SOIL APPLIED HERBICIDES

ANTHEM MAXX

ANTHEM MAXX 4.3 SC  2.5 to 4.75 oz/A  (pyroxasulfone:fluthiacet)  
[(0.081:0.0024) to (0.155: 0.047) lb ai/A]]

Weeds Controlled: Barnyardgrass, black nightshade, crabgrass, fall panicum, foxtails, lambsquarters, Palmer amaranth, smooth pigweed, waterhemp.

Crop Stage: May be applied early preplant, preplant, preemergence, or early postemergence from planting through third trifoliate.

General Comments: Soybeans should be planted at least one inch deep. The maximum cumulative rate for most soils is 0.186 lb ai/A pyroxasulfone and 0.006 lb ai fluthiacet per 12-month cropping season.

Environmental Statements: ANTHEM MAXX has groundwater and surface water advisory statements on the label.

Rain Delay: 1 hour. Do not irrigate within 4 hours of a post application.

Rotation Restrictions: Corn or soybeans may be planted any time after application. Rotational crops that may be planted after ANTHEM MAXX include wheat after 4 months, barley and grain sorghum after 11 months; alfalfa after 10 months. For certain other crops allow a 18-month interval.

Harvest & Forage Restrictions: Apply no later than 60 days before harvest. Do graze or harvest forage or hay.

Tank Mixtures: Aim, 2,4-D, glyphosate, paraquat, glufosinate, Sharpen, or Verdict, AUTHORITY ELITE or BROADAXE XC

AUTHORITY ELITE 7L or BROADAXE XC 7L 25-32 fl oz/A  (sulfentrazone:S-metolachlor)  
[(0.137:1.23) to (0.175:1.58) lb ai/A]]

Weeds Controlled: Barnyard grass, crabgrass, fall panicum, foxtails, black nightshade, lambsquarters, morningglories, Palmer amaranth, smooth pigweed, prickly sida, smartweed, waterhemp.

Incorporation and use of high rate may improve control of yellow nutsedge.

Crop Stage: May be applied preplant surface in spring; preplant incorporated; or preemergence up to 3 days after planting but before crop seed germinate. Soybean injury may occur if applied near or after crop emergence.

General Comments: A limited number of soybean varieties are susceptible to sulfentrazone and may be injured. Consult label for other comments regarding crop injury. When other herbicides with these ingredients are also used, do not exceed 0.375 lb ai sulfentrazone/A or 2.387 lb ai S-metolachlor/A per season.

Environmental Statements: AUTHORITY ELITE and BROADAXE XC has groundwater and surface water advisory statements on the label.

Rain Delay: None.

Rotation Restrictions: Rotational crops that may be planted after AUTHORITY ELITE include wheat or barley, after 4 ½ months; field corn and tobacco after 10 months (18 months for popcorn); 12 months for alfalfa. For certain other crops allow a 12-month interval and a bioassay.

Harvest & Forage Restrictions: Do graze or harvest forage or hay for 30 days after treatment.

Tank Mixtures: None specified on the label.

AUTHORITY FIRST or SONIC

AUTHORITY FIRST 70 DG 6.45 oz/A  (sulfentrazone:cloransulam 0.25:0.032 lb ai/A)

SONIC 70 DG 6.45 oz/A

Weeds Controlled: Black nightshade, cocklebur, lambsquarters, marestail (horseweed), morningglories, common ragweed, giant ragweed, smooth pigweed, smartweed, velvetleaf, waterhemp. Incorporation and use of high rate may improve control of yellow nutsedge. For burndown and residual control of marestail use 6.45 to 8 oz/A

Crop Stage: May be applied preplant incorporated or preemergence. For burndown plus residual control of marestail (not ALS resistant biotypes) apply AUTHORITY FIRST or SONIC at 6.45 to 8 oz/A plus surfactant or crop oil concentrate plus AMS.

General Comments: Do not exceed 8 oz of AUTHORITY FIRST or SONIC per acre per season. When applying AUTHORITY FIRST or SONIC followed by post application of Authority, do not exceed a cumulative rate of 0.055 lb ai of cloransulam per acre per season.
Environmental Statements: AUTHORITY FIRST and SONIC have GROUND and SURFACE WATER ADVISORY statements on the label.

Rain Delay: None.

Rotation Restrictions: Rotational crops include wheat after 4 months; field corn or popcorn after 10 months (18 months if organic matter is < 1.5% and soil pH > 7.0); alfalfa, barley, rye, or sorghum after 12 months after application. Tobacco requires a 30-month interval and a successful field bioassay.

Harvest & Forage Restrictions: Do not harvest soybeans for 65 days after application. Do not feed treated forage or hay.

Tank Mixtures: AUTHORITY FIRST or SONIC: Aim, 2,4-D, glyphosate, paraquat.

AUTHORITY MTZ

AUTHORITY MTZ 45 DG 14 to 18 oz/A (sulfentrazone : metribuzin)

[(0.158:0.24) to (0.2:0.3 lb ai/A)]

Weeds Controlled: Black nightshade, hophornbeam copperleaf, lambsquarters, marestail (horseweed), morningglories, common ragweed, palmer amaranth, smooth pigweed, smartweed, waterhemp. Incorporation and use of high rate may improve control of yellow nutseed.

Crop Stage: May be applied in the fall or in the spring (early preplant 30-45 days prior to planting); preplant incorporated; or preemergence up to 3 days after planting but before crop seed germinate.

General Comments: AUTHORITY MTZ is a Restricted Use Pesticide. A limited number of soybean varieties are susceptible to AUTHORITY MTZ and may be injured. Consult label for other comments regarding crop injury.

Environmental Statements: AUTHORITY MTZ has GROUND and SURFACE WATER ADVISORY statements on the label. This product should not be mixed or loaded within 50 feet of any wells, sink holes, perennial or intermittent streams, rivers, and natural or impounded lakes and reservoirs, unless an impervious pad is used.

Rain Delay: None.

Rotation Restrictions: Rotational crops that may be planted after AUTHORITY MTZ include wheat, and barley, after 4 months; field corn or popcorn after 10 months; alfalfa and tobacco after 12 months; and sorghum after 18 months after application. Consult label for reduced intervals for corn & sorghum.

Harvest & Forage Restrictions: Do graze or harvest forage or hay.

Tank Mixtures: None specified on AUTHORITY MTZ label.

AUTHORITY XL

AUTHORITY XL 70DG 6.5 oz/A to 7.5 oz/A (sulfentrazone : chlorimuron)

[(0.25:0.032) to (0.29:0.036 lb ai/A)]

Weeds Controlled: Black nightshade, cocklebur, lambsquarters, marestail (horseweed), morningglories, prickly sida, common ragweed, giant ragweed, smooth pigweed, smartweed, velvetleaf. Incorporation and use of high rate may improve control of yellow nutseed.

Crop Stage: May be applied in the fall or in the spring; preplant incorporated; or preemergence up to 3 days after planting but before crop seed germinate.

General Comments: A limited number of soybean varieties are susceptible to AUTHORITY XL and may be injured. Consult label for other comments regarding crop injury. Authority Maxx is a similar premix, yet it provides a lower concentration of chlorimuron, compared to AUTHORITY XL.

Environmental Statements: AUTHORITY XL has groundwater and surface water advisory statements on the label.

Rain Delay: 1 hour.

Rotation Restrictions: For soils with a pH < 6.8 rotational crops that may be planted after AUTHORITY XL include wheat, barley after 4 months; field corn, popcorn, and tobacco after 10 months; alfalfa after 12 months. For sorghum allow 18 months (10 months if rate is 6.4 oz/A). Certain other crops may require 18 or 36 months interval. Consult AUTHORITY XL label when: 1) soil pH >6.8; 2) when using the reduced rate program; 3) or when a successful field bioassay is required.

Harvest & Forage Restrictions: Do not feed treated forage or hay to livestock.

Tank Mixtures: Glyphosate, glufosinate, paraquat, 2,4-D

Generic Products; ZONE HERBICIDE
BOUNDARY

**BOUNDARY 6.5EC** 2.1 to 3.0 pt/A  
[S-metolachlor : metribuzin]  
[(1.38:0.33) to (1.97:0.47) lb ai/A]

**Weeds Controlled:** Barnyardgrass, common ragweed, crabgrass, fall panicum, foxtails, hophornbeam copperleaf, lambsquarters, smooth pigweed, prickly sida, smartweed, waterhemp.

**Crop Stage:** May be applied preplant incorporated or preemergence. BOUNDARY may be applied up to 30 days before no-till plantings.

**General Comments:** Seed should be planted at least 1.5 inches deep. When soil pH > 7.0, apply 1.5 pt/A rate only.

**Environmental Statements:** BOUNDARY has GROUND and SURFACE WATER ADVISORY statements on the label. This product should not be mixed or loaded within 50 feet of any wells, sink holes, perennial or intermittent streams, rivers, and natural or impounded lakes and reservoirs, unless an impervious pad is used.

**Rain Delay:** None.

**Rotation Restrictions:** Alfalfa, winter wheat, and barley may be planted 4.5 months, or corn after 8 months following BOUNDARY treatments. Other crops may require a 12-month rotational interval. Cover crops may be planted any time but stand reductions may occur. Do not graze or harvest cover crops for feed or food.

**Harvest & Forage Restrictions:** Wait 40 days after application before grazing or feeding soybean forage.

**Tank Mixtures:** Canopy, Canopy XL, Command 3ME, FirstRate, Gramoxone Extra, Prowl, Python, Scepter, Roundup Ultra, Touchdown, 2,4-D (LVE).

**Generic Formulation:** PRESIDUAL, TAILWIND, LEDGER

---

**CANOPY 75DG**

<table>
<thead>
<tr>
<th></th>
<th>Rate/A</th>
<th>chlorimuron:metribuzin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burndown Control</td>
<td>3 to 4 oz/A</td>
<td>(0.02:0.12) - (0.03:0.16 lb ai/A)</td>
</tr>
<tr>
<td>Burndown &amp; Residual Control</td>
<td>6 to 8 oz/A</td>
<td>(0.04:0.24) - (0.053:0.32 lb ai/A)</td>
</tr>
</tbody>
</table>

**Additives:** When used as a "burndown", add Crop Oil Concentrate at 1% (1 gal/100 gal) or Non-Ionic Surfactant at 0.25% (1 qt/100 gal).

**Weeds Controlled:** Burcucumber, chickweed, cocklebur, henbit, hophornbeam copperleaf, lambsquarters, morningglory, prickly lettuce, marestail, mustards, pennycress, pigweed, prickly sida, common ragweed, giant ragweed, sicklepod, smartweed, velvetleaf. The addition of 2,4-D LVE is required for burndown of marestail.

**Timing:** CANOPY may be applied preemergence or early preplant in the fall or spring up to 45 days prior to planting.

**General Comments:** Soybean injury may occur if soil pH is greater than 7.5. Do not exceed 3.5 oz/A CANOPY DF if soil pH exceeds 7.0. Treatments will provide some "burndown" of existing broadleaf weeds up to 3" and small annual grasses up to 1" tall. For added postemergence control, apply with 2,4-D, paraquat, or glyphosate. Soybean stunting may occur under certain environmental conditions. Sprayer equipment should be thoroughly cleaned before spraying other crops.

**Environmental Statements:** The use of metribuzin on permeable soils may result to ground water contamination.

**Rain Delay:** Rainfast after 1 hour.

**Rotation Restrictions:** If soil pH is 7.0 or less and the CANOPY rate is less than 10 oz/A, rotational crops which may be planted include wheat or barley after 4 months; or alfalfa, tobacco, grain sorghum, field corn or popcorn after 10 months (9 months for corn if rate is ≤ 6 oz/A following treatment). Other crops require a minimum 18 month interval. Consult label for rotation restrictions if pH is greater than 7.0, CANOPY rate exceeds 10 oz/A, or when other long-residual herbicides are used during the same season. Over application can result in injury to rotational crops. When using CANOPY BLEND, consult label for rotation restrictions.

**Harvest & Forage Restrictions:** Do not graze treated fields or harvest for forage.

**Tank Mixtures:** metolachlor, pendimethalin, 2,4-D LVE, glyphosate, or paraquat

**Generic Formulation:** CLOAK is similar to CANOPY. Follow label for rates & preplant intervals.
**88 Soybean**

**DUAL II MAGNUM**  (S-metolachlor)

- **DUAL II MAGNUM**: 1.33 to 1.67 pt/A  (S-metolachlor 1.27 to 1.6 lb ai/A)  
- **CINCH or EverpreX**: 1.33 to 1.67 pt/A

**Weeds Controlled:** Barnyardgrass, black nightshade, crabgrass, fall panicum, foxtails, smooth pigweed.  
**Incorporation and use of high rate may improve control of yellow nutsedge.**

**Crop Stage:** DUAL II MAGNUM and CINCH may be applied preplant incorporated or preemergence for control of annual grasses and certain broadleaf weeds. They may be applied within 30 days before planting. Postemergence treatments may be applied 1 to 1.33 pt/A before weeds emerge through 3 trifoliate soybean.

**General Comments:** Similar products include Brawl II, Charger Basic, Cinch, Parallel, Parallel PCS and Stalwart.  
**BRAWL II, CHARGER BASIC, DUAL II MAGNUM, CINCH, MEDAL and MEDAL II contain 7.64 lb ai S-metolachlor per gal. PARALLEL contains 7.8 lb ai metolachlor.**  
**Me-Too-Lachlor, Parallel PCS and Stalwart contain 8 lb ai metolachlor per gal.**

**Environmental Statements:** These products have GROUND and SURFACE WATER ADVISORY statements on the label. They should not be mixed or loaded within 50 feet of any wells, sink holes, perennial or intermittent streams, rivers, and natural or impounded lakes and reservoirs, unless an impervious pad is used.

**Rain Delay:** None.

**Rotation Restrictions:** Field corn, popcorn, or grain sorghum (use CONCEP treated seed) or soybeans may be planted anytime following application. Small grains may be planted 4 ½ months, alfalfa 4 months, or clover 9 months after application. Plant other crops in the spring following treatment.

**Harvest & Forage Restrictions:** Do not graze or feed forage or hay to livestock.

**Tank Mixtures DUAL II MAGNUM:** Canopy, Gramoxone MAX, Roundup, Scepter.

**Tank Mixtures CINCH and EverpreX:**  Scepter, Gramoxone, Touchdown, or Roundup UltraMax

---

**ENVIVE**

- **ENVIVE**: 2.5 to 5.3 oz/A *  
  (chlorimuron 0.014 to 0.03 lb ai/A)  
  (thifensulfuron 0.0045 to 0.0096 lb ai/A)  
  (flumioxazin 0.046 lb ai/A to 0.097 lb ai/A)

  * Use >4 to 5.3 oz/A where soil pH < 7.0. No pH restrictions for rates at 2.5 to 4 oz/A

**Additives:** Crop Oil Concentrate at 1 gal/100 gal of spray mixture. If tank mix partner prohibits use of crop oil concentrate, use non-ionic surfactant at 1 qt/100 gal of spray mixture.

**Weeds Controlled:** Burndown control of dandelion, prickly lettuce, common ragweed, giant ragweed. Add 2,4-D LVE for optimum burndown control of horseweed (marestail), wild garlic, and certain other weed species.  
**Preemergence control of black nightshade, cocklebur, dandelion, hophornbeam copperleaf, lambsquarters, marestail, morningglories, Palmer amaranth, smooth pigweed, prickly sida, common ragweed, smartweed, velvetleaf, waterhemp

**Crop Stage:** Apply as an early preplant treatment in the fall or spring up to 3 days after planting but before crop emergence. For optimum control apply when annual broadleaf weeds are up to 3 inches and perennial broadleaf weeds are up to 6 inches in height or diameter.

**General Comments:** Do not exceed 4 oz/A where soil pH >7. Soybean stunting may develop if excessive rainfall occurs after application and for a short period after crop emergence. Risk of injury can be minimized by not using on poorly drained soils, planting seed at least 1.5 inches deep, and covering seed with soil.

**Environmental Statements:** Do not mix/load, or use within 50 feet of all wells including abandoned wells, drainage wells and sinkholes.

**Rain Delay:** 1 hour

**Rotation Restrictions:** Follow the label for herbicide rate relative to soil pH. The rotation intervals are 4 months for barley, wheat, 10 months for alfalfa, transplanted tobacco, field corn, popcorn, (8 months for field corn if chlorimuron rate does not exceed 0.375 oz ai/A), and 12 months for sorghum and clover.

**Harvest & Forage Restrictions:** Do not graze treated fields or harvest for forage or hay.

**Tank Mixtures:** 2,4-D LVE, Assure II, dicamba, Express brands, glyphosate, metribuzin, paraquat, pendimethalin, pyroxasulfone, saflufenacil (refer to label restrictions). Do not tank mix ENVIVE with acetochlor (Warrant), flufenacet (Axiom, Domain), metolachlor (Cinch, Dual), or dimethenamide (Outlook) within 14 days of soybean planting unless soybeans are planted under no-till or minimum till on wheat stubble or no-till field corn stubble.
**FIERCE**

**FIERCE 76 DG** 3 to 3.75 oz/A  
(flumioxazin:pyroxasulfone)  
[(0.063:0.08) to (0.078:0.1 lb ai/A)]

**Weeds Controlled:** Barnyardgrass, broadleaf signalgrass, large crabgrass, fall panicum, foxtails, seedling johnsongrass, black nightshade, common ragweed, hophornbeam copperleaf, lambsquarters, marestail (horseweed), Palmer amaranth, smooth pigweed, prickly sida, waterhemp.

**Crop Stage:** May be applied in the fall or in the spring up to 3 days after planting but before crop emerges. Do not apply if soybeans are cracking.

**General Comments:** When used for burndown control, consult label for use of additives. Crop injury may occur if treated soil is splashed onto newly emerged plants. Spray equipment must be cleaned each day. To enhance removal of herbicide residue from spray system, use a tank cleaner such as Valent Tank Cleaner.

**Environmental Statements:** Fierce label has GROUNDWATER AND SURFACE WATER ADVISORY statements.

**Rain Delay:** 1 hour

**Rotation Restrictions:** The rotational interval when using up to 3 oz of Fierce/A is 1 month for wheat, 30 days for conventional till field corn (7 days for reduced-till corn), 10 months for alfalfa, and 18 months for other crops. Consult label when Fierce rate is 3 oz/A.

**Harvest & Forage Restrictions:** Do not graze or feed treated forage or hay to livestock.

**Tank Mixtures:** Extreme, Gangster, metribuzin, FirstRate, pendimethalin, Python, Scepter, Valor, Valor XLT Command, glyphosate, 2,4-D LVE, Ignite, dicamba. Do not use FIERCE where flufenacet (Axiom), (Micro-Tech), metolachlor (Dual), or dimethenamid (Outlook) are applied or injury may occur.

**FIERCE XLT 62.41 DG** 3.75 to 4.5 oz/A  
(chlorimuron:flumioxazin:pyroxasulfone)  
[(0.0156:0.0575:0.073 lb ai/A) to (0.0187:0.069:0.088 lb ai/A)]

**Weeds Controlled:** Barnyardgrass, large crabgrass, fall panicum, foxtails, black nightshade, common ragweed, hophornbeam copperleaf, lambsquarters, marestail (horseweed), Palmer amaranth, smooth pigweed, prickly sida, smartweed, velvetleaf, waterhemp.

**Crop Stage:** May be applied in the fall or in the spring up to 3 days after planting but before crop emerges. Do not apply if soybeans are cracking.

**General Comments:** When used for burndown control, consult label for use of additives. Crop injury may occur if treated soil is splashed onto newly emerged plants. Spray equipment must be cleaned each day. To enhance removal of herbicide residue from spray system, use a tank cleaner such as Valent Tank Cleaner.

**Environmental Statements:** Fierce XLT label has GROUNDWATER AND SURFACE WATER ADVISORY statements.

**Rain Delay:** 1 hour

**Rotation Restrictions:** The rotational interval when soil pH is < 7.0 is 10 months for field corn, 18 months for alfalfa, barley, clover rye, and sorghum. Consult label when soil pH is 7.0 or greater.

**Harvest & Forage Restrictions:** Do not graze or feed treated forage or hay to livestock.

**Tank Mixtures:** Do not tank mix FIERCE XLT with chloroacetamide products such as flufenacet (Axiom), metolachlor (Dual), or dimethenamid (Outlook) are applied or injury may occur.

**INTIMIDATOR**

**INTIMIDATOR** 2.8 to 4.48 pt/A  
(S-metolachlor:metribuzin:fomesafen)  
[1.19:0.26:0.23 lb ai/A] to [1.9:0.42:0.38 lb ai /A]

**Weeds Controlled:** Barnyardgrass, broadleaf signalgrass, crabgrass, fall panicum, foxtails, yellow nutsedge, black nightshade, hophornbeam copperleaf, Palmer amaranth, smooth pigweed, prickly sida, common ragweed, smartweed, waterhemp. Incorporation and higher use rates may improve control of yellow nutsedge.

**Crop Stage:** Preplant incorporated, preplant surface up to 30 days before planting or preemergence surface before soybean emergence.

**General Comments:** Do not exceed a maximum of 4.48 pt/A pre use season. When using other herbicides with these ingredients, do not exceed a cumulative rate 2.5 lb/A metolachlor or S-metolachlor; or 0.375 lb fomesafen per acre in alternate years.

**Environmental Statements:** INTIMIDATOR has ground and surface water advisory statements on the label. It should not be mixed or loaded within 50 feet of wells, sinkholes, perennial intermittent streams, rivers, and natural impounded lakes and reservoirs, unless an impervious pad is used.

**Rain Delay:** None

**Rotation Restrictions:** Rotational crops include wheat or barley after 4.5 months, field corn after 10 months, (popcorn after 12 months). Other crops require an interval of 18 months.

**Harvest & Forage Restrictions:** Do not graze or harvest for soybean forage or hay. Do not graze rotated small grains or harvest forage or straw for livestock. Make post applications at least 90 days before harvest.

**Tank Mixtures:** 2,4-D LVE, Gramoxone Inteon, glyphosate, Canopy, FirstRate, Command, Python
90 Soybean

MATADOR

MATADOR  2.4 to 4.0 pt/A  
(metolachlor:metribuzin:imazethapyr)

[1.2:0.168:0.039 lb ai/A] to [2:0.28:0.065 lb ai/A]

Weeds Controlled:  Barnyardgrass, common ragweed, crabgrass, fall panicum, foxtails, hophornbeam copperleaf, lambsquarters, smooth pigweed, prickly sida, smartweed, waterhemp.
Crop Stage:  May be applied preplant incorporated or preemergence.
General Comments:  Seed should be planted at least 1.5 inches deep. Applications to soils with a pH > 7.5 can result in soybean injury. Do not apply in conjunction with soil applied organophosphate insecticides
Environmental Statements:  Matador has GROUND and SURFACE WATER ADVISORY statements on the label. This product should not be mixed or loaded within 50 feet of any wells, sink holes, perennial or intermittent streams, rivers, and natural or impounded lakes and reservoirs, unless an impervious pad is used.
Rain Delay:  None.
Rotation Restrictions:  Alfalfa, winter wheat, and barley may be planted 4.5 months, or corn after 8.5 months following Matador treatments. Tobacco requires a 12-month rotational interval. Risk of rotational crop injury is increased if products containing chlorimuron-ethyl, cloransulam-methyl, flumetsulam, or imazaquin are applied in the same season as Matador
Harvest & Forage Restrictions:  Do not graze or feed soybean forage, hay or straw that has been treated with Matador
Tank Mixtures:  Roundup Ultra, Touchdown, 2,4-D (LVE).

METRIBUZIN 75DF

METRIBUZIN 75DF  0.5 lb/A  
(metribuzin 0.38 lb ai/A)

Weeds Controlled:  Common ragweed, hophornbeam copperleaf, lambsquarters, marestail (horseweed), smooth pigweed, prickly sida, smartweed.
Crop Stage:  May be applied preplant incorporated, preemergence, or post directed after soybeans are 8" tall.
General Comments:  Seed should be planted at least 1½ inches deep.
Environmental Statements:  METRIBUZIN has a GROUNDWATER ADVISORY statement on the label.
Rain Delay:  None.
Rotation Restrictions:  Alfalfa, corn, wheat, barley, and forage grasses may be planted 4 months after METRIBUZIN treatments are applied to soybeans. Before planting grain sorghum or tobacco, wait 12 months after application. Cover crops may be planted any time but stand reductions may occur. Do not graze or harvest cover crops for feed or food.
Harvest & Forage Restrictions:  When METRIBUZIN is soil-applied, wait 40 days before utilizing treated soybean plants for forage, feed, or grazing. For POST-DIRECTED applications of METRIBUZIN, wait 70 days after application before harvesting grain or utilizing treated soybean plants (dry vines) as a forage crop. Do not use green vines for feed.
Tank Mixtures:  Consult specific metribuzin product labels.
Generic Formulations:  DIMETRIC, GLORY, METRI DF, METRIBUZIN 75, and TRICOR DF are examples of products containing the active ingredient metribuzin and are similar to SENCOR (a former brand name product.)

OUTLOOK

OUTLOOK 6EC  14 to 21 oz/A or  
(dimethenamid-P 0.66 to 0.98 lb ai/A)

Weeds Controlled:  Barnyardgrass, black nightshade, crabgrass, fall panicum, foxtails, smooth pigweed. Incorporation and use of high rate may improve control of some weeds.
Crop Stage:  Apply preplant incorporated or preemergence for control of annual grasses and certain broadleaf weeds. OUTLOOK may be applied up to 30 days before planting and may also be applied postemergence from first to third trifoliate soybeans and before weeds emerge.
General Comments:  ESTABLISH is another dimethenamid-P containing product. Incorporation and higher use rates will improve control of certain weeds.
Environmental Statements:  OUTLOOK may have the potential to contaminate groundwater and surface water. This product should not be mixed or loaded within 50 feet of any wells, sink holes, perennial or intermittent streams, rivers, and natural or impounded lakes and reservoirs, unless an impervious pad is used.
Rain Delay:  None.
Rotation Restrictions:  Soybean, corn, or grain sorghum (with seed safener) may be planted immediately after application. Allow a 4-month rotational interval for fall-seeded small grains. Other rotational crops may be planted the following spring.
Harvest & Forage Restrictions:  Do not use treated plants for feed or forage.
Tank Mixtures:  Authority, Canopy, Command, Extreme, FirstRate, glyphosate, Gramoxone Extra, Scepter, or Touchdown. Consult label for approved combinations after soybean emergence.
**Soybean 91**

**PREFIX**

PREFIX  5.29L  2.25 to 2.75 pt/A  
(S-metolachlor:fomesafen 1.22 : 0.27 to 1.49:0.33 lb ai/A)

**Weeds Controlled:** Barnyardgrass, black nightshade, crabgrass, fall panicum, foxtails, palmer amaranth, smooth pigweed, waterhemp. Incorporation and higher use rates may improve control of yellow nutsedge.

**Crop Stage:** PREFIX may be applied early preplant (up to 15 days before planting), preplant incorporated or preemergence for control of annual grasses and certain broadleaf weeds. PREFIX may be applied early postemergence at least 90 days before harvest to soybeans at 2-2.33 pt/A.

**General Comments:** Do not exceed a maximum of 0.375 lb ai of fomesafen in alternate years. Do not exceed 2.48 lb ai metolachlor per year.

**Environmental Statements:** PREFIX ground and surface water advisory statements on the label. It should not be mixed or loaded within 50 feet of wells, sinkholes, perennial intermittent streams, rivers, and natural impounded lakes and reservoirs, unless an impervious pad is used.

**Rain Delay:** None.

**Rotation Restrictions:** Rotational crops include wheat or barley after 4.5 months, corn after 10 months, (popcorn after 12 months when rate > 2 pt/A). Other crops require an interval of 18 months.

**Harvest & Forage Restrictions:** Do not graze or harvest for soybean forage or hay. Do not graze rotated small grains or harvest forage or straw for livestock. Make post applications at least 90 days before harvest.

**Tank Mixtures:** 2,4-D LVE, Gramoxone Inteon, glyphosate. (May be mixed with glyphosate for post applications to RR soybean.)

**Generic Formulations:** Statement and Vise

**PROWL**

PROWL 3.3E  1.8 to 3 pt/A  
or  
PROWL H2O  3.8 L  2 to 2.5 pt/A  
(pendimethalin 0.74 to 1.24 lb ai/A)  
or  
(pendimethalin 0.95 to 1.19 lb ai/A)

**Weeds Controlled:** Barnyardgrass, crabgrass, fall panicum, foxtails, johnsongrass (seedling), lambsquarters, smooth pigweed.

**Crop Stage:** Early preplant in the fall or spring (up to 15 days prior to planting) or preemergence or preplant incorporated for control of annual grasses and certain broadleaf weeds. Apply preplant incorporated and at the higher recommended rate to reduce competition from harder-to-control weeds.

**General Comments:** The rate for preemergence applications at planting up through 2 days after planting should not exceed 2.4 pt/A for Prowl 3.3 EC or 2 pt/A for Prowl H2O. Lodging from "brittleness" of soybean stems may occur with preemergence applications of Prowl in conventional tillage.

**Environmental Statements:** None.

**Rain Delay:** None.

**Rotation Restrictions:** Soybean or tobacco may be planted any time. Any rotational crop may be planted the year following application. Allow a 10-months interval following spring applications of Prowl H2O for sorghum (milo) or perennial grasses. Wheat or barley may be planted 4 months days after application. Allow a 12-months interval for wheat if less than 12” of rain occurs between application and planting rotational crop. Observe label when pendimethalin rate exceeds 2 lb ai/A.

**Harvest & Forage Restrictions:** Pendimethalin treated soybean plants may be used as a forage crop. Do not apply PROWL H2O within 85 days of grain harvest.

**Tank Mixtures with PROWL 3.3 EC or PENDIMAX 3.3:** Canopy, Command 4EC, Gramoxone Extra, Roundup, Scepter, Sencor, 2,4-D.

**Generic Formulations:** Acumen, Pendant, Stealth are other pendimethalin containing products.

**SCEPTER**

SCEPTER 70DG  2.8 oz/A  
(imazaquin 0.123 lb ai/A)

**Weeds Controlled:** Cocklebur, common ragweed, lambsquarters, smooth pigweed, prickly sida, smartweed. Apply as a preplant incorporated treatment for optimum control of such weeds as black nightshade, burcucumber and giant ragweed.

**Crop Stage:** May be applied preplant incorporated, preemergence, (up to 45 days before planting) or postemergence up to 90 days before harvest.

**General Comments:** Internode shortening of soybean plants may be observed with SCEPTER.

**Environmental Statements:** SCEPTER use on permeable soils may result in ground water contamination.

**Rain Delay:** None.
SCEPTER (continued)

**Rotation Restrictions:** Rotational crops which may be planted include wheat after 3 months; field corn or tobacco 9.5 months; or barley, or grain sorghum 11 months following treatment. Do not plant other rotational crops within 18 months after application. Consult label for rotation restrictions when other long-residual herbicides are used during the same season; for sequential SCEPTER applications; or when soil conditions are dry after application.

**Harvest & Forage Restrictions:** Do not harvest within 90 days after SCEPTER application. Do not use treated plants for feed or forage.

**Tank Mixtures:** Dual, Frontier, Gramoxone, Prowl, Roundup, Roundup Ultra, Sencor, Touchdown, 2,4-D.

---

**SURVEIL**

**SURVEIL 48% WG**

- **3.5 to 4.2 oz/A**
- **cloransulam 0.026 to 0.032 lb ai/A**
- **flumioxazin 0.079 to 0.095 lb ai/A**

**Weeds Controlled:** Black nightshade, cocklebur, common ragweed, hophornbeam copperleaf, lambsquarters, marestail (horseweed), morningglories, smooth pigweed, prickly sida, smartweed, velvetleaf, waterhemp.

**Crop Stage:** May be applied in the fall or in the spring up to 3 days after planting but before crop emerges.

**General Comments:** When used for burndown control, consult label for use of additives. DO NOT INCORPORATE. Plant seed at least 1.5 inches deep and completely cover seed with soil. Crop injury may occur in poorly drained soils and under cool wet conditions. Crop injury may also occur if treated soil is splashed onto newly emerged plants. Do not tank-mix SURVEIL with group 15 herbicides such as acetochlor, flufenacet, metolachlor, dimethenamid, or pyroxasulfone, within 14 days of planting soybeans unless soybeans are planted no-till or minimum till into wheat or corn stubble. The risk of soybean injury may increase if applications are followed by prolonged periods of cool wet weather. Spray equipment must be cleaned each day. To enhance removal of herbicide residue from spray system, use a tank cleaner such as All Clear or Valent Tank Cleaner.

**Environmental Statements:** Cloransulam has the potential to occur in ground water.

**Rain Delay:** 2 hours

**Rotation Restrictions:** Rotational crops that may be planted following SURVEIL include wheat after 3 months; field corn, popcorn, and sorghum after 9 months, 10 months for alfalfa. Transplanted tobacco requires a 30-month interval and a successful field bioassay. Consult label for requirements for a 10-months interval for tobacco.

**Harvest & Forage Restrictions:** Do not feed treated forage or hay to livestock.

**Tank Mixtures:** glyphosate, paraquat, 2,4-D LVE, Liberty, dicamba, pendimethalin

---

**TRIVENCE**

**TRIVENCE 61.3WDG**

- **6 to 9 oz/A**
- **chlorimuron, flumioxazin, metribuzin**
  - **(0.014:0.048:0.167 to 0.022:0.072:0.25 lb ai/A)**

**Weeds Controlled:** Black nightshade, cocklebur, marestail, lambsquarters, morningglory, Palmer amaranth, smooth pigweed, common ragweed, smartweed, velvetleaf, waterhemp.

**Crop Stage:** Fall through spring up to 3 days after planting. Do not apply at cracking or after soybean emergence.

**General Comments:** Excessive rainfall in a short period following emergence of soybean may cause leaf burn, crinkling and defoliation of lower leaves. Excessive rain and cool cloudy weather during the growing season may cause temporary stunting. The use of TRIVENCE in same field treated with flufenacet, metolachlor, dimethenamid may result in severe crop injury when applications are followed by prolonged periods of cool wet weather. When using TRIVENCE with these other herbicides allow a minimum of 14 days prior to planting in no-till and reduced till soybeans

**Environmental Statements:** TRIVENCE has ground water Advisory statements on the label.

**Rain Delay:** 1 hour

**Rotation Restrictions:** Soybeans may be planted immediately, The rotation interval is 4 months for wheat and barley, 10 months for field corn and alfalfa, 12 months for forage grasses, and 18 months for tobacco and certain other crops.

**Harvest & Forage Restrictions:** Do not feed treated forage or hay to livestock.

**Tank Mixtures:** Assure II, Express, dicamba, glyphosate, glufosinate, paraquat, saflufenacil, or 2,4-D LVE.
VALOR

**VALOR SX 51WDG** 2 to 2.5 oz/A or **VALOR EZ 4L** 2 to 2.5 fl oz/A (flumioxazin 0.064 to 0.080 lb ai/A)

**Weeds Controlled:** Black nightshade, common ragweed, hophornbeam copperleaf, lambsquarters, marestail (horseweed), morningglories, palmer amaranth, smooth pigweed, prickly sida, waterhemp.

**Crop Stage:** May be applied for preemergence and for burndown control before soybeans emerge.

**General Comments:** When used for burndown control, consult label for use of additives. DO NOT INCORPORATE. Plant seed at least 1.5 inches deep and completely cover seed with soil. Crop injury may occur in poorly drained soils and under cool wet conditions. Crop injury may also occur if treated soil is splashed onto newly emerged plants. No-till planters that incorporate soil during planting may limit the length of weed control in the spring. Spray equipment must be cleaned each day. To enhance removal of herbicide residue from spray system, use a tank cleaner such as Valent Tank Cleaner.

**Environmental Statements:** Flumioxazin products (e.g. VALOR, ENCOMPASS) have the potential to runoff to surface water and adjacent land.

**Rain Delay:** 1 hour

**Rotation Restrictions:** Soybeans may be planted immediately. Rotational intervals for other crops that may be planted following VALOR at rates up to 2 oz/A include: 7 days for no-till wheat; 7 to 14 days for no-till field corn depending on herbicide rate, residue cover, and rainfall; 30 days for conventional field corn, sorghum, and tobacco and a minimum of 1 inch rainfall. Allow 3 months for barley. For alfalfa, clover, and other crops not listed, allow 4 months if soil is tilled before planting and 8 months for no-tillage. A successful soil bioassay is required for other crops not listed. Consult VALOR label when rate is up to 3 oz/A.

**Harvest & Forage Restrictions:** Do not feed treated forage or hay to livestock.

**Tank Mixtures:** Command, metribuzin, FirstRate, glyphosate, paraquat, pendimethalin, Python, Scepter, 2,4-D LVE, Weedmaster. Do not use VALOR where flufenacet (Define), metolachlor (Dual), or dimethenamid (Outlook) are applied or injury may occur.

**Generic Products:** OUTFLANK, PANTHER, PANTHER SC ENCOMPASS

---

VALOR XLT

**VALOR XLT 40.3WDG 3 to 4 oz/A** (flumioxazin:chlorimuron (0.056:0.019 to 0.075:0.026 lb ai/A)

**Weeds Controlled:** Black nightshade, common ragweed, hophornbeam copperleaf, lambsquarters, marestail (horseweed), morningglories, palmer amaranth, smooth pigweed, prickly sida, waterhemp.

**Crop Stage:** May be applied in the fall or spring for preemergence and for burndown control before soybeans emerge.

**General Comments:** When used for burndown control, consult label for use of additives. Plant seed at least 1.5 inches deep and completely cover seed with soil. Crop injury may occur in poorly drained soils and under cool wet conditions. Spray equipment must be cleaned each day. To enhance removal of herbicide residue from spray system, use a tank cleaner such as Valent Tank Cleaner. Do not use on soils with a composite pH greater than 7.6.

**Environmental Statements:** Do not apply where runoff is likely to occur.

**Rain Delay:** 1 hour

**Rotation Restrictions:** Rotational crops that may be planted where soil pH is less than 7.0 are wheat or barley after 4 months, field corn, popcorn, sorghum, or tobacco after 10 months, or alfalfa after 12 months after application. Other crops require 18 months. Consult label when soil pH ≥ 7.0.

**Harvest & Forage Restrictions:** Do not feed treated forage or hay to livestock.

**Tank mixtures:** 2,4-D LVE, Express, glyphosate, Harmony GT, linuron, metribuzin, paraquat, pendimethalin, or Command. Tank mixes with chloroacetamide containing products (e.g. Dual II magnum, Outlook, Intro) may result in crop injury.
94 Soybean

**WARRANT ULTRA**

**WARRANT ULTRA** 3.45L  48 to 65 oz/A  (acetochlor:fomesafen)

\[(1.06:0.236)\) to \[(1.43:0.32)\) lb ai /A\]

**Weeds Controlled:** Barnyardgrass, crabgrass, fall panicum, black nightshade, lambsquarters, Palmer amaranth, smooth pigweed, common ragweed, waterhemp.

**Crop Stage:** Preplant, at-planting, and preemergence. Warrant Ultra may also be applied postemergence before R2 growth stage. For optimum postemergence control, apply to soybean at V2 to V3 growth stage.

**General Comments:** Do not exceed a maximum of 0.375 lb ai /A of fomesafen in alternate years.

**Environmental Statements:** Warrant Ultra has GROUND WATER AND SURFACE WATER ADVISORY statements on the label.

**Rain Delay:** 1 hour for postemergence applications.

**Rotation Restrictions:** Rotational crops that may be planted include wheat, barley, rye, oats after 4 months, corn after 10 months, popcorn after 12 months, alfalfa and grain sorghum after 18 months after application.

**Harvest & Forage Restrictions:** Do not apply within 45 days of harvest. Do not graze or feed treated crop following a postemergence application.

**Tank Mixtures:** Prowl, metribuzin, imazethapyr, 2,4-D, Gramoxone Inteon, Roundup

---

**ZIDUA**

**ZIDUA** 85 WDG  2 to 3 oz/A  (pyroxasulfone 0.106 to 0.159 lb ai/A)

**ZIDUA SC**  3.25 to 5 fl oz/A

**Weeds Controlled:** Barnyardgrass, Broadleaf signalgrass, crabgrass, fall panicum, foxtails, black nightshade, Palmer amaranth, smooth pigweed, waterhemp.

**Crop Stage:** May be applied in the fall or in the spring preplant surface up to 14 days before planting, preplant incorporated, preemergence, or early postemergence at first-tri foliate to third-tri foliate leaf stage. Do not apply from emergence (at-cracking) through unifoliate stage.

**General Comments:** Do not apply more than one application in the spring. The maximum cumulative rate of Zidua for all soils other than coarse texture is 3.5 oz/A.

**Environmental Statements:** Zidua label has GROUNDWATER AND SURFACE WATER ADVISORY statements.

**Rain Delay:** None

**Rotation Restrictions:** The rotational interval when using 1 to 3 oz of Zidua/A is up to 4 months for wheat depending on rate of Zidua (11 months for other small grains), 10 months for alfalfa, and 18 months for other crops. Corn and soybean may be planted immediately. Consult label when using other rates of Zidua.

**Harvest & Forage Restrictions:** No information on label.

**Tank Mixtures:** Extreme, Outlook, Prowl, Pursuit, Raptor, Scepter, Sharpen, Verdict, glyphosate.