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## RESTRICTED USE PESTICIDE (GROUND AND SURFACE WATER CONCERNS)

FOR RETAIL SALE TO AND USE ONLY BY CERTIFIED APPLICATORS OR PERSONS UNDER THEIR DIRECT SUPERVISION, AND ONLY FOR THOSE USES COVERED BY THE CERTIFIED APPLICATOR'S CERTIFICATION.

THIS PRODUCT IS A RESTRICTED-USE HERBICIDE DUE TO GROUND AND SURFACE WATER CONCERNS. USERS MUST READ AND FOLLOW ALL PRECAUTIONARY STATEMENTS AND INSTRUCTIONS FOR USE IN ORDER TO MINIMIZE POTENTIAL FOR ATRAZINE TO REACH GROUND AND SURFACE WATER.

GROUP 5 15 HERBICIDES

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

# Medal<sup>®</sup> II ATZ

## HERBICIDE

*For weed control in corn and grain or forage sorghum*

*Active Ingredients:*

Atrazine (CAS No. 1912-24-9) . . . . .	33.0%
Atrazine related compounds . . . . .	0.7%
S-metolachlor (CAS No. 87392-12-9) . .	26.1%

<i>Other Ingredients:</i>	40.2%
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<i>Total:</i>	100.0%
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*Medal II ATZ contains 3.1 lb atrazine + related compounds per gallon and 2.4 lb S-metolachlor active ingredient per gallon.*

*Medal II ATZ is formulated as a suspension concentrate (SC).*

*EPA Reg. No. 100-817  
EPA Est. 100-LA-001*

**KEEP OUT OF REACH  
OF CHILDREN.**

## CAUTION

*See additional precautionary statements and directions for use inside booklet.*

**SCP 817B-L1S 0917  
4092485**

**2.5 gallons**  
Net Contents

FIRST AID	
<b>If swallowed</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to by a poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>If on skin or clothing</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If in eyes</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If inhaled</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
<p style="text-align: center;"><b>HOT LINE NUMBER</b>  For 24 Hour Medical Emergency Assistance (Human or Animal)  or Chemical Emergency Assistance (Spill, Leak, Fire or Accident),  Call  <b>1-800-888-8372</b></p>	

## PRECAUTIONARY STATEMENTS

### Hazards to Humans and Domestic Animals

#### CAUTION

Harmful if swallowed. Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

#### Personal Protective Equipment (PPE)

Some of the materials that are chemical-resistant to this product are made of any waterproof material.

#### Mixers, loaders, applicators, flaggers, and other handlers not using engineering controls must wear:

- Coveralls over short-sleeved shirt and short pants
- Chemical-resistant gloves
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear for overhead exposure
- Chemical-resistant apron when cleaning equipment, mixing and loading, or exposed to the concentrate

#### Mixers, loaders, applicators, and other handlers using engineering controls must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical-resistant gloves and apron for mixers and loaders

See engineering controls for additional requirements.

*continued...*

## PRECAUTIONARY STATEMENTS *(continued)*

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. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

### Engineering Control Statements

Pilots must use an enclosed cockpit in a manner that is consistent with the WPS for Agricultural Pesticides [40 CFR 170.240(d)(6)]. Pilots must wear the PPE required on this labeling for applicators, however, they need not wear chemical-resistant gloves when using an enclosed cockpit.

Flaggers supporting aerial applications must use an enclosed cab that meets the definition on the Worker Protection Standard for Agricultural Pesticides [40 CFR 170.240(d)(5)] for dermal protection.

Mixers and loaders supporting aerial applications must use a closed system that meets the requirements for dermal protection listed in the Worker Protection Standard (WPS) for Agricultural Pesticides [40 CFR 170.240(d)(4)] and must: wear the personal protective equipment required for mixers and loaders, wear protective eyewear if the system operates under pressure, and be provided and have immediately available for use in an emergency, such as a spill or equipment breakdown: chemical-resistant footwear.

When applicators 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)(5)], the handler PPE requirements may be reduced or modified as specified in the WPS.

### User Safety Recommendations

#### Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE 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

This product is toxic to aquatic invertebrates. 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. This pesticide contains atrazine, which has been shown to be toxic to aquatic invertebrates. Runoff and drift from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not apply when weather conditions favor drift from treated areas.

### Ground Water Advisory

Medal II ATZ contains both the active ingredients atrazine and S-metolachlor.

Atrazine can travel (seep or leach) through soil and can enter ground water which may be used as drinking water. Atrazine has been found in ground water. Users are advised not to apply atrazine to sand and loamy sand soils where the water table (ground water) is close to the surface and where these soils are very permeable, i.e., well-drained. Your local agricultural agencies can provide further information on the type of soil in your area and the location of ground water.

S-metolachlor is known 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**

S-metolachlor has the potential to contaminate surface water through ground spray drift. Under some conditions, S-metolachlor 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 draining 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 vegetative filter strips, and areas overlaying tile drainage systems that drain to surface water. A level, well maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential for contamination of water from runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours. Sound erosion control practices will reduce this product's contribution to surface water contamination.

### **Mixing/Loading Instructions**

Take care when using this product to prevent back-siphoning into wells, spills, or improper disposal of excess pesticide, spray mixtures, or rinsates.

Use check-valves or antisiphoning devices on all mixing equipment.

This product must 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.

Additional State imposed requirements regarding well-head setbacks and operational area containment must be observed.

This product must 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 applied aerially or by ground within 66 ft of the points where field surface water runoff enters perennial or intermittent streams and rivers or within 200 ft around natural or impounded lakes and reservoirs. If this product is applied to highly erodible land, the 66-ft buffer or setback from runoff entry points must be planted to crop, or seeded with grass or other suitable crop.

### **Tile-Outletted Terraced Fields Containing Standpipes**

One of the following restrictions must be used in applying atrazine to tile-terraced fields containing standpipes.

1. Do not apply this product within 66 ft of standpipes in tile-outletted terraced fields.
2. Apply this product to the entire tile-outletted terraced field and immediately incorporate it to a depth of 2-3 inches in the entire field.
3. Apply this product to the entire tile-outletted terraced field under a no-till practice only when a high crop residue management practice is practiced. High crop residue management is described as a crop management practice where little or no crop residue is removed from the field during and after crop harvest.

## 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 permitted by 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 permitted by 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 PERMITTED BY 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 permitted by 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 PERMITTED BY 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.

ANY USE OF THIS PRODUCT IN AN AREA WHERE USE IS PROHIBITED IS A VIOLATION OF FEDERAL LAW. Before using this product, you must consult the Atrazine Watershed Information Center (AWIC) to determine whether the use of this product is prohibited in your watershed. AWIC can be accessed through [www.atrazine-watershed.info](http://www.atrazine-watershed.info) or 1-866-365-3014. If use of this product is prohibited in your watershed, you may return this product to your point of purchase or contact Syngenta Crop Protection, LLC for a refund.

Use Medal II ATZ only in accordance with use directions on this label or in separately published EPA accepted supplemental labeling 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 over short-sleeve shirt and short pants
- Chemical-resistant gloves made of any waterproof materials
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear for overhead exposures

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

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

### PRODUCT INFORMATION

Medal II ATZ is a selective herbicide labeled for preplant, preemergence, or postemergence control of many annual grasses and broadleaf weeds in corn. Medal II ATZ can also be used before crop emergence for control of most annual grasses and broadleaf weeds in grain or forage sorghum, provided the sorghum seed has been properly treated with Concep®. Medal II ATZ may be tank mixed with other herbicides for weed control in conventional, minimum-till, and no-till corn, grain sorghum, or forage sorghum.

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions, limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

When tank mixing or sequentially applying atrazine or products containing atrazine to corn or sorghum, do not exceed an application rate of 2.0 pounds active ingredient of atrazine per acre for any single application and the total pounds of atrazine applied (lb ai per acre) must not exceed 2.5 pounds active ingredient per acre per year.

Following many years of continuous use of atrazine (one of the ingredients in Medal II ATZ), and products chemically related to atrazine, biotypes of some of the weeds listed on this label which are controlled by the atrazine component have been reported to develop resistance to this and chemically related herbicides. Where this is known or suspected, and weeds controlled by this product are expected to be present along with resistant biotypes, the use of Medal II ATZ in combination or in sequence with registered herbicides which do not contain triazines may enhance product performance. Consult with your State Agricultural Extension Service for specific advice.

Medal II ATZ alone or in tank mixture with AAtrex®, Dual Magnum®, Dual II Magnum®, or Princep® may be applied early preplant, preplant surface, preplant incorporated, or preemergence on corn, in water or fluid fertilizer. Apply postemergence treatments of Medal II ATZ to corn, alone or in combination, using water only as the carrier. Medal II ATZ may be applied in tank mix combination with Gramoxone® brands, or solo glyphosate brands, with or without the above herbicides preplant surface or preemergence to corn. Medal II ATZ alone may also be applied on sorghum early preplant, preplant incorporated, preplant surface, or preemergence in water or in fluid fertilizer.

Medal II ATZ may be applied in water by aircraft. Make applications in fluid fertilizer by ground equipment only.

#### **USE PRECAUTIONS FOR ALL MEDAL II ATZ APPLICATIONS**

- 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.
- Dry weather following preemergence application of Medal II ATZ or a tank mixture may reduce effectiveness. Cultivate if weeds develop in conventional tillage corn or sorghum.
- Avoid spray overlap, as crop injury may result.

#### **RESTRICTIONS FOR ALL MEDAL II ATZ APPLICATIONS**

- Do not apply this product through any type of irrigation system.
- Do not apply under windy conditions or under conditions which favor runoff or wind erosion of soil containing this product to nontarget areas.
- Do not use a sprayer or applicator contaminated with other materials, or crop damage or sprayer clogging of the application device may occur. Thoroughly clean sprayer or other application device before using. Dispose of cleaning solution in a responsible manner.
- To prevent off-site movement due to runoff or wind erosion:
  - Avoid treating powdery dry or light sand soils when conditions are favorable for wind erosion. Under these conditions, ensure that the soil surface is settled by rainfall or irrigation first.
  - Do not apply to impervious substrates, such as paved or highly compacted surfaces.
  - 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.

#### **RESISTANT WEED MANAGEMENT**

Medal II ATZ herbicide contains the active ingredients atrazine which inhibits the photosynthetic pathway of photosystem II (PSII, Site of Action Group 5) and S-metolachlor which inhibits the formation of very long chain fatty acids (VLCFA, Site of Action Group 15). Some naturally-occurring weed populations have been identified as resistant to Group 5 and 15 herbicides. Selection of resistant biotypes, through repeated use of these herbicides or lower than labeled use rates in the same field, may result in weed control failures. A resistant biotype may be present where poor performance cannot be attributed to adverse environmental conditions or improper application methods. If resistance is suspected, contact your local Syngenta representative and/or agricultural advisor for assistance.

Principles of herbicide resistant weed management:

- Employ integrated weed management practices. Use multiple herbicide sites-of-action with overlapping weed spectrums in rotation, sequences, or mixtures.
- Use the full labeled herbicide rate and proper application timing for the hardest to control weed species present in the field.
- Scout fields after herbicide application to ensure control has been achieved. Avoid allowing weeds to reproduce by seed or to proliferate vegetatively.
- Monitor site and clean equipment between sites.
- Start with a clean field and control weeds early by using a burndown treatment or tillage in combination with a preemergence residual herbicide as appropriate.
- Use cultural practices such as cultivation and crop rotation, where appropriate.
- Use good agronomic principles that enhance crop competitiveness.

## SOIL TEXTURE INFORMATION

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

Directions are based upon soil textures, which are defined as follows:

<b>COARSE</b>	Sand, loamy sand, sandy loam
<b>MEDIUM</b>	Loam, silt loam, silt
<b>FINE</b>	Sandy clay loam, silty clay loam, clay loam, sandy clay, silty clay, clay

## MEDAL II ATZ APPLIED ALONE – CORN (ALL TYPES), GRAIN SORGHUM, OR FORAGE SORGHUM

Weeds Controlled or Partially Controlled by Early Preplant, Preplant Surface-Applied, Preplant Incorporated, or Preemergence Applications of Medal II ATZ

Weeds Controlled	Weeds Partially Controlled**
barnyardgrass (watergrass)	carpetweed
browntop panicum	chickweed
crabgrass	cocklebur*
crowfootgrass	common purslane
fall panicum	common ragweed
foxtail millet	Florida pusley
giant foxtail	galinsoga
goosegrass	giant ragweed*
green foxtail	henbit
prairie cupgrass	jimsonweed
red rice	lambsquarters
signalgrass	morningglory
( <i>Brachiaria</i> )*	mustards
southwestern cupgrass	nightshades
witchgrass	pigweed
yellow foxtail	smartweed
yellow nutsedge*	velvetleaf*
	waterhemp
	sandbur
	seedling johnsongrass
	shattercane
	sicklepod
	volunteer sorghum
	woolly cupgrass

\*Control of these weeds can be erratic, especially under dry weather conditions. Control escaped weeds with cultivation or application of an appropriate EPA-registered postemergence herbicide. On fine-textured soils, only partial control can be expected.

\*\*Control may be improved by following these suggested procedures:

1. In corn, apply up to the maximum single application rate in Table 1 or Table 2 for your given soil texture and rate limitation based on your soil conservation practices.
2. Thoroughly till moist soil to destroy germinating and emerged weeds. If Medal II ATZ is to be applied preplant incorporated, this tillage may be used to incorporate Medal II ATZ if uniform 2-inch incorporation is achieved as described under **Application Procedures**.
3. Plant crop into moist soil immediately after tillage. If Medal II ATZ is to be used preemergence, apply at planting or immediately after planting.
4. 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.
5. 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 as soon as weeds emerge may improve control.



### Medal II ATZ Rate Limitations – Corn and Sorghum\*

\*Where there are state/local requirements regarding atrazine use (including lower maximum rates and/or greater setbacks) which are different from the label, the more restrictive/protective requirements must be followed. Certain states may have established rate limitations 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.

**Note:** For purposes of calculating total atrazine active ingredient applied, Medal II ATZ contains 3.1 lb ai atrazine + related compounds per gal (0.775 lb ai/qt).

#### **ATRAZINE USE RESTRICTIONS:**

Medal II ATZ contains both atrazine and S-metolachlor as active ingredients.

#### **FOR ALL SOIL APPLICATIONS PRIOR TO CROP EMERGENCE**

- **On Highly Erodible Land (as defined by the Natural Resource Conservation Service)**  
If conservation tillage is practiced, leaving at least 30% of the soil covered with plant residues at planting, apply a maximum of 2.58 qt/A of Medal II ATZ (2.0 lb ai/A) as a broadcast spray.  
If the soil coverage with plant residue is less than 30% at planting, a maximum of 2.1 qt/A of Medal II ATZ (1.6 lb ai/A) may be applied.
- **On Land Not Highly Erodible**  
Apply a maximum of 2.58 qt/A of Medal II ATZ (2.0 lb ai/A) as a broadcast spray.

#### **FOR POSTEMERGENCE APPLICATION OF ATRAZINE TO CORN**

If no atrazine was applied prior to corn emergence, apply a maximum of 2.58 qt/A of Medal II ATZ (2.0 lb ai/A) broadcast. If a postemergence treatment is required following an earlier atrazine application, the total atrazine applied may not exceed 2.5 lb active ingredient (3.2 qt of Medal II ATZ) per acre per calendar year.

### **Replant and Rotational Crops**

**Replant Crops:** If treated crop is lost due to poor germination, hail, flood, insects, etc., corn may be replanted immediately or sorghum may be replanted immediately, provided the seed has been properly treated with Concep. If the original application was banded and the second crop is planted in the untreated row middles, a second banded treatment may be applied.

**Replant Crop Restriction:** Do not make a second broadcast application to replanted crops.

**Rotational Crops:** Corn, sorghum, soybeans, cotton, or peanuts may be planted the spring following treatment.

**Rotational Crop Restrictions:** (1) Do not rotate to food or feed crops other than those listed above. (2) In eastern parts of the Dakotas, KS, western MN, and NE, do not rotate to soybeans for 18 months following application if the rate applied to corn or sorghum was more than 2.0 lb ai of atrazine or equivalent band application rate. (3) In the High Plains and Intermountain areas of the West, where rainfall is sparse and erratic or where irrigation is required, use only when corn or sorghum is to follow corn or sorghum, or a crop of untreated corn or sorghum is to precede other rotational crops. (4) Do not graze or feed forage or fodder from cotton to livestock.

**Rotational Crop Precautions:** (1) Injury may occur to soybeans planted the year following application on soils having a calcareous surface layer. (2) If Medal II ATZ is applied after June 10, rotating to crops other than corn or sorghum the next year may result in crop injury. (3) Avoid planting sugar beets, tobacco, vegetables (including dry beans), spring-seeded small grains, or small-seeded legumes the year following Medal II ATZ application, or crop injury may occur.

### **Cover Crops**

A cover crop can be an important tool for the overall farm cropping system. Cover crops are planted for conservation purposes, soil erosion control, soil health improvement, water quality improvement and weed management. A cover crop can be a single crop or a combination of crops, including grasses and/or broadleaf crops.

After harvest of a Medal II ATZ treated crop, planting of a cover crop is allowed provided the cover crop is not grazed or fed to livestock nor harvested for food. Terminate the cover crop through natural causes such as frost or intentional termination by herbicide application, crimping, rolling, tillage or cutting.

All possible cover crops or cover crop combinations have not been tested for tolerance to Medal II ATZ herbicide. Before planting the cover crop, determine the level of tolerance for the intended cover crops by conducting a field bioassay. Refer to the **Field Bioassay for Cover Crops** section for instructions.

#### **Field Bioassay for Cover Crops**

A field bioassay is a method of determining if herbicide residues are present in the soil at concentrations high enough to adversely affect crop growth.

Conduct the field bioassay by planting several strips of the desired cover crop across the field which has been previously treated with Medal II ATZ. Plant the cover crop strips perpendicular to the direction of the Medal II ATZ application. The strips should be located so that all the different field conditions are encountered, including differences in field terrain, soil texture, organic matter, pH, and drainage.

If the cover crop does not show adverse effects such as crop injury and/or stand reduction, the field can be planted to this cover crop. If injury and/or stand reduction are visible, wait two to four weeks for further herbicide degradation to occur and repeat the bioassay. Alternatively, select a different cover crop and repeat the bioassay. Only plant cover crops that show acceptable tolerance in the field bioassay.

### **CORN AND SORGHUM USE PRECAUTIONS AND RESTRICTIONS**

For purposes of calculating the amount of active ingredient applied, 1 qt Medal II ATZ contains 0.775 lb ai atrazine + related compounds and 0.6 lb S-metolachlor.

To determine the combined total lb ai of atrazine or S-metolachlor per acre resulting from all products, use the following 2-step method:

- A. Determine the lb ai of atrazine or S-metolachlor applied as Medal II ATZ (1.0 qt = 0.775 lb ai atrazine + related compounds and 0.6 lb ai S-metolachlor); then,
- B. If Dual Magnum, Dual II Magnum or any other source of S-metolachlor is to be used, add the lb ai S-metolachlor to be applied in these products to the lb ai S-metolachlor in Step A above; or if AAtrex or any other source of atrazine is to be used, add the lb ai atrazine to be applied in these products to the lb ai atrazine + related compounds in Step A above.

#### **Restrictions for All Medal II ATZ Corn Applications**

- The combined amount of Medal II ATZ resulting from all applications to corn must not exceed a total of 3.23 qt/A per calendar year.
- When tank mixing or sequentially applying atrazine or products containing atrazine, such as AAtrex, do not exceed a single application rate of 2.0 pounds active ingredient of atrazine (2.58 qt Medal II ATZ) per acre.
- When tank mixing or sequentially applying atrazine or products containing atrazine, such as AAtrex, the total pounds of atrazine applied (lb ai) must not exceed 2.5 lb per acre per calendar year.
- If other products containing S-metolachlor, such as Dual Magnum or Dual II Magnum, have been applied, the combined total amount of S-metolachlor resulting from all applications must not exceed 3.75 lb per acre per calendar year.
- Do not graze or feed field corn forage from treated areas for 60 days or sweet corn forage for 45 days following Medal II ATZ application.
- Preharvest Interval (PHI): Do not harvest sweet corn ears from treated areas for 30 days following Medal II ATZ application.

#### **Precautions for All Medal II ATZ Sorghum Applications**

- If sorghum seed is not properly pretreated with Concep, application of Medal II ATZ will result in severe crop injury or death.
- Injury may occur to sorghum following the use of Medal II ATZ under abnormally high soil moisture conditions during early development of the crop.

#### Restrictions for All Medal II ATZ Sorghum Applications

- The combined amount of Medal II ATZ resulting from all applications to sorghum must not exceed a total of 2.58 qt/A per calendar year.
- When tank mixing or sequentially applying atrazine or products containing atrazine, such as AAtrex, do not exceed a single application rate of 2.0 pounds active ingredient of atrazine (2.58 qt Medal II ATZ) per acre.
- When tank mixing or sequentially applying atrazine or products containing atrazine, such as AAtrex, the total pounds of atrazine applied (lb ai) must not exceed 2.5 lb per acre per calendar year.
- If other products containing S-metolachlor, such as Dual Magnum or Dual II Magnum, have been applied, the combined total amount of S-metolachlor resulting from all applications must not exceed 1.7 lb per acre per calendar year.
- Do not graze or feed sorghum forage for 60 days following preemergence Medal II ATZ use.
- Preharvest Interval (PHI): Do not harvest grain sorghum from treated areas for 75 days following Medal II ATZ application.

#### CORN USE DIRECTIONS – EARLY PREPLANT, PREPLANT SURFACE, PREPLANT INCORPORATED, OR PREEMERGENCE APPLICATIONS

**Early Preplant (Corn):** 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  $\frac{2}{3}$  the labeled rate of Medal II ATZ as a split treatment 30-45 days before planting and the remainder at planting, using the rates in Table 1. Applications made less than 30 days prior to planting may be as either a split or single treatment. Use the lower rate for light expected weed infestations and the higher rate for heavy expected weed infestations. On coarse-textured soils, apply 2.1 qt/A of Medal II ATZ not more than 2 weeks prior to planting. The above procedure may be followed if AAtrex, Dual Magnum, Dual II Magnum, or Princep is used in tank mixtures with Medal II ATZ. Substitute a fluid fertilizer for some or all of the water carrier for burndown of existing annual weeds listed on this label up to the 2-leaf stage of development. The addition of crop oil concentrate to the spray mixture will enhance the burndown activity. If larger weeds are present at the time of treatment, apply in a tank mixture combination with a burndown herbicide (for example, Gramoxone brands, or solo glyphosate brands). Observe all directions for use, precautions, and restrictions on the label of the burndown herbicide.

On medium- and fine-textured soils with minimum- or no-tillage systems in DE, MD, MI, NY, OH, PA, VA, and WV, early preplant 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. If the postemergence treatment includes the herbicide used early preplant, do not exceed the labeled rate for corn on a given soil texture. Observe all directions for use, precautions, restrictions and limitations on the label of the postemergence herbicide.

Medal II ATZ may be used according to the above directions to control winter wheat planted as a cover crop in IN, KY, and OH, in addition to providing residual weed control. The wheat must be less than 6 inches tall (preferably still in a dormant or semi-dormant state coming out of winter) at the time of application. Depending on rainfall, 10-20 days may be required to completely kill the wheat. In the event that adequate rainfall does not occur, control of the winter wheat may be unsatisfactory and the application of a burndown herbicide (i.e., Gramoxone brands, or solo glyphosate brands) may be required before planting the crop.

Medal II ATZ may be applied in the fall, as a single application, for control of the winter weeds listed on this label within the ecofallow (no-till) production areas of NE and KS where wheat (or other small grain cereals) will be rotated to corn. Make the application to untilled wheat stubble in the fall following wheat harvest, but before soil freeze-up. The ground must remain untilled through the establishment of the corn crop.

On medium- and fine-textured soils following final seedbed preparation in the Blacklands and Gulf Coast areas of TX, an early preplant application of Medal II ATZ at 1.6-1.9 qt/A may be made 30-45 days before planting. Grass suppression of 2-3 weeks after planting can be expected as a result of this application. A follow-up application of Dual Magnum, or Dual II Magnum may be needed in fields with a history of heavy grass pressure. Apply after planting, but before corn and grass weeds emerge.

Read and follow all restrictions in the **Restrictions for All Medal II ATZ Corn Applications** section above.

**Precaution:** Avoid soil incorporation or disturbing the soil after Medal II ATZ application and before planting. Moving treated soil out of the row or moving untreated soil to the surface during planting will result in diminished weed control.

**Table 1: Medal II ATZ – Early Preplant – Corn<sup>1</sup>**

Soil Texture	Single Application	Split Application*	
		30-45 DBP**	At Planting
<b>COARSE</b> Sand, loamy sand, sandy loam	2.1 qt/A	DO NOT APPLY	
<b>MEDIUM</b> Loam, silt loam, silt	2.1-2.58 qt/A	1.4-1.75 qt/A	0.7-0.9 qt/A
<b>FINE</b> Sandy clay loam, silty clay loam, clay loam, sandy clay, silty clay, clay	2.1-2.58 qt/A	1.4-1.75 qt/A	0.7-0.9 qt/A

\*Split applications can be made less than 30 days before planting if desired.

\*\*DBP – Days before planting

<sup>1</sup>Do not exceed 2.1 qt/A on highly erodible land with less than 30% plant residue cover. Control of certain weeds may be reduced and a tank mix partner or an application of a postemergence herbicide may be needed.

**Preplant Surface, Preplant Incorporated, or Preemergence:** Apply Medal II ATZ preplant surface, preplant incorporated, or preemergence, using the appropriate rates from Table 2.

**Preplant Surface:** Apply uniformly to the soil surface within 14 days before planting. Where applications are made to coarse soils more than 7 days before planting, use the rates in Table 1 for corn.

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

**Preemergence:** Apply to the soil surface at planting (behind the planter) or after planting, but before weeds or crop emerge.

**Table 2: Medal II ATZ – Preplant Surface, Preplant Incorporated, or Preemergence – Corn**

Soil Texture	Broadcast Rate Per Acre	
	Less Than 3% Organic Matter	3% Organic Matter or Greater
<b>COARSE</b> Sand, loamy sand, sandy loam	1.3 qt	1.6 qt
<b>MEDIUM</b> Loam, silt loam, silt	1.6 qt	2.1 qt
<b>FINE</b> Sandy clay loam, silty clay loam, clay loam, sandy clay, silty clay, clay	2.1 qt	2.1-2.58 qt* <sup>1</sup>
Muck or peat soils (more than 20% organic matter)	DO NOT USE	

\*For cocklebur, yellow nutsedge, and velvetleaf control on fine-textured soils above 3% organic matter: Apply 2.58 qt of Medal II ATZ per acre.

<sup>1</sup>Do not exceed 2.1 qt/A on highly erodible land with less than 30% plant residue cover. Control of certain weeds may be reduced and a tank mix partner or an application of a postemergence herbicide may be needed.

**Precautions:** In the event of escape of annual weeds following an early preplant, preplant surface, preplant incorporated, or preemergence treatment of Medal II ATZ applied alone or in combination, follow with a postemergence application of an appropriately labeled broadleaf and/or grass weed herbicide. If the postemergence treatment includes the herbicide used in the earlier treatment, do not exceed the labeled rate for corn on a given soil texture.

Substitute a fluid fertilizer for some or all of the water carrier for burndown of existing annual weeds listed on this label up to the 2-leaf stage of development. The addition of crop oil concentrate to the spray mixture will enhance the burndown activity. If larger weeds are present, add a contact herbicide as noted in the **Medal II ATZ Tank Mixtures** section of this label.

Read and follow all restrictions in the **Restrictions for All Medal II ATZ Corn Applications** section above.

### **SORGUM USE DIRECTIONS – EARLY PREPLANT, PREPLANT SURFACE, PREPLANT INCORPORATED, OR PREEMERGENCE APPLICATIONS**

**Early Preplant (Sorghum-Seed Treated with Concep):** For minimum-tillage and no-tillage systems only, Medal II ATZ may be applied up to 45 days before planting grain sorghum in IA, IL, eastern KS, MO, NE, and SD, using the rates in Table 3. Use only split applications for treatments made 30-45 days before planting with  $\frac{2}{3}$  the labeled rate applied initially and the remaining  $\frac{1}{3}$  at planting. Applications made less than 30 days prior to planting may be made as either a split or single application.

Substitute a fluid fertilizer for some or all of the water carrier for burndown of existing annual weeds listed on this label up to the 2-leaf stage of development. The addition of crop oil concentrate to the spray mixture will enhance the burndown activity. If larger weeds are present at the time of treatment, apply in a tank mixture combination with a contact herbicide (for example, Gramoxone brands, or solo glyphosate brands). Observe all directions for use, precautions, and restrictions on the label of the contact herbicide. Under dry conditions, irrigate after application to move Medal II ATZ into the soil.

On medium- and fine-textured soils following final seedbed preparation in the Blacklands, Panhandle, and Gulf Coast areas of TX, an early preplant application of Medal II ATZ at 1.6-1.9 qt/A may be made 30-45 days before planting. Grass suppression of 2-3 weeks after planting can be expected as a result of this application. A follow-up application of a Dual Magnum, or Dual II Magnum product may be needed in fields with a history of heavy grass pressure. Apply after planting, but before sorghum and grass weeds emerge.

Read and follow all precautions and restrictions in the **Precautions for All Medal II ATZ Sorghum Applications and Restrictions for All Medal II ATZ Sorghum Applications** sections above.

**Precaution:** Avoid soil incorporation or disturbing the soil after Medal II ATZ application and before planting. Moving treated soil out of the row or moving untreated soil to the surface during planting will result in diminished weed control.

**Restrictions:** (1) Do not use on soils with a pH greater than 8.0 if grain sorghum is to be planted. (2) Do not use on coarse soils. (3) Do not use on medium soils with less than 1.0% organic matter.

**Table 3: Medal II ATZ – Early Preplant – Grain or Forage Sorghum (Seed treated with Concep)<sup>1</sup>**

Soil Texture	Organic Matter Content	Single Application	Split Application*	
			30-45 DBP**	At Planting
<b>COARSE</b> Sand, loamy sand, sandy loam	any level	DO NOT USE	DO NOT USE	
<b>MEDIUM</b> Loam, silt loam, silt	more than 1.0%	2.1-2.33 qt/A	1.4-1.6 qt/A	0.7-0.8 qt/A
	less than 1.0%	DO NOT USE	DO NOT USE	
<b>FINE</b> Sandy clay loam, silty clay loam, clay loam, sandy clay, silty clay, clay	more than 1.0%	2.1 qt/A	1.4 qt/A	0.7 qt/A
	1.0%-1.5%	2.1-2.33 qt/A	1.4-1.6 qt/A	0.7-0.8 qt/A
	more than 1.5%	2.33-2.58 qt/A	1.6-1.75 qt/A	0.8-0.9 qt/A

\*Split applications can be made less than 30 days before planting if desired.

\*\*DBP – Days before planting

<sup>1</sup>Do not exceed 2.1 qt/A on highly erodible land with less than 30% plant residue cover. Control of certain weeds may be reduced and a tank mix partner or an application of a postemergence herbicide may be needed.

**Preplant Surface, Preplant Incorporated, or Preemergence to Sorghum (Seed Treated with Concep):** Apply Medal II ATZ preplant surface, preplant incorporated, or preemergence, using the appropriate rates from Table 4.

**Preplant Surface:** Apply uniformly to the soil surface within 14 days before planting.

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

**Preemergence:** Apply to the soil surface at planting (behind the planter) or after planting, but before weeds or crop emerge.

**Precaution:** In the event of escape of annual weeds following an early preplant, preplant surface, preplant incorporated, or preemergence treatment of Medal II ATZ applied alone or in combination, follow with a postemergence application of an appropriately labeled broadleaf and/or grass weed herbicide. If the postemergence treatment includes the herbicide used in the earlier treatment, do not exceed the labeled rate for sorghum on a given soil texture.

**Table 4: Medal II ATZ – Preplant Surface, Preplant Incorporated, or Preemergence – Grain or Forage Sorghum (Seed treated with Concep)**

Soil Texture	Organic Matter	Broadcast Rate Per Acre
<b>COARSE</b> Sand, loamy sand, sandy loam	any level	DO NOT USE
<b>MEDIUM and FINE</b> Loam, silt loam, silt, sandy clay loam, silty clay loam, clay loam, sandy clay, silty clay, clay	less than 1.0%	DO NOT USE
	more than 1.0%	1.6 - 2.1 qt

Read and follow all sorghum related precautions and restrictions in the **Corn and Sorghum Use Precautions and Restrictions** section above.

**Restrictions:** (1) Do not use in NM or TX, except in the TX Panhandle, Gulf Coast, and Blacklands areas. (2) Do not apply preplant incorporated in AZ or the Imperial Valley of CA.

A fluid fertilizer may be substituted for some or all of the water carrier for burndown of existing annual weeds listed on this label up to the 2-leaf stage of development. The addition of crop oil concentrate to the spray mixture will enhance the burndown activity. If larger weeds are present at the time of treatment, add a contact herbicide as noted in the **Medal II ATZ Tank Mixtures** section of this label.

**Precautions:** (1) Avoid applying Medal II ATZ on highly alkaline soils (pH greater than 8.0) or on eroded areas where calcareous subsoils are exposed, or crop injury may result. (2) Avoid applying Medal II ATZ when sorghum is planted in deep furrows because heavy rains following application can cause excessive concentrations of herbicide in the furrow. (3) Avoid applying to sorghum grown under dry mulch tillage, or crop injury may result. (4) Injury may occur if both Medal II ATZ applied early preplant, preplant surface, preplant incorporated, or preemergence and an at-planting systemic insecticide applied in-furrow are used. (5) Sorghum growing under stress caused by minor element deficiency may be injured by Medal II ATZ.

## **CORN USE DIRECTIONS – POSTEMERGENCE AND POST DIRECTED APPLICATIONS**

### **Postemergence Broadcast – Corn**

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

**Application:** Apply early postemergence, using the appropriate rate from Table 5. Apply this treatment before grass and broadleaf weeds pass the 2-leaf stage and before corn exceeds 12 inches in height. Occasional corn leaf burn may result, but this is unlikely to affect later growth or yield.

**Precautions:** (1) Application to weeds larger than the 2-leaf stage will likely result in unsatisfactory control. (2) Avoid applying postemergence in fluid fertilizer, or severe crop injury may occur.

**Table 5: Medal II ATZ Postemergence Broadcast – Corn**

Soil Texture	Broadcast Rate Per Acre
<b>COARSE</b> Sand, loamy sand, sandy loam	1.6 qt
<b>MEDIUM</b> Loam, silt loam, silt	2.1 qt
<b>FINE</b> Sandy clay loam, silty clay loam, clay loam, sandy clay, silty clay, clay	2.1-2.58 qt*

\*For better residual control of cocklebur, velvetleaf, and yellow nutsedge on fine-textured soils above 3% organic matter, apply 2.58 qt of Medal II ATZ per acre.

Read and follow all corn related precautions and restrictions in the **Corn and Sorghum Use Precautions and Restrictions** section above.

#### **Postemergence-Directed – Corn**

Medal II ATZ may be applied at 1.3-2.58 qt/A in a minimum of 15 gal of water as a postemergence-directed treatment to corn to extend control of weeds listed in the **Early Preplant, Preplant Surface-Applied, Preplant Incorporated, Preemergence, or Postemergence Broadcast** section of this label. Apply using the appropriate rate from Table 6.

For best results, apply Medal II ATZ to weed-free soil following use of a preplant surface, preplant incorporated, or preemergence herbicide, or following a lay-by cultivation. If weeds have emerged at the time of Medal II ATZ application, apply before grass and broadleaf weeds exceed the 2-leaf stage. Apply to corn not exceeding 12 inches in height. Minimize contact with corn leaves.

Read and follow all corn related precautions and restrictions in the **Corn and Sorghum Use Precautions and Restrictions** section above.

**Precautions:** (1) Application to weeds larger than the 2-leaf stage will likely result in unsatisfactory control. (2) Avoid postemergence application in fluid fertilizer, or severe crop injury may result.

**Table 6: Postemergence-Directed – Corn**

Soil Texture	Broadcast Rate Per Acre
<b>COARSE</b> Sand, loamy sand, sandy loam	1.3 qt
<b>MEDIUM</b> Loam, silt loam, silt	2.1 qt
<b>FINE</b> Sandy clay loam, silty clay loam, clay loam, sandy clay, silty clay, clay	2.1-2.58 qt*

\*For better residual control of cocklebur, velvetleaf, and yellow nutsedge on fine-textured soils above 3% organic matter, apply 2.58 qt of Medal II ATZ per acre.

Read and follow all corn related precautions and restrictions in the **Corn and Sorghum Use Precautions and Restrictions** section above.

### **SORGHUM USE DIRECTIONS – POSTEMERGENCE APPLICATION**

Medal II ATZ may be applied postemergence to Concep III treated forage or grain sorghum for control of several grass and broadleaf weeds. For a list of weeds controlled, refer to the **Corn Use Directions – Postemergence and Post Directed Applications** section on this label.



Make the application to grass and broadleaf weeds before they exceed the 2-leaf stage. Apply to sorghum from the 3-leaf stage (3 visible collars) up to 12 inches in height. Occasional sorghum leaf burn may result, but this is unlikely to affect later growth or yield.

Apply early postemergence at the appropriate rate from Table 7. Use only water as the carrier.

For best results, add a crop oil concentrate (COC) type adjuvant at a rate of 1% v/v (1 gallon COC/100 gallons spray solution) to the spray solution. In addition to COC, a spray grade Urea Ammonium Nitrate (UAN) at a rate of 2.5% v/v (2.5 gallons UAN/100 gallons spray solution) or ammonium sulfate (AMS) at a rate equivalent to 8.5 lb/100 gallons of spray solution can be added to the spray solution.

Medal II ATZ may be tank mixed with other herbicides registered on sorghum for improved spectrum of weed control. Additionally, these tank mixtures can be used to include a herbicide with a different mode of action to help control or manage the development of resistant weed biotypes. Refer to individual product labels for precautionary statements, restrictions, rates, approved uses, and a list of weeds controlled.

Medal II ATZ can be applied as part of a sequential sorghum weed control program. If Medal II ATZ was applied prior to sorghum emergence, a second treatment of Medal II ATZ can be applied postemergence provided that the total Medal II ATZ rate during any one crop does not exceed 2.58 qt/A.

**Table 7: Medal II ATZ Postemergence Broadcast – Sorghum**

Soil Texture	Broadcast Rate Per Acre*
<b>COARSE</b> (Sand, loamy sand, sandy loam)	1.3–1.6 qt
<b>MEDIUM</b> (Loam, silt loam, silt)	1.6–2.1 qt
<b>FINE</b> (Sandy clay loam, silty clay loam, clay loam, sandy clay, silty clay, clay)	2.1–2.58 qt

\*Apply the higher rate in the rate range on soils with higher organic matter (>3%) or for additional residual weed control.

Read and follow all sorghum related precautions and restrictions in the **Corn and Sorghum Use Precautions and Restrictions** section above.

#### Precautions:

- Application to weeds larger than the 2-leaf stage will likely result in unsatisfactory control.
- Avoid applying postemergence in fluid fertilizer, or severe crop injury may occur.
- Application to sorghum growing under stress caused by minor element deficiency or to sorghum growing on highly calcareous soil may result in crop injury.

## SPRAY EQUIPMENT

**Ground Application:** Use sprayers that provide accurate and uniform application. Ensure that screens in nozzles and in suction and in-line strainers are no finer than 50-mesh. Use a pump with capacity to: (1) maintain 35-40 psi at the nozzles, and (2) provide sufficient agitation in tank to keep mixture in suspension. Unless otherwise specified, use a minimum of 10 gal of spray mixture per acre. Rinse sprayer thoroughly with clean water immediately after use.

For band applications, calculate amount to be applied per acre as follows:

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

**Low Carrier Application (Broadcast Ground Application Only):** Use sprayers with properly spaced nozzles that provide accurate and uniform application. **Only water may be used as a carrier.** Ensure that screens in suction and in-line strainers are 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 gal of spray mixture per acre. Maintain uniform travel speed while spraying. Rinse sprayer thoroughly with clean water immediately after each use.

Use appropriate nozzles to reduce drift and increase application accuracy. Use nozzle screens when directed by the manufacturer. Place all nozzles on 20-inch centers, except flooding types. Place flooding type nozzles on 40-inch centers. When Flat Fan-type nozzles are used, place at angles of 80° or 110°. Always read and follow the manufacturer's directions for optimum setup and performance of their nozzles or tips.

**Aerial Application (For Medal II ATZ Alone):** Use aerial application only where broadcast applications are specified. Use the appropriate amount of this product in sufficient water to equal a minimum of 2.0 gal/A of total spray. Avoid applications 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 the label directions, make applications at a maximum height of 10 ft above the top of the largest plants, 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 Medal II ATZ by aircraft at a minimum upwind distance of 400 ft from sensitive plants.

Avoid application to humans or animals. Ensure that flagmen and loaders avoid inhalation of spray mist and prolonged contact with skin.

### **Aerial Drift Management**

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment- and weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all of 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  $\frac{3}{4}$  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.

Ensure that the applicator is familiar with and takes 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 advised 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 preferred 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.

#### **Boom Length**

For some use patterns, reducing the effective boom length to less than  $\frac{3}{4}$  of the wingspan or rotor length may further reduce drift without reducing swath width.

#### **Application Height**

Do not make applications 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 up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Increase swath adjustment distance 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. Avoid application below 2 mph due to variable wind direction and high inversion potential. **Note:** Local terrain can influence wind patterns. Ensure that every applicator is familiar with local wind patterns and how they affect spray drift.

#### **Temperature and Humidity**

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

#### **Temperature Inversions**

Do not make applications 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 must 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).

## **MIXING PROCEDURES**

Shake 2.5 gal jugs well or thoroughly recirculate larger containers and bulk tanks before using. Medal II ATZ is a liquid that may be mixed with water or fluid fertilizer and applied as a spray. Medal II ATZ may also be sprayed onto dry bulk granular fertilizer and applied with the granular fertilizer.

### Dry Bulk Granular Fertilizers

Many dry bulk granular fertilizers may be impregnated or coated with Medal II ATZ and used to control weeds in corn or Concep-treated sorghum.

When applying Medal II ATZ with dry bulk granular fertilizers, follow all directions for use, restrictions and precautions on the Medal II ATZ label regarding target crops, rates per acre, soil texture, application methods, and rotational crops.

#### Restrictions:

- Impregnation of bulk fertilizer is restricted to commercial facilities. On-farm fertilizer impregnation is prohibited.
- No more than 500 tons of dry bulk fertilizer can be impregnated per day.
- No single facility may impregnate fertilizer with this product for more than 30 days per calendar year.
- The commercial facility impregnating the dry bulk fertilizer must inform, in writing, the user (applicator) of the dry bulk fertilizer that:
  - Applicators must wear long-sleeved shirt, long pants, shoes, and socks
  - The restricted entry interval is 24 hours

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 mixture by using any closed drum, belt, ribbon, or other commonly used dry bulk fertilizer blender. Nozzles used to spray Medal II ATZ onto the fertilizer must be placed to provide uniform spray coverage. Take care to aim the spray onto the fertilizer only, avoiding the walls of the blender.

If the herbicide/fertilizer mixture is too wet, add a highly absorptive material, such as Agsorb® FG 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 the amount of Medal II ATZ to be used by the following:

$$\frac{\text{tons of fertilizer}}{\text{acre}} \times \text{qt of Medal II ATZ per acre} = \text{qt of Medal II ATZ per ton of fertilizer}$$

### Pneumatic (Compressed Air) Application

High humidity, high urea concentrations, low fertilizer use rates, and dusty fertilizer may cause fertilizer mixtures to build up or plug the distributor head, air tubes, or nozzle deflector plates. To minimize buildup, premix Medal II ATZ with Exxon Aromatic 200 at a rate of 2.0-2.5 pt/gal of Medal II ATZ. Aromatic 200 is a noncombustible/non-flammable petroleum product. Aromatic 200 may be used in either a fertilizer blender or through direct injection systems. Do not use drying agents when using Aromatic 200.

**Precautions:** (1) Use mixtures of Medal II ATZ and Aromatic 200 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 Medal II ATZ 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 another drying agent of 6/30 particle size is preferred. (3) Drying agents are not endorsed for use with On-The-Go impregnation equipment.

**Precautions:** To avoid potential for explosion, (1) Do not impregnate Medal II ATZ on ammonium nitrate, potassium nitrate, or sodium nitrate, either alone or in blends with other fertilizers. (2) Do not combine Medal II ATZ with a single superphosphate (0-20-0) or treble superphosphate (0-46-0). (3) Do not use Medal II ATZ on straight limestone, since absorption will not be achieved. Fertilizer blends containing limestone can be impregnated.

## Application

Apply 200-700 lb 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 in order to prevent possible crop injury or injury to subsequent rotational crops. Nonuniform application may also result in unsatisfactory weed control. To obtain satisfactory weed control in areas where conventional tillage is practiced, shallowly incorporate the mixture into the soil. 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.

**Precautions:** (1) To help avoid rotational crop injury, make applications as early as possible, since Medal II ATZ impregnated onto dry bulk granular fertilizers can be expected to last longer in the soil than when Medal II ATZ is applied as a spray in water or fluid fertilizer. (2) Avoid use of the herbicide/fertilizer mixture on crops where planting beds are to be formed, or crop injury may occur.

## Application in Water or Fluid Fertilizers

**Medal II ATZ Alone:** Fill the spray tank  $\frac{1}{2}$ - $\frac{3}{4}$  full with water or fluid fertilizer, add the proper amount of Medal II ATZ, then add the rest of the water or fluid fertilizer. Provide sufficient agitation during mixing and application to maintain a uniform suspension.

**Tank Mixtures:** Fill the spray tank  $\frac{1}{2}$ - $\frac{3}{4}$  full with water or fluid fertilizer, add the proper amount of Medal II ATZ, then add AAtrex, Banvel®, Linuron, or Princep; next add Dual Magnum, or Dual II Magnum; then add Gramoxone brands, or solo glyphosate brands, depending on the tank mix combination desired; and finally, add the rest of the water or fluid fertilizer. Only water may be used with Medal II ATZ + Liberty® Herbicide when applied postemergence to corn designated as tolerant to Liberty (glufosinate); and with solo glyphosate brands when applied postemergence to corn designated as glyphosate-tolerant (e.g. Agrisure® or Roundup Ready®). Provide sufficient agitation during mixing and application to maintain a uniform suspension.

## Compatibility Test

Perform a jar test before tank mixing to ensure compatibility of Medal II ATZ with other pesticides. The following test assumes a spray volume of 25 gal/A. For other spray volumes, make appropriate changes in the ingredients.

**Note:** 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. **Note:** 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  $\frac{1}{4}$  tsp or 1.2 milliliters of a compatibility agent approved for this use, such as Compex® or Unite® ( $\frac{1}{4}$  tsp is equivalent to 2.0 pt/100 gal spray). Shake or stir gently to mix.
3. To both jars, add the appropriate amount of pesticide(s) in their relative proportions based on 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  $\frac{1}{2}$  the compatibility agent to the fertilizer or water and the other  $\frac{1}{2}$  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.

## CORN USE DIRECTIONS – MEDAL II ATZ TANK MIXTURES

Read and follow all corn related precautions and restrictions in the **Corn and Sorghum Use Precautions and Restrictions** section of this label. Additionally, always follow label instructions for tank mix products when mixing with Medal II ATZ. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions, limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

When tank mixing Medal II ATZ with AAtrex formulations, refer to the **Medal II ATZ Rate Limitations** section of this label. Do not exceed the following:

On highly erodible land with less than 30% plant residue cover prior to crop emergence	1.6 lb ai of atrazine
On other land prior to crop emergence	2.0 lb ai of atrazine
Postemergence applications only – any land	2.0 lb ai of atrazine
Preemergence + postemergence applications	2.5 lb ai of atrazine

### Tank Mixture with AAtrex, Dual Magnum, Dual II Magnum or Princep

**AAtrex (4L or Nine-O®):** Add up to 1.0 qt of AAtrex 4L (1.1 lb of Nine-O) per acre to the rate of Medal II ATZ labeled in Table 2 (do not exceed the above atrazine limit) in the southeastern U.S. where high rainfall can shorten the duration of control of broadleaf weeds, and in all areas where heavy infestations of cocklebur, morningglory, velvetleaf, or other broadleaf weeds claimed are expected.

**Dual Magnum Products:** Add up to 0.33 pt of Dual Magnum or Dual II Magnum per acre to the rate of Medal II ATZ labeled in Table 2 when heavy infestations of yellow nutsedge, sandbur, or seedling johnsongrass are expected.

**Princep (4L or Caliber 90®):** Add up to 1.0 qt of Princep 4L (1.1 lb of Caliber 90) per acre to the rate of Medal II ATZ labeled in Table 2 where heavy infestations of crabgrass or fall panicum are expected or additional control of certain broadleaves is desired.

### Tank Mixture of Medal II ATZ Alone or Medal II ATZ + AAtrex, Dual Magnum, Dual II Magnum, or Princep, with Gramoxone Brands, or Solo Glyphosate Brands

In minimum-tillage or no-tillage systems where corn is planted directly into a cover crop, stale seedbed, established sod, or previous crop residues, tank mix the contact herbicides Gramoxone brands, or solo glyphosate brands with Medal II ATZ alone or with Medal II ATZ + AAtrex, Dual Magnum, Dual II Magnum, or Princep. When used as directed, the Gramoxone brands portion of the tank mixture controls most emerged annual weeds and suppresses many perennial weeds. Solo glyphosate brands will control emerged annual and perennial weeds when applied as directed on its label. The Medal II ATZ portion of the tank mixture provides preemergence control of the weeds listed on this label in the **Medal II ATZ Alone** section for corn. The addition of AAtrex, Dual Magnum, Dual II Magnum, or Princep offers the advantage indicated above.

**Application:** Apply before, during, or after planting, but before corn emerges, at the appropriate rate in Table 8. Up to 0.75 qt of AAtrex 4L (0.8 lb of Nine-O), or 0.33 pt of Dual Magnum or Dual II Magnum or 1.0 qt of Princep 4L (1.1 lb of Caliber 90) per acre may be added to the rate of Medal II ATZ labeled in Table 8. Add Gramoxone brands or solo glyphosate brands at labeled rates.

Apply in 20-60 gal of water per acre with conventional spray equipment.

### **Tank Mixture of Medal II ATZ Alone or Medal II ATZ + AAtrex, or with 2,4-D or 2,4-D + Banvel**

In minimum-tillage or no-tillage systems where corn is planted directly into a cover crop, stale seedbed, established sod, or previous crop residues, Medal II ATZ may be applied in combination with AAtrex. When used as directed, the Medal II ATZ portion of the tank mixture provides preemergence control of the weeds listed on this label in the **Medal II ATZ Alone** section for corn.

**Application:** Apply Medal II ATZ before, during, or after planting, but before corn emerges, at the appropriate rate in Table 8. Up to 0.75 qt of AAtrex 4L (0.8 lb of Nine-O) per acre may be added to the rate of Medal II ATZ labeled in Table 8.

For control of broadleaf weeds or where heavy crop residues exist, add an appropriately labeled 2,4-D amine or low volatile ester to the spray tank last and apply in a minimum of 25 gal of carrier per acre.

As carriers, nitrogen solutions and complete liquid fertilizers, applied before corn emergence, enhance burndown of existing weeds, and therefore, are preferred instead of water. Add a non-ionic surfactant (NIS) at 1.0-2.0 qt/100 gal of diluted spray, or another surfactant cleared for use on growing crops at its labeled rate. 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., brome grass, orchard grass, rye, or timothy), when existing weeds exceed 3 inches in height or when very dry conditions exist, add Gramoxone brands at the rate of 2.5 pt/A in place of, or in addition to, 2,4-D as indicated above. Do not apply Gramoxone brands in suspension-type liquid fertilizer. Observe all directions for use, precautions, restrictions and limitations on the respective product labels when applying these products in tank mix combination.

**Table 8: Medal II ATZ for Minimum-Tillage or No-Tillage Corn**

Soil Texture	Broadcast Rate Per Acre
<b>COARSE</b> Sand, loamy sand, sandy loam	1.6 qt
<b>MEDIUM</b> Loam, silt loam, silt	2.1 qt
<b>FINE</b> Sandy clay loam, silty clay loam, clay loam, sandy clay, silty clay, clay	2.1-2.58 qt* <sup>1</sup>
Muck or peat soils	DO NOT USE

\*For cocklebur, yellow nutsedge, and velvetleaf control on fine-textured soils above 3% organic matter, apply 2.58 qt of Medal II ATZ per acre.

<sup>1</sup>Do not exceed 2.1 qt/A on highly erodible land with less than 30% plant residue cover. Control of certain weeds may be reduced and a tank mix partner or an application of a postemergence herbicide may be needed.

### **Tank Mixtures For Postemergence Weed Control in Field Corn**

For postemergence control of weeds in specific types of field corn, the combinations listed below with Medal II ATZ 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 as listed below can be used to provide residual control for the remainder of the season.

Follow all label directions, instructions, precautions, restrictions and limitations for each product. For each tank mixture with Medal II ATZ, apply only to the specific field corn type specified on the tank mix product label.

**Precautions:** (1) Use of fluid fertilizer with these mixtures may result in corn injury. (2) In-row weed control may be reduced because of lack of coverage when applied to corn over 4 inches tall.

- A. Medal II ATZ + Liberty or Ignite® 280 SL Herbicide for Postemergence Use in LibertyLink® Corn** - The tank mixture of Medal II ATZ + Liberty or Ignite 280 SL Herbicide 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. Liberty or Ignite 280 SL Herbicide provides postemergence control of a broad spectrum of grass and broadleaf weeds and the Medal II ATZ provides residual control of grasses and broadleaf weeds listed in the label section **Medal II ATZ Applied Alone - Weeds Controlled**. For the proper rate of Medal II ATZ applied postemergence with Liberty or Ignite 280 SL Herbicide, refer to Table 5 and use the minimum rate per soil texture for season-long residual control. Refer to the Liberty or Ignite 280 SL Herbicide label for the postemergence application rate according to weed species and their maximum height at the time of postemergence application. Where multiple weed species are present, use the highest Liberty or Ignite 280 SL Herbicide rate labeled to control the species and growth stages present.

Follow all applicable use directions, limitations, precautions, restrictions and information regarding application to corn on the Medal II ATZ and Liberty or Ignite 280 SL Herbicide labels.

- B. Medal II ATZ + Solo Glyphosate Brands for Postemergence Application to Glyphosate-Tolerant Corn (e.g. Agrisure or Roundup Ready)** - The tank mixture of Medal II ATZ + solo glyphosate brands can be applied postemergence to weeds and to corn designated as glyphosate-tolerant. Application may be applied postemergence to glyphosate-tolerant corn up to 12 inches in height. This mixture will provide postemergence control of weed species on the solo glyphosate brand label, and also residual control of weed species on the Medal II ATZ label. Use the minimum Medal II ATZ rate postemergence with solo glyphosate brands in glyphosate-tolerant corn as specified in Table 5 of this label. Refer to each product label and follow all appropriate use directions, application procedures, precautions, restrictions and limitations. Apply solo glyphosate brands for control of labeled broadleaf and grass weeds. Refer to the solo glyphosate brand label for directions to control problem species.
- C. Medal II ATZ + Spirit®** - Apply 1.33-1.75 qt/A of Medal II ATZ + 1.0 oz/A of Spirit to corn that is 4-12 inches tall. The application may be broadcast, semi-directed, or directed. The Medal II ATZ rate is based on soil texture with 1.33 qt/A on coarse and 1.75 qt/A on medium and fine soils. Add a nonionic surfactant at 0.25% v/v. This mixture is effective for control of many annual and broadleaf weeds and some grasses. A few instances of broadleaf weed control antagonism have been observed with this combination. Control of certain annual grasses can be improved with the addition of Accent®.

**Precautions:** (1) Avoid using fertilizer or crop oil concentrate with these mixtures or injury to field corn may occur. (2) Combining Medal II ATZ with other products not listed above for postemergence weed control in corn is not endorsed. (3) **These combinations may cause injury and/or weed control concerns that would not exist when the products are used separately.** A certain inherent risk is involved with the various combinations of these products used postemergence in corn. [Early preplant, preplant incorporated, or preemergence control of these weeds would usually provide more timely weed control resulting in higher yields than total postemergence treatments.]

### Mixing Order

Add these products to the tank mix in the following order:

1. Products in water-soluble bags first
2. Medal II ATZ
3. Additives

Follow all label instructions, precautions, and restrictions for individual products when making these applications to field corn.

**Precautions:** (1) When Medal II ATZ is applied after June 10, crop injury may occur the following year if you rotate to crops other than corn or sorghum. (2) In-row weed control may be reduced because of lack of coverage when applied to corn over 4 inches tall.



## SORGHUM USE DIRECTIONS – MEDAL II ATZ TANK MIXTURES

Medal II ATZ may be applied to grain or forage sorghum in the tank mixtures described in this section provided the sorghum seed was treated with Concep. Read and follow all sorghum related precautions and restrictions in the **Corn and Sorghum Use Precautions and Restrictions** section of this label. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions, limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

### Tank Mixture of Medal II ATZ with Gramoxone Brands or Solo Glyphosate Brands for Minimum-Tillage or No-Tillage Systems

In minimum-tillage or no-tillage systems where grain sorghum is planted directly into a cover crop, stale seedbed, established sod, or previous crop residues, the contact herbicides Gramoxone brands, or solo glyphosate brands, may be tank mixed with Medal II ATZ. When used as directed, the Gramoxone brands portion of the tank mixture controls most emerged annual weeds and suppresses many perennial weeds. Solo glyphosate brands will control emerged annual and perennial weeds when applied as directed on its label. The Medal II ATZ portion of the tank mixture provides preemergence control of the weeds listed on this label in the **Medal II ATZ Applied Alone** section.

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 grain sorghum emerges, at the appropriate rate in Table 9. Add Gramoxone brands or solo glyphosate brands at labeled rates.

Apply in a minimum of 20 gal of water per acre with conventional spray equipment.

**Table 9: Medal II ATZ for Minimum-Tillage or No-Tillage Grain Sorghum (Seed treated with Concep)**

Soil Texture	Organic Matter	Broadcast Rate Per Acre
<b>COARSE</b> Sand, loamy sand, sandy loam	any level	DO NOT USE
<b>MEDIUM and FINE</b> Loam, silt loam, silt, sandy clay loam, silty clay loam, clay loam, sandy clay, silty clay, clay	less than 1.0% 1.0-1.5% more than 1.5%	DO NOT USE 1.6 qt 1.8-2.1 qt

**Restrictions:** (1) Do not use in NM or TX, except in the TX Panhandle, Gulf Coast, and Blacklands areas. (2) Do not apply preplant incorporated in AZ or the Imperial Valley of CA. (3) Postemergence applications to sorghum must be made before the crop reaches 12 inches in height.

**Precautions:** (1) Avoid applying Medal II ATZ on highly alkaline soils (pH greater than 8.0) or on eroded areas where calcareous subsoils are exposed or crop injury may result. (2) Avoid applying Medal II ATZ when sorghum is planted in deep furrows because heavy rains following application can cause excessive concentrations of herbicide in the furrow. (3) Avoid applying to sorghum grown under dry mulch tillage or crop injury may result. (4) Injury may occur if both Medal II ATZ applied early preplant, preplant surface, preplant incorporated, or preemergence and an at-planting systemic insecticide applied in-furrow are used. (5) Sorghum growing under stress caused by minor element deficiency may be injured by Medal II ATZ.

**Rotational Crops:** Follow the crop rotation instructions in the **Medal II ATZ Alone** section.

## STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage, disposal, or cleaning of equipment.

### **Pesticide Storage**

Store in a dry and cool place. Do not irradiate directly with sunlight.

### **Pesticide Disposal**

Open dumping is prohibited. 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 [equal to or less than 5 gallons]**

Non-refillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Drain for 10 seconds after the flow begins to drip. Fill the container  $\frac{1}{4}$  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.

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. If the container is damaged and leaking or material has been spilled follow these procedures:

1. Cover spill with absorbent material.
2. Sweep into disposal container.
3. Wash area with detergent and water and follow with clean water rinse.
4. Do not allow to contaminate water supplies.
5. Dispose of according to instructions.

*continued...*

## STORAGE AND DISPOSAL *(continued)*

### Container Handling [greater than 5 gallons]

**Refillable container.** Refill this container with Medal II ATZ Herbicide 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 refiller. 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 approved by state and local authorities. If the container is damaged, leaking, or obsolete, contact Syngenta Crop Protection, LLC at 1-800-888-8372.

### Container Handling [greater than 5 gallons]

**Non-refillable container.** Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container  $\frac{1}{4}$  full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration.

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. If the container is damaged and leaking or material has been spilled follow these procedures:

1. Cover spill with absorbent material.
2. Sweep into disposal container.
3. Wash area with detergent and water and follow with clean water rinse.
4. Do not allow to contaminate water supplies.
5. Dispose of according to instructions.

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Roundup Ready® trademark of Monsanto Company

Unite® trademark of HACO, Inc.

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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 817B-L1S 0917**  
**4092485**

# RESTRICTED USE PESTICIDE

## (GROUND AND SURFACE WATER CONCERNS)

FOR RETAIL SALE TO AND USE ONLY BY CERTIFIED APPLICATORS OR PERSONS UNDER THEIR DIRECT SUPERVISION, AND ONLY FOR THOSE USES COVERED BY THE CERTIFIED APPLICATOR'S CERTIFICATION.

THIS PRODUCT IS A RESTRICTED-USE HERBICIDE DUE TO GROUND AND SURFACE WATER CONCERNS. USERS MUST READ AND FOLLOW ALL PRECAUTIONARY STATEMENTS AND INSTRUCTIONS FOR USE IN ORDER TO MINIMIZE POTENTIAL FOR ATRAZINE TO REACH GROUND AND SURFACE WATER.

GROUP 5 15 HERBICIDES

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

## Medal® II ATZ

### Herbicide

For weed control in corn and grain or forage sorghum

Active Ingredients:	
Atrazine (CAS No. 1912-24-9) .....	33.0%
Atrazine related compounds .....	0.7%
S-metolachlor (CAS No. 87392-12-9) .....	26.1%
Other Ingredients:	40.2%
Total:	100.0%

Medal II ATZ contains 3.1 lb atrazine + related compounds per gallon and 2.4 lb S-metolachlor active ingredient per gallon.

Medal II ATZ is formulated as a suspension concentrate (SC).

## KEEP OUT OF REACH OF CHILDREN.

## CAUTION

See additional precautionary statements and directions for use inside attached 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. 100-817 EPA Est. 100-LA-001

Medal® II ATZ and the Syngenta logo are trademarks of a Syngenta Group Company

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Manufactured for:

Syngenta Crop Protection, LLC

P. O. Box 18300

Greensboro, North Carolina 27419-8300

SCP 817B-L1S 0917 4092485

# 2.5 gallons

Net Contents

## Precautionary Statements

### Hazards to Humans and Domestic Animals

Harmful if swallowed. Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

### FIRST AID

If swallowed: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to by a poison control center or doctor. Do not give anything by mouth to an unconscious person. If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice. If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control 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:** This product is toxic to aquatic invertebrates. 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. This pesticide contains atrazine, which has been shown to be toxic to aquatic invertebrates. Runoff and drift from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not apply when weather conditions favor drift from treated areas.

**Ground Water Advisory:** Medal II ATZ contains both the active ingredients atrazine and S-metolachlor. Atrazine can travel (seep or leach) through soil and can enter ground water which may be used as drinking water. Atrazine has been found in ground water. Users are advised not to apply atrazine to sand and loamy sand soils where the water table (ground water) is close to the surface and where these soils are very permeable, i.e., well-drained. Your local agricultural agencies can provide further information on the type of soil in your area and the location of ground water. S-metolachlor is known 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:** S-metolachlor has the potential to contaminate surface water through ground spray drift. Under some conditions, S-metolachlor 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 draining 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 vegetative filter strips, and areas overlaying tile drainage systems that drain to surface water. A level, well maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential for contamination of water from runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours. Sound erosion control practices will reduce this product's contribution to surface water contamination.

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

Use check-valves or antisiphoning devices on all mixing equipment. This product must not be mixed/loaded or used within 50 ft of all wells, including abandoned wells, drainage wells, and sink holes\*.

This product must 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 applied aerially or by ground within 66 ft of the points where field surface water runoff enters perennial or intermittent streams and rivers or within 200 ft around natural or impounded lakes and reservoirs. If this product is applied to highly erodible land, the 66-ft buffer or setback from runoff entry points must be planted to crop, or seeded with grass or other suitable crop.\*

\*For exceptions to these restrictions, 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 Prohibition:** Do not apply this product through any type of irrigation system.

**Container Handling [equal to or less than 5 gallons]:** Non-refillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. 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.

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. If the container is damaged and leaking or material has been spilled follow these procedures:

1. Cover spill with absorbent material.
2. Sweep into disposal container.
3. Wash area with detergent and water and follow with clean water rinse.
4. Do not allow to contaminate water supplies.
5. Dispose of according to instructions.