

84930-25

01-13-2011

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U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (7505P)
Ariel Rios Building
1200 Pennsylvania Ave., NW
Washington, D.C. 20460

EPA Reg. Number: 84930-25	Date of Issuance: JAN 13 2011
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NOTICE OF PESTICIDE:
 Registration
 Reregistration
 (under FIFRA, as amended)

Term of Issuance: Unconditional
Name of Pesticide Product: ARC-Metolachlor

Name and Address of Registrant (include ZIP Code):
Arcana LLC
P.O. Box 26
Timnath, CO 80547

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

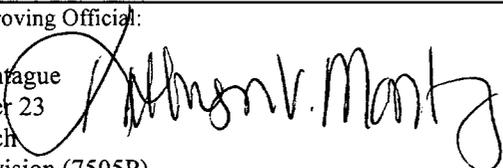
On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act. Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is unconditionally registered in accordance with FIFRA sec. 3(c)(7)(A) provided that you:

- 1) Submit and/or cite all data required for registration/reregistration review of your product when the Agency requires all registrants of similar products to submit data. If required, failure to submit acceptable data to fulfill these requirements may result in registration cancellation in accordance with FIFRA section 6(e).
- 2) Add the phrase "EPA Reg. No. 84930-25" to the labeling and assure that the EPA Establishment Number and Net Contents are also on the label.
- 3) Add the term "Herbicide" to the product name in the at the top of page 1.
- 4) Per the Label Review Manual, the USER SAFETY RECOMMENDATIONS information at the top of page 2 must appear in a box.
- 5) Per the Label Review Manual, assure the following statement appears in Precautionary Statements section of the label: "Follow the manufacturer's instructions for cleaning/maintaining PPE. If not such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry." Note to Registrant: For additional information, the online Label Review Manual can be located at "<http://www.epa.gov/oppfead1/labeling/lrm/>".

SEE NEXT PAGE FOR ADDITIONAL COMMENTS

Signature of Approving Official:
Kathryn V. Montague
 Product Manager 23
 Herbicide Branch
 Registration Division (7505P)



Date:
JAN 13 2011

6) Under the “**PRODUCT INFORMATION**” header on page 2, change the term “recommended” to “for use” for the statement to read “This product is a herbicide for use as a preplant surface applied.....”

7) On page 4 in the second to last sentence under “**Note**” near the top of the page, clarify the term “cleaning solution”. If by “cleaning solution” you mean rinsate, then include the term “rinsate” in the sentence for the instructions to read “Dispose of cleaning solution (i.e. rinsate) in a responsible manner.” However, if the term “cleaning solution” refers to leftover cleaning product, then the sentence must read “Dispose of cleaning solution and rinsate in a responsible manner.”

8) On page 4 in the second sentence under “**2) APPLICATION PROCEDURES Application Timing**” clarify the statement by replacing the word “given” with “specific” and replace “recommended” with “appropriate” for the sentence to read “Refer to the specific crop section of the label to determine if application timings listed below are appropriate.”

9) On page 4 under number 2 in “**A) Preplant Surface-Applied**”, replace “recommended” with “specified” for the second sentence to read “Use only split applications for treatments made 30 to 45 days before planting, with two-thirds the specified broadcast rate for the crop and soil texture.....”

10) Near the bottom of page 5, change the term “**General Information**” in bold to “**Product Information**” for the statement to read “*See **Product Information** section. Control of these weeds can be erratic.....”.

11) Correct the typographical error on page 6 under the header “**ROTATIONAL CROPS**”, changing “o r” to “or” for the statement to read “.....Forage Sorghum, Soybeans, Milo, Oats, Peppers, Rice, Root Crops, Rye, Tobacco or Wheat may be planted in the Spring following treatment.”

12) On page 6 under the header “**CORN (FIELD, SWEET, POP)** item “**B) Use on medium- and fine-textured soils...**” change the term “recommended” to “specified” for the second sentence to read “Apply two-thirds of the specified rate of this product (1.67 pts./A on medium soils and 2 pts./A on fine soils) as a split treatment 30 to 45 days before planting and the remained at planting.”

13) On page 8 under the header “**IMPORTANT: FOR TANK MIXTURES WITH ATRAZINE**”, replace the term “recommended” with “specified” in the second to last sentence above the chart for the statement to read “In addition, if Atrazine is/must be applied at rates lower than those specified on this label, broadleaf weed control may be affected. Refer to the Atrazine label for weeds controlled at the reduced rate.”

14) On page 9 under the header “**Shattercane, Wild Proso Millet, Woolly Cupgrass, and Eclipta – Partial Control**”, replace the term “recommended” with “specified” in the second sentence in number 2 near the bottom of the page for it to read “Do not exceed the total rate of triazine herbicide specified for Field corn, Sweet corn, and Popcorn grown in a given soil texture.”

15) NOTE: Check paragraph formatting on page 12 under the header “**TANK MIXTURE WITH ATRAZINE, OR SIMAZINE, ATRAZINE + SIMAZINE, WITH GRAMOXONE MAX, LANDMASTER BW, OR GLYPHOSATE FOR MINIMUM-TILLAGE OR NO-TILLAGE SYSTEMS**”.

16) Under the header “**TANK MIXTURE WITH ATRAZINE, OR SIMAZINE, ATRAZINE + SIMAZINE, WITH GRAMOXONE MAX, LANDMASTER BW, OR GLYPHOSATE FOR MINIMUM-TILLAGE OR NO-TILLAGE SYSTEMS**” on page 12, replace “recommended rates” with “specified rates” for the statements to appear as follows:

“**Gramoxone Max:** See the Gramoxone Max label for weeds controlled and specified rates. This treatment will not control weeds taller than 6 inches.

Note: Do not apply combinations containing Gramoxone Max in suspension-type liquid fertilizers because the activity of paraquat will be reduced.

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

Glyphosate: See the Glyphosate or Roundup RT label for weeds controlled, specified rates, and other use precaution directions.”

Note to Registrant: For the purposes of clarity, we recommend the term “**Note**” above changed to “**Restriction**”. See comment 19t for additional details.

17) On page 13 under the header “**TANK MIXTURE WITH ATRAZINE; OR ATRAZINE + 2,4-D; OR ATRA-ZINE + 2,4-D + BANVEL FOR MINIMUM TILLAGE OR NO-TILLAGE SYSTEMS**”, replace the phrase “recommended” with “specified” in both sentences for the statements to read as follows:

“Add X-77 surfactant at 1 to 2 qts./100 gals of diluted, or another appropriate surfactant at its specified rate, or add crop oil concentrate plus 28% liquid nitrogen (or equivalent).”

“For fields with existing sod grasses (e.g. Bromegrass, Orchardgrass, Rye, or Timothy) when existing weeds exceed 3 inches in height or when very dry conditions exist, add Gramoxone Max at the specified label rate in place of or in addition to 2,4-D, as indicated above.”

18) Per the Label Review Manual, the statement “Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities,

SEE NEXT PAGE

by burning. If burned, stay out of smoke.” must be added as the last sentence to the container handling instructions for Refillable Containers on page 14 for the paragraph to read:

“Refillable Containers: Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with 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, if allowed by state and local authorities, by burning. If burned, stay out of smoke.”

19) NOTE: The edits listed in a-x below are recommended by the Agency for the purposes of clarity. They are not required, and are considered optional.

- a) At the bottom of page 4, we recommend you insert the phrase “**Restrictions and Precautions**” for the text to read “(C) Fall Application (Only in IA, MN, ND, SD, and WI, and portions of NE and IL – see specific instructions for timing of application and other information): **Restrictions and Precautions:** Do not apply to frozen ground. Use on medium and fine soils.....”
- b) At the top of page 5 we recommend you replace the term “**Note**” with “**Restriction**” for the statement to read “**Restriction:** If a Spring application is made, the total rate of the Fall plus Spring applications must not exceed the maximum total rate for the specified crop, or illegal residues may result.”
- c) Under the header “**3) ROTATIONAL CROPS This Product Alone:**” on page 6, we recommend that application, replanting, grazing restrictions and other precautions be clearly labeled as restrictions by inserting the header “**Restrictions and Precautions**” under the phrase “**This Product Alone:**”
- d) Under the header “**This Product in Tank Mixtures**” appearing in the middle of page 6, we recommend replacing the term “statements/restrictions” in the first sentence with “restrictions and precautions” for it to read “For Rotational Crop restrictions for this product used in tank mixtures, refer to the restrictions and precautions above for this product and to the respective product labels of any mixing partner(s) for additional restrictions and precautions.”
- e) Under the header “**This Product In Tank Mixtures**” appearing on page 6, we recommend changing the subheading appearing in the middle of the page from “**Important Notes**” to “**Restrictions and Precautions**”.

- f) On page 6 under the header "**CORN (FIELD, SWEET, POP) – THIS PRODUCT ALONE**" section, we recommend you add the phrase "**Restrictions and Precautions**" under the header "**1) PREPLANT SURFACE-APPLIED**" for the statement to appear as follows:

"1) PREPLANT SURFACE-APPLIED

Refer to instructions for use of this product alone under Application Procedures.

Restrictions and Precautions

A) Fall Application (Apply after September 30 in MN, ND, SD, WI....."

- g) On page 6 under the header "**CORN (FIELD, SWEET, POP)**" letter "**A) Fall Application**", we recommend you replace the term "**Note**" with "**Restriction**" for the statement to read "**Restriction:** If a Spring application is made, the total rate of the Fall plus Spring applications must not exceed the maximum total rate for Corn, or illegal residues may result."

- h) On page 7 under the header "**3) LAY-BY**", we recommend you add the phrase "**Restrictions and Precautions**" for the statement to read as follows:

"3) LAY-BY

Restrictions and Precautions: To extend the duration of weed control in Field corn, Sweet corn, and Popcorn, a maximum rate of 2 pts./A....."

- i) On page 7 under the header "**3) LAY-BY**" we recommend you replace the phrase "**Use Precautions for all applications to Corn**" with "**Restrictions for all applications to Corn**" for the statement to read "**Restrictions for all applications to Corn:** To avoid possible illegal residues, do not graze or feed forage from treated areas for 30 days following application. Do not use on peat or muck soils."

- j) On page 7 under the header "**Shattercane, Wild Proso Millet, Woolly Cupgrass, and Eclipta – Partial Control**", we recommend you insert the subheader "**Restrictions and Precautions**" for the statement to read as follows:

**"Shattercane, Wild Proso Millet, Woolly Cupgrass, and Eclipta – Partial Control
Restrictions and Precautions:....."**

- k) On page 7 under the header "**Woolly Cupgrass and Wild Proso Millet Control Program**", we recommend you replace the term "**Notes**" with the term "**Restrictions and Precautions**".

- l) At the top of page 8 under the header "**THIS PRODUCT IN TANK MIXTURES**", we recommend you replace the subheading "**Note**" with "**Restrictions and Precautions**".

- m) On page 9, we recommend changing the text in statement number 5 from “**Use Precautions**” to read “**(5) Restrictions and Precautions: Do not exceed a total of 2.5 lbs.....**”
- o) On page 9, we recommend replacing the term “**Notes**” below number 8 with “**Restrictions and Precautions**” for the statement to read “**Restrictions and Precautions: 1) For all applications to Field corn, Sweet corn, and Popcorn, do not graze of feed forage from treated areas for 30 days.....**”
- p) On page 9, under the “**Preplant Incorporated or Preemergence**” header in the “**TANK MIXTURE WITH ATRAZINE OR SIMAZINE, OR ATRAZINE + SIMAZINE – PREPLANT SURFACE, PREPLANT INFORPORATED, OR PREEMERGENCE**” section, we recommend replacing the term “**Note**” with “**Restriction**”. The sentence may read “**Restriction: Do not apply more than the labeled rate for a given soil texture per year, either as a split or single treatment, or illegal residues may result.**”
- q) On page 9 under the header “**Shattercane, Wild Proso Millet, Woolly Cupgrass, and Eclipta – Partial Control**”, we recommend inserting the subheader “**Restrictions and Precautions**” for the statement to read as follows:

“Shattercane, Wild Proso Millet, Woolly Cupgrass, and Eclipta – Partial Control Restrictions and Precautions:.....”
- r) On page 10 under the header “**Lay-by**”, we recommend you add the term “**Restrictions**” before the last sentence for it to read:

“Lay-by: Apply to Field Corn, Sweet corn, and popcorn plants not more than 12 inches tall. Applications to Corn in excess of 5 inches may be made over the top. Occasionally, some Corn lead burn may result, but this should not affect later growth or yield. Restriction: Do not apply this post emergence tank mixture in fluid fertilizer, or severe crop injury may occur.”
- s) On page 11 near the top of the page, we recommend replacing the term “**Note**” with “**Restriction**” for the statement to read “**Restriction: The total rate of this product should not exceed.....**”
- t) Under the header “**TANK MIXTURE WITH ATRAZINE, OR SIMAZINE, ATRAZINE + SIMAZINE, WITH GRAMOXONE MAX, LANDMASTER BW, OR GLYPHOSATE FOR MINIMUM-TILLAGE OR NO-TILLAGE SYSTEMS**” on page 12, we recommend replacing the term **Note**” with “**Restriction**” for the statements to appear as follows:

“Gramoxone Max:

Restriction: Do not apply combinations containing Gramoxone Max in suspension-type liquid fertilizers because the activity of paraquat will be reduced.

Landmaster BW:

Glyphosate:”

- u) On page 13 under the header **“TANK MIXTURE WITH MARKSMAN IN CONSERVATION TILLAGE – FIELD CORN”**, we recommend adding the term **“Restriction”** before the second to last sentence for it to read **“Restriction:** Do not apply Gramoxone Max in suspension-type liquid fertilizer or use on emerged Corn.
- v) On page 17 under the **“APPENDIX D: CENTER PIVOT IRRIGATION APPLICATION”** header, we recommend adding the term **“Restrictions and Precautions”** at the beginning of the second paragraph for it to read **“Restrictions and Precautions:** Follow all restrictions (height, timing, rate, etc.) to avoid illegal residues. Apply this product only through a center pivot irrigation system. Do not apply this product through any other type of irrigation system. Crop injury, lack of effectiveness, or illegal residues in the crop can result from non-uniform.....”
- w) On page 18 under **“Pneumatic (Compressed Air) Application (This Product Alone)”** we recommend you change the term **“Notes”** to **“Restrictions and Precautions”**.
- x) On page 18 under **“Pneumatic (Compressed Air) Application (This Product Alone)”**, we recommend you change the term **“Use Precautions”** to **“Restrictions and Precautions”** for the statement to read **“Restrictions and Precautions:** To avoid potential for explosion, (1) Do not impregnate this product.....”

20) NOTE: While no additional data is being requested at this time, any marketing claims made on the pesticide label must be substantiated by data maintained in your files. If data supporting marketing claims made on the product label is not available then those claims must be removed.

21) NOTE: Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

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New Product Registration
EPA Registration #: 84930-25
Product Name: ARC-Metolachlor Herbicide
Decision Number: 440096

22) Submit one (1) copy of the revised final printed label before the product is released for shipment.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records.

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ARC-METOLACHLOR

For weed control in Field Corn, Sweet Corn and Popcorn

ACTIVE INGREDIENT:

Metolachlor: 2-chloro-N-(2-ethyl-6-methylphenyl)-N-(2-methoxy-1-methylethyl) acetamide .84.4%

OTHER INGREDIENTS: 15.6%

TOTAL: 100.0%

This product contains 7.8 pounds of active ingredient per gallon.

KEEP OUT OF REACH OF CHILDREN CAUTION

EPA Reg. No. 84930-

EPA Est. No. 19713-MS-001

Net Contents: _____

FIRST AID

IF INHALED:

- Move person to fresh air.
- If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.

IF ON SKIN OR CLOTHING:

- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15 to 20 minutes.

IF IN EYES:

- Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.
- Remove contact lenses, if present, after the first 15 minutes, then continue rinsing eye.

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 do so by a poison control center or doctor.
- Do not give anything by mouth to an unconscious or convulsing person.

**ACCEPTED
with COMMENTS
In EPA Letter Dated:**

JAN 13 2011

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No.

84930-25

Call a poison control center or doctor for treatment advice. Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For information on this pesticide product (including health concerns, medical emergencies or pesticide incidents), call the National Pesticide Information Center at 1-800-858-7378.

FOR CHEMICAL SPILL, LEAK, FIRE OR EXPOSURE CALL TOLL FREE 1-800-424-9300.

PRECAUTIONARY STATEMENTS - Hazards To Humans And Domestic Animals

CAUTION: Harmful if swallowed. Causes moderate eye irritation. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Avoid contact with eyes or clothing. Wear protective eye wear. Wear long-sleeved shirt and long pants, socks, shoes and gloves.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for Category H on an EPA chemical resistance category selection chart. **Applicators and other handlers must wear:**

- Coveralls over short-sleeved shirt and short pants
- Chemical-resistant gloves made of any waterproof material such as barrier laminate or viton
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear for overhead exposure

Manufactured For:
ARCANA, LLC
P.O. Box 26
Timnath, CO 8547

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USER SAFETY RECOMMENDATIONS

Users should: 1) Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. 2) Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. 3) 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.

ENGINEERING CONTROL STATEMENTS

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

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

ENVIRONMENTAL HAZARDS

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

Ground Water Advisory

This chemical 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

Metolachlor can contaminate surface water through ground spray drift. Under some conditions, 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 over-laying extremely shallow ground water, areas with in-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas over-laying tile drainage systems that drain to surface water.

Mixing/Loading Instructions

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

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

This product may not be mixed or loaded within 50 feet of perennial or intermittent streams and rivers, natural or impounded lakes and reservoirs. This product may not be mixed/loaded or used within 50 feet of all wells, including abandoned wells, drainage wells, and sinkholes. Operations that involve mixing, loading, rinsing, or washing of this product into or from pesticide handling or application equipment or containers within 50 feet 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.

PRODUCT INFORMATION - SHAKE WELL BEFORE USING

Observe all use precautions and limitations on the labels of each product used in tank mixtures. Tank mixtures are permitted only in those states where the tank-mix partner is registered.

This product is a herbicide recommended as a preplant surface applied, preplant incorporated, or preemergence treatment in water or fluid fertilizer for control of most annual grasses and certain broadleaf weeds in Field corn, Sweet corn, and Popcorn.

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:

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- 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 non-target crops unless at least one-half inch of rainfall has occurred between application and the first irrigation.

If this product is incorporated, any supplemental tillage before planting must not exceed the depth of incorporation.

Dry weather following preemergence application of this product or a tank mixture may reduce effectiveness. Cultivate if weeds develop. Where reference is made to weeds partially controlled, partial control can either mean erratic control from good to poor, or consistent control at a level below that generally considered acceptable for commercial weed control.

Use Precautions: Injury may occur following the use of this product under abnormally high soil moisture conditions during early development of the crop. Do not use on peat or muck soils. Do not graze or feed forage from treated Field corn, Sweet corn, or Popcorn within 30 days from time of application.

MIXING INSTRUCTIONS

This Product Alone: Mix this product with water or fluid fertilizer and apply as a spray. Fill the spray tank one-half to three-quarters full with water or fluid fertilizer, add the proper amount of this product, then add the rest of the water or fluid fertilizer. Provide sufficient agitation during mixing and application to maintain a uniform emulsion. **Tank Mixtures:** Fill the spray tank one-fourth full with water, and start agitation; add 2,4-D, Atrazine, Banvel®, Linuron, Marksman®, Prowl®, Simazine or Atrazine + Simazine, and allow it to become dispersed; then add this product, then add Gramoxone® Max, Landmaster® BW, or Glyphosate if these products are being used; and finally the rest of the water. For tank mixtures with Atrazine, Banvel, Linuron, Marksman, Prowl*, Simazine or Atrazine + Simazine, fluid fertilizers may replace all or part of the water as carrier, except in the Atrazine postemergence and the Banvel postemergence tank mixes. For tank mixtures with Atrazine, see additional mixing instructions on the Atrazine label. For each mixture, check compatibility with fluid fertilizer, as described in Appendix A, before mixing in spray tank. For all tank mixtures, agitate during mixing and application to maintain a uniform suspension.

*See **Special Mixing Instructions** for tank mixtures with Atrazine or Simazine + Prowl under the appropriate tank mixture section. For directions on how to conduct a compatibility test, see **Appendix A**.

DIRECTIONS FOR USE

This product is intended for use in weed control in Field corn, Sweet corn, and Popcorn.

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

DO NOT APPLY THIS PRODUCT BY AIR IN NEW YORK STATE. DO NOT SELL, USE OR DISTRIBUTE THIS PRODUCT IN NASSAU AND SUFFOLK COUNTIES.

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 12 hours. Exception: If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is: Coveralls, Chemical-resistant gloves made of any waterproof material such as barrier laminate or viton, Shoes plus socks.

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

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

1) SOIL TEXTURES AND HERBICIDE RATES

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

<u>Coarse</u>	<u>Medium</u>	<u>Fine</u>
Sand	Loam	Sandy clay loam
Loamy sand	Silt loam	Silty clay loam
Sandy loam	Silt	Clay loam
		Sandy clay
		Silty clay
		Clay

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

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

Thoroughly clean sprayer or other application device before using.

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

2) APPLICATION PROCEDURES Application Timing

This product alone or in some tank mixtures with other labeled herbicides may be applied for weed control in Field corn, Sweet corn, and Popcorn at various times. Refer to the given crop section of the label to determine if application timings listed below are recommended.

A) Preplant Surface-Applied: For minimum-tillage or no-tillage systems only, this product alone and some tank mixtures of this product may be applied up to 45 days before planting. Use only split applications for treatments made 30 to 45 days before planting, with two-thirds the recommended broadcast rate for the crop and soil texture applied initially and the remaining one-third at planting. Treatments less than 30 days before planting may be made either as a split or a single application. If weeds are present at the time of treatment, apply in a tank-mixture combination with a contact herbicide (for example, Gramoxone Max or Glyphosate). Observe directions for use, use precautions, and restrictions on the label of the contact herbicide. To the extent possible, do not move treated soil out of the row or move untreated soil to the surface during planting, or weed control will be diminished.

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

C) Preemergence: Apply this product during planting (behind the planter) or after planting, but before weeds or Field corn, Sweet corn, and Popcorn emerge.

3) Special Application Procedures

A) CA Only (Field corn, Sweet corn, and Popcorn)—Preplant Incorporated: Broadcast this product alone or with tank mix partners listed on this label to the soil and thoroughly incorporate with a disk or similar implement set to till 4 to 6 inches deep. For more thorough incorporation, till the soil in 2 different directions (cross-till). Field corn, Sweet corn, and Popcorn may be planted on flat surface or on beds. Caution should be used when forming the beds that only soil from this product's treated zone is used (i.e., untreated soil should not be brought to soil surface). If the application is made to preformed beds, incorporate this product with a tillage implement set to till 2 to 4 inches deep. Care should be taken during tilling to keep the tilled (this product treated) soil on the beds.

B) Preemergence: Apply this product after planting. Water with sprinkler or flood irrigation within 7 to 10 days.

C) Fall Application (Only in IA, MN, ND, SD, WI, and portions of NE and IL - see specific instructions for timing of application and other information): Do not apply to frozen ground.

Use on medium and fine soils with greater than 2.5% organic matter that will be planted to Field corn, Sweet corn, or Popcorn the next Spring. Ground may be tilled before or after application. Do not exceed a 2 to 3-inch incorporation depth if tilled after treatment. **Note:** If a Spring application is made, the total rate of the Fall plus Spring applications must not exceed the maximum total rate for the specific crop, or illegal residues may result.

D) Ground Application: Apply this product alone or in tank mixtures by ground equipment in a minimum of 10 gals. of spray mixture per acre, unless otherwise specified.

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

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

$$\frac{\text{Band width in inches}}{\text{Row width in inches}} \times \text{Broadcast rate per acre} = \text{Amount needed per acre of field}$$

Note: For information on applying in lower volumes of carrier, see **Low Carrier Application in Appendix B.**

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

For information on impregnating dry fertilizer, see **Appendix E.**

THIS PRODUCT APPLIED ALONE

1) WEEDS CONTROLLED

Barnyardgrass (watergrass)	Foxtail millet	Signalgrass (<i>Brachiaria</i>)
Bristly foxtail	Galinsoga	Southwestern cupgrass
Carpetweed	Giant foxtail	Tall waterhemp
Common waterhemp	Goosegrass	Wild proso millet*
Crabgrass	Green foxtail	Witchgrass
Crowfootgrass	Pigweed	Woolly cupgrass*
Eastern black nightshade	Prairie cupgrass	Yellow foxtail
Fall panicum	Red rice	Yellow nutsedge
Florida pusley	Robust foxtails (purple, white)	

*For control of these weeds refer to the **Woolly Cupgrass and Wild Proso Millet Control Program** section of this label.

2) WEEDS PARTIALLY CONTROLLED*:

Common purslane	Sandbur	Volunteer sorghum
Eclipta	Seedling Johnsongrass	Wild proso millet
Florida beggarweed**	Shattercane	Woolly cupgrass
Hairy nightshade	Texas panicum***	

* See **General Information** section. Control of these weeds can be erratic, due partially to variable weather conditions. Control may be improved by following these suggested procedures:

A) Use 2 to 2.67 pts./A or the preplant surface-applied rates for this product alone or in tank mixture, if allowed, when making preplant incorporated or preemergence applications.

B) Thoroughly till moist soil to destroy germinating and emerged weeds. If this product is to be applied preplant incorporated, this tillage may be used to incorporate this product if uniform 2-inch incorporation is achieved as recommended under **Application Procedures.**

C) Plant Field corn, Sweet corn, and Popcorn into moist soil immediately after tillage. If this product is to be used preemergence, apply at planting or immediately after planting.

D) If available, sprinkler irrigate within 2 days after application. Apply one-half to 1 inch of water. Use lower water volume (one-half inch) on *coarse-textured soils* and higher volume (1 inch) on *fine-textured soils*. Also, refer to the section on **Center Pivot Irrigation Application** for this method of applying this product.

E) If irrigation is not possible and rain does not occur within 2 days after planting and application, weed control may be decreased. Under these conditions, a uniform, shallow cultivation is recommended as soon as weeds emerge.

** For partial control of this weed, use a minimum of 2 pts./A and apply preemergence.

*** For partial control of this weed, use a minimum of 2 pts./A and apply through a center pivot irrigation system.

3) ROTATIONAL CROPS

This Product Alone:

A) If crop treated with this product alone is lost, either Field corn, Sweet corn or Popcorn may be replanted immediately. Do not make a second broadcast application of this product. If the original application was banded and the second crop is planted in the untreated row middles, a second banded treatment may be applied.

B) Barley, Oats, Rye, or Wheat may be planted 4.5 months following treatment; Alfalfa may be planted 4 months following application. Tomatoes may be planted 6 months following application.

C) Field corn, Sweet corn, and Popcorn, in addition to Barley, Buckwheat, Cabbage, Cotton, Peanuts, Pod crops, Potatoes, Safflower, Grain or Forage Sorghum, Soybeans, Milo, Oats, Peppers, Rice, Root crops, Rye, Tobacco, or Wheat may be planted in the Spring following treatment. Clover may be seeded 9 months following application. Do not graze or feed forage or fodder from Cotton to livestock.

D) Following a lay-by treatment or multiple treatments applied the previous season, Field corn, Sweet corn, and Popcorn in addition to Cabbage, Peppers or Tobacco may be planted in the Spring. All other rotational crops may be planted 12 months after a lay-by application.

This Product In Tank Mixtures:

For Rotational Crop restrictions for this product used in tank mixtures, refer to the statements/restrictions above for this product and to the respective product labels of any mixing partner(s) for additional statements/restrictions.

Important Notes: To avoid injury to rotational Alfalfa or Clover: (1) Do not apply more than 2 lbs. a.i. per acre (2 pts. of this product) preemergence (including preplant surface, preplant incorporated, postplant incorporated, etc.), and (2) Do not make lay-by or other postemergent applications of this product.

CORN (FIELD, SWEET, POP) — THIS PRODUCT ALONE Apply this product either preplant surface, preplant incorporated or preemergence using the appropriate rate specified below.

1) PREPLANT SURFACE-APPLIED

Refer to instructions for use of this product alone under **Application Procedures**.

A) Fall Application (Apply after September 30 in MN, ND, SD, WI and north of Route 30 in IA; Apply after October 15 north of Route 91 in NE and south of Route 30 in IA; Apply after October 31 north of Route 136 in IL):

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

B) 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 two-thirds of the recommended rate of this product (1.67 pts./A on *medium soils* and 2 pts./A on *fine soils*) as a split treatment 30 to 45 days before planting and the remainder at planting. Applications made less than 30 days prior to planting may be as either a split or single treatment.

Apply 1.33 pts./A on *coarse soils* not more than 2 weeks prior to planting.

C) On medium- and fine-textured soils with minimum- or no-tillage systems in CT, DE, MA, MD, ME, MI, NH, NY, OH, PA, RI, VA, VT, and WV, preplant surface applications may be applied following the directions for use above. If the amount of rainfall results in unsatisfactory length of weed control following the earlier treatment, a postemergence application of an appropriately labeled broadleaf and/or grass weed herbicide may be used, i.e., Accent®, Atrazine, Banvel, Basagran, Beacon®, Bicep®, Bromoxynil (Brominal® or Buctril®), Exceed®, or 2,4-D. If the postemergence treatment includes the herbicide used

preplant surface-applied, do not exceed the total labeled rate for Field corn, Sweet corn, and Popcorn on a given soil texture. Observe all directions for use, use precautions, and limitations on the label of the postemergent herbicide.

2) PREPLANT INCORPORATED OR PREEMERGENCE

Follow instructions for use of this product alone under **Application Procedures**. On *coarse soils*, apply 1 to 1.33 pts./A of this product if organic matter content is less than 3%, or 1.33 pts./A if organic matter content is 3% or greater. On *medium soils*, apply 1.33 to 1.67 pts./A of this product. On *fine soils*, apply 1.33 to 1.67 pts./A of this product if organic matter content is less than 3%, or 1.67 to 2 pts./A if organic matter content is 3% or greater.

3) LAY-BY To extend the duration of weed control in Field corn, Sweet corn, and Popcorn, a maximum rate of 2 pts./A of this product may be applied after Corn emergence until the Corn plants reach 40 inches in height, following any preplant surface-applied, preplant incorporated, or preemergence herbicide application, including this product. For best results, applications should be made to soil free of emerged weeds and directed towards the base of Corn plants in excess of 5 inches tall. The total rate of this product applied on Field corn, Sweet corn, and Popcorn during any one crop year should not exceed 4 pts./A, depending on soil texture.

Use Precautions for all applications to Corn: To avoid possible illegal residues, do not graze or feed forage from treated areas for 30 days following application. Do not use on peat or muck soils.

Shattercane, Wild Proso Millet, Woolly Cupgrass, and Eclipta —

Partial Control: For more consistent partial control of Shattercane, Wild proso millet, Woolly cupgrass, or Eclipta, apply 2 to 2.55 pts./A as a single application; or apply 1 to 1.33 pts./A of this product preplant incorporated followed by 1 to 1.33 pts./A of this product preemergence; however, do not apply more than a total of 2.55 pts./A. Make the preemergence application during or after planting, but before weeds and Corn emerge. Apply the 1.33 pts./A rate of this product when a heavy infestation of Shattercane, Wild proso millet, Woolly cupgrass, or Eclipta is expected. A shallow cultivation may be needed to control any late emerging weeds.

Woolly Cupgrass and Wild Proso Millet Control Program: For control of these species, use the following 3-step program:

- 1) Apply this product early preplant, preplant incorporated, or preemergence at 1.67 pts./A on *medium soils* and 2 pts./A on *fine-textured* soils up to the maximum label rate. Lightly incorporate with a rotary hoe if rainfall does not occur within 5 to 7 days.
- 2) Apply a postemergence tank mix of Beacon at 0.38 oz./A or Exceed at 1 packet per 4 acres plus Accent SP at 0.33 oz./A plus 1 qt. of crop oil concentrate plus 1 gal./A of 28% nitrogen, or the equivalent amount of ammonium sulfate, when grasses are 2 to 3 inches tall and the Field corn, Sweet corn, and Popcorn is at least 4 inches tall.
- 3) Cultivate 14 to 21 days after the postemergence application.

Notes:

- 1) Do not apply more than the labeled application rate for a given soil texture per year, either as a single or split treatment, or illegal residues may result.
- 2) In Field corn, Sweet corn, and Popcorn, this product may be used up to 2.75 pts./A as either a preplant surface, preplant incorporated, or preemergence treatment on soils having an organic matter content between 6% and 20% or up to 2 pts./A on any soil for extended residual control and where severe stands of problem weeds are expected.
- 3) In the event of escape of annual weeds following a preplant surface, preplant incorporated, or preemergence treatment of this product, follow with a postemergence application of an appropriately labeled broadleaf and/or grass weed herbicide, i.e., Accent, Atrazine, Banvel, Basagran, Beacon, Bicep, Brominal, Buctril, Exceed, or 2,4-D. If the postemergence treatment includes the herbicide used in earlier treatment, i.e., Atrazine, do not exceed the total labeled rate for Field corn, Sweet corn, and Popcorn on a given soil texture.
- 4) Brominal or Buctril may be applied postemergence alone or in tankmix combination with Atrazine. Do not exceed 1.2 lbs. of Atrazine per acre in tank-mix combination with Brominal or Buctril postemergence. Refer to the Atrazine, Brominal, and Buctril labels for specific rates and use precautions.
- 5) Do not use this product on peat or muck soils.

THIS PRODUCT IN TANK MIXTURES*

This product in any tank mixture for Field corn, Sweet corn, and Popcorn (except this product + Atrazine postemergence and this product + Banvel postemergence) may be applied in water or fluid fertilizer. Use only water in this product + Atrazine or this product + Banvel postemergence tank mixes.

Note: For all applications to Field corn, Sweet corn, and Popcorn, do not graze or feed forage from treated areas for 30 days following application, or possible illegal residues may result. *This product may be tank-mixed with the herbicides listed on this label provided the specific product(s) tank-mixed is registered for use on Field corn, Sweet corn, and Popcorn.

IMPORTANT: FOR TANK MIXTURES WITH ATRAZINE — If applying this product in tank mixture with Atrazine, all the restrictions and rate limitations on the Atrazine label must be followed, if more restrictive/protective than those on this label. In addition, if Atrazine is/must be applied at rates lower than those recommended on this label, broadleaf weed control may be affected. Refer to the Atrazine label for weeds controlled at the reduced rates.

Chart 1: This Product in Tank Mixtures — Additional Weeds Controlled and Special Instructions

	This Product + Atrazine and/or Simazine (Preplant Surface, PPI, PRE)	This Product + Atrazine (Post)	This Product + Banvel (Field Corn)	This Product + Atrazine + Linuron	This Product + Atrazine or Simazine + Prowl	This Product + Marksman
Special Mixing Instructions					1	
Comments	2,3, 4,5, 7,8	2,3, 4,5		2,3, 4,5, 6	2,3, 4,5	7
Browntop panicum	X			X	X	
Cocklebur	X	0	0	X	X	X
Common purslane	X			X	X	X
Hairy nightshade	X			X	X	X
Jimsonweed		X	0			X
Kochia		X				X
Lambsquarters	X	X	X	X	X	X
Morningglory	X	0	0	X	X	X
Mustard		X				X
Pigweed				X	X	X
Prickly sida		X				X
Ragweed	X	X	X	X	X	X
Smartweed	X	X	X	X	X	X
Velvetleaf	X	X	0	X	X	X

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

COMMENTS — Chart 1: This Product in Tank Mixtures

1) Special Mixing Instructions for this product + Atrazine or Simazine and Prowl. A) Fill the spray tank one-quarter full with water or fluid fertilizer and start agitation. B) To aid compatibility, add a compatibility agent, at 4 pts./100 gals. of spray mixture. C) Then add the Atrazine or Simazine and allow it to become dispersed. D) Then add this product and Prowl 4E. E) Add the rest of the water.

2) Although a single formulation for Atrazine or Simazine is listed in the rate tables, other formulations may be substituted using the following formula:

• 1 lb. of Atrazine 90DF or Simazine 90DF = 1.8 pts. of Atrazine 4L or Simazine 4L

3) Follow the rates, recommendations, and limitations on the Atrazine label.

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4) See additional mixing instructions on the Atrazine label.

5) **Use Precautions:** Do not exceed a total of 2.5 lbs. of Atrazine per acre per year. However, certain states may have established rate limitations for Atrazine within specific geographical areas. Consult your state lead pesticide control agency for additional information. It is a violation of this label to deviate from state use regulations.

6) Other formulations of Linuron can be used:

- 1 lb. of Linuron DF = 1 pt. of Linuron 4L

7) In Minimum-Tillage and No-Tillage systems, mix with Gramoxone Max for control of most emerged annual weeds and suppression of perennial weeds; or with Landmaster BW for suppression of emerged Field bindweed and control or suppression of annual weeds; or with Glyphosate for control of most emerged annual and perennial weeds.

8) Refer to label section on specific directions for 2,4-D or Banvel burndown combinations in Minimum-Tillage and No-Tillage systems.

This product in any tank mixture for Field corn, Sweet corn, and Popcorn may be applied in water or fluid fertilizer, except as noted.

Notes: 1) For all applications to Field corn, Sweet corn, and Popcorn, do not graze or feed forage from treated areas for 30 days following application, or possible illegal residues may result.

2) When applying this product in tank mixture with Atrazine, do not exceed a total of 2.5 lbs. of Atrazine per acre per year.

3) Refer to "**Note 3**" under "**Corn (Field, Sweet, Pop) — This Product Alone**", section for recommended sequential postemergence treatments if escape weeds develop.

4) This product may be used up to 2 pts./A in combinations on any soil for extended residual control and where severe stands of problem weeds are expected.

TANK MIXTURE WITH ATRAZINE OR SIMAZINE, OR ATRAZINE + SIMAZINE — PREPLANT SURFACE, PREPLANT INCORPORATED, OR PREEMERGENCE

In addition to the weeds controlled by this product alone, this product + Atrazine or Simazine, or this product + Atrazine + Simazine, applied preplant surface, preplant incorporated, or preemergence, also controls the following weeds: Browntop panicum, Cocklebur, Common purslane, Hairy nightshade, Lambsquarters, Morningglory, Ragweed, Smartweed, and Velvetleaf. Apply this product + Atrazine or Simazine, or this product + Atrazine + Simazine either preplant surface, preplant incorporated, or preemergence.

Preplant Surface-Applied: Follow instructions for use of this product alone under **Application Procedures** and under application instructions for this product alone on Field corn, Sweet corn, and Popcorn. Apply this product + Atrazine or Simazine, or this product + Atrazine + Simazine on *medium soils* (1.67 pts./A of this product + 3.2 to 4 pts./A of Atrazine 4L or Simazine 4L, or Atrazine 4L + Simazine 4L combined) and on *fine soils* (1.67 to 2 pts./A of this product + 4 to 5 pts./A of Atrazine 4L, or Simazine 4L, or Atrazine 4L + Simazine 4L combined) in minimum tillage and no-tillage systems in CO, IA, IL, IN, KS, KY, MN, MO, MT, ND, NE, SD, TN, WI, and WY. Apply the tank mixtures as a split or single treatment in those states and as indicated in the **This Product— Alone Preplant Surface-Applied** section of the label for Corn. On *coarse soils*, apply 1.33 pts./A of this product and 3.2 pts./A of Atrazine 4L or Simazine 4L, or Atrazine 4L + Simazine 4L combined.

Preplant Incorporated or Preemergence: Follow instructions for use of this product alone under **Application Procedures**. Apply this product + Atrazine or Simazine, or this product + Atrazine + Simazine, using the appropriate rates from Table 1. **Note:** Do not apply more than the labeled rate for a given soil texture per year, either as a split or single treatment, or illegal residues may result.

Shattercane, Wild Proso Millet, Woolly Cupgrass, and Eclipta — Partial Control

For more consistent partial control of Shattercane, Wild proso millet, Woolly cupgrass, or Eclipta, where this product is applied in tank mixture or sequentially with other registered Field corn, Sweet corn, and Popcorn herbicides apply 2 to 2.33 pts. as a single application or, the following applications may be made:

1) Apply 1 to 1.33 pts./A of this product plus 2 lbs. per acre of Atrazine or Simazine preplant incorporated, followed by 1 to 1.33 pts./A of this product preemergence. Make the preemergence application during or after planting, but before weeds and Corn emerge.

2) Apply this product at 1.33 pts./A alone or in tank mix combination with up to 2 lbs. per acre of Atrazine or Simazine preplant incorporated. Do not exceed the total rate of triazine herbicide recommended for Field corn, Sweet corn, and Popcorn grown on a given soil texture. Follow with a post-directed application of Evik 80W at 2.5 lbs./A. Refer to the Evik 80W label for specific directions for the post-directed application.

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3) Apply Eradicane® or Sutan (or equivalent EPTC or butylate formulations) at labeled rates preplant incorporated, followed by a preemergence application of this product at 1 to 1.33 pts./A. Do not use Eradicane® or Sutan on soils where rapid degradation has been shown to occur. Make the preemergence application during or after planting, but before weeds and Corn emerge.

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

TANK MIXTURE WITH ATRAZINE — POSTEMERGENCE

Weeds Controlled			Weeds Partially Controlled
Barnyardgrass (watergrass)	Green foxtail	Prickly sida	Cocklebur
Crabgrass	Jimsonweed	Purslane	Morningglory
Crowfootgrass	Kochia	Ragweed	Yellow nutsedge
Fall panicum	Lambsquarters	Smartweed	
Giant foxtail	Mustard	Velvetleaf	
	Pigweed	Yellow foxtail	

Apply 1 pt./A of this product + 1.3 lbs./A of Atrazine 90DF* on *coarse soils*, 1.33 pts./A of this product + 1.8 lbs./A of Atrazine 90DF on *medium soils*, or 1.33 to 1.67 pts./A of this product + 1.8 to 2.2 lbs./ A** of Atrazine 90DF on *fine soils*. Apply this tank mixture before grass and broadleaf weeds pass the 2-leaf stage and before Field corn, Sweet corn, and Popcorn exceeds 5 inches in height. Application to weeds larger than the 2-leaf stage will generally result in unsatisfactory control.

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

*When using Atrazine 4L, use equivalent rates. One pound of Atrazine **90DF equals 1.8 pts. of Atrazine 4L.

**For better control of Cocklebur, Morningglory, Velvetleaf, and Yellow **nutsedge on *fine-textured soils* above 3% organic matter, apply 2.2 lbs./A of Atrazine 90DF, or equivalent rate of Atrazine 4L, with 1.33 to 1.67 pts./A of this product.

Tank mixtures of this product + Atrazine may be applied following use of any registered preplant surface-applied, preplant incorporated, or preemergence Field corn, Sweet corn, and Popcorn herbicide, including this product + Atrazine.

Table 1: This Product + Atrazine or Simazine, or This Product + Atrazine + Simazine, Preplant Incorporated, or Preemergence — Corn (Field, Sweet, Pop)

Soil Texture	Broadcast Rates Per Acre			
	Less Than 3% Organic Matter		3% Organic Matter or Greater	
	This Product + Atrazine 90DF* OR Simazine 90DF*	- OR - This Product + Atrazine 90DF** +Simazine 90DF**	This Product + Atrazine 90DF* OR Simazine 90DF*	- OR - This Product + Atrazine 90DF** OR +Simazine 90DF**
COARSE	0.85-1.0 pt. + 1.1-2.2 lbs.	0.85-1.0 pt. + 0.6-1.1 lbs. + 0.6-1.1 lbs.	1.0 pt. + 1.3-2.2 lbs.	1.0 pt. + 0.7-1.1 lbs. + 0.7-1.1 lbs.
MEDIUM	1.0-1.33 pts. + 1.3-2.2 lbs.	1.0-1.33 pts. + 0.7-1.1 lbs. + 0.7-1.1 lbs.	1.33 pts. + 1.8-2.2 lbs.	1.33 pts. + 0.9-1.1 lbs. + 0.9-1.1 lbs.
FINE	1.33 pts. + 1.8-2.2 lbs.	1.33 pts. + 0.9-1.1 lbs. + 0.9-1.1 lbs.	1.33-1.67 pts. + 1.8-2.2 lbs.***	1.33-1.67 pts. + 0.9-1.1 lbs.*** + 0.9-1.1 lbs.

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Muck or Peat (soils with more than 20% organic matter)	DO NOT USE
<p>*Use Simazine in preference to Atrazine when heavy infestations of Crabgrass or Fall panicum are expected. On soils having between 6% and 20% organic matter, this product may be used up to 2.33 pts./A in tank mix combination with 2.2 lbs./A of Atrazine 90DF, or equivalent rates of Atrazine 4L. Refer to the Atrazine label for weeds controlled at this reduced rate.</p> <p>**When using the tank mixture of this product + Atrazine 90DF + Simazine 90DF, use equal rates of each as shown when heavy broadleaf weed infestations are expected. When heavy infestations of Crabgrass or Fall panicum are expected, use a 1:2 ratio of Atrazine + Simazine, instead of the 1:1 ratio given in Table 1. (Example: Total Atrazine 90DF + Simazine 90DF = 1.2 lbs./A, use 0.4 lb. of Atrazine + 0.8 lb. of Simazine, respectively.) Refer to the Tank Mixture with Atrazine-Postemergence section for Atrazine 4L and Simazine 4L conversions.</p> <p>***For Cocklebur, Yellow nutsedge, and Velvetleaf control on <i>fine-textured soils</i> above 3% organic matter, apply 2.25 lbs./A of Atrazine 90DF, or equivalent rates of Atrazine 4L, or the same total amount of Atrazine + Simazine with 1.33 to 1.67 pts./A of this product.</p>	

Note: The total rate of this product should not exceed 4 pts., nor more than 2.5 lbs. of Atrazine rate during any one crop year, or illegal residues may result. Refer to the Atrazine label for geographic, soil texture, and rotational restrictions.

TANK MIXTURE WITH BANVEL

Preemergence: Use this tank mixture only on Field corn which is flat planted (no furrows) in CO, IA, IL, IN, KS, MN, NE, OH, SD, and WI. In addition to the weeds controlled by this product alone, this product + Banvel, applied preemergence, also controls Lambsquarters, Ragweed, Smartweed, Cocklebur*, Jimsonweed*, Morningglory*, and Velvetleaf*.

*Partially controlled.

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

Use Precautions: (1) Avoid drift to sensitive non-target plants, such as Soybeans, during application, or injury may occur. (2) Do not apply with aircraft.

Postemergence for Control of Pigweed (Mid-Atlantic states including DE, MD, PA, VA, and WV):

Apply 1 to 1.5 pts. of this product + one half to 1 pt./A of Banvel by ground equipment when Pigweed plants are less than 3 inches tall and before Field corn exceeds 5 inches in height in a minimum of 20 gals. of spray per acre. Use the lower rate on coarse-textured and low organic matter soils. Use the higher rate on fine-textured and high organic matter soils.

Banvel SGF® and Clarity® may be used at equivalent pounds of active ingredient per acre.

Use Precautions: (1) Avoid drift to sensitive non-target plants, such as Soybeans, during application, or injury may occur. (2) Do not apply with aircraft.

TANK MIXTURE WITH ATRAZINE AND LINURON FOR CONTROL OF LAMBSQUARTERS AND PIGWEED

For prolonged control of Lambsquarters and Pigweed in DE, MD, NJ, NY, PA, VA, and WV, this product may be applied preemergence in tank mix combination with Atrazine + Linuron. Apply this product and Atrazine according to the rates in Table 1 and Linuron according to the following rates.

Soil Texture	Broadcast Rate per Acre
Sandy loam (1-3% organic matter)	0.67 lb. Linuron
Sandy loam (3-6% organic matter)	1.0 lb. Linuron
Medium- and fine-textured soils (1-6% organic matter)	1.0 lb. Linuron

Observe all directions for use, use precautions, and limitations on this product, Atrazine and Linuron labels when applying these products in tank-mix combinations.

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TANK MIXTURE WITH ATRAZINE OR SIMAZINE + PROWL FOR PRO- LONGED CONTROL OF LAMBSQUARTERS AND PIGWEED IN FIELD CORN ONLY (NORTHEAST U.S., INCLUDING MI, IN, KY, AND STATES EAST OF THESE)

For prolonged control of Lambsquarters and Pigweed in addition to a broad spectrum of annual broadleaf and grass weeds, this product in tank mix combination with Atrazine* or Simazine + Prowl 4E may be applied after planting, but before Field corn or weeds emerge. Apply by ground equipment in a minimum of 10 gals. of water or 20 gals. of liquid fertilizer. Apply by air in a minimum of 5 gals. of water. Refer to Table 1 of this label for rates of this product, Atrazine, or Simazine to be applied. Apply Prowl 4E according to the following rates below in Table 2.

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

Mixing Instructions: See **Tank Mixture with Atrazine-Postemergence.**

Table 2: Prowl 4E — Broadcast Rates Per Acre

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

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

TANK MIXTURE WITH ATRAZINE, OR SIMAZINE, ATRAZINE + SIMAZINE, WITH GRAMOXONE MAX, LANDMASTER BW, OR GLYPHOSATE FOR MINIMUM-TILLAGE OR NO-TILLAGE SYSTEMS

*See **Tank Mixture with Atrazine-Postemergence** for special mixing instructions.

In minimum-tillage or no-tillage systems where Field corn, Sweet corn and Popcorn is planted directly into a cover crop, stale seedbed, established sod, or previous crop residues, the contact herbicides Gramoxone Max, Landmaster BW, or Glyphosate may be added to a tank mix of this product, Atrazine, or Simazine, or this product + Atrazine + Simazine. See Comment No. 7 following Chart 1. This product + Atrazine or Simazine, or this product + Atrazine + Simazine portion of the tank mixture provides preemergence control of the weeds listed on this label in the tank mixture section for **This Product + Atrazine or Simazine, or This Product + Atrazine + Simazine-Pre- plant Surface, Preplant Incorporated, or Preemergence**.

Application: Apply before, during, or after planting, but before the Field corn, Sweet corn, and Popcorn emerges, at the rates specified in the Gramoxone Max, Landmaster BW, or Glyphosate label.

Gramoxone Max: See the Gramoxone Max label for weeds controlled and recommended rates. This treatment will not control weeds taller than 6 inches.

Note: Do not apply combinations containing Gramoxone Max in suspension-type liquid fertilizers because the activity of paraquat will be reduced.

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

Glyphosate: See the Glyphosate or Roundup RT label for weeds controlled, recommended rates, and other use precaution directions.

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

On coarse soils, apply 1 pt./A of this product with 1.3 lbs. of Atrazine 90DF* or Simazine 90DF*, or with 0.7 lb. of Atrazine 90DF** + 0.7 lb. of Simazine 90DF**. On medium soils, apply 1.33 pts./A of this product with 1.8 lbs. of Atrazine 90DF or Simazine 90DF, or with 0.9 lb. of Atrazine 90DF + 0.9 lb. of Simazine 90DF. On fine soils ***, apply 1.33 to 1.67 pts./A of this product with 1.8 to 2.2 lbs. of Atrazine 90DF or Simazine 90DF, or with 0.9 to 1.1 lbs. of Atrazine 90DF + 0.9 to 1.1 lbs. of Simazine 90DF.

*Use Simazine in preference to Atrazine when heavy infestations of Crabgrass or Fall panicum are expected.

**When using the tank mixture of this product + Atrazine 90DF + Simazine 90DF, use equal rates of Atrazine and Simazine as shown when heavy broadleaf weed infestations are expected. When heavy infestations of Crabgrass or Fall panicum are expected, use a 1:2 ratio of Atrazine + Simazine, instead of the 1:1 ratio given. (Example: Total Atrazine 90DF + Simazine 90DF = 1.8 lbs./A, use 0.6 lb. of

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Atrazine + 1.2 lbs. of Simazine, respectively.) Refer to Comment No. 2 following Chart 1 for Atrazine 4L and Simazine 4L conversions.

***For Cocklebur, Yellow nutsedge, and Velvetleaf control on *fine-textured soils* above 3% organic matter, apply 2.25 lbs./A of Atrazine 90DF, or equivalent rate of Atrazine 4L, or the same total amount of Atrazine + Simazine, with 1.33 to 1.67 pts./A of this product.

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

In minimum-tillage or no-tillage systems where Field corn, Sweet corn, and Popcorn is planted directly into a cover crop, stale seedbed, established sod, or previous crop residues, this product applied in combination with Atrazine will kill most emerged small annual weeds. Apply this product + Atrazine before, during, or after planting, but before Field corn, Sweet corn, and Popcorn emerges, according to the rates in Table 1.

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

As carriers, nitrogen solutions and complete liquid fertilizers, applied before Corn emergence, enhance burndown of existing weeds, and therefore, are recommended instead of water. Add X-77 surfactant at 1 to 2 qts./100 gals. of diluted spray, or another appropriate surfactant at its recommended rate, or add crop oil concentrate plus 28% liquid nitrogen (or equivalent). Apply before weeds exceed 3 inches in height. If Alfalfa is present, add Banvel to the spray mixture at 0.33 to 0.5 pt./A and apply before Alfalfa exceeds 6 inches in height.

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

TANK MIXTURE WITH MARKSMAN IN CONSERVATION TILLAGE — FIELD CORN

In conservation tillage systems where Field corn is planted directly into a cover crop or previous crop residue, this product + Marksman will kill most emerged small annual weeds. Apply this product + Marksman before, during, or after planting, but before Corn emergence on *medium* and *fine soils* with greater than 2.5% organic matter. For fields with existing vegetation exceeding 3 inches in height or when very dry conditions exist, add Gramoxone Max at its standard rate. This product + Marksman may be applied postemergence to Field corn less than 3 inches tall and before weedy grasses exceed the 2-leaf stage. As carriers, nitrogen solutions and complete liquid fertilizers, applied before Corn emergence, enhance burndown of existing weeds. Do not apply Gramoxone Max in suspension-type liquid fertilizer or use on emerged Corn.

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

STORAGE AND DISPOSAL.

Do not contaminate water, food or feed by storage and disposal.

PESTICIDE STORAGE: Keep container closed to prevent spills and contamination. Store in original container.

PESTICIDE DISPOSAL: Open dumping is prohibited. Wastes resulting from the use of this product are toxic. Improper disposal of unused pesticide, spray mixture, or rinsate is a violation of Federal law.

Pesticide, spray mixture, or rinsate that cannot be used according to label instructions must be disposed of according to Federal, state, or local procedures. For guidance in proper disposal methods, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office.

CONTAINER DISPOSAL:

Nonrefillable Container (rigid material; less than 5 gallons): Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container one-fourth full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

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Nonrefillable Container (rigid material; 5 gallons or greater): Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container one-fourth 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. Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

Refillable Containers: Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% 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.

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 should be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather, presence of other materials or other influencing factors in the use of the product, which are beyond the control of ARCANA LLC or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold ARCANA LLC and Seller harmless for any claims relating to such factors.

ARCANA LLC 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. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or ARCANA LLC, and Buyer and User assume the risk of any such use. ARCANA LLC MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

To the extent consistent with applicable law, neither ARCANA LLC nor Seller shall be liable for any incidental, consequential or special damages resulting from the use or handling of this product. THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF ARCANA LLC 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 ARCANA, LLC OR SELLER, THE REPLACEMENT OF THE PRODUCT.

ARCANA LLC 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 ARCANA LLC.

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APPENDICES

APPENDIX A: COMPATIBILITY TEST

Since liquid fertilizers can vary, even within the same analysis, always **check compatibility with herbicide(s) each time before use.**

Be especially careful when using **complete** suspension or fluid fertilizers, as serious compatibility problems are more likely to occur. Commercial application equipment may improve compatibility in some instances. The following test assumes a spray volume of 25 gals./A. For other spray volumes, make appropriate changes in the ingredients. Check compatibility using this procedure:

1. Add 1 pt. of fertilizer to each of 2 one-quart jars with tight lids.
2. To **one** of the jars, add one-quarter teaspoon or 1.2 milliliters of a compatibility agent approved for this use, such as MIX, Compex or Unite (one-quarter tsp. is equivalent to 2 pts./100 gals. spray). Shake or stir gently to mix.
3. To **both** jars, add the appropriate amount of herbicide(s). If more than one herbicide is used, add them separately with dry herbicides first, flowables next, and emulsifiable concentrates last. After each addition, shake or stir gently to thoroughly mix. The appropriate amount of herbicides for this test follows:

Dry herbicides: For each pound to be applied per acre, add 1.5 level teaspoons to each jar.

Liquid herbicides: For each pint to be applied per acre, add one-half teaspoon or 2.5 milliliters to each jar.

Note: For this product in tank mixtures with Atrazine + Simazine, use one-third to one-half the amount of Atrazine specified above and the remainder as Simazine, depending on whether the 1:2 or 1:1 ratio of Atrazine to Simazine is to be applied.

4. After adding all ingredients, put lids on and tighten, and invert each jar 10 times to mix. Let the mixtures stand 15 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 2 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 herbicide(s) in water before addition, or (B) add one-half of the compatibility agent to the fertilizer and the other one-half to the emulsifiable concentrate or flowable herbicide before addition to the mixture. If incompatibility is still observed, do not use the mixture.

APPENDIX B: LOW CARRIER APPLICATION For Broadcast Ground Application Only

Use sprayers, such as Ag-Chem RoGator, Hagie, John Deere HiCycle™, Melroe Spra-Coupe, Tyler Patriot™, or Willmar Air Ride®, that provide accurate and uniform application. **Only water may be used as a carrier.** Screens in suction and in-line strainers should be 50-mesh. Manufacturers may require that tip screens as fine as 100-mesh be used with some nozzles. Use a pump with capacity to: (1) maintain up to 35 to 40 psi at the nozzles, and (2) provide sufficient agitation in tank to keep mixture in suspension. Use a minimum of 5 gals. of spray mixture per acre. Maximum recommended sprayer speed is 15 mph. Rinse sprayer thoroughly with clean water immediately after each use.

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

APPENDIX C: AERIAL APPLICATION

Apply this product in water alone or in tank mixtures with Atrazine, or Linuron in a minimum total volume of 2 gals./A by aircraft. This product may also be applied by air in combination with Prowl. Avoid application under conditions where uniform coverage cannot be obtained or where excessive spray drift may occur. In order to assure that spray will be controllable within the target area when used according to label directions, make applications at a maximum height of 10 feet, 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 this product alone or this product + Atrazine by aircraft at a minimum upwind distance of 400 feet from sensitive plants, or apply this product + Linuron at a minimum upwind distance of 300 feet from sensitive plants.

Avoid application to humans or animals. Flagmen and loaders should 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 these factors when making decisions. The following drift management requirements must be followed to avoid off-target drift movements 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 three-fourths the length of the wingspan or rotor.
2. Nozzles must always point backwards parallel with the air stream and never be pointed downwards more than 45 degrees.

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

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

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

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

Boom Length For some use patterns, reducing the effective boom length to less than three-fourths of the wingspan or rotor length may further reduce drift without reducing swath width.

Application Height Applications should not be made at a height greater than 10 feet 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. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.)

Wind Drift potential is lowest between speeds of 2 to 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. **Note:** Local terrain can influence wind patterns. Every applicator should be 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 Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small-suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights when there is 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.

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

APPENDIX D: CENTER PIVOT IRRIGATION APPLICATION

This product alone in tank mixture with other herbicides on this label, which are registered for center pivot application, may be applied in irrigation water preemergence (after planting, but before weeds or crop emerge) at rates recommended on this label. This product also may be applied postemergence to the Field corn crop, Sweet corn, or Popcorn crop and preemergence to weeds in Field corn, Sweet corn, or Popcorn where postemergence applications are allowed on this label.

Follow all restrictions (height, timing, rate, etc.) to avoid illegal residues. Apply this product only through a center pivot irrigation system. Do not apply this product through any other type of irrigation system. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. If you have questions about calibration, you should contact State Extension specialists, equipment manufacturers, or other experts. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system, unless the pesticide label-prescribed safety devices for public water systems are in place. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut down the system and make the necessary adjustments should the need arise.

Operating Instructions 1. The system must contain a functional check-valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water-source contamination from backflow.

2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check-valve to prevent the flow of fluid back toward the injection pump.

3. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

5. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

6. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump or piston pump), effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

7. Do not apply when wind speed favors drift beyond the area intended for treatment.

8. Prepare a mixture with a minimum of 1 part of water to 1 part herbicide(s) and inject this mixture into the center pivot system. Injecting a larger volume of more dilute mixture per hour will usually provide more accurate calibration of metering equipment. Maintain sufficient agitation to keep the herbicide in suspension.

9. Meter into irrigation water during entire period of water application.

10. Apply in one-half to 1 inch of water. Use the lower water volume (one-half inch) on *coarse-textured soils* and the higher volume (1 inch) on *fine-textured soils*. More than 1 inch of water at application may reduce weed control by moving the herbicide below the effective zone in the soil.

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

APPENDIX E: DRY BULK GRANULAR FERTILIZERS Many dry bulk granular fertilizers may be impregnated or coated with this product alone or selected tank mixtures of this product which are registered for preplant incorporated or preplant surface application which are used to control weeds in crops on this product label and are not prohibited from use on dry bulk granular fertilizers.

When applying this product or this product mixtures with dry bulk granular fertilizers follow all directions for use and use precautions on the respective product labels regarding Field corn, Sweet corn, and Popcorn, rates per acre, soil texture, application methods (including timing of application), and rotational crops. All individual state regulations relating to dry bulk granular fertilizer blending, registration, labeling, and application are the responsibility of the individual and/or company selling the herbicide/fertilizer mixture. Prepare the herbicide/fertilizer mixtures by using any closed drum, belt, ribbon, or other commonly used dry bulk fertilizer blender. Nozzles used to spray this product and this product mixtures

onto the fertilizer must be placed to provide uniform spray coverage. Care should be taken to aim the spray directly onto the fertilizer only and to avoid spraying the walls of the blender. If the herbicide/fertilizer mixture is too wet, add a highly absorptive material, such as Agsorb® or Celatom MP-79®, or similar granular clay or diatomaceous earth materials, to obtain a dry, free-flowing mixture. Absorptive materials should be added only after the herbicide has been thoroughly blended into the fertilizer mixture. Best application results will be obtained by using a granule of six-thirtieth particle size or of a size similar to that of the fertilizer material being used. Generally, less than 2% by weight of absorptive material will be needed. Avoid using more than 5% absorptive material by weight. Calculate amounts of this product, Atrazine, Atrazine + Simazine or Simazine by the following formula:

2000				
Lbs. of fertilizer per acre	X	pts./A of liquid or Flowable product	=	pints of liquid or Flowable product per ton of fertilizer

2000				
Lbs. of fertilizer per acre	X	lbs./A of dry product	=	pounds of dry product per ton of fertilizer

Pneumatic (Compressed Air) Application (This Product Alone): High humidity, high urea concentrations, low fertilizer use rates, and dusty fertilizer may cause fertilizer mixture to build up or plug the distributor head, air tubes, or nozzle deflector plates. To minimize buildup, premix this product with Exxon Aromatic 200 at a rate of 1 to 4 pts./gal. of this product. Aromatic 200 is a noncombustible/nonflammable petroleum product. Aromatic 200 may be used in either a fertilizer blender or through direct injection systems. Drying agents should not be used when using Aromatic 200.

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

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

Application Apply 200 to 700 lbs. of the herbicide/fertilizer mixture per acre. For best results, apply the mixture uniformly to the soil with properly calibrated equipment immediately after blending. Uniform application of the herbicide/fertilizer mixture is essential to prevent possible crop injury. Non-uniform application may also result in unsatisfactory weed control. In areas where conventional tillage is practiced, a shallow incorporation of the mixture into the soil may improve weed control.

On *fine- or medium-textured soils* in areas where soil incorporation is not planned, i.e., reduced tillage situations or in some conventional till situations, make applications approximately 30 days before planting to allow moisture to move the herbicide/fertilizer mixture into the soil. On *coarse-textured soils*, make applications approximately 14 days prior to planting.

Use Precaution: To avoid crop injury, do not use the herbicide/ fertilizer mixture on Field corn, Sweet corn, and Popcorn where bedding occurs.

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