

## **CORN - EARLY PREPLANT - MEDIUM (B) - SPLIT APPLICATION (30-45 DBP)**

### General Information

#### GENERAL INFORMATION

Medal II ATZ is a selective herbicide recommended for preplant, preemergence, or postemergence control of most 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 by the seed company with Concep. This product may be tank mixed with other herbicides for weed control in conventional, minimum-till, and no-till corn, grain sorghum, or forage sorghum.

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

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. a.i. 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 the 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, we recommend the use of Medal II ATZ in combination or in sequence with registered herbicides which do not contain triazines. Consult with your State Agricultural Extension Service for specific recommendations.

Precautions: (1) If sorghum seed is not properly pretreated with Concep, Medal II ATZ will severely injure the crop. (2) Injury may occur to sorghum following the use

of Medal II ATZ under abnormally high soil moisture conditions during early development of the crop.

Medal II ATZ alone or in tank mixture with AAtrex, Balance, 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 Inteon, Landmaster BW, Touchdown, or Roundup 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. Applications in fluid fertilizer should be only by ground equipment.

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

Do not apply this product through any type of irrigation system.

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

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

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

Where 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.

Observe all precautions and limitations on the label of each product used in tank mixtures.

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

## 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 recommended 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.

General 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 recommended 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.

Refer in the label regarding tank mix information.

#### Limitations, Restrictions, and Exceptions

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

B. Use these rates for all other 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 2/3 the recommended 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 qts./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. Tank mixtures with Balance may be applied up to 14 days before planting field corn. Substitute a fluid fertilizer for some or all of the water carrier for burndown of existing annual weeds listed on the 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 Inteon, Touchdown, or Roundup). Observe directions for use, precautions, and restrictions on the label of the contact herbicide. When tank mixing atrazine containing products, do not exceed 2.0 lbs. a.i./A of atrazine as a pre or post application or 2.5 lbs. a.i./A as the total of pre plus post applications per calendar year.

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, i.e., AAtrex, Beacon, Basagran, 2,4-D, Banvel, Buctril, or Marksman. 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, 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 contact herbicide (i.e., Gramoxone Inteon, Touchdown brands, or Roundup 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 the label within the ecofallow (no-till) production areas of NE and KS where wheat (or other small grain cereals) will be rotated to corn. The application must be made 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 qts./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. Do not incorporate or disturb the soil before planting, and avoid moving the soil during the planting operation. 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.

S-metolachlor Notes: (1) If a follow-up application of Dual Magnum or Dual II Magnum is needed, do not exceed a total of 1.6 lbs. a.i. of S-metolachlor per acre,

including the preplant Medal II ATZ application on medium or fine-textured soils. On fine-textured soils with more than 3% organic matter, do not exceed 1.9 lbs. a.i. of S-metolachlor.

[To determine the total lbs. a.i. of S-metolachlor per acre, use the following 2-step method:

A. Determine the lbs. a.i. of S-metolachlor applied as Medal II ATZ (1.0 qt. = 0.6 lb. a.i. of S-metolachlor); then,

B. If Dual Magnum or Dual II Magnum or any other source of S-metolachlor is to be used, add the lbs. a.i. to be applied in these products to the lbs. in Step A above.]

(2) To the extent possible, do not move treated soil out of the row or move untreated soil to the surface during planting, or weed control will be diminished.

Rates

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Restricted Entry Interval

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.