respective product labels when applying these products in tank mix combination. Refer to the Prowl 4E label for replanting instructions in the event of crop loss.

TANK MIXTURE WITH AATREX OR PRINCEP, OR AATREX + PRINCEP WITH GRAMOXONE INTEON, LANDMASTER BW, TOUCHDOWN, OR ROUNDUP FOR MINIMUM-TILLAGE OR NO-TILLAGE SYSTEMS

In minimum-tillage or no-tillage systems where corn is planted directly into a cover crop, stale seedbed, established sod, or previous crop residues, the contact herbicides Gramoxone Inteon, Landmaster BW, Touchdown brands, or Roundup brands should be tank mixed with Dual II Magnum + AAtrex, Dual II Magnum + Princep, or Dual II Magnum + AAtrex + Princep. See Comment No. 7 following Table 2. The Dual II Magnum, Dual II Magnum + AAtrex or Princep, or Dual II Magnum + AAtrex + Princep portion of the tank mixture provides preemergence control of the weeds listed on this label in the tank mixture section for **Dual II Magnum, Dual II Magnum + AAtrex or Princep, or Dual II Magnum + AAtrex + Princep – Preplant Surface, Preplant Incorporated, or Preemergence**.

Application: Apply before, during, or after planting, but before the corn emerges. Add Gramoxone Inteon, Landmaster BW, Touchdown brands, or Roundup brands and apply as directed on the product label.

Gramoxone Inteon: Apply as directed on the product label. This treatment will not control weeds taller than 6 inches.

Restrictions: Do not apply combinations containing Gramoxone Inteon in suspension-type liquid fertilizers, as the activity of paraquat will be reduced.

Landmaster BW: 27-54 oz./A depending on weed species and size. See the Landmaster BW label for weeds controlled, recommended rates for specific weeds, and other information concerning use.

Touchdown Brands or Roundup Brands: See the Touchdown brand or Roundup brand label for weeds controlled, recommended rates, and other use directions.

Apply in 20-60 gals. of water or fluid fertilizer per acre with ground equipment.

On *coarse soils*, apply 1.0 pt./A of Dual II Magnum with 1.3 lbs. of AAtrex Nine-O* or Princep Caliber 90*, or with 0.7 lb. of AAtrex Nine-O** + 0.7 lb. of Princep Caliber 90**. On *medium soils*, apply 1.33 pts./A of Dual II Magnum with 1.8 lbs. of AAtrex Nine-O or Princep Caliber 90, or with 0.9 lb. of AAtrex Nine-O + 0.9 lb. of Princep Caliber 90. On *fine soils****, apply 1.33-1.67 pts./A of Dual II Magnum with 1.8-2.2 lbs. of AAtrex Nine-O or Princep Caliber 90, or with 0.9-1.1 lbs. of AAtrex Nine-O + 0.9-1.1 lbs. of Princep Caliber 90.

*Use Princep in preference to AAtrex when heavy infestations of crabgrass or fall panicum are expected.

**When using the tank mixture of Dual II Magnum + AAtrex Nine-O + Princep Caliber 90, use equal rates of AAtrex and Princep as shown when heavy broadleaf weed infestations are expected. When heavy infestations of crabgrass or fall panicum are expected, use a 1:2 ratio of AAtrex + Princep instead of the 1:1 ratio given. (*Example:* Total AAtrex Nine-O + Princep Caliber 90 = 1.8 lbs./A, use 0.6 lb. of AAtrex + 1.2 lbs. of Princep, respectively.) Refer to Comment No. 2 following Table 2 for AAtrex 4L and Princep 4L conversions.

***For cocklebur, yellow nutsedge, and velvetleaf control on *fine-textured soils* above 3% organic matter, apply 2.25 lbs./A of AAtrex Nine-O, or equivalent rate of AAtrex 4L, or the same total amount of AAtrex + Princep, with 1.33-1.67 pts./A of Dual II Magnum.

TANK MIXTURE WITH AATREX; OR AATREX + 2,4-D; OR AATREX + 2,4-D + BANVEL FOR MINIMUM-TILLAGE OR NO-TILLAGE SYSTEMS

In minimum-tillage or no-tillage systems where corn is planted directly into a cover crop, stale seedbed, established sod, or previous crop residues, Dual II Magnum applied in combination with AAtrex will kill most emerged small annual weeds. Apply Dual II Magnum + AAtrex before, during, or after planting, but before corn emerges, according to the rates in Table 3.

Where heavy crop residues exist, add 0.8-1.6 pts./A of an appropriately labeled 3.8 lbs. a.i./gals. of 2,4-D amine (such as Weedar 64, Weedar 64A, DMA-4 Herbicide, Weedone® 638 or Formula 40) to the spray tank last and apply in a minimum of 25 gals. of carrier per acre.

As carriers, nitrogen solutions and complete liquid fertilizers, applied before corn emergence, enhance burndown of existing weeds, and therefore, are recommended instead of water. Add X-77 surfactant at 1.0-2.0 qts./100 gals. of diluted spray, or another appropriate surfactant at its recommended rate, or add crop oil concentrate plus 28% liquid nitrogen (or equivalent). Apply before weeds exceed 3 inches in height. If alfalfa is present, add Banvel to the spray mixture at 0.33-0.5 pt./A and apply before alfalfa exceeds 6 inches in height.

For fields with existing sod grasses (e.g., bromegrass, orchardgrass, rye, or timothy), when existing weeds exceed 3 inches in height or when very dry conditions exist, add Gramoxone Inteon at the rate indicated on the product label in place of or in addition to 2,4-D, as indicated above. Do not apply Gramoxone Inteon in suspension-type liquid fertilizer. Observe all directions for use, precautions, and limitations on the respective product labels when applying these products in tank mix combination.

TANK MIXTURE WITH MARKSMAN IN CONSERVATION TILLAGE - FIELD AND SILAGE CORN

In conservation tillage systems where corn is planted directly into a cover crop or previous crop residue, Dual II Magnum + Marksman will kill most emerged small annual weeds. Apply Dual II Magnum + Marksman before, during, or after planting, but before corn emergence on *medium* and *fine soils* with greater than 2.5% organic matter. For fields with existing vegetation exceeding 3 inches in height or when very dry conditions exist, add Gramoxone Inteon at its standard rate. Dual II Magnum + Marksman may be applied postemergence to corn less than 3 inches tall and before weedy grasses exceed the 2-leaf stage.

As carriers, nitrogen solutions and complete liquid fertilizers, applied before corn emergence, enhance burndown of existing weeds. Do not apply Gramoxone Inteon in suspension-type liquid fertilizer or use on emerged corn.

Refer to the Marksman label and follow all directions, limitations, precautions, and information regarding application and use in corn.

TANK MIXTURE WITH BALANCE PRO - FIELD CORN ONLY

Dual II Magnum and Balance Pro have a complementary response and weed control profile which allows various tank mix rate combinations to be considered. The addition of Balance Pro will improve the control of certain problem weeds, including Texas panicum, woolly cupgrass, and wild proso millet. Dual II Magnum improves both the duration and spectrum of annual grass and small-seeded broadleaf weed control, in particular foxtails (yellow foxtail) and witchgrass, and yellow nutsedge.

To reduce the risk of an adverse crop response, the Balance Pro label does not allow applications to *coarse-textured soils* with less than 1.5% organic matter and warns about applications to all soils with less than 1.5% organic matter or with pH greater than 7.5, as well as applications made to areas in fields with clay knolls, eroded hillsides, and exposed subsoil. Dual II Magnum has no adverse crop response warnings or use restrictions.

Listed below are compensating rate options for combinations of Dual II Magnum and Balance Pro, i.e., higher rates of Dual II Magnum are combined with lower rates of Balance Pro and vice versa. Select a rate option for Dual II Magnum plus Balance Pro by weighing the intensity of problem weed pressure (population presence and density) and your acceptance for risk of an adverse crop response. For example, where Texas panicum, woolly cupgrass, or wild proso millet is a primary target weed, use a tank-mix combination with a higher Balance Pro rate for the given soil type.

Where your acceptance of an adverse crop response risk is low and/or a more general weed spectrum is targeted (especially yellow foxtail, witchgrass, or yellow nutsedge), use a tank-mix combination with a higher Dual II Magnum rate for the given soil type. Where a target weed is listed as controlled on both product labels, a tank-mix combination option including intermediate rates of both products may be used. Where a target weed is listed as controlled on only one product label, do not apply a rate of that product below what is recommended for that weed on the individual product label, or unacceptable control may result. Follow all other directions for use, rate limitations, precautions, and restrictions on both the Dual II Magnum and Balance Pro product labels.

For coarse-textured soils: Where 1.5 or 1.88 oz./A of Balance Pro is used, 1.0-1.33 pts./A of Dual II Magnum may be applied. Do not use Balance Pro on *coarse-textured soils* with less than 1.5% organic matter.

For medium-textured soils: Where 1.5 oz./A of Balance Pro is used, rates as low as 1.33 pts./A of Dual II Magnum may be applied. Where 1.88 or 2.25 oz./A of Balance Pro is used, rates as low as 1.0 pt./A of Dual II Magnum may be applied. Dual II Magnum can be used in combinations with Balance Pro at rates up to 1.67 pts./A on *medium-textured soils*.

For fine-textured soils: Where 1.5 oz./A of Balance Pro is used, rates as low as 1.33 pts./A of Dual II Magnum may be applied if the soil organic matter is less than 3%; if the soil organic matter is 3% or greater, 1.67 pts./A of Dual II Magnum should be applied. Where 1.88 or 2.25 oz./A of Balance Pro is used, rates as low as 1.33 pts./A of Dual II Magnum may be applied. Where 3.0 oz./A or more of Balance Pro is used, rates as low as 1.0 pt./A of Dual II Magnum may be applied. Dual II Magnum can be used in combinations with Balance Pro at rates up to 2.0 pts./A on *fine-textured soils* if the organic matter is 3% or greater.

TANK MIXTURES FOR POSTEMERGENCE SALVAGE WEED CONTROL IN FIELD CORN ONLY

For postemergence control of weeds in specific types of field corn, the Dual II Magnum combinations listed below may be used. Full season weed control from early preplant, preplant incorporated, or preemergence treatments can lead to maximum yield potential under competition-free conditions. However, if control of emerged weeds is needed, a postemergence program listed below can be applied to provide residual control for the remainder of the season.

Restrictions: (1) Follow all label directions, instructions, precautions, and limitations for each product used. (2) Do not use fluid fertilizer with these mixtures or corn injury may occur. (3) For each tank mixture with Dual II Magnum, apply only to the specific field corn type specified on the tank mix product label. (4) In-row weed control may be reduced because of lack of coverage when applied to corn over 4 inches tall.

Dual II Magnum + Liberty Herbicide or Ignite® 280 SL Herbicide: Postemergence Use in LibertyLink® Corn or Corn Warranted by Bayer CropScience as Being Tolerant to Liberty Herbicide or Ignite 280 SL Herbicide

These tank mixtures can be applied postemergence to weeds and corn from seed designated as LibertyLink or corn warranted by Bayer CropScience as being tolerant to Liberty Herbicide or Ignite 280 SL Herbicide. Liberty provides postemergence control of a broad spectrum of grass and broadleaf weeds and the Dual II Magnum provides residual control of grasses and certain broadleaf weeds listed in the label section **Dual II Magnum Applied Alone - Weeds Controlled**. Refer to section **Dual II Magnum Alone - Preplant Incorporated or Preemergence** and use the minimum rate per soil texture and organic matter classification for season-long residual control from this tank mix combination with Liberty Herbicide or Ignite 280 SL Herbicide. Refer to the Liberty Herbicide or Ignite 280 SL Herbicide label for the postemergence application rates according to weed species and their maximum height at the time of postemergence application. Where multiple weed species are present, use the highest rate recommended to control the species and growth stages present.

Follow all applicable use directions, limitations, precautions, and information regarding application to corn on the Dual II Magnum and Liberty Herbicide or Ignite 280 SL Herbicide labels. Where difficult species and/or severe weed populations are expected, use the maximum rate where rate ranges are listed.

Dual II Magnum + Touchdown Brands or Roundup Brands for Postemergence Application to Glyphosate-Tolerant Corn (e.g., Roundup Ready® or Agrisure® GT)

The tank mixture of Dual II Magnum + Touchdown brands or Roundup brands can be applied postemergence to weeds and to corn designated as glyphosate-tolerant. Application may be applied postemergence to glyphosate-tolerant corn from emergence until corn reaches 30 inches tall or the V8 stage (8 leaves with collars), whichever comes first. This mixture will provide postemergence control of weed species on the Touchdown brand or Roundup brand label and residual control of weed species on the Dual II Magnum label. Use the minimum Dual II Magnum rate postemergence with Touchdown or Roundup in glyphosate-tolerant corn as specified in the **Corn – Dual II Magnum Alone – Preplant Incorporated or Preemergence** section of this label according to soil texture and organic matter. Refer to the Touchdown brand or Roundup brand label and follow appropriate use directions, application procedures, precautions, and limitations. Refer to the Touchdown brand or Roundup brand label for directions for control of problem species. Where difficult species and/or severe weed populations are expected, use the maximum rate where rate ranges are listed.

Dual II Magnum + Touchdown Brands or Roundup Brands + AAtrex for Postemergence Application to Glyphosate-Tolerant Corn (e.g., Roundup Ready or Agrisure GT)

The tank mixture of Dual II Magnum + AAtrex + Touchdown brands or Roundup brands can be applied postemergence to weeds and to corn designated as glyphosate-tolerant. Application may be applied postemergence to glyphosate-tolerant corn from emergence up to 12 inches in height. This mixture will provide postemergence control of weed species on the Touchdown brand or Roundup brand label and residual control of weed species on the Dual II Magnum + AAtrex label. Use the minimum Dual II Magnum + AAtrex rate postemergence with Touchdown or Roundup in glyphosate-tolerant corn as specified in the **Corn - Dual II Magnum Combinations – Tank Mixture With AAtrex or Princep, or AAtrex + Princep – Preplant Incorporated or Preemergence** section and Table 3 of this label according to soil texture and organic matter.

Follow all applicable use directions, limitations, precautions, and information regarding application to corn on the Dual II Magnum, AAtrex, and Touchdown brand or Roundup brand labels for application to glyphosate-tolerant corn. Where difficult species and/or severe weed populations are expected, use the maximum rate where rate ranges are listed.

COTTON – DUAL II MAGNUM ALONE

Application: Apply Dual II Magnum preemergence only in Area 1* at the rate of 0.5-1.0 pts./A on sandy loams, 0.66-1.33 pts./A on *medium soils*, or 1.0-1.33 pts./A on *fine soils*. Apply Dual II Magnum preplant incorporated or preemergence in Area 2** at 1.0 pt./A on sandy loams, 1.0-1.33 pts./A on *medium soils*, or 1.33 pts./A on *fine soils*. Apply Dual II Magnum postemergence to cotton and preemergence to weeds at 0.5-1.33 pts./A, according to the state limitations in the following Postemergence section.

*Area 1 = AR, KS, LA, MS, TN, and Bootheel of MO
**Area 2 = NM, OK, and TX

Fall Application for Italian Ryegrass Control: Dual II Magnum may be applied for residual control of glyphosate-resistant Italian ryegrass (*Lolium multiflorum*). Apply Dual II Magnum at 1.33-1.67 pts./A in the fall (September 1 - December 1) after harvest of the previous crop and prior to Italian ryegrass emergence. Use the lower Dual II Magnum rate for coarse-textured soils and the higher rater for fine-textured soils. A tillage operation may precede the application. Do not incorporate to a depth greater than 2-3 inches if tillage follows the application of Dual II Magnum. For fall applications after emergence of glyphosate-resistant Italian ryegrass, Gramoxone Inteon can be tank mixed with Dual II Magnum to control emerged ryegrass. Refer to the Gramoxone Inteon label for specific rates, application instructions, and restrictions. Other registered herbicides may be tank mixed with Dual II Magnum for control or improved control of other weeds present at the time of application. *Precautions: (1) Do not apply Dual II Magnum to frozen ground. (2) If a spring application is made, the combined total amount of Dual II Magnum applied in the fall plus the spring must not exceed the maximum seasonal S-metolachlor rate for cotton (2.6 pts./A, depending on soil texture), or illegal residues may result.*

Preplant Incorporated (NM, OK, and TX Only): Apply to the soil and incorporate into the top inch of soil immediately before planting, at planting, or after planting, but before crop or weeds emerge. Use a rolling cultivator or similar implement to uniformly incorporate not more than 1 inch deep. Use a preplant incorporated application if furrow irrigation is used or when a period of dry weather after application is expected. Where furrow irrigation is used, wet the top of the bed for best results. If the crop is to be planted on beds, apply and incorporate after bed formation. Cotton should be planted below the zone of incorporation; i.e., at least 1 inch on *fine soils* and 1.5 inches on *coarse* and *medium* soils. If incorporated prior to planting, use a planter that will result in a minimum of soil disturbance.

Restrictions: For best control of yellow nutsedge and suppression of seedling johnsongrass, apply Dual II Magnum preplant incorporated at the maximum rate for the soil texture, whether applied alone or mixed with Caparol 4L.

Preemergence: Apply to the soil surface at planting or after planting, but before weeds or crop emerge.

Postemergence: Apply Dual II Magnum broadcast over the top or directed to the soil surface according to the rate limitations listed below by state. Over-the-top postemergence application may be made not later than 100 days before harvest, and directed-postemergence application may be made not later than 80 days before harvest. Application before weeds emerge or after clean cultivation to remove existing weeds is necessary since Dual II Magnum will not control emerged weeds. Dual II Magnum postemergence may be applied over any previous registered herbicide treatment. In sprinkler-irrigated areas, sprinkler irrigate after application with 1/2-1 inch of water (1/2 inch on *coarse-textured soils* to 1 inch on *fine-textured soils*) to incorporate Dual II Magnum. In furrow-irrigated areas, apply Dual II Magnum, incorporate with a rolling cultivator or similar implement that provides uniform shallow incorporation (2 inches or less), and then irrigate. In non-irrigated areas, if at least 1/2 inch of rainfall does not occur within 10 days after application, cultivate with a rolling cultivator or similar implement that provides uniform shallow incorporation of Dual II Magnum.

VA, NC, SC, GA, FL, and AL: Apply Dual II Magnum postemergence at 1.0-1.33 pts./A.

TN, AR, KS, MS, MO, and LA: Apply Dual II Magnum postemergence at 0.5-1.33 pts./A.

TX, OK, NM, AZ, CA, and Clay Soils in AR: Apply Dual II Magnum postemergence at 1.0-1.33 pts./A before August 1.

Multiple Applications: Where weed pressure is heavy, difficult-to-control species are expected, or re-infestation may occur, and a weed control program is used, multiple applications of Dual II Magnum are effective when used as part of the weed control program. Apply as a preplant incorporated or preemergence treatment and follow with an application postemergence to cotton before weeds emerge or after clean cultivation to remove existing weeds, since Dual II Magnum will not control emerged weeds. Apply Dual II Magnum postemergence over a previous preplant or preemergence Dual II Magnum application as shown in the following table.

State	Multiple Dual II Magnum Applications to Cotton		
	Preplant Incorporated or Preemergence (Pt./A)	+	Postemergence (Pt./A)
MS, LA, TN, AR, KS, MO	0.5-1.33 (Preemergence Only)	+	0.5-1.33
TX, OK, NM	1.0-1.33	+	1.0-1.33 before August 1
NC, VA	1.0-1.33 (Preemergence Only)	+	1.0-1.33

In sprinkler-irrigated areas, sprinkler irrigate after application with 1/2-1 inch of water (1/2 inch on *coarse-textured soils* to 1 inch on *fine-textured soils*) to incorporate Dual II Magnum. In furrow-irrigated areas, apply Dual II Magnum, incorporate with a rolling cultivator or similar implement that provides uniform shallow incorporation (2 inches or less), and then irrigate. In nonirrigated areas, if at least 1/2 inch of rainfall does not occur within 10 days after application, cultivate with a rolling cultivator or similar implement that provides uniform shallow incorporation of Dual II Magnum.

Restrictions: For best control of yellow nutsedge and suppression of seedling johnsongrass, apply Dual II Magnum preplant incorporated, preemergence, or postemergence to cotton and preemergence to weeds at the maximum rate for the soil texture, whether applied alone or in combinations. Do not apply more than a total of 2.0 pts./A on *coarse soils* or 2.6 pts./A of Dual II Magnum on *medium* and *fine soils* during a growing season. These treatments may be applied over previous registered herbicide treatments.

Precautions: To avoid crop injury, (1) Do not apply Dual II Magnum on sand or loamy sand soils, or in areas where water is likely to "pond" over the bed; (2) To avoid concentration in the seed furrow, do not make broadcast applications of Dual II Magnum to cotton planted in furrows more than 2 inches deep. Band applications may be made to cotton planted in furrows deeper than 2 inches, but band width should not exceed the width of the bottom of the furrow; (3) In furrow-planted cotton, to avoid concentration in the furrow and potential injury, do not apply Dual II Magnum postemergence until after first "knifing" or cultivation to level soil surface; (4) Do not apply over the top in fluid fertilizer or any other adjuvant, surfactant, oil, or other pesticide not recommended in the cotton section of this label, or injury may occur; (5) Do not apply on Taloka silt loam; and (6) Do not use in Gaines County, TX.

Restrictions: Do not graze or feed forage or fodder from cotton to livestock, or illegal residues may result.

COTTON – DUAL II MAGNUM COMBINATIONS

TANK MIXTURE WITH CAPAROL 4L

Dual II Magnum tank mixtures with Caparol 4L may be applied preplant incorporated or preemergence in water or fluid fertilizer. When fluid fertilizer is used as a carrier for Dual II Magnum, either alone or in combination with Caparol 4L, mix only the amount that will be sprayed in one operation. These mixtures should not be allowed to stand without agitation. Only use water as a carrier for postemergence-directed application.

In addition to those weeds controlled by Dual II Magnum alone, Dual II Magnum + Caparol 4L, applied preplant incorporated or preemergence, also controls the following weeds: junglerice, wild oats, annual morningglory, groundcherry, hairy nightshade, lambsquarters, malva, mustard, prickly sida (teaweed), purslane, ragweed, and shallow-germinating seedlings of cocklebur and coffeeweed. As a postemergence-directed application, Caparol 4L provides postemergence control and residual control of weeds on its label, while Dual II Magnum provides residual control of weed species on its label. Dual II Magnum will not control emerged weeds.

Preplant Incorporated or Preemergence: Apply Dual II Magnum + Caparol 4L, either preplant incorporated or preemergence, using the appropriate rate from Table 5. Plant cotton below the zone of incorporation; i.e., at least 1.0 inch on *fine soils* and 1.5 inches on *coarse* and *medium soils*. If incorporated before planting, use a planter that will result in a minimum of soil disturbance.

Table 5: Dual II Magnum + Caparol 4L – Cotton (NM, OK, TX)

		Broadcast Rates Per Acre	
Use Areas	**Soil Texture**	**Dual II Magnum**	**Caparol 4L**
ALL	Sand, loamy sand	DO NOT USE	
OK, and Blacklands and Gulf Coast of TX	Loams	0.8-1.33 pts.	2.4 pts.
	Clays	1.33 pts.	4.8 pts.
Rio Grande Valley of TX	Loams	0.8-1.33 pts.	3.2 pts.
	Clays	1.33 pts.	4.8 pts.
NM; High Plains, Rolling Plains, Edwards Plateau of TX; and Southwest TX	Sandy loam	0.8-1.0 pt.	1.6 pts.
	Loams	0.8-1.33 pts.	2.4 pts.
	Sandy clay loams	1.33 pts.	2.4 pts.
	Other clay soils	1.33 pts.	3.2 pts.

Postemergence Directed (AR, AZ, CA, LA, MS, NM, OK, TN, TX, and MO): Dual II Magnum may be tank mixed with Caparol 4L in water and applied postemergence directed in cotton for control of emerged weeds listed on the Caparol 4L label and residual preemergence control of weeds controlled by Dual II Magnum and Caparol 4L, or application may be made after cultivation for residual preemergence control. These treatments may be applied over previous registered treatments, including Dual II Magnum, provided the maximum label rate of any product is not exceeded. Do not apply over the top of cotton or injury may occur.

Apply Dual II Magnum + Caparol 4L in a minimum of 20 gals. of spray volume per acre. Follow the directions, limitations, and precautions on the Caparol 4L label when Caparol 4L is applied as a postemergence-directed application. Refer to the directions, limitations, and precautions for use of Dual II Magnum under the **Cotton – Dual II Magnum Alone – Postemergence** section.

Precautions: (1) To avoid concentration in the seed furrow, do not make broadcast applications of Dual II Magnum + Caparol 4L to cotton planted in furrows more than 2 inches deep. Band applications may be made to cotton planted in furrows deeper than 2 inches, but band width should not exceed the width of the bottom of the furrow. To avoid crop injury, (2) Do not apply on sand or loamy sand soils, or in areas where water is likely to "pond" over the bed; (3) Do not apply in cut areas of newly leveled fields, or in areas of excess salt; (4) Do not apply to glandless cotton varieties; and (5) Do not apply on Taloka silt loam. (6) Do not use in Gaines County, TX.

Restrictions: Do not graze or feed forage or fodder from cotton to livestock, or illegal residues may result.

Refer to the Caparol 4L label for further instructions and limitations.

TANK MIXTURE WITH COTORAN DF

Apply Dual II Magnum in tank mixture with Cotoran DF preemergence for control of those weeds controlled by Dual II Magnum alone and those as listed on the Cotoran DF label. This combination will also control spotted spurge, hyssop spurge, nodding spurge, and prostrate spurge. Apply to the soil surface at planting or after planting, but before weeds or crop emerge, using the appropriate rates from Table 6. Apply the tank mixture postemergence to cotton but preemergence to weeds, or apply postemergence to both cotton and broadleaf weeds for control of weeds on the Cotoran DF label. Apply as a directed, semi-directed, or over-the-top spray. Dual II Magnum will not control emerged weeds but will provide preemergence control of species on its label. Where rate ranges are given for Cotoran DF, use the higher rate when applying postemergence to weeds that are 2 inches or less. These treatments may be applied over previous registered treatments, including Dual II Magnum, provided the maximum label rate of any product is not exceeded.

Mixing Instructions: Incompatibility may occur when tank mixing Dual II Magnum and Cotoran DF. To help overcome this condition, fill the spray tank 1/4 full with water or fluid fertilizer and start agitation, add the Cotoran DF and allow it to become dispersed. Add X-77 at 0.5% volume/volume final spray (4.0 pts./100 gals.), then add the Dual II Magnum and finally the rest of the water or fluid fertilizer. Agitate during mixing and application to maintain a uniform suspension. Do not use fluid fertilizer as a carrier for postemergence applications.

Table 6: Dual II Magnum + Cotoran DF – Cotton

	Broadcast Rates Per Acre		
	Dual II Magnum (pts.)		Cotoran DF*** (lbs.)
Soil Texture	**Area 1***	**Area 2****	
Sand, loamy sand	DO NOT USE		
Sandy loam	0.5-1.0	0.8-1.0	1.2
Loam, silt loam, silt	0.66-1.33	1.0-1.33	1.2-1.9
Fine soil	1.0-1.33	1.33	1.9-2.4

*Area 1 = AR, LA, MS, Bootheel of MO and TN
**Area 2 = Eastern OK, Gulf Coast, Rio Grande Valley, and Eastern TX
***When using Cotoran 4L, use equivalent rates. Multiply lbs. of Cotoran DF by 1.7 to get pts. of Cotoran 4L.

Precautions: (1) Do not apply Dual II Magnum + Cotoran on sand or loamy sand soils, or in areas where water is likely to "pond" over the bed, or crop injury may occur. (2) To avoid concentration in the seed furrow, do not make broadcast applications of Dual II Magnum + Cotoran to cotton planted in furrows more than 2 inches deep. Band applications may be made to cotton planted in furrows deeper than 2 inches, but band width should not exceed the width of the bottom of the furrow. (3) The use of Cotoran following the use of a systemic insecticide at planting may result in crop injury. (4) Do not use on Taloka silt loam, or crop injury may occur. (5) Do not use in Gaines County, TX.

Refer to the Cotoran labels for further instructions, precautions, and limitations.

Restrictions: To avoid possible illegal residues, do not feed treated forage or gin trash to livestock, or graze treated areas.

TANK MIXTURE OF DUAL II MAGNUM OR DUAL II MAGNUM + COTORAN WITH GRAMOXONE INTEON, TOUCHDOWN BRANDS, OR ROUNDUP BRANDS FOR MINIMUM-TILLAGE OR NO-TILLAGE SYSTEMS

In minimum-tillage or no-tillage systems where cotton is planted directly into a cover crop, stale seedbed, or previous crop residues, the contact herbicides Gramoxone Inteon, Touchdown brands, or Roundup brands may be added to a tank mix of either Dual II Magnum or Dual II Magnum + Cotoran. When used as directed, the Gramoxone Inteon portion of the tank mixture controls most emerged weeds and suppresses many perennial weeds. Touchdown or Roundup combinations will control emerged annual and perennial weeds when applied as directed on the Touchdown or Roundup label. The Dual II Magnum and Dual II Magnum + Cotoran portion of the tank mixture provides preemergence control of the weeds listed on this label in the Dual II Magnum and Dual II Magnum + Cotoran sections, respectively.

Refer to the label of each product used in combination and observe the planting details, information regarding application, geographical restrictions, and all other precautions and limitations. Refer to **Mixing Instructions** under **Tank Mixture with Cotoran DF** section.

Application: Apply before, during, or after planting, but before the cotton emerges. Apply Dual II Magnum at 0.8-1.0 pt./A on sandy loams, *medium-*, and *fine-textured soils*. Refer to Table 6 for the Cotoran DF rates.

Gramoxone Inteon: Apply as directed on the product label. This treatment will not control weeds taller than 6 inches.

Restrictions: Do not apply combinations containing Gramoxone Inteon in suspension-type liquid fertilizers, as the activity of paraquat will be reduced.

Touchdown Brands or Roundup Brands: See the Touchdown or Roundup label for weeds controlled, recommended rates, and other use directions.

Restrictions: Do not apply Dual II Magnum + Cotoran 4L + Roundup in tank mixture because of compatibility problems.

Apply in 20-60 gals. of water or fluid fertilizer per acre with ground equipment.

*Precautions: (1) If heavy rain occurs soon after application, crop injury may result, especially in poorly drained areas where water stands for several days, or where the seeding slit has not been properly closed. (2) Refer to the Cotoran labels and the **Tank Mixture with Cotoran DF** section of this label for further instructions, precautions, and limitations. (3) Do not use in Gaines County, TX.*

TANK MIXTURE WITH MSMA, MSMA + CAPAROL, OR MSMA + COTORAN

Dual II Magnum may be tank mixed with MSMA in water and applied postemergence directed for control of emerged weeds listed on the MSMA product label and residual preemergence control of weeds controlled by Dual II Magnum. The addition of Caparol or Cotoran will add control of weed species on their respective labels.

Postemergence Directed (AL, AR, AZ, CA, FL, GA, LA, MS, NC, NM, OK, SC, TN, TX, VA, and Bootheel of MO): Apply Dual II Magnum + MSMA postemergence directed to cotton at least 3 inches tall according to the directions, limitations, and precautions on the MSMA product label, as well as the directions, limitations, and precautions for use of Dual II Magnum in the section for **Cotton – Dual II Magnum Alone – Postemergence**. Do not apply after first cotton bloom. These treatments may be applied over previous registered treatments, including Dual II Magnum, provided the maximum label rate of any product is not exceeded. Cotoran or Caparol may be added to the Dual II Magnum + MSMA tank mixture according to the respective label directions for application to cotton at least 3 inches tall. When these mixtures are used, follow the mixing instructions for Dual II Magnum + Caparol or Cotoran and then add the MSMA product.

Do not use Dual II Magnum in tank mix with premixes of MSMA plus herbicides other than those registered for use in tank mixture with Dual II Magnum on cotton.

TANK MIXTURE WITH TREFLAN FOR POST-DIRECTED FOLLOWED BY SOIL INCORPORATION APPLICATIONS

Dual II Magnum may be applied as a tank mixture with Treflan in cotton for improved late-season weed control when used as an incorporated lay-by type application. This combination may be applied after the cotton is at least 3 inches tall and has reached the 4 true-leaf stage. Make the application directed to the soil surface and away from the crop foliage. Incorporate using a sweep or rolling type cultivator to provide uniform and shallow mixing into the top 2 inches of soil. Refer to each product label for the appropriate application rates by soil type and for this application timing, and follow all product use limitations and restrictions.

TANK MIXTURE WITH TOUCHDOWN BRANDS OR ROUNDUP BRANDS FOR USE ON ROUNDUP READY COTTON ONLY

Apply Dual II Magnum as a tank mixture with Touchdown or Roundup in water postemergence over-the-top or postemergence directed for control of emerged weeds listed on the Touchdown or Roundup labels and for residual preemergence control of weeds listed on the Dual II Magnum label. See the **Cotton – Dual II Magnum Alone – Postemergence** section of this label for rates and timings of Dual II Magnum and follow the Touchdown or Roundup label for their respective rates, application methods, and application timing restrictions. Do not add additional spray adjuvants, surfactants, fertilizer additives, or pesticides to this tank mixture if applied postemergence over-the-top or unacceptable injury may occur. Refer to the Touchdown brand or Roundup brand label and follow appropriate use directions, application procedures, precautions, and limitations.

Precautions: (1) Do not apply this tank mixture postemergence to any cotton variety unless it is designated Roundup Ready and unless the Touchdown or Roundup formulation being used is registered for postemergence use in Roundup Ready Cotton. (2) Postemergence over-the-top applications of this tank mixture may cause temporary injury in the form of necrotic spotting to exposed cotton leaves, which will not affect normal plant development. (3) Do not apply Touchdown or Roundup postemergence over-the-top to cotton past the growth stage limit specified on their respective labels. (4) Do not use on sand or loamy sand soils in Gaines County, TX.

SOYBEAN, IMMATURE SEED

Dual II Magnum may be applied preplant or preemergence for the control or suppression of grass and small-seeded weeds in immature-seed soybean or other food-grade soybeans. For specific rates, see the rate table listed below.

Preplant Surface-Applied: For minimum-tillage or no-tillage systems only, Dual II Magnum alone may be applied up to 45 days before planting. Use only split applications for treatments made 30-45 days before planting, with $^{2}/_{3}$ the recommended broadcast rate for the crop and soil texture applied initially and the remaining $^{1}/_{3}$ applied at planting. Treatments less than 30 days before planting may be made either as a split or a single application. If weeds are present at the time of treatment, apply in a tank mixture combination with a contact herbicide (e.g., Gramoxone Inteon, Touchdown, or Roundup). Observe directions for use, precautions, and restrictions on the label of the contact herbicide. To the extent possible, do not move treated soil out of the row or move untreated soil to the surface during planting, or weed control will be diminished.

Preplant Incorporated: Apply Dual II Magnum to the soil and incorporate into the top 2 inches of soil within 14 days before planting, using a finishing disk, harrow, rolling cultivator, or similar implement capable of providing uniform 2-inch incorporation. Use a preplant incorporated application if furrow irrigation is used or when a period of dry weather after application is expected. If crop will be planted on beds, apply and incorporate Dual II Magnum after bed formation, unless specified otherwise.

Preemergence: Apply Dual II Magnum during planting (behind the planter) or after planting, but before weeds emerge.

Dual II Magnum Broadcast Rates Per Acre

	Percent Organic Matter in Soil	
Soil Texture	**<3%**	**>3%**
Coarse	1-1.33 pts.	1.33 pts.
Medium	1.33-1.67 pts.	1.33-1.67 pts.
Fine	1.33-1.67 pts.	1.67-2.0 pts.

Precautions: (1) Dual II Magnum will not control emerged weeds. (2) Do not cut for hay within 120 days following a Dual II Magnum application. (3) Do not use for forage within 60 days following a Dual II Magnum application. (4) Do not apply more than 2.0 pts./A of Dual II Magnum during any one crop year.

GRASSES GROWN FOR SEED (ID, OR, WA) – DUAL II MAGNUM APPLIED ALONE

To control weeds and volunteer grasses in established grasses grown for seed, apply Dual II Magnum to established stands of tall fescue, orchardgrass, perennial ryegrass, fine fescue, bentgrass, and Kentucky bluegrass just before, during, or immediately following the first fall rains or just before or during a late summer or early fall irrigation, but before target grasses emerge. The seed crop must have had one seed harvest or been established at least one year. The post-harvest residue (straw) should be evenly spread, removed, or burned before applying Dual II Magnum. Rainfall or irrigation is required after application and before weed emergence for best control. Dual II Magnum will provide preemergence control/suppression of volunteer seedlings of perennial ryegrass, fine fescue species, tall fescue, orchardgrass, bentgrass, and Kentucky bluegrass. Dual II Magnum will control those weed species listed in the **Dual II Magnum Alone** section of the Dual II Magnum label and will suppress or control rattail fescue, annual bluegrass, Italian ryegrass, California brome, downy brome, and roughstalk bluegrass.

Apply Dual II Magnum by ground equipment in a minimum of 10 gallons of water per acre using the rate listed below according to grass species.

Established Grass Crop Grown for Seed	Pt./A
Fine fescue species	1.0
Perennial ryegrass	1.0
Bentgrass	1.0-1.33
Kentucky bluegrass	1.0-1.33
Orchardgrass	1.0-1.33
Tall fescue	1.0-1.33

Precautions: (1) Apply Dual II Magnum only once per crop year. (2) Do not apply after the November 15 or poor control may result. (3) Tank mixtures with other pesticides, or the addition of an adjuvant, can increase the risk of crop injury. (4) Application to perennial ryegrass and fine fescue stands under stress may cause crop injury. (5) If weed escapes occur following a Dual II Magnum application, an application of a postemergence herbicide may be necessary to control escapes. When making such an application, follow all directions, precautions, and limitations on the label of the postemergence herbicide. (6) Control may be decreased if excessive straw from the previous harvest is present at application and/or insufficient rainfall/irrigation occurs.

Restrictions: To avoid possible illegal residues: (1) Do not graze forage regrowth for 60 days following application west of the Cascades. (2) In areas east of the Cascades, do not graze forage regrowth for 150 days following application. (3) Hay may be harvested anytime between seed harvest and the next application of *S*-metolachlor.

HORSERADISH

Apply a single application of Dual II Magnum at a broadcast rate of 1.0-1.33 pts./A to the soil surface after planting, but before weed or crop emergence (i.e., preemergence). 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 II Magnum will not control emerged weeds. Control emerged weeds with an appropriate registered foliar herbicide or by mechanical means.

Restrictions: (1) Make only one application of Dual II Magnum per crop. (2) Do not apply more than 1.33 pts./A of Dual II Magnum per crop. (3) Harvest horseradish at normal timing.

PEANUTS – DUAL II MAGNUM ALONE

Apply Dual II Magnum, either preplant incorporated, postplant incorporated, or preemergence, using the appropriate rate specified below. **Preplant Incorporated or Preemergence:** Follow instructions for use of Dual II Magnum alone under **Application Procedures**. **Postplant Incorporated:** Apply and shallowly incorporate Dual II Magnum into the soil after planting, but before peanut germination. Incorporation depth and incorporating implements must be kept above the seed, or seed will be damaged.

Apply Dual II Magnum alone, preplant incorporated, postplant incorporated, or preemergence, at a broadcast rate of 1.0-1.33 pts./A in the Southeast* and 0.8-1.33 pts./A in NM, OK, and TX.

*In the Southeast, use 1.33-2.0 pts./A and apply preemergence for partial control of Florida beggarweed.

Restrictions: (1) Dual II Magnum alone may be applied as directed after any of the following preplant incorporated herbicides when used according to their label recommendations: Balan at 3.0-4.0 qts./A; Treflan E.C. at 1.0 pt./A; Sonalan at 1.25-3.0 pts./A; Pursuit at 0.25 pt./A; or Prowl at 1.0-2.0 pts./A. (2) Do not graze or feed peanut forage or fodder to livestock for 30 days following application, and (3) Do not apply within 90 days of harvest, or illegal residues may result.

PEANUTS – DUAL II MAGNUM COMBINATIONS

TANK MIXTURE WITH BALAN L.C.

Dual II Magnum + Balan tank mixture applied preplant incorporated controls those weeds listed under **Dual II Magnum Applied Alone** and those weeds as listed on the Balan label.

Apply 1.0-1.33 pts./A of Dual II Magnum + 3.0-4.0 qts./A of Balan in a minimum of 10 gals. of spray volume per acre for ground application or in a minimum of 5.0 gals. of spray volume per acre for aerial application. Follow the recommended procedures for Balan on the Balan label for soil preparation and incorporation of this tank mix. Apply and incorporate Dual II Magnum + Balan up to 14 days prior to planting.

Restrictions: Follow all restrictions and precautions on the Balan label.

TANK MIXTURE OR SEQUENTIALLY WITH PURSUIT

The tank mixture or sequential treatment of Dual II Magnum and Pursuit controls all weeds controlled by Dual II Magnum alone and by Pursuit alone. Refer to the **Dual II Magnum Applied Alone** section for weeds controlled by Dual II Magnum and to the Pursuit label for weeds controlled by Pursuit.

Refer to the respective labels for application methods, timing, rates, restrictions, and precautions; and use in accordance with the more restrictive label. Do not exceed the label rate of either product. Dual II Magnum will not control emerged weeds.

TANK MIXTURE WITH SONALAN

The tank mixture controls all weeds controlled by Dual II Magnum alone and by Sonalan alone. Refer to the **Dual II Magnum Applied Alone** section for weeds controlled by Dual II Magnum and to the Sonalan label for weeds controlled by Sonalan.

Apply Dual II Magnum + Sonalan preplant incorporated, using the appropriate rate from Table 7. Follow recommended soil preparation procedures for Sonalan.

Table 7: Dual II Magnum + Sonalan – Peanuts

Soil Texture	Broadcast Rates Per Acre			
	Southeast		NM, OK, TX	
	Dual II Magnum	Sonalan	Dual II Magnum	Sonalan
COARSE	1.0-1.33 pts.	1.25-2.0 pts.	0.8-1.33 pts.	1.25-2.0 pts.
MEDIUM	1.0-1.33 pts.	1.75-2.5 pts.	0.8-1.33 pts.	1.75-2.5 pts.
FINE	1.0-1.33 pts.	2.25-3.0 pts.	0.8-1.33 pts.	2.25-3.0 pts.

Restrictions: Follow all use directions, limitations, precautions, and information regarding application to peanuts on the Dual II Magnum and Sonalan labels.

TANK MIXTURE WITH PROWL

Dual II Magnum + Prowl applied preplant incorporated controls all weeds controlled by Dual II Magnum alone plus Texas panicum, field sandbur, johnsongrass from seed, lambsquarters, kochia, annual spurge, and other species on the Prowl label. Apply Dual II Magnum + Prowl by ground or by aerial equipment within 14 days before planting. Incorporate into the top 1-2 inches of soil before planting and within 7 days of application, using a finishing disk or similar implement capable of providing uniform incorporation. If peanuts will be planted on beds, apply and incorporate after bed formation. Refer to the **Incorporation** instructions of the respective labels for additional directions.

Apply Dual II Magnum + Prowl preplant incorporated, using the appropriate rates from Table 8.

Table 8: Dual II Magnum + Prowl – Peanuts

Soil Texture	Broadcast Rates Per Acre	
	NM, OK, TX	Other Peanut Growing States
	Dual II Magnum + Prowl	Dual II Magnum + Prowl
Sand, loamy sand	0.8 + 1.0-1.5 pts.	1.0-1.33 + 1.5-2.0 pts.
Sandy loam	0.8-1.0 + 1.0-1.5 pts.	1.0-1.33 + 1.5-2.0 pts.
Fine soil	1.33 + 1.0-1.5 pts.	1.33 + 1.5-2.0 pts.

Restrictions: Follow all use directions, limitations, precautions, and information regarding application to peanuts on the Dual II Magnum and Prowl labels.

TANK MIXTURE WITH GRAMOXONE INTEON

Dual II Magnum + Gramoxone Inteon applied at ground cracking will control or suppress small (1- to 6-inch) emerged annual grass and broadleaf weeds and provide residual control of weed species listed in the **Dual II Magnum Applied Alone** section of this label. Apply Gramoxone Inteon plus the appropriate Dual II Magnum rate from the **Peanuts – Dual II Magnum Alone** section in a minimum spray volume of 20 gals./A with ground equipment. Refer to the Gramoxone Inteon label and follow all directions, limitations, and restrictions.

TANK MIXTURE WITH GRAMOXONE INTEON + BASAGRAN

The addition of Basagran to the Dual II Magnum + Gramoxone Inteon mixture will result in improved control of such problem broadleaf weeds as prickly sida, cocklebur, smartweed, and bristly starbur. Dual II Magnum + Gramoxone Inteon + Basagran applied at ground cracking will control or suppress small (1- to 6-inch) emerged annual grass and broadleaf weeds and provide residual control of weed species listed in the **Dual II Magnum Applied Alone** section of this label. Apply Basagran + Gramoxone Inteon with the appropriate Dual II Magnum rate from the **Peanuts – Dual II Magnum Alone** section in a minimum spray volume of 20 gals./A with ground equipment. Refer to the Gramoxone Inteon and Basagran labels and follow all directions, limitations, and restrictions.

TANK MIXTURE WITH GRAMOXONE INTEON + BUTYRAC 200 OR BUTOXONE 200

The addition of Butyrac 200 or Butoxone 200 to the Dual II Magnum + Gramoxone Inteon mixture will result in improved control of such problem broadleaf weeds as sicklepod, morning glory, and cocklebur. Dual II Magnum + Gramoxone Inteon + Butyrac 200 or Butoxone 200 applied at ground cracking will control or suppress small (1- to 6-inch) emerged annual grass and broadleaf weeds and provide residual control of weed species listed in the **Dual II Magnum Applied Alone** section of this label. Apply Gramoxone Inteon + Butyrac 200 or Butoxone 200 with the appropriated Dual II Magnum rate from the **Peanuts – Dual II Magnum Alone** section in a minimum spray volume of 20 gals./A with ground equipment. Refer to the Gramoxone Inteon and Butyrac 200 or Butoxone 200 labels and follow all directions, limitations, and restrictions.

TANK MIXTURE WITH BASAGRAN

Dual II Magnum + Basagran applied at ground cracking will control species on the Basagran label and provide residual control of species listed in the **Dual II Magnum Applied Alone** section of this label. Apply 1.0-2.0 pts./A of Basagran in 20 gals./A, depending on weed species and stage of growth as specified on the Basagran label, with the appropriate Dual II Magnum rate from the **Peanuts – Dual II Magnum Alone** section. A second Basagran application may be made in all peanut-growing areas, if needed. Refer to the respective labels and follow all directions, limitations, and restrictions for each product.

TANK MIXTURE WITH BASAGRAN + BUTYRAC 200 OR BUTOXONE 200

Dual II Magnum + Basagran + Butyrac 200 or Butoxone 200 applied at ground cracking will control species on the Basagran label and on the Butyrac 200 or Butoxone 200 labels, especially morning glories. Apply 1.5-2.0 pts./A of Basagran + 8.0 fl. oz./A of Butyrac 200 or Butoxone 200 in 20 gals./A, depending on weed species and stage of growth as specified on the Basagran label, with the appropriate Dual II Magnum rate from the **Peanuts – Dual II Magnum Alone** section. A second Basagran + Butyrac 200 or Butoxone 200 application may be made in all peanut-growing areas, if needed. Refer to the respective labels and follow all directions, limitations, and restrictions for each product.

SEQUENTIALLY WITH STORM®

Apply Dual II Magnum according to the directions for Dual II Magnum Alone and follow with a postemergence treatment of Storm as specified on its label for the control of weeds listed on the Dual II Magnum label and on the Storm label. Refer to the **Dual II Magnum – Peanuts – Alone** section and to the Storm label and follow all directions, limitations, and restrictions for each product.

MULTIPLE APPLICATIONS

Where weed pressure is heavy or where species difficult to control are expected, Dual II Magnum is most effective when used as follows:

Southeast Only (AL, FL, GA, NC, SC, VA)

Preplant Incorporated: Apply Dual II Magnum preplant incorporated as directed under **Peanuts – Dual II Magnum Alone** or apply Dual II Magnum + Balan preplant incorporated as directed previously in this section. Refer to the respective section for weeds controlled.

OR

Preemergence to before "ground cracking": Apply Dual II Magnum any time from preemergence to before "ground cracking" at 1.0-2.0 pts./A for extended control of weeds not yet emerged. **Do not use Dual II Magnum after peanut emergence.** If peanuts have emerged, use Dual Magnum® according to its label: **Peanuts – Combinations – Multiple Applications**.

Follow the PPI or PRE application by:

Lay-by: Do not use Dual II Magnum. Apply Dual Magnum at lay-by as directed under the **Peanuts – Alone** section of the Dual Magnum label.

Restrictions: (1) Do not apply more than the equivalent of 2.67 lbs. of active ingredient of Dual II Magnum per acre during any one year, or illegal residues may result. If Dual Magnum is used as a sequential treatment, the lbs. of active ingredient (1.0 pt. = 0.95 lb.) plus the lbs. of active ingredient of Dual II Magnum should not exceed 2.67 lbs. **Do not use Dual II Magnum, or Dual IIG Magnum after peanuts have emerged.** (2) Do not graze or feed peanut forage or fodder to livestock for 30 days following application, and (3) Do not apply within 90 days of harvest, or illegal residues may result.

Southwest Only (NM, OK, TX)

1st Application: Apply Dual II Magnum preplant incorporated or preemergence to before "ground cracking" as directed under **Peanuts – Dual II Magnum Alone** or apply Dual II Magnum + Balan preplant incorporated as directed previously in this section. **Do not use Dual II Magnum after peanut emergence.** If peanuts have emerged, use Dual Magnum according to its label.

2nd Application: Do not use Dual II Magnum. Apply Dual Magnum at lay-by as directed under the **Peanuts – Alone** section of the Dual Magnum label. Use only when late germinating weeds are expected to be a problem. Refer to the product **Applied Alone** section for a list of weeds controlled.

Restrictions: (1) Do not apply more than the equivalent of 2.67 lbs. of active ingredient of Dual II Magnum per acre during any one year, or illegal residues may result. If Dual Magnum is used as a sequential treatment, the lbs. of active ingredient (1.0 pt. = 0.95 lb.) plus the lbs. of active ingredient of Dual II Magnum should not exceed 2.67 lbs. **Do not use Dual II Magnum, or Dual IIG Magnum after peanuts have emerged.** (2) Do not graze or feed peanut forage or fodder to livestock for 30 days following application, and (3) Do not apply within 90 days of harvest, or illegal residues may result.

BEANS, PEAS, AND LENTILS – DUAL II MAGNUM ALONE

Beans, peas, and lentils, including garbanzo, great northern beans, kidney beans, lima beans, mung beans, navy beans, peas (English*; southern peas, such as blackeye, pinkeye, crowder, etc.), pinto beans, snap beans (green, wax, string), lentils, and lupines (sweet, white, white sweet, and grain).

Fall Application:

1. Apply after September 30 in ND, SD, MN, WI, and north of Route 30 in IA.
2. Apply after October 15 north of Route 91 in NE and south of Route 30 in IA.
3. Apply after October 31 north of Route 136 in IL.

In all locations, apply to crop stubble after harvest when the sustained soil temperature at a 4-inch depth is less than 55°F and falling. In minimum-till or no-tillage systems on soils having greater than 2.5% organic matter, use 1.67-2.0 pts./A on *medium-textured* and 2.0 pts./A on *fine-textured soils*. Do not apply to frozen ground. A tillage operation may precede the application. A fall and/or a spring tillage may follow application, but do not exceed an incorporation depth greater than 2-3 inches. Minimize furrow and ridge formation in the tillage operations. **Restrictions:** If a spring application is made, the total rate of the fall plus spring applications must not exceed the maximum total rate for beans, peas, and lentils, or illegal residues may result.

Spring Application:

Apply Dual II Magnum, either preplant incorporated or preemergence, using the appropriate rate specified below. **Preplant Incorporated or Preemergence:** Follow instructions for use of Dual II Magnum alone under **Application Procedures**. On *coarse soils* with less than 3% organic matter, apply 1.0-1.33 pts./A of Dual II Magnum or 1.33 pts./A if organic matter is 3% or greater. On *medium soils*, apply 1.33-1.67 pts./A of Dual II Magnum. On *fine soils*, apply 1.33-1.67 pts./A of Dual II Magnum if organic matter content is less than 3%, or 1.67-2.0 pts./A if organic matter content is 3% or greater.

*On English peas, use only preemergence applications. If soils are cold and wet during pea germination and emergence, the use of Dual II Magnum may delay maturity and/or reduce yields.

Restrictions: To avoid possible illegal residues, (1) Do not cut for hay within 120 days following a Dual II Magnum application, (2) Do not use for forage within 60 days following a Dual II Magnum application, and (3) Do not apply more than 2.0 pts./A of Dual II Magnum during any one crop year.

BEANS, PEAS, AND LENTILS – DUAL II MAGNUM COMBINATIONS

Restrictions: When applying Dual II Magnum in combination on beans, peas, and lentils, do not cut for hay within 120 days following application, or illegal residues may result.

TANK MIXTURE AND SEQUENTIAL APPLICATIONS WITH EPTAM – BEANS (GREEN OR DRY)

This mixture controls all weeds controlled by Dual II Magnum alone and by Eptam alone. Refer to the **Dual II Magnum Applied Alone** section of this label for weeds controlled by Dual II Magnum alone and to the Eptam label for weeds controlled by Eptam.

Preplant Incorporated: Follow instructions for use of Dual II Magnum alone under **Application Procedures**. **Sequential:** Apply Eptam alone preplant incorporated, as specified on that label. Follow with a preemergence application of Dual II Magnum, at rates specified for Dual II Magnum alone, during planting (behind the planter) or after planting, but before the weeds or crop emerge.

Refer to the **Product Information** section of this label and to the Eptam label for weather, cultural practices, and all other precautions and limitations that affect performance of these products.

Apply 2.5-4.5 pts./A of Eptam 7E* with Dual II Magnum as specified. On *coarse soils*, apply 0.8 pt./A of Dual II Magnum if organic matter content is less than 3%, or 1.0 pt./A if organic matter content is 3% or greater. On *medium soils*, apply 1.0 pt./A of Dual II Magnum if organic matter content is less than 3%, or 1.33 pts./A if organic matter content is 3% or greater. On *fine soils*, apply 1.33 pts./A of Dual II Magnum if organic matter is less than 3%, or 1.33-1.67 pts./A if organic matter is 3% or greater.

*Refer to the Eptam label for rate limitations depending on geographical area, and for species and varietal restrictions.

Precaution: Do not exceed 3.5 pts./A of Eptam 7E on small white beans or green beans grown on coarse-textured soils.

TANK MIXTURE WITH TREFLAN – BEANS (DRY – KIDNEY, NAVY, PINTO, ETC.; LIMA; AND SNAP)

Dual II Magnum + Treflan tank mix applied preplant incorporated controls those weeds listed under **Dual II Magnum Applied Alone** and those weeds listed for Treflan alone on the Treflan label. Dual II Magnum + Treflan may be applied by ground or by aerial equipment and incorporated up to 14 days prior to planting. Follow the recommended procedures on this label and on the respective Treflan label using equipment that provides uniform 2-inch incorporation.

Apply Dual II Magnum + Treflan tank mix using the appropriate Dual II Magnum rate specified for Dual II Magnum alone, and the Treflan rate from the Dry Beans, and the Lima and Snap Beans sections of the respective Treflan label. Choose the product rate for the specific soil texture/organic matter classification and weed species expected.

Restrictions: Follow all restrictions and precautions on the respective Treflan label and in the **Beans, Peas, and Lentils – Dual II Magnum Alone** section of this label.

POTATOES – DUAL II MAGNUM ALONE

Apply Dual II Magnum, either incorporated, preemergence, or postemergence to potatoes after hilling/lay-by, according to directions specified below for control of weeds listed under the **Product Information** section. Within a rate range, use the lower rate on soils relatively coarse-textured or low in organic matter; use the higher rate on soils relatively fine-textured or high in organic matter. Effectiveness will be reduced if later cultural practices expose untreated soil. For application by center pivot irrigation, see the **Center Pivot Irrigation Application** section of this label.

Incorporated: Apply Dual II Magnum at 1.0-2.0 pts./A to the soil and incorporate into the top 3 inches before planting, using a finishing disk, harrow, rolling cultivator, or similar implement. Planting and later cultural practices should not bring untreated soil to the surface. Postplant incorporated application may be made any time after planting to drag-off, but before potato emergence. Use an implement that evenly distributes Dual II Magnum in the top 2 inches of soil. Do not damage potato seed pieces or sprouts with incorporation equipment.

Preemergence: Apply Dual II Magnum at 1.0-2.0 pts./A, either after planting as a preemergence, delayed preemergence, after drag-off or hilling treatment, but before weeds emerge. Up to 2.5 pts./A of Dual II Magnum alone may be used where soil organic matter is between 6% and 20%.

Postemergence After Hilling/Lay-by: Apply 1.67 pts./A of Dual II Magnum postemergence to potatoes through after hilling/at lay-by to control Dual II Magnum-sensitive species for remainder of the growing season. This application will not control emerged weeds. It may be applied over a previous Dual II Magnum application, but do not apply more than 3.6 pts./A of Dual II Magnum in a single crop season.

Precautions: (1) Do not use on muck or peat soils. If cool, wet soil conditions occur after application, Dual II Magnum may delay maturity and/or reduce yield of Superior and other early maturing potato varieties. (2) These directions for use do not apply to sweet potatoes or yams; (3) Do not apply both as a preemergence and an incorporated treatment.

Restrictions: Potatoes treated with Dual II Magnum should not be harvested within 60 days after the at-planting to drag-off application, or illegal residues may result.

POTATOES – DUAL II MAGNUM COMBINATIONS

TANK MIXTURE WITH SENCOR

In addition to those weeds controlled by Dual II Magnum alone, Dual II Magnum applied in tank mix combination with, or sequentially with, any of the registered Sencor formulations also controls the following broadleaf weeds: cocklebur*, hairy nightshade*, hemp sesbania, jimsonweed*, lambsquarters, prickly sida, ragweed, smartweed, velvetleaf, Venice mallow, and wild mustard.

*Partially controlled.

Dual II Magnum at 1.0-2.0 pts./A plus the labeled Sencor use rate may be used preemergence or postemergence to potatoes through after last hilling. Apply 1.0-1.33 pts./A of Dual II Magnum on *coarse soils* and 1.33-2.0 pts./A on other soil textures. Within this rate range, use the lower rate on soils relatively coarse-textured or low in organic matter; use the higher rate on soils relatively fine-textured or high in organic matter. Effectiveness will be reduced if later cultural practices expose untreated soil. Dual II Magnum will not control emerged weeds.

Refer to the Sencor label for precautionary statements, restrictions, application information, center pivot irrigation application, weeds controlled, and varietal limitations.

Precautions: (1) Postemergence applications to potatoes, except center pivot, should be made only as a directed or semi-directed spray to avoid chlorosis, minor necrosis, or leaf distortion. (2) These directions for use do not apply to sweet potatoes or yams. (3) Do not use this tank mixture on muck or peat soils.

Restrictions: (1) Potatoes treated with Dual II Magnum in tank mixture with Sencor cannot be harvested within 60 days after application, or illegal residues may result. (2) Potatoes may not be harvested within 40 days after a lay-by application of Dual II Magnum, or illegal residues may result.

DUAL II MAGNUM + LOROX TANK MIXTURE (EAST OF ROCKY MOUNTAINS)

Dual II Magnum may be applied in a tank mix combination with any of the registered Lorox formulations as a preemergence broadcast application to potatoes. Apply to the soil surface after planting and before emergence of the crop or after final drag-off according to the rates specified in Table 9.

Table 9: Dual II Magnum + Lorox – Potatoes (East of Rocky Mountains)

	Broadcast Rates Per Acre			
	1% to Less Than 3% Organic Matter		3-5% Organic Matter	
Soil Texture	**Dual II Magnum**	**Lorox***	**Dual II Magnum**	**Lorox***
COARSE Sandy loam	1.0 pt.	1.0-1.5 lbs.	1.33 pts.	1.5-2.0 lbs.
MEDIUM Loam, silt loam, silt	1.33 pts.	1.5-2.0 lbs.	1.67-2.0 pts.	2.0-2.5 lbs.

*When using Lorox L or Lorox DF, use equivalent rates. One pt. of Lorox L equals 1.0 lb. of Lorox DF.

Precautions: To avoid crop injury, (1) Do not use on sands or loamy sands, and (2) Do not incorporate or spray over the top of emerged potatoes.

Refer to the **Product Information** section of this label and to the Lorox label for precautionary statements, restrictions, application information, and weeds controlled.

TANK MIXTURE WITH PROWL 4E

In addition to the weeds controlled by Dual II Magnum alone, this tank mixture with Prowl 4E controls such problem species as kochia, lambsquarters, purslane, annual spurge, stinging nettle, and others specified on the Prowl 4E Alone label. Apply Dual II Magnum + Prowl 4E preemergence, preemergence incorporated, or early postemergence, according to the specific directions on the Prowl 4E label, using the rates in Table 10.

Table 10: Dual II Magnum + Prowl 4E –Potatoes

	Broadcast Rates Per Acre	
	Less Than 3% Organic Matter	More Than 3% Organic Matter
Soil Texture	Dual II Magnum + Prowl 4E*	Dual II Magnum + Prowl 4E*
COARSE	1.0-1.33 pts. + 1.0-1.5 pts.	1.0-1.33 pts. + 1.0-1.5 pts.
MEDIUM	1.33 pts. + 1.5-2.0 pts.	1.33-1.67 pts. + 2.0-3.0 pts.
FINE	1.33-1.67 pts. + 2.0-3.0 pts.	1.67-2.0 pts. + 3.0 pts.

*When using other formulations of Prowl, use equivalent rates of active ingredient.

Refer to the Dual II Magnum and Prowl 4E labels and observe all directions, timings, limitations, precautions, and restrictions concerning the use of these products on potatoes and follow the most restrictive.

TANK MIXTURE WITH PROWL 4E + EPTAM

In addition to the weeds controlled by Dual II Magnum alone, this tank mixture will control those species on the Prowl 4E and Eptam labels. Refer to the Dual II Magnum + Prowl 4E labels for rates of those products and add Eptam 7E at 3.5-7.0 pts./A, depending on geographical area. Refer to the respective Dual II Magnum, Prowl 4E, and Eptam labels and observe all directions, limitations, precautions, and restrictions concerning the use of these products on potatoes and follow the most restrictive.

PUMPKIN – DUAL II MAGNUM ALONE

Preemergence

Apply Dual II Magnum preemergence (before the weeds have emerged) at 1.0 to 1.33 pts./A as an inter-row or inter-hill application in pumpkin. Leave 1 foot of untreated area over the row, or 6 inches to each side of the planted hill and/or any emerged pumpkin foliage (inter-row or inter-hill means not directly over the planted seed or young pumpkin plants). Use the lower Dual II Magnum rate on soils light in texture (loamy sand or lighter) and low in soil organic matter (less than 3%). Dual II 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 (e.g., stand loss, delayed maturity, and loss of yield) to the pumpkin crop. Do not apply Dual II Magnum closer than 30 days before pumpkin harvest.

Dual II 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, e.g., by mechanical means or by another herbicide.

RHUBARB – DUAL II MAGNUM ALONE

Apply Dual II Magnum at a broadcast rate of 0.67-1.33 pts./A to the soil surface in early spring, prior to crop emergence. 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 II 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 II Magnum per crop. (2) Do not apply more than 1.33 pts./A of Dual II Magnum per crop. (3) Do not harvest rhubarb within 62 days of the Dual II Magnum application.

SAFFLOWERS – DUAL II MAGNUM ALONE

Preplant Incorporated or Preemergence: Follow instructions for use of Dual II Magnum alone under **Application Procedures**.

On *coarse soils*, apply 1.0-1.33 pts./A of Dual II Magnum if organic matter content is less than 3%, or 1.33 pts./A if organic matter is 3% or greater. On *medium soils*, apply 1.33-1.67 pts./A of Dual II Magnum. On *fine soils*, apply 1.33-1.67 pts./A of Dual II Magnum if organic matter content is less than 3%, or 1.67-2.0 pts./A if organic matter content is 3% or greater.

GRAIN OR FORAGE SORGHUM (SEED TREATED WITH CONCEP®) – DUAL II MAGNUM ALONE

Apply Dual II Magnum, either preplant surface, preplant incorporated, preemergence, or postemergence using the appropriate rate specified below. Apply Dual II Magnum alone only when the sorghum seed has been properly treated with Concep seed treatment. Preplant or preemergence applications of Dual II Magnum not treated with Concep seed treatment will result in crop death.

Fall Application for Italian Ryegrass Control: Dual II Magnum may be applied for residual control of glyphosate-resistant Italian ryegrass (*Lolium multiflorum*). Apply Dual II Magnum at 1.33-1.67 pts./A in the fall (September 1-December 1) after harvest of the previous crop and prior to Italian ryegrass emergence. Use the lower Dual II Magnum rate for coarse-textured soils and the higher rate for fine-textured soils. A tillage operation may precede the application. Do not incorporate to a depth greater than 2-3 inches if tillage follows the application of Dual II Magnum. For fall applications after emergence of glyphosate-resistant Italian ryegrass, Gramoxone Inteon can be tank mixed with Dual II Magnum to control emerged ryegrass. Refer to the Gramoxone Inteon label for specific rates, application instructions, and restrictions. Other registered herbicides may be tank mixed with Dual II Magnum for control or improved control of other weeds present at the time of application. *Precautions: (1) Do not apply Dual II Magnum to frozen ground. (2) If a spring application is made, do not apply Dual II Magnum or any other product containing S-metolachlor the following spring to grain or forage sorghum, or illegal residues may result.*

Preplant Surface-Applied: Refer to instructions for use of Dual II Magnum under **Application Procedures** section on this label. For minimum-tillage or no-tillage systems only, apply Dual II Magnum up to 45 days before planting in CO, IA, IL, KS, MO, NE, and SD. Use only split applications for treatments made 30-45 days prior to planting, with 2/3 of the broadcast rate applied initially and the remaining 1/3 at planting. Apply 1.5 pts./A of Dual II Magnum on *medium soils* or 1.67 pts./A on *fine soils*. Treatments less than 30 days prior to planting may be made either as a split or single application. Apply 1.33 pts./A of Dual II Magnum on *coarse soils* not more than 2 weeks prior to planting. Under dry conditions, irrigation after application is recommended to move Dual II Magnum into the soil.

Preplant Incorporated or Preemergence: Refer to instructions for use of Dual II Magnum under **Application Procedures** section on this label. Broadcast 1.0-1.33 pts./A of Dual II Magnum on *coarse soils*, 1.33-1.5 pts./A on *medium soils*, or 1.33-1.67 pts./A on *fine soils*.

Postemergence: Refer to instructions for use of Dual II Magnum under **Application Procedures** section on this label. Dual II Magnum may be applied broadcast postemergence at 1.0-1.33 pts./A on *coarse soils*, 1.33-1.5 pts./A on *medium soils*, or 1.33-1.67 pts./A on *fine soils*. Dual II Magnum will not control emerged weeds. Therefore, emerged weeds must be controlled by cultural or chemical means. When applied alone, Dual II Magnum will be safe to emerged sorghum. The risk of sorghum injury increases when adjuvants (e.g., non-ionic, crop oil), nitrogen sources (e.g., AMS, UAN), or fertilizers are applied with Dual II Magnum.

Precautions: (1) If sorghum seed is not properly treated with Concep seed treatment, preplant and preemergence applications of Dual II Magnum will severely injure the crop. (2) Under high soil moisture conditions prior to sorghum emergence, injury may occur following preplant and preemergence application of Dual II Magnum. The crop will normally outgrow this effect. (3) Do not use Dual II Magnum on sorghum grown under dry mulch tillage, or injury may occur. (4) Except for the split preplant surface treatment, do not make more than one application per year, or illegal residues may result. (5) Do not apply Dual II Magnum postemergence within 75 days of harvest.

GRAIN OR FORAGE SORGHUM (SEED TREATED WITH CONCEP) – DUAL II MAGNUM TANK MIXTURES

Dual II Magnum preplant or preemergence (prior to sorghum emergence) tank mixtures with AAtrex may be applied in water or fluid fertilizer. Apply Dual II Magnum preplant or preemergence in tank mixtures only when the sorghum seed has been properly treated with Concep seed treatment. Preplant or preemergence applications of Dual II Magnum to sorghum not treated with Concep seed treatment will result in crop death.

IMPORTANT: FOR TANK MIXTURES WITH AATREX (OR OTHER BRANDS OF ATRAZINE) – If applying Dual II Magnum in tank mixture with AAtrex, all the restrictions and rate limitations on the AAtrex label must be followed if more restrictive/ protective than those on this label. In addition, if AAtrex is/must be applied at rates lower than those recommended on this label, broadleaf weed control may be affected. Refer to the AAtrex label for weeds controlled at the reduced rates.

Precautions: (1) Applications of Dual II Magnum + AAtrex on highly alkaline soils or on eroded areas where calcareous subsoils are exposed may cause sorghum injury. (2) If sorghum seed is not properly treated with Concep, Dual II Magnum + AAtrex may severely injure the crop. (3) Under high soil moisture conditions prior to sorghum emergence, injury may occur following preplant and preemergence application of Dual II Magnum + AAtrex. The crop will normally outgrow this effect. (4) Do not use Dual II Magnum + AAtrex on sorghum grown under dry mulch tillage, or injury may occur. (5) Except for the split preplant surface treatment, do not make more than one application per year, or illegal residues may result.

TANK MIXTURE WITH AATREX

In addition to the weeds controlled by Dual II Magnum alone, Dual II Magnum + AAtrex also controls the following broadleaf weeds when applied either preplant surface, preplant incorporated, or preemergence: cocklebur, common purslane, hairy nightshade, lambsquarters, morningglory, ragweed, smartweed, and velvetleaf.

Preplant Surface-Applied: Refer to instructions for use of Dual II Magnum under **Application Procedures** section on this label. For minimum-tillage or no-tillage systems only, Dual II Magnum + AAtrex may be applied up to 45 days prior to planting in IA, IL, eastern KS, MO, NE, and SD. Use only split applications for treatments made 30-45 days prior to planting, with $^{2}/_{3}$ of the broadcast rate applied initially and the remaining $^{1}/_{3}$ at planting. Apply 1.5 pts./A of Dual II Magnum + 1.7-2.0 lbs./A of AAtrex Nine-O* on *medium soils* with 1.5% organic matter or greater. Apply 1.5 pts./A of Dual II Magnum + 1.7-2.0 lbs./A of AAtrex Nine-O on *fine soils* with less than 1.5% organic matter, or apply 1.67 pts./A of Dual II Magnum + 2.0-2.2 lbs./A of AAtrex Nine-O on *fine soils* with 1.5% organic matter or greater. Treatments less than 30 days prior to planting may be made either as a split or single application. Under dry conditions, irrigation after application is recommended to move Dual II Magnum + AAtrex into the soil.

Precautions: To avoid crop injury, (1) Do not use on coarse soils, and (2) Do not use on medium soils with less than 1.5% organic matter.

Preplant Incorporated or Preemergence: Refer to instructions for use of Dual II Magnum under **Application Procedures** on this label. On *medium soils* with 1.5% organic matter or greater, apply 1.0 pt./A of Dual II Magnum + 1.3 lbs./A of AAtrex Nine-O*. On *fine soils* with less than 1.5% organic matter, apply 1.0 pt./A of Dual II Magnum + 1.3 lbs./A of AAtrex Nine-O; on *fine soils* with 1.5% organic matter or greater, apply 1.2-1.33 pts./A of Dual II Magnum + 1.6-1.8 lbs./A of AAtrex Nine-O.

*When using AAtrex 4L, use equivalent rates. One lb. of AAtrex Nine-O equals 1.8 pts. of AAtrex 4L.

Precautions: To avoid crop injury, (1) Do not use on coarse soils; (2) Do not use on medium soils with less than 1.5% organic matter; (3) Do not use in NM, OK, or TX, except in northeast OK and the TX Gulf Coast and Blacklands areas; and (4) Do not apply preplant incorporated in AZ or the Imperial Valley of CA.

TANK MIXTURE OF DUAL II MAGNUM OR DUAL II MAGNUM + AATREX, WITH GRAMOXONE INTEON, LANDMASTER BW, TOUCHDOWN BRANDS, OR ROUNDUP BRANDS FOR MINIMUM-TILLAGE OR NO-TILLAGE SYSTEMS

In minimum-tillage or no-tillage systems where sorghum (seed treated with Concep) is planted directly into a cover crop, stale seedbed, established sod, or previous crop residues, the contact herbicides Gramoxone Inteon, Landmaster BW, Touchdown, or Roundup may be tank mixed with Dual II Magnum or Dual II Magnum + AAtrex. See Comment No. 7 following Table 2. The Dual II Magnum or Dual II Magnum + AAtrex portion of the tank mixture provides preemergence control of the weeds listed on this label under the respective sections.

Refer to the label of each product used in combination and observe the planting details, restrictions, and all other precautions and limitations.

Application: Apply before, during, or after planting, but before sorghum emerges. Add Gramoxone Inteon, Landmaster BW, Touchdown brands, or Roundup brands and apply as directed on the product labels.

Gramoxone Inteon: Apply as directed on the product label. This treatment will not control weeds taller than 6 inches.

Landmaster BW: 27-54 oz./A depending on weed species and size. See the Landmaster BW label for weeds controlled, recommended rates for specific weeds, and other information concerning use.

Touchdown Brands or Roundup Brands: See the Touchdown brand or Roundup brand labels for weeds controlled, recommended rates, and other use directions.

SWEET SORGHUM (SEED TREATED WITH CONCEP)

Apply Dual II Magnum preplant surface, preplant incorporated, preemergence, or postemergence using the appropriate rate specified below. Apply Dual II Magnum only when the sweet sorghum seed has been properly treated with Concep seed treatment. Preplant or preemergence applications of Dual II Magnum to sweet sorghum not treated with Concep seed treatment will result in crop death.

Soil-Applied: Apply Dual II Magnum up to 45 days before planting. Use only split applications for treatments made 30-45 days prior to planting, with 2/3 of the broadcast rate applied initially and the remaining 1/3 at planting. Treatments less than 30 days prior to planting may be made either as a split or single application. Under dry conditions, irrigation after application is recommended to move Dual II Magnum into the soil.

Dual II Magnum Rates for Soil Applications to Sweet Sorghum

Soil Type	30-45 Days Prior to Planting[1]	<30 Days Prior to Planting	At Planting[2]
Coarse	Not Recommended	1.33 pts./A	1.0-1.33 pts./A
Medium	1.5 pts./A	1.5 pts./A	1.33-1.5 pts./A
Fine	1.67 pts./A	1.67 pts./A	1.33-1.67 pts./A

[1]Use only as a split application with 2/3 of the broadcast rate applied initially and the remaining 1/3 applied at planting.
[2]Preplant incorporated or preemergence

Post-Applied: Dual II Magnum may be applied postemergence to sweet sorghum for residual control of grasses and small-seeded broadleaf weeds. Postemergence application to sweet sorghum may be made to crop up to 5 inches in height. Dual II Magnum will not control emerged weeds. Therefore, emerged weeds must be controlled by cultural or other chemical methods. When applied alone, Dual II Magnum will be safe to emerged sweet sorghum. Use of adjuvants is prohibited on sweet sorghum.

Dual II Magnum Rates for Postemergence Applications to Sweet Sorghum

Soil Type	Postemergence Rate
Coarse	1.0-1.33 pts./A
Medium	1.33 pts./A
Fine	1.33 pts./A

Precautions: (1) If sweet sorghum seed is not properly treated with Concep seed treatment, soil applications of Dual II Magnum prior to sorghum emergence will severely injure the crop. (2) Under high soil moisture conditions prior to sweet sorghum emergence, injury may occur following soil applications of Dual II Magnum. The crop will normally outgrow this effect. (3) Do not use Dual II Magnum on sorghum grown under dry mulch tillage, or injury may occur. (4) Only one application per season is allowed. Dual II Magnum may be applied either as a soil-applied treatment or a postemergence treatment, but not both. (5) Do not apply Dual II Magnum postemergence within 90 days of harvest.

SOYBEANS – DUAL II MAGNUM ALONE

Apply Dual II Magnum preplant surface-applied, preplant incorporated, preemergence, or postemergence using the appropriate rate specified below. Follow instructions for use of Dual II Magnum alone under **Application Procedures** section of this label.

Fall Application for Spring Weed Control:

1. Apply after September 30 in ND, SD, MN, WI, and north of Route 30 in IA.
2. Apply after October 15 north of Route 91 in NE and south of Route 30 in IA.
3. Apply after October 31 north of Route 136 in IL.

In all locations, apply to crop stubble after harvest when the sustained soil temperature at a 4-inch depth is less than 55°F and falling. In minimum-till or no-tillage systems on soils having greater than 2.5% organic matter, use 1.67-2.0 pts./A of Dual II Magnum on *medium-textured* and 2.0 pts./A of Dual II Magnum on *fine-textured soils*. Do not apply to frozen ground. A tillage operation may precede the application. A fall and/or a spring tillage may follow application, but do not exceed an incorporation depth greater than 2-3 inches. Minimize furrow and ridge formation in the tillage operations.

Restrictions: If a spring application is made, the total rate of the fall plus spring applications must not exceed the maximum total rate for soybeans of 2.5 pts./A depending on soil texture, or illegal residues may result.

Fall Application for Italian Ryegrass Control: Dual II Magnum may be applied for residual control of glyphosate-resistant Italian ryegrass (*Lolium multiflorum*). Apply Dual II Magnum at 1.33-1.67 pts./A in the fall (September 1-December 1) after harvest of the previous crop and prior to Italian ryegrass emergence. Use the lower Dual II Magnum rate for *coarse-textured soils* and the higher rate for *fine-textured soils*. A tillage operation may precede the application. Do not incorporate to a depth greater than 2-3 inches if tillage follows the application of Dual II Magnum. For fall applications after emergence of glyphosate-resistant Italian ryegrass, Gramoxone Inteon can be tank mixed with Dual II Magnum for control emerged ryegrass. Refer to the Gramoxone Inteon label for specific rates, application instructions, and restrictions. Other registered herbicides may be tank mixed with Dual II Magnum for control of improved control of other weeds present at the time of application. *Precautions: (1) Do not apply Dual II Magnum to frozen ground. (2) If a spring application is made, the combined total amount of Dual II Magnum applied in the fall plus the spring must not exceed the maximum seasonal S-metolachlor rate for soybeans (2.5 pts./A, depending on soil texture), or illegal residues may result.*

Preplant Surface – Spring Application: Use on medium and fine soils with minimum-tillage or no-tillage systems in CO, CT, DE, IA, IL, IN, KS, KY, MA, MD, ME, MI, MN, MO, MT, ND, NE, NH, NY, OH, PA, RI, SD, TN, VA, VT, WI, WV, and WY. Apply $^{2}/_{3}$ the recommended rate of Dual II Magnum (1.67 pts./A on *medium soils* and 2.0 pts./A on *fine soils*) as a split treatment 30-45 days prior to planting and the remainder at planting. Applications made less than 30 days before planting may be as either a split or single treatment. Apply 1.33 pts./A of Dual II Magnum on coarse soils not more than 2 weeks prior to planting.

Restrictions: (1) On soybeans, use up to 2.5 pts./A of Dual II Magnum preplant incorporated or preemergence treatment on soils having an organic matter content between 6% and 20%. (2) The total Dual II Magnum rate applied to soybeans during any one crop should not exceed 2.5 pts./A. (3) Do not graze or feed treated soybean forage, hay, or straw to livestock 30 days following treatment, or illegal residues may result.

Preplant Incorporated or Preemergence: On *coarse soils*, apply 1.0-1.33 pts./A of Dual II Magnum if organic matter content is less than 3%, or 1.33 pts./A if organic matter content is 3% or greater. On *medium soils*, apply 1.33-1.67 pts./A of Dual II Magnum. On *fine soils*, apply 1.33-1.67 pts./A of Dual II Magnum if organic matter content is less than 3%, or 1.67-2.0 pts./A if organic matter content is 3% or greater.

Restrictions: (1) On soybeans, use up to 2.5 pts./A of Dual II Magnum preplant incorporated or preemergence treatment on soils having an organic matter content between 6% and 20%. (2) The total Dual II Magnum rate applied to soybeans during any one crop should not exceed 2.5 pts./A. (3) Do not graze or feed treated soybean forage, hay, or straw to livestock 30 days following treatment, or illegal residues may result.

Postemergence: Apply 1.0-1.33 pts./A as a postemergence treatment to soybeans from emergence up through the third trifoliate leaf stage. Dual II Magnum will not control emerged weeds so it must be applied to a weed-free soil surface or in a tank mixture with products that provide postemergence control of weeds present at the time of application. Do not apply a postemergence application of Dual II Magnum if a preplant surface, preplant incorporated, or preemergence application of *S*-metolachlor products such as Dual Magnum or Dual II Magnum has already been applied.

Restrictions: To avoid possible illegal residues when Dual II Magnum is applied postemergence to soybeans: (1) Do not apply more than 1.33 pts./A postemergence. (2) Make postemergence application at least 90 days before harvest. (3) Do not graze or feed treated forage or hay from soybeans to livestock following a postemergence application of Dual II Magnum.

SOYBEANS – DUAL II MAGNUM COMBINATIONS

Water or fluid fertilizer may be used as carrier for Dual II Magnum in combination with Sencor, Lorox, Canopy, Pursuit, Scepter, Sonalan, or Command.

Restrictions: For all of the following combinations, on soybeans use up to 2.5 pts./A Dual II Magnum preplant incorporated or preemergence treatment on soils having an organic matter content between 6% and 20%. The total Dual II Magnum rate applied to soybeans during any one crop year should not exceed 2.5 pts./A.

TANK MIXTURE WITH SENCOR

In addition to those weeds controlled by Dual II Magnum alone, Dual II Magnum + Sencor, when applied as directed, also controls the following broadleaf weeds: cocklebur*, hairy nightshade, hemp sesbania, jimsonweed*, lambsquarters, prickly sida, ragweed, smartweed, velvetleaf, Venice mallow, and wild mustard.

*Partially controlled.

Apply Dual II Magnum and Sencor preplant incorporated or preemergence, using the appropriate rates from Table 11. **Preplant Incorporated or Preemergence:** Follow instructions for use of Dual II Magnum alone under **Application Procedures**.

Sequential: Apply Dual II Magnum alone **Preplant Incorporated**, as specified in Table 11 for this tank mixture. Follow with a preemergence application of Sencor during planting (behind the planter) or after planting, but before weeds or soybeans emerge.

Refer to the Sencor label for planting details and soybean variety restrictions.

Table 11: Dual II Magnum + Sencor – Soybeans

	Broadcast Rates Per Acre					
	0.5% to Less Than 3% Organic Matter			3% Organic Matter or Greater		
Soil Texture**	**Dual II Magnum**	**+**	**Sencor***	**Dual II Magnum**	**+**	**Sencor***
COARSE Loamy sand (over 2% organic matter), sandy loam	0.8-1.0 pt.	+	0.33 lb.	1.0 pt.	+	0.5 lb.
MEDIUM	1.0-1.33 pts.	+	0.5 lb.	1.33 pts.	+	0.67 lb.***
FINE	1.33 pts.	+	0.67 lb.	1.33-1.67 pts.	+	0.67 lb.
Mississippi Delta only Silty clay, clay	1.33 pts.	+	1.0 lb.	1.33-1.67 pts.	+	1.0 lb.
Muck or Peat (soils with more than 20% organic matter)	DO NOT USE					

*When using Sencor 4, multiply lbs. of DF by 1.5 to get pts./A.

**On all sand and on loamy sand with less than 2% organic matter, do not use this tank mixture preemergence, or the sequential treatment. Do not use the tank mixture preplant incorporated on any sand, loamy sand, or sandy loam, or crop injury may occur.

***Use 0.5 lb./A if applied preplant incorporated.

Precautions: (1) Do not use the tank mix or sequential application on soil with less than 0.5% organic matter or on alkaline soil with a pH over 7.4, or crop injury may occur. (2) If heavy rain occurs soon after application, crop injury may result, especially in poorly drained areas where water stands for several days.

Restrictions: Follow most restrictive limitations and precautions on the **Dual II Magnum – Soybeans Alone** section of the Dual II Magnum label and the Soybean directions on the Sencor label.

TANK MIXTURE WITH LOROX

In addition to those weeds controlled by Dual II Magnum alone, Dual II Magnum + Lorox, applied preemergence, also controls the following broadleaf weeds: cocklebur*, jimsonweed*, lambsquarters, morningglory*, prickly sida, ragweed, smartweed, velvetleaf*, Venice mallow, and wild mustard.

*Partially controlled.

Preemergence: Apply during planting (behind planter) or after planting, but before weeds or soybeans emerge. Refer to the Lorox label for planting details. Apply the appropriate rates from Table 12.

Precaution: Do not use on soil with less than 0.5% organic matter, or crop injury may occur.

Table 12: Dual II Magnum + Lorox – Soybeans

	Broadcast Rates Per Acre					
	0.5% to Less Than 3% Organic Matter			3% Organic Matter or Greater		
Soil Texture*	**Dual II Magnum**	**+**	**Lorox DF*** **	**Dual II Magnum**	**+**	**Lorox DF*** **
COARSE**	0.8 pt.	+	1.0 lb.	1.0 pt.	+	1.0-1.5 lbs.
MEDIUM	1.0 pt.	+	1.0-1.5 lbs.	1.33 pts.	+	1.5-2.0 lbs.
FINE	1.33 pts.	+	2.0 lbs.	1.33-1.67 pts.	+	2.5-3.0 lbs.
Muck or Peat (soils with more than 20% organic matter)	DO NOT USE					

*Do not use on sand, gravelly soils, or exposed subsoils.
**Do not use on loamy sand, except in the northeastern U.S. on loamy sand with over 1% organic matter.
***When using Lorox L or Lorox DF, use equivalent rates. One pt. of Lorox L equals 1.0 lb. of Lorox DF.

TANK MIXTURE WITH TREFLAN

Dual II Magnum + Treflan tank mix applied preplant incorporated controls those weeds listed under **Dual II Magnum Applied Alone** and those weeds listed for Treflan Alone on the Treflan label. Dual II Magnum + Treflan may be applied by ground or aerial equipment and incorporated up to 14 days before planting. Follow the recommended procedures on the Treflan and Dual II Magnum labels, using equipment that provides uniform 2-inch incorporation.

Apply Dual II Magnum + Treflan tank mix using the appropriate rate from the **Soybeans – Dual II Magnum Alone** section of this label and the Treflan Alone section of the Treflan label for the specific soil texture/organic matter classification and weed species expected.

To control DNA-resistant goosegrass* and other species on the respective labels where the soil organic matter is 3% or less, apply the rate in Table 13.

Table 13: Dual II Magnum + Treflan – Organic Matter Content Less Than 3%

Soil Texture	Broadcast Rates Per Acre		
	Dual II Magnum	Treflan E.C.**	
	Organic Matter Less Than 3%	Organic Matter	
		Less Than 2%	2-3%
COARSE*	0.8-1.0 pt.	1.0 pt.	1.5 pts.
MEDIUM	1.0 pt.	1.5 pts.	1.5 pts.
FINE	1.33 pts.	2.0 pts.	2.0 pts.

*Where a range of rates is given for Dual II Magnum, use the minimum rate where DNA-resistant goosegrass is the predominant species.

**When Treflan MTF or Treflan 5 is used, use comparable rates. Multiply pts. of Treflan E.C. by 1 for Treflan MTF and by 0.8 for Treflan 5.

Restrictions: Follow the most restrictive limitations and precautions on the **Soybeans – Dual II Magnum Alone** section of the Dual II Magnum label and the Soybean directions on the Treflan labels.

TANK MIXTURE WITH SCEPTER

This tank mixture controls all weeds controlled by Dual II Magnum alone and by Scepter alone. Refer to the **Dual II Magnum Applied Alone** section for weeds controlled by Dual II Magnum and to the Scepter label for weeds controlled by Scepter. Refer to the Scepter label for geographical locations where this tank mixture may be applied.

Apply Dual II Magnum + Scepter preplant incorporated or preemergence, using rates in Table 14. Follow use directions under **Application Instructions** on the Scepter label. For preplant incorporated applications, apply and incorporate within 30 days before planting. Observe all other precautions and limitations on the Scepter labels.

Table 14: Dual II Magnum + Scepter – Soybeans

Soil Texture	Broadcast Rates Per Acre			
	Less Than 3% Organic Matter		3% or More Organic Matter	
	Dual II Magnum	Scepter	Dual II Magnum	Scepter
COARSE	0.8 pt.	0.67 pt.	1.0 pt.	0.67 pt.
MEDIUM	1.0 pt.	0.67 pt.	1.33 pts.	0.67 pt.
FINE	1.33 pts.	0.67 pt.	1.33-1.67* pts.	0.67 pt.
Muck or Peat (soils with more than 20% organic matter)	DO NOT USE			

*Use the higher rate of Dual II Magnum if heavy weed infestations are expected.

Restrictions: Follow the most restrictive limitations and precautions on the **Dual II Magnum – Soybeans Alone** section of the Dual II Magnum label and the Soybean directions on the Scepter label.

TANK MIXTURE WITH CANOPY

This tank mixture controls all weeds controlled by Dual II Magnum alone and by Canopy alone. Refer to the **Dual II Magnum Applied Alone** section for weeds controlled by Dual II Magnum and to the Canopy label for weeds controlled by Canopy.

Apply preplant incorporated or preemergence, using the appropriate rates from Table 15. **Preplant Incorporated:** Apply within 2 weeks of planting. Uniformly incorporate into the top 1-2 inches of soil before planting soybeans. **Preemergence:** Apply after planting, but before soybeans emerge.

Restrictions: Follow the most restrictive limitations and precautions on the **Dual II Magnum – Soybeans Alone** section of the Dual II Magnum label and the Soybean directions on the Canopy label, including varietal restrictions.

Table 15: Dual II Magnum + Canopy – Soybeans

	Broadcast Rates Per Acre		
	Less Than 3% Organic Matter	3% or More Organic Matter	
Soil Texture	**Dual II Magnum**	**Dual II Magnum**	**Canopy**
COARSE	0.8 pt.	1.0 pt.	*
MEDIUM	1.0 pt.	1.33 pts.	*
FINE	1.33 pts.	1.33-1.67 pts.	*

*Refer to the Canopy label for appropriate rate according to geographical location, soil and organic matter classification, and pH limitations.

Precaution: Do not apply to sand, or to any soil with less than 0.5% organic matter, or to any soil with pH greater than 7.0, except as noted on the Canopy label.

TANK MIXTURE WITH COMMAND*

This tank mixture controls all weeds controlled by Dual II Magnum alone and by Command alone. Refer to the **Dual II Magnum Applied Alone** section for weeds controlled by Dual II Magnum and to the Command label for weeds controlled by Command.

Apply Dual II Magnum + Command preplant incorporated, using rates in Table 16. Follow all Command application instructions as to incorporation interval, geographical location, equipment operation, soil moisture conditions, etc.

***Restrictions:** Follow the most restrictive limitations and precautions on the **Dual II Magnum – Soybeans Alone** section of the Dual II Magnum label and the Soybean directions on the Command label, including rotational.

Table 16: Dual II Magnum + Command – Soybeans

	Broadcast Rates Per Acre			
	Dual II Magnum		Command 4E	
Soil Texture	0.5-3% Organic Matter	Greater Than 3% Organic Matter	Northern Area	Southern Area
COARSE	0.8 pt.	1.0 pt.	1.5-2.0 pts.	2.0-2.5 pts.
MEDIUM	1.0 pt.	1.33 pts.	1.5-2.0 pts.	2.0-2.5 pts.
FINE	1.33 pts.	1.33-1.67 pts.	1.5-2.0 pts.	2.0-2.5 pts.

TANK MIXTURE WITH SONALAN

This tank mixture controls all weeds controlled by Dual II Magnum alone and by Sonalan alone. Refer to the **Dual II Magnum Applied Alone** section for weeds controlled by Dual II Magnum and to the Sonalan label for weeds controlled by Sonalan.

Apply Dual II Magnum and Sonalan preplant incorporated, using the appropriate rates from Table 17.

Preplant Incorporated: Follow recommended soil preparation procedures for Sonalan.

Sequential: Apply Sonalan alone preplant incorporated as specified on the Sonalan label. Follow with a preemergence application of Dual II Magnum during planting (behind the planter) or after planting, but before weeds or soybeans emerge.

Table 17: Dual II Magnum + Sonalan – Soybeans

	Broadcast Rates Per Acre			
	Less Than 3% Organic Matter		3% or More Organic Matter	
Soil Texture	**Dual II Magnum**	**Sonalan**	**Dual II Magnum**	**Sonalan**
COARSE	1.0-1.33 pts.	1.25-2.0 pts.	1.33 pts.	1.25-2.0 pts.
MEDIUM*	1.33-1.67 pts.	1.75-2.5 pts.	1.33-1.67 pts.	1.75-2.5 pts.
FINE*	1.33-1.67 pts.	2.25-3.0 pts.	1.67-2.0 pts.	2.25-3.0 pts.
Muck or Peat (soils with more than 20% organic matter)	DO NOT USE			

*For eastern black nightshade on these soils, apply Sonalan at 3.0 pts./A on *medium* and 3.5 pts./A on *fine-textured soils*, and follow with 2 incorporation passes.

Restrictions: Follow the most restrictive limitations and precautions on the **Dual II Magnum – Soybeans Alone** section of the Dual II Magnum label and the Soybean directions on the Sonalan label.

TANK MIXTURE WITH PURSUIT

This tank mixture controls all weeds controlled by Dual II Magnum alone and by Pursuit alone. Refer to the **Dual II Magnum Applied Alone** section for weeds controlled by Dual II Magnum and to the Pursuit label for weeds controlled by Pursuit. Refer to the Pursuit label for geographical locations where this tank mixture may be applied.

Apply Dual II Magnum + Pursuit early preplant, preplant incorporated, or preemergence after planting, using rates in Table 18. Application can be made in water or liquid fertilizer. Follow all use directions under Soil Applications on the Pursuit label. For early preplant and preplant incorporated applications, apply within 30 days before planting.

Restrictions: Follow the most restrictive limitations and precautions on the **Dual II Magnum – Soybeans Alone** section of the Dual II Magnum label and the Soybean directions on the Pursuit label, including rotational restrictions.

Table 18: Dual II Magnum + Pursuit – Soybeans

	Broadcast Rates Per Acre		
	Less Than 3% Organic Matter	**3% or More Organic Matter**	**Less Than 3% - 3% or More Organic Matter**
Soil Texture	**Dual II Magnum**	**Dual II Magnum**	**Pursuit**
COARSE	0.8 pt.	1.0 pt.	0.25 pt.
MEDIUM	1.0 pt.	1.33 pts.	0.25 pt.
FINE	1.33 pts.	1.33-1.67 pts.	0.25 pt.

Sequential: Apply Dual II Magnum early preplant, preplant incorporated, or preemergence after planting at 0.8 pt./A on *coarse soils* and 1.0 pt./A on *medium-* and *fine-textured soils*. Follow with a sequential postemergence application of Pursuit to control emerged weeds according to the Pursuit label. Dual II Magnum will improve the consistency and level of control from Pursuit on most grass species. Refer to the Pursuit postemergence label for a listing of weeds controlled, application rate, and growth stage limitations.

TANK MIXTURE WITH SENCOR, SCEPTER, LOROX, CANOPY, OR PURSUIT, PLUS GRAMOXONE INTEON, TOUCHDOWN BRANDS, OR ROUNDUP BRANDS FOR MINIMUM-TILLAGE OR NO-TILLAGE SYSTEMS

In minimum-tillage or no-tillage systems where soybeans are planted directly into a cover crop, stale seedbed, established sod, or previous crop residues, the contact herbicides Gramoxone Inteon, Touchdown brands, or Roundup brands may be added to a tank mix of either Dual II Magnum + Sencor, Dual II Magnum + Scepter, Dual II Magnum + Lorox, Dual II Magnum + Canopy, or Dual II Magnum + Pursuit. When used as directed, the Gramoxone Inteon portion of the tank mixture controls most emerged weeds and suppresses many perennial weeds. Touchdown or Roundup combinations will control emerged annual and perennial weeds when applied as directed on the Touchdown or Roundup label. The Dual II Magnum + Sencor, Scepter, Lorox, Canopy, or Pursuit portion of the tank mixture provides preemergence control of the weeds listed on this label in the tank mixture section for Dual II Magnum + Sencor, Dual II Magnum + Scepter, Dual II + Lorox, Dual II Magnum + Canopy, and Dual II Magnum + Pursuit, respectively.

Refer to the label of each product used in combination and observe the planting details, soybean variety restrictions, information regarding application to soybeans, geographical restrictions, and all other precautions and limitations.

Application: Apply before, during, or after planting, but before the soybeans emerge. Add Gramoxone Inteon, Touchdown brands, or Roundup brands and apply as directed on the product labels.

Gramoxone Inteon: Apply as directed on the product label. This treatment will not control weeds taller than 6 inches.

Restrictions: Do not apply combinations containing Gramoxone Inteon in suspension-type liquid fertilizers, as the activity of paraquat will be reduced.

Touchdown or Roundup: See the Touchdown brand or Roundup brand label for weeds controlled, recommended rates, and other use directions.

Apply in 20-60 gals. of water or fluid fertilizer per acre with ground equipment.

Dual II Magnum + Sencor + Gramoxone Inteon, Touchdown Brands, or Roundup Brands

On loamy sand with over 2% organic matter, apply 1.0 pt./A of Dual II Magnum + 0.33-0.5 lb./A of Sencor. On *medium soils*, apply 1.33 pts./A of Dual II Magnum + 0.5-0.67 lb./A of Sencor. On *fine soils*, apply 1.33-1.67 pts./A of Dual II Magnum + 0.67 lb./A of Sencor.

*When using Sencor 4 or Lexone® 4L, multiply lbs. of DF by 1.5 to get pts./A.

Precautions: To avoid crop injury, (1) Do not use this tank mixture on soil with less than 0.5% organic matter, on alkaline soil with a pH over 7.4, or on all sand and on loamy sand with less than 2% organic matter. (2) If heavy rain occurs soon after application, crop injury may result, especially in poorly drained areas where water stands for several days, or where the seeding slit has not been properly closed.

Dual II Magnum + Scepter + Gramoxone Inteon, Touchdown Brands, or Roundup Brands

On *coarse soils*, apply 1.0 pt./A of Dual II Magnum + 0.67 pt./A of Scepter. On *medium soils*, apply 1.33 pts./A of Dual II Magnum + 0.67 pt./A of Scepter. On *fine soils*, apply 1.67 pts./A of Dual II Magnum + 0.67 pt./A of Scepter.

Restrictions: (1) Do not apply within 90 days of harvest, and (2) Do not graze or feed treated soybean forage, hay, or straw to livestock, or illegal residues may result.

Dual II Magnum + Lorox + Gramoxone Inteon, Touchdown Brands, or Roundup Brands

On *coarse soils**, apply 1.0 pt./A of Dual II Magnum + 1.0-1.5 lbs./A of Lorox DF**. On *medium soils*, apply 1.33 pts./A of Dual II Magnum + 1.0-2.0 lbs./A of Lorox DF. On *fine soils*, apply 1.33-1.67 pts./A of Dual II Magnum + 2.0-3.0 lbs./A of Lorox DF.

*Do not use on loamy sand, except in the northeastern U.S. on loamy sand with over 1% organic matter, or injury may occur. Do not use on sand, gravelly soils, or exposed subsoils, or injury may occur.

**When using Lorox L or Lorox DF, use equivalent rates. One pt. of Lorox L equals 1.0 lb. of Lorox DF.

Precaution: Do not use on soil with less than 0.5% organic matter, or crop injury may occur.

Dual II Magnum + Canopy + Gramoxone Inteon, Touchdown Brands, or Roundup Brands

Use only where soils have 0.5-5% organic matter. On *coarse soils* (except sand), apply 1.0 pt./A of Dual II Magnum, on *medium soils*, apply 1.33 pts./A of Dual II Magnum, and on *fine soils*, apply 1.33-1.67 pts./A of Dual II Magnum. Refer to the Canopy label for appropriate rate, according to geographical location, soil and organic matter classification, pH limitations, and all other use directions.

Precaution: Do not apply to sand, or to any soil with less than 0.5% organic matter, or to any soil with pH greater than 7.0, except as noted on the Canopy label.

Dual II Magnum + Pursuit + Gramoxone Inteon, Touchdown Brands, or Roundup Brands

On *coarse soils*, apply 1.0 pt./A of Dual II Magnum + 0.25 pt./A of Pursuit. On *medium soils*, apply 1.33 pts./A of Dual II Magnum + 0.25 pt./A of Pursuit. On *fine soils*, apply 1.67 pts./A of Dual II Magnum + 0.25 pt./A Pursuit.

POSTEMERGENCE USE ON SOYBEANS – DUAL II MAGNUM TANK MIXTURES

Tank Mixture with Glyphosate Products (e.g., Touchdown Brands or Roundup Brands)

Dual II Magnum at 1.0-1.33 pts./A may be tank mixed with glyphosate products at labeled rates and applied from emergence up through the third trifoliate leaf stage of Roundup Ready or glyphosate-tolerant soybeans. Dual II Magnum alone will not control emerged weeds. Use this treatment only on soybeans designated for use with glyphosate (e.g., Roundup Ready or glyphosate-tolerant soybeans). The glyphosate product must be registered for postemergence use in Roundup Ready or glyphosate-tolerant soybeans.

Tank Mixture with Pursuit

Dual II Magnum at 1.0-1.33 pts./A may be tank mixed with Pursuit at labeled rates and applied from emergence up through the third trifoliate leaf stage of soybeans. Dual II Magnum alone will not control emerged weeds.

Tank Mixture with Liberty Herbicide or Ignite 280 SL

Dual II Magnum at 1.0-1.33 pts./A may be tank mixed with Liberty Herbicide or Ignite 280 SL Herbicide at labeled rates and applied from emergence up through the third trifoliage leaf stage of soybeans. Dual II Magnum alone will not control emerged weeds. Use this treatment only on soybeans designated for use with glufosinate (e.g., LibertyLink).

Restrictions: Follow the tank mix product label for adjuvant recommendations. The use of COC or UAN with Dual II Magnum may result in temporary crop injury. To avoid possible illegal residues when Dual II Magnum is applied postemergence to soybeans: (1) Do not apply more than 1.33 pts./A postemergence. (2) Make postemergence application at least 90 days before harvest. (3) Do not graze or feed treated forage or hay from soybeans to livestock following a postemergence application of Dual II Magnum.

SUGAR BEETS – DUAL II MAGNUM ALONE

Postemergence Applications

Dual II Magnum may be applied postemergence to sugar beets after the sugar beets have reached the first true-leaf stage. However, because Dual II Magnum is primarily a soil-active herbicide, it must be applied prior to weed emergence in order to provide consistent control of listed weeds. As such, weeds that are emerged with or before the crop, or that are present at the time Dual II Magnum is applied, must be controlled with another appropriately labeled herbicide. Apply Dual II Magnum at 1 pt./A on coarse soils, 1.33 pts./A on medium soils, and 1.67 pts./A on *fine soils*. More than one postemergence application may be applied, but the total should not exceed 2.6 pts./A. Weeds present at the time of application will not be controlled.

Restrictions: To avoid possible illegal residues: (1) Do not apply more than 2.6 pts./A postemergence. (2) Do not harvest within 60 days after the last application.

Precaution: In coarse soils, Dual II Magnum applied before emergence of sugar beets (i.e., other than postemergence) may cause injury.

SUGAR BEETS – DUAL II MAGNUM TANK MIX COMBINATIONS

Dual II Magnum may be tank mixed with Assure® II, Betamix®, Poast®, Progress®, Select®, Stinger®, or Upbeet® and applied to sugar beets. Tank mixtures of these products with Dual II Magnum will increase the risk of crop injury over that of either product applied alone, as the Dual II Magnum formulation has some adjuvant properties. The addition of a spray adjuvant such as crop oil concentrates (COC's) or methylated seed oils (MSO's) can further increase the risk of crop injury. Injury risk can be reduced by using the lowest effective rate of the tank mix partner(s) and/or adjuvant and by avoiding applications under adverse growing conditions or high soil or air humidity. Refer to the individual product labels and follow all use restrictions and limitations.

SUNFLOWERS – DUAL II MAGNUM ALONE

Preplant Incorporated or Preemergence

Within the rate ranges given below, use the higher rate of Dual II Magnum if heavy weed infestations are expected. On *coarse soils* with organic matter less than 3%, apply 1.0-1.33 pts./A of Dual II Magnum; apply 1.33 pts./A if organic matter is 3% or greater. On *medium soils*, apply 1.33-1.67 pts./A of Dual II Magnum. On *fine soils* with organic matter of less than 3%, apply 1.33-1.67 pts./A of Dual II Magnum; apply 1.67-2.0 pts./A if organic matter is 3% or greater.

Restrictions: To avoid possible illegal residues: (1) Do not allow livestock to graze or feed in treated area. (2) Do not exceed the maximum label rates for sunflowers for the soil type.

TOMATOES – DUAL II MAGNUM ALONE

Transplanted

Dual II Magnum may be applied preplant incorporated or preplant before transplanting. If the latter method is used, keep soil disturbance to a minimum during the transplanting operation. Application may also be post directed to transplants after the first settling rain or irrigation. When an application is made post-directed, apply in a minimum of 20 gallons of water per acre and minimize contact with tomato plants. Dual II Magnum will not control emerged weeds. In bedded transplanted tomatoes, apply Dual II Magnum preplant non-incorporated to the top of the pressed bed as the last step prior to laying plastic. Dual II Magnum may also be used to treat row-middles in bedded tomatoes, as long as the total amount of Dual II Magnum does not exceed the maximum allowed per crop.

Seeded

Dual II Magnum may be applied post-directed to direct-seeded tomatoes. Tomato plants must be at least 4 inches tall at the time of application, and the product must be applied in a minimum of 20 gallons of water per acre. Minimize spray contact with tomato plants. Dual II Magnum will not control emerged weeds.

Tomato Use Rates: On *coarse soils*, apply 1.0-1.33 pts./A of Dual II Magnum if organic matter is less than 3% or 1.33 pts./A if organic matter is 3% or greater. On *medium soils*, apply 1.33-1.67 pts./A of Dual II Magnum. On *fine soils*, apply 1.33-1.67 pts./A of Dual II Magnum if organic matter is less than 3% or 1.67-2.0 pts./A if organic matter is 3% or greater.

Precautions: (1) Do not apply to varieties or cultivars with unknown tolerance to Dual II Magnum. (2) Dual II Magnum may damage transplants that have been weakened by any cause. To prevent damage, plant only healthy transplants. Do not plant when wet, cool, or unfavorable growing conditions exist. (3) In transplanted tomatoes, if Dual II Magnum is applied preplant incorporated, incorporate to a depth less than the depth of transplanting, and use the lower end of the rate range for the given soil type, or damage may occur. (4) For row-middle applications where tomatoes are grown on sandy soils and where high soil moisture conditions can exist (e.g., low binding and high evaporation conditions), as may be found in the States of Florida, Georgia, Maryland, and Virginia, there is potential for crop injury in the form of leaf epinasty. The risk of this type of injury can be reduced by: a) incorporating the Dual II Magnum immediately following application, b) applying the Dual II Magnum seven or more days before transplanting (but only after the beds have been formed), c) minimizing the application of Dual II Magnum onto the plastic of the bed, or d) any combination of the above.

Restrictions: To avoid possible illegal residues: (1) Do not exceed the maximum label rate for the soil texture per year. (2) Apply only by ground application.

Restrictions:

90-Day PHI – If the single application rate of Dual II Magnum is greater than 1.33 pts./A (up to 2.0 pt./A), do not harvest tomatoes within 90 days of application.

30-Day PHI – If the application of Dual II Magnum does not exceed 1.33 pts./A, do not harvest tomatoes within 30 days of application.

When applying at 1.33 pts./A with a 30-day PHI, the following restrictions apply:

- **Do not exceed two applications per growing season.**
- **The use of adjuvants is prohibited.**
- **Applications may be made using ground equipment, in concentrated spray volumes.**
- **Applications may be made as a foliar broadcast spray to the soil within 1 week of transplanting and again at blooming/fruiting to the row middles as a banded/directed application 38-77 days after the first treatment.**

STORAGE AND DISPOSAL

Pesticide Storage

This product may be stored at temperatures down to 30 degrees below 0°F.

Pesticide Disposal

Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited. Wastes resulting from the use of this product are toxic. Improper disposal of unused pesticide, spray mixture, or rinsate is a violation of federal law. Pesticide, spray mixture, or rinsate that cannot be used according to label instructions must be disposed of according to federal, state, or local procedures. For guidance in proper disposal methods, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office.

Container Handling [less than 5 gallons]

Non-refillable container. Do not reuse or refill this container. Offer for recycling if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use and disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. In the event of a major spill, fire, or other emergency, call 1-800-888-8372, day or night.

Container Handling [Bulk/Mini-bulk]

Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the person refilling. To clean container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

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For non-emergency (e.g., current product information), call
Syngenta Crop Protection at 1-800-334-9481.

Manufactured for:
Syngenta Crop Protection, LLC
P.O. Box 18300
Greensboro, North Carolina 27419-8300

SCP 818A-L1Q 0412
4011735

RESTRICTED USE PESTICIDE

GROUP 15 HERBICIDE

Sale, use and distribution of this product in Nassau and Suffolk Counties in the State of New York is prohibited.

Dual II Magnum®

Herbicide

For weed control in beans, peas, and lentils; corn; cotton; grasses grown for seed; horseradish; peanuts; potatoes; pumpkin; rhubarb; safflowers; sweet, grain, or forage sorghum; soybeans; soybeans, immature seed; sugar beets; sunflowers; and tomatoes

Active Ingredient:

S-metolachlor (CAS No. 87392-12-9)	82.4%
Other Ingredients:	17.6%
Total:	100.0%

Dual II Magnum contains 7.64 lbs. of active ingredient per gallon.

See additional precautionary statements and directions for use inside booklet.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to supplemental labeling under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

EPA Reg. No. 100-818
EPA Est. 11773-IA-01

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Manufactured for:
Syngenta Crop Protection, LLC
P.O. Box 18300
Greensboro, North Carolina 27419-8300

SCP 818A-L1Q 0412
4011735

BAR CODE # IS
(01) 0 07 02941 53305
LAST DIGIT IS CHECK DIGIT
UCC/EAN 128

KEEP OUT OF REACH OF CHILDREN.

CAUTION

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

Causes eye irritation. Harmful if swallowed or absorbed through skin. Avoid contact with eyes, skin, or clothing. This product may cause skin sensitization reactions in some people.

FIRST AID

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 Center or doctor for treatment advice. **If on skin or clothing:** Take off contaminate clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a Poison Control Center or doctor for treatment advice. **If swallowed:** Call a Poison Control Center or doctor immediately for treatment advice. Do not give any liquid to the person. Do not induce vomiting unless told to do so by the Poison Control Center or doctor. Do not give anything by mouth to an unconscious person. **If inhaled:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a Poison Control Center or doctor for further treatment advice.

Have the product container or label with you when calling a Poison Control Center or doctor, or going for treatment.

HOT LINE NUMBER: For 24 Hour Medical Emergency Assistance (Human or Animal) Or Chemical Emergency Assistance (Spill, Leak, Fire or Accident), Call **1-800-888-8372**.

Environmental Hazards: Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash water or rinsate.

Ground Water Advisory: The active ingredient in Dual II Magnum has the potential to leach through soil into ground water under certain conditions as a result of agricultural use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

Surface Water Advisory: The active ingredient in Dual II Magnum has the potential to contaminate surface water through ground spray drift. Under some conditions, the active ingredient may also have a high potential for runoff into surface water (primarily via dissolution in runoff water) for several months post-application. These include poorly drained or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, areas overlaying extremely shallow ground water, areas with in-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas overlaying tile drainage systems that drain to surface water.

Mixing/Loading Instructions: Care must be taken when using this product to prevent back-siphoning into wells, spills, or improper disposal of excess pesticide, spray mixtures, or rinsates.

Check-valves or antisiphoning devices must be used on all mixing and/or irrigation equipment.

This product may not be mixed or loaded within 50 ft. of perennial or intermittent streams and rivers, natural or impounded lakes and reservoirs. This product may not be mixed/loaded or used within 50 ft. of all wells, including abandoned wells, drainage wells, and sink holes*.

*For exceptions to this restriction, see the **Environmental Hazards** section of the **Precautionary Statements** in attached booklet.

Aerial Drift Management Requirements: Do not apply this product by air, unless the supplemental labeling on Aerial Drift Management in attached booklet is followed.

Chemigation: Refer to supplemental labeling in attached booklet for use directions for chemigation. Do not apply this product through any irrigation system, unless the supplemental labeling on chemigation is followed.

STORAGE AND DISPOSAL

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2.5 gallons

Net Contents

syngenta®