

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

November 10, 2021

Jennifer Hughes Regulatory Leader Corteva Agriscience LLC 9330 Zionsville Road Indianapolis, IN 46268

Subject: Registration Review Label Amendments Incorporating Mitigation Measures from the Atrazine and Acetochlor Interim Decisions and the Technical Registrants' Commitments for the Endangered Species Act (ESA) Biological Evaluation for Atrazine *Product Name*: GF-2836 *EPA Registration Number*: 62719-646 *Application Dates*: 12/16/2020 and 9/27/2021 *Decision Numbers*: 568896 and 578763

Dear Ms. Hughes:

The Agency, in accordance with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, has completed reviewing all the information submitted with your application to support the Registration Review of the above referenced product in connection with the Atrazine and Acetochlor Interim Decisions and with the Atrazine technical registrants' commitments for the ESA Biological Evaluation. The Agency has concluded that your submission is acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

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.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only Page 2 of 2 EPA Reg. No. 62719-646 Decision No. 568896 and 578763

distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

If you have any questions about this letter, please contact Quinn Gavin at gavin.quinn@epa.gov.

Sincerely,

< - 2

Linda Arrington, Branch Chief Risk Management and Implementation Branch 4 Pesticide Re-Evaluation Division Office of Pesticide Programs

Enclosure

(Base label):

#### **RESTRICTED USE PESTICIDE** Due to Ground and Surface Water Concerns

For retail sale to and use only by Certified Applicators, or persons under their direct supervision, and only for those uses covered by the Certified Applicator's certification.

This product is a restricted use herbicide due to ground and surface water concerns. Users must read and follow all precautionary statements and instructions for use in order to minimize potential for atrazine to reach ground and surface water.

ACETOCHLOR	GROUP	15	HERBICIDE
ATRAZINE	GROUP	5	HERBICIDE

# GF-2836 Herbicide

A preemergence herbicide for control of annual grasses and broadleaf weeds in field corn, production seed corn, silage corn, sweet corn and popcorn

Active Ingredients: acetochlor: 2-chloro-2'-methyl-6'-ethyl-N- ethoxymethylacetanilide atrazine: [2-chloro-4-(ethylamino)-6- (isopropylamino)-s-triazine] and	21.9%
related triazines Other Ingredients:	63.5%



Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 62719-646

Contains 2.0 pounds acetochlor and 1.33 pounds atrazine active ingredient per gallon.

Not for use in the states of Hawaii or Alaska, or in the U.S. territories (Puerto Rico, Guam, American Samoa, the U.S. Virgin Islands, and the North Mariana Islands)

# Keep Out of Reach of Children **CAUTION**

# **Personal Protective Equipment (PPE)**

Mixers, loaders, applicators and other handlers must wear:

- Coveralls over long-sleeved shirt and long pants
- Waterproof gloves except when mixed with oil use Chemical-resistant gloves such as Barrier Laminate, Nitrile Rubber, Neoprene Rubber and Viton gloves
- Chemical-resistant footwear plus socks
- Protective eyewear
- Chemical-resistant headgear (If overhead exposure)
- A chemical-resistant apron when mixing/loading, cleaning up spills, or cleaning equipment, or otherwise exposed to the concentrate.

See Engineering Controls for additional requirements.

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

**Engineering Controls:** When handlers use closed systems or enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(5)], the handler PPE requirements may be reduced or modified as specified in the WPS.

# **User Safety Recommendations**

Users should:

- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

# **Environmental Hazards**

This pesticide is toxic to fish and aquatic invertebrates. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from treated areas. Runoff and drift from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwaters.

#### Non-Target Organism Advisory

This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated site. Protect the forage and habitat of non-target organisms by following label directions intended to minimize spray drift.

#### Surface Water Advisory

This product may impact surface water quality due to runoff of rainwater. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having high potential for reaching surface water via runoff for several weeks after application.

A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of acetochlor from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours.

#### **Groundwater Advisory**

Acetochlor is known to leach through soil into groundwater under certain conditions as a result of label use. This chemical may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

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

### Agricultural Use Requirements

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

#### Nonrefillable containers 5 gallons or less:

#### Storage and Disposal

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

**Pesticide Storage:** Store in original container only. Keep container closed when not in use. Do not store near food or feed. In case of spill or leak on floor or paved surfaces, soak up with vermiculite, earth, or synthetic absorbent.

**Pesticide Disposal:** Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

**Container Handling:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

#### **Refillable containers larger than 5 gallons:**

#### Storage and Disposal

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

**Pesticide Storage:** Store in original container only. Keep container closed when not in use. Do not store near food or feed. In case of spill or leak on floor or paved surfaces, soak up with vermiculite, earth, or synthetic absorbent.

**Pesticide Disposal:** Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

**Container Handling:** 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 two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

#### Nonrefillable containers larger than 5 gallons:

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

**Pesticide Storage:** Store in original container only. Keep container closed when not in use. Do not store near food or feed. In case of spill or leak on floor or paved surfaces, soak up with vermiculite, earth, or synthetic absorbent.

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Refer to inside of label booklet for additional precautionary information including First Aid and Directions for Use.

Notice: Read the entire label. Use only according to label directions. Before using this product, read Warranty Disclaimer, Inherent Risks of Use and Limitation of Remedies at end of label booklet. If terms are not acceptable, return at once unopened.

In case of emergency endangering health or the environment involving this product, call 1-800-992-5994.

Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

EPA Reg. No. 62719-646

EPA Est.

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Produced for Corteva Agriscience LLC 9330 Zionsville Road Indianapolis, IN 46268

Net Contents \_\_\_\_

(cover/shipping container)

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Active Ingredients:	
acetochlor: 2-chloro-2'-methyl-6'-ethyl-N-	
ethoxymethylacetanilide	21.9%
atrazine: [2-chloro-4-(ethylamino)-6-	
(isopropylamino)-s-triazine] and	
related triazines	14.6%
Other Ingredients:	63.5%
Total	100.0%

Contains 2.0 pounds acetochlor and 1.33 pounds atrazine active ingredient per gallon.

Not for use in the states of Hawaii or Alaska, or in the U.S. territories (Puerto Rico, Guam, American Samoa, the U.S. Virgin Islands, and the North Mariana Islands)

# Keep Out of Reach of Children **CAUTION**

#### **Agricultural Use Requirements**

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

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(Page 1 through end):

# CAUTION

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- Protective eyewear
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#### Groundwater Advisory

Acetochlor is known to leach through soil into groundwater under certain conditions as a result of label use. This chemical may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

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

### **Directions for Use**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read all Directions for Use carefully before applying.

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

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.

#### **Endangered Species:**

It is a Federal offense to use any pesticide in a manner that results in an unauthorized "take" (e.g., kill or otherwise harm) of an endangered species under the Endangered Species Act section 9. When using this product, you must follow the measures contained in the Endangered Species Protection Bulletin for the area in which you are applying the product. You must obtain a Bulletin no earlier than six months before using this product. To obtain Bulletins, consult http://www.epa.gov/espp/, call 1-844-447-3813, or email ESPP@epa.gov. You must use the Bulletin valid for the month in which you will apply the product.

### **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:

- Long sleeved shirts and long pants
- Waterproof gloves except when mixed with oil use Chemical-resistant gloves such as Barrier Laminate, Nitrile Rubber, Neoprene Rubber and Viton gloves
- Shoes plus socks

#### **Storage and Disposal**

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

**Pesticide Storage:** Store in original container only. Keep container closed when not in use. Do not store near food or feed. In case of spill or leak on floor or paved surfaces, soak up with vermiculite, earth, or synthetic absorbent.

**Pesticide Disposal:** Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

#### Nonrefillable containers 5 gallons or less:

**Container Handling:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

#### **Refillable containers larger than 5 gallons:**

**Container Handling:** 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 two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

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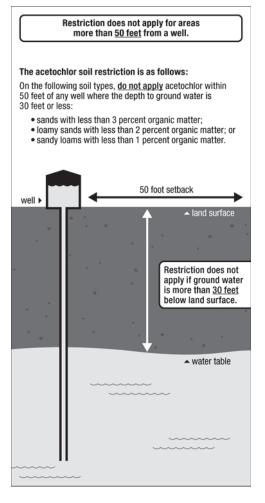
**Product Information** 

For use only on field corn, production seed corn, silage corn, sweet corn and popcorn. Corn in this label refers to: field corn, production seed corn, silage corn, sweet corn and popcorn.

GF-2836 herbicide is a unique combination of the herbicides acetochlor and atrazine plus the antidote or safener, dichlormid. While the acetochlor and atrazine provide weed control, the dichlormid safens corn against herbicide injury. GF-2836 may be applied to the surface or incorporated into the top 1-2 inch layer of soil. It may be used for control alone, or in tank mix combinations, for the weeds listed in the "Target Weeds" section of these use directions. GF-2836 controls weeds by interfering with normal germination and seedling development. GF-2836 does not control established or germinated weeds present at application.

# **Use Restrictions**

- Not for use in the states of Hawaii or Alaska, or in the U.S. territories (Puerto Rico, Guam, American Samoa, the U.S. Virgin Islands, and the North Mariana Islands)
- This product is restricted to impregnation of dry bulk fertilizer to 340 tons per worker per day for no more than 30 days per calendar year for use on corn.
- Do not apply GF-2836 using mechanically pressurized handgun to sweet corn.
- On the following soil types, do not apply this product within 50 feet of any well where the depth to groundwater is 30 feet or less: sands with less than 3% organic matter; loamy sands with less than 2% organic matter; or sandy loams with less than 1 percent organic matter. See the figure for additional clarification.



• This product may not be mixed or loaded within 50 ft. of intermittent streams and rivers, natural or impounded lakes and reservoirs. This product may not be applied by ground within 66 feet of the points where field surface water runoff enters perennial or intermittent streams and rivers or within 200 feet around natural or impounded lakes and reservoirs. If this product is applied to highly erodible land, the 66-foot buffer or setback from runoff entry points must be planted to crop, seeded with grass or other suitable crop.

This product must not be mixed or loaded, or used within 50 feet of all wells, including abandoned wells. drainage wells, and sinks holes. 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 washwater, and rainwater that may fall on the pad. Surface water shall not be allowed to either flow over or from the pad, which means the pad must be self-contained. The pad shall be sloped to facilitate material removal. An unroofed pad shall be of sufficient capacity to contain at a minimum 110% of the capacity of the largest pesticide container or application equipment on the pad. A pad that is covered by a roof of sufficient size to completely exclude precipitation from contact with the pad shall have a minimum containment capacity of 100% of the capacity of the largest pesticide container or application equipment on the pad. Containment capacities as described above shall be maintained at all times. The above specified minimum containment capacities do not apply to vehicles when delivering pesticide shipments to the mixing/loading site. Additional State imposed requirements regarding well-head setbacks and operational area containment must be observed.

#### • Tile-Outletted Fields Containing Standpipes

To ensure protection of surface water from runoff through standpipes with tile-outlets in fields, one of the following restrictions must be used in applying this product to tile-outletted fields containing standpipes:

- 1. Do not apply this product within 66 feet of standpipes in tile-outletted fields.
- 2. Apply this product to the entire tile-outletted field and immediately incorporate it to a depth of 2-3 inches in the entire field.
- 3. Apply this product to the entire tile-outletted field under a no-till practice only when high crop residue management practices are used. High crop residue management is described as a crop management practice where little or no crop residue is removed from the field during or after crop harvest.
- Do not apply GF-2836 to sweet corn as an early postemergence application
- Chemigation: Do not apply this product through any type of irrigation system.
- Do not use flood irrigation to apply or incorporate this product.
- Product must be used in a manner that will prevent back siphoning in wells, spills or improper disposal of excess pesticide, spray mixtures or rinsates.
- Do not apply under conditions that favor runoff or wind erosion of soil containing this product to nontarget areas. To prevent off-site movement due to runoff or wind erosion:

Avoid treating powdery dry or light sandy soils when conditions are favorable for wind erosion. Under these conditions, the soil surface should first be settled by rainfall or irrigation.

Do not apply to impervious substrates such as paved or highly compacted surfaces or frozen or snow covered soils.

- Do not use tailwater from the first flood or furrow irrigation of treated fields to treat non-target crops unless at least 1/2 inch of rainfall has occurred between application and the first irrigation.
- Aerial Application: Do not apply this product using aerial application equipment.
- Do not use GF-2836 on any crop other than field corn, production seed corn, silage corn, sweet corn, and popcorn.
- Do not apply GF-2836 to sweet corn as an early postemergence application.
- Do not contaminate irrigation water used for crops other than corn or water used for domestic purposes.
- Do not apply GF-2836 before pre-irrigation in irrigated areas.
- Maximum Atrazine Application Rates Per Calendar Year:

Maximum annual atrazine broadcast application rates for corn must be as follows:

- If no atrazine was applied prior to corn emergence, apply a maximum of 2.0 pounds active ingredient (6.0 quarts GF-2836) per acre. If postemergence treatment is required following an earlier herbicide application, the total atrazine applied may not exceed 2.5 pounds active ingredient per acre per calendar year. Note: One quart per acre GF-2836 delivers 0.3325 pound active ingredient atrazine per acre.
- Apply a maximum of 2.0 pounds active ingredient (6.0 quarts GF-2836) per acre if a single preemergence application is made on soils that are not highly erodible or on highly erodible soil if at least 30% of the soil is covered with plant residues, or
- Apply a maximum of 1.6 pounds active ingredient (4.8 quarts GF-2836) per acre as a single preemergence application on highly erodible soils if less than 30% of the soil is covered with plant residues; or 2.0 pounds active ingredient (6.0 quarts GF-2836) per acre if only applied postemergence.
- Maximum Acetochlor Application Rates Per Calendar Year:
  - Maximum annual acetochlor broadcast application rates for corn must not exceed 3.0 pounds active ingredient (6.0 quarts GF-2836) per acre. Note: One quart per acre GF-2836 delivers 0.5 pound active ingredient acetochlor per acre).
- Applications of GF-2836 to corn must be made before the crop reaches 11 inches in height.
- Postemergence applications of atrazine to corn must be made before the crop reaches 12 inches in height.
- **Preharvest Interval:** Do not apply GF-2836 within 60 days of harvest of field corn for field corn forage uses or 45 days for sweet corn forage uses.

# **Use Precautions**

- Failure to strictly follow label directions may result in exceeding the maximum annual atrazine use rates as stipulated by the Environmental Protection Agency.
- Note: This product contains atrazine and thus may not control weeds that are known or suspected to be triazine resistant. Following many years of continuous use of atrazine and chemically related products, biotypes of some of the weeds listed on this label have been reported which cannot be effectively controlled by atrazine and related herbicides. Where this is known or suspected and weeds controlled by atrazine are expected to be present along with resistant biotypes, it is recommended that atrazine be used in combinations or in sequence with other registered herbicides which are not triazines. If only resistant biotypes are expected to be present, use a registered non-triazine herbicide.
- GF-2836 should not be stored near seeds, fertilizers, or foodstuffs.
- GF-2836 should not be used on corn seed stock such as Breeders, Foundation, or Increase.
- All containers of GF-2836 should be kept tightly closed when not in use.
- Applied according to directions and under normal growing conditions, GF-2836 will not harm the treated crop. During germination and early stages of growth, extended periods of unusually cold and wet or hot and dry weather, insect or plant disease attack, carryover pesticide residues, the use of certain soil applied systemic insecticides, or improperly placed fertilizers or soil insecticides may create abnormal conditions that weaken crop seedlings. GF-2836 used under these abnormal conditions could result in crop injury.

#### **Rotational Crop Restrictions:**

When tank mixing with other herbicides, follow the most restrictive crop rotation guidelines on the label of each product used. The following rotational crops may be planted as indicated:

Rotational Crop	Timing or Interval
corn (1)	0 months after application
sorghum, soybeans(2)	Spring following application
alfalfa, barley, dry beans (3), lupin (4), pearl or proso millet, oats, pea (6), potatoes, rye, sugar beets, sunflower, tobacco (7), triticale, wheat, wild	15 months after application (5)
rice	

Numbers within parentheses (-) in the table refer to Specific Rotational Crop Requirements below.

- (1) If crop treated with GF-2836 is lost, corn may be replanted immediately. Do not make a second application of GF-2836. Do not apply GF-2836 after June 10, unless only corn will be planted the following year.
- (2) Due to the risk of atrazine carryover, injury may occur to soybeans the year following corn when planted in north central and northwest lowa, south central and southwest Minnesota, northern Nebraska and southeast South Dakota on soils having a calcareous surface layer and relatively high pH
- (3) Dry beans includes: adzuki, kidney, lima, navy, pinto
- (4) Lupin includes: grain, white, white sweet
- (5) Approved rotation crops list does not include any species of succulent beans and peas.
- (6) Pea includes: blackeyed, chick, cow, Crowder, field, pigeon, Southern
- (7) Because of atrazine carryover, injury may occur to tobacco.

# **Aerial Application**

Do not apply this product using aerial application equipment.

### Mandatory Spray Drift

#### Ground Boom Applications:

- Applicators are required to select a nozzle and pressure that deliver coarse or coarser droplets in accordance with American Society of Agricultural & Biological Engineers Standard 572 (ASABE S572).
- User must only apply with the release height recommended by the manufacturer, but no more than 4 feet above the ground or crop canopy.
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.
- User must maintain a 15 foot (4.6 m) in-field downwind buffer (in the direction in which the wind is blowing) from the edge of streams and rivers, as well as high-tide line for all estuarine/marine environments.

# Spray Drift Advisories

- THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.
- BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.
- IMPORTANCE OF DROPLET SIZE
  - An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

Controlling Droplet Size - Ground Boom

- Volume Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.
- BOOM HEIGHT Ground Boom
  - Use the lowest boom height that is compatible with the spray nozzles that will provide uniform coverage. For ground equipment, the boom should remain level with the crop and have minimal bounce.

#### SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

#### • TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

#### TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or 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.

#### WIND

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.

Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

# Weed Resistance Management

GF-2836 contains the active ingredients Acetochlor (Group 15) and Atrazine (Group 5) herbicides, based on the mode of action classification system of the Weed Science Society of America. Proactively implementing diversified weed control strategies to minimize selection for weed populations resistant to one or more herbicides is a best practice. A diversified weed management program may include the use of multiple herbicides with different modes of action and overlapping weed spectrum with or without tillage operations and/or other cultural practices. Research has demonstrated that using the labeled rate and directions for use is important to delay the selection for resistance.

The continued effectiveness of this product depends on the successful implementation of a weed resistance management program.

To aid in the prevention of developing weeds resistant to this product, users should:

- Scout fields before and after application to ensure herbicides and rates will be appropriate for the weed species and weed sizes present.
- Start with a clean field, using either a burndown herbicide application or tillage.
- If using post-emergence herbicides or tank mixes, control weeds early when they are relatively small.
- Apply full rates of GF-2836 for the most difficult to control weed in the field at the specified time to minimize weed escapes.
- Scout fields after application to detect weed escapes or shifts in control of weed species.
- Control weed escapes before they reproduce by seed or proliferate vegetatively.
- Report any incidence of non-performance of this product against a particular weed to your local company representative, local retailer, or county extension agent.
- Contact your local company representative, crop advisor, or extension agent to find out if suspected resistant weeds to these MOAs have been found in your region. DO NOT assume that each listed weed is being controlled by multiple modes of action. Products with multiple active ingredients are intended to broaden the spectrum of weeds that are controlled. Some weeds may be controlled by only one of the active ingredients in this product.
- If resistance is suspected, treat weed escapes with an herbicide having a mode of action other than Group 15 or Group 5 and/or use nonchemical methods to remove escapes, as practical, with the goal of preventing further seed production.
- Suspected herbicide-resistant weeds may be identified by these indicators:
- Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
- A spreading patch of non-controlled plants of a particular weed species; and
- Surviving plants mixed with controlled individuals of the same species.

Additionally, users should follow as many of the following herbicide resistance management practices as is practical:

- Use a broad spectrum herbicide with another mode of action as a foundation in a weed control program, if appropriate.
- Utilize sequential applications of herbicides with alternative modes of action.
- Rotate the use of this product with non-Group 15 and 5 herbicides.
- Avoid making more than two sequential applications of GF-2836 and any other Group 15 or Group 5 herbicides within a single growing season unless mixed with an herbicide with a different mode of action with an overlapping spectrum for the difficult-to-control weeds.
- Incorporate non-chemical weed control practices, for example, mechanical cultivation, crop rotation, cover crops and weed-free crop seeds, as part of an integrated weed control program.
- Use good agronomic principles that enhance crop development and crop competitiveness.
- Thoroughly clean plant residues from equipment before leaving fields suspected to contain resistant weeds.
- Manage weeds in and around fields to reduce weed seed production.

#### General principles of herbicide resistance management

- 1. Apply integrated weed management practices. Use multiple herbicide modes-of-action with overlapping weed spectrums in rotation, sequences, or mixtures.
- 2. Use the full recommended herbicide rate and proper application timing for the hardest to control weed species present in the field.
- 3. Scout fields after herbicide application to ensure control has been achieved. Avoid allowing weeds to reproduce by seed or to proliferate vegetatively.
- 4. Monitor site and clean equipment between sites.

#### For annual cropping situations also consider the following:

- 1. Start with a clean field and control weeds early by using a burndown herbicide treatment or tillage in combination with a soil-applied residual herbicide as appropriate.
- 2. Use cultural practices such as cultivation and crop rotation, where appropriate.
- 3. Use good agronomic principles that enhance crop competitiveness.
- 4. Use new commercial seed that is as free of weed seed as possible.

# Report any incidence of repeated non-performance of this product on a particular weed to your Corteva Agriscience Dow AgroSciences representative, local retailer, or county extension agent.

# **Application Directions – Corn**

#### Carriers

**Liquids:** Either water or liquid fertilizers such as solutions, slurries or suspensions may be used as liquid carriers. If fluid fertilizers are used, a physical compatibility test with these must be done **before combining** in the spray tank. See Appendix I for details of the compatibility testing procedure. Even if GF-2836 is physically compatible with a fluid fertilizer, constant agitation is necessary to maintain a uniform mixture during application.

**Dry Bulk Fertilizer:** GF-2836 may be impregnated on dry bulk fertilizer and applied as the fertilizer is spread. See Appendix II for directions and restrictions including which fertilizers are compatible.

• This product is restricted to impregnation of dry bulk fertilizer to 340 tons per worker per day for no more than 30 days per calendar year for use on corn.

# Adding to Spray Tank

The spray tank must be clean, thoroughly rinsed and decontaminated before adding either GF-2836 alone or with tank mix combinations. If water is used as the carrier, use clean water.

**Used Alone:** When GF-2836 is used alone, add the specified amount to the spray tank when the tank is half filled with carrier, then add the rest of the water or fluid fertilizer. Provide sufficient agitation during mixing and application to maintain a uniform emulsion.

**Tank Mixed:** If a tank mixture is used, it is recommended that a compatibility test be done before actual tank mixing. See Appendix I for details on the procedure for such a test.

Once compatibility is confirmed for the tank mix, fill the tank half full of carrier. Start and continue agitation throughout mixing. All return lines to the spray tank must discharge below the liquid level. Add components in the following order of formulation:

- If a wettable powder or dry flowable formulation is used, make a slurry with water and add it slowly through the screen into the tank. Agitate during the procedure.
- If a flowable formulation is used, add slowly through screen into the tank. Mixing and compatibility may be improved when the flowable is diluted with water before adding to the tank.

- Add GF-2836 next.
- Add ammonium sulfate then Durango<sup>®</sup> DMA<sup>®</sup> herbicide, 2,4-D herbicide, and a nonionic surfactant last, if needed.
- Complete filling the sprayer tank and continue agitation.
- Batches should be mixed and applied the same day.

# Volume

Liquid: Use a minimum of 10 gallons per acre in broadcast boom equipment for ground applications.

**Dry Bulk Fertilizer:** Use a minimum of 200 pounds of dry bulk fertilizer per acre. See Appendix II for directions and restrictions.

# Pressure

If liquid carriers are used, the pressure at the nozzle should be 15 to 40 psi to ensure good distribution in the spray pattern. Use appropriate nozzles and 50-mesh or coarser screens, if needed. Maintain sufficient agitation to ensure the mixture is suspended in the spray tank.

# **Application Timing and Methods**

For the optimum period of effective weed control during the time most critical to corn production, preplant applications of GF-2836 should occur as close as possible to planting. Preemergence applications should occur as close as possible to planting, but prior to weed emergence.

**Early Preplant:** On medium and fine textured soils (Table 1), GF-2836 may be applied up to 30 days prior to planting.

**Preplant Incorporation:** GF-2836 and certain tank mixes may be mechanically incorporated in the top 2 inches of the soil with field cultivators, discs, or spring tooth harrows at any time within 14 days prior to planting. Improper incorporation, excessive crop residues, or poor soil tilth may result in erratic, streaked or otherwise unsatisfactory weed control. Avoid moving or shaping soil after incorporation.

**Preemergence Surface:** GF-2836 and certain tank mixes may be applied to the soil surface as a broadcast or banded application. Precipitation or sprinkler irrigation of at least 0.25 inch following application is required to bring GF-2836 into contact with germinating weed seeds. If rain or sprinkler irrigation does not occur within 7 days after application, weed control may be improved by using a rotary hoe, or similar device, to incorporate the herbicide. The device used should be run at a shallow depth to prevent disturbing the corn seed. Do not remove GF-2836 from the weed control zone or dilute it with untreated soil.

**Postplant-Preemergence:** GF-2836 may be applied immediately after planting but prior to corn emergence. If rain or sprinkler irrigation does not occur within 7 days after application, weed control may be improved by using a rotary hoe or similar device to shallowly incorporate the herbicide; do not disturb the germinating corn. Do not remove GF-2836 from the weed control zone or dilute it with untreated soil.

**Banding-Preemergence:** GF-2836 may be applied in a 10 to 14 inch band after corn planting but prior to corn emergence. If rain or sprinkler irrigation does not occur within 7 days after application, weed control may be improved by using a rotary hoe or similar device to shallowly incorporate the herbicide; do not disturb the germinating corn. Do not remove GF-2836 from the weed control zone or dilute it with untreated soil.

**Early Postemergence:** GF-2836 may be applied early postemergence to corn **up to 11" tall**. Applications must be made prior to weed seedling emergence or in a tank mixture that controls the emerged weeds. **Note: Do not** apply GF-2836 to sweet corn as an early postemergence application. Read and follow directions, precautions, and restrictions on tank mix product labels.

**Sprinkler Irrigation: Do not apply GF-2836 through sprinkler irrigation systems.** Use a sprinkler system only to incorporate GF-2836 after application. After GF-2836 has been applied, a sprinkler irrigation system set to deliver 0.25 to 0.75 inch of water per acre may be used to incorporate the product. Using more than 0.75 inch of water could result in reduced performance. On sandy soils low in organic matter, use no more than 0.5 inch of water. Do not use flood irrigation to apply or incorporate GF-2836.

# Planting

Planting should be done as close to the time of application of GF-2836 as possible. This allows GF-2836 to provide effective weed control during the time it is most critical in the production of corn.

# Cultivation

Cultivation should be delayed as long as possible. If weeds develop, a shallow cultivation or rotary hoeing will generally result in improved weed control. If GF-2836 was incorporated, cultivate to a depth of less than half the depth of incorporation.

If cultivation is necessary due to soil crusting, compaction, or escaped weeds, adjust equipment to run shallow and minimize soil movement. This will decrease the possibility of diluting or moving the herbicide from the weed control zone.

# Soil Texture and Organic Matter

The use rate of GF-2836 is determined by soil texture and organic matter content, which must be determined prior to application. Soils are grouped into three textural classes (coarse, medium and fine), as outlined in Table 1.

#### Table 1: Soil Texture Groupings for GF-2836 Use Rate Selection.

Coarse	Medium	Fine
Sand	Loam	Sandy Clay Loam
Loamy Sand	Silt	Sandy Clay
Sandy Loam	Silt Loam	Silty Clay Loam
-		Silty Clay
		Clay Loam
		Clay

### **Use Rates in Conventional Tillage Systems**

# Table 2: GF-2836 Use Rates (Qts/acre) by Soil Texture and Organic Matter Content in Conventional Tillage Systems.

The following use rates are for preplant incorporated, preemergence, and early postemergence applications (see Application Timing and Methods). Consult Table 3 if no-till applications are made or application is made more than 14 days prior to planting under conventional tillage.

	Soil Organic Matter Content		
Soil Texture	Less than 3%	3% or Greater	
Coarse	3.3-3.6	3.6-3.9	
Medium	3.6-4.2	3.9-4.2	
Fine	3.9-4.5†	3.9 <b>-</b> 5.1 <sup>+</sup>	

<sup>†</sup> On highly erodible soils with less than 30% plant residue, do not apply more than 4.2 quarts/acre.

**Organic Matter:** If the organic matter content of the soil is at the lower end of the range, use the lower rates in the rate range provided in Table 2; if the organic matter content is at the upper end of the range, use the higher rates.

**Weed Infestation:** If the weed infestation is lighter, use the lower rates in the rate range for the soil texture and organic matter content. If the weed infestation is heavier, use the higher rates in the rate range for the soil conditions.

### **Use Rates for Reduced Tillage Systems**

GF-2836 may be used in reduced or no-tillage systems as outlined in Table 3. Applications may be made from up to 30 days prior to planting to after planting. Optimal weed control will be obtained when applications are made as close to planting as possible but before the corn emerges. It is recommended that a burndown herbicide such as Durango DMA or 2,4-D be tank mixed with GF-2836 in reduced or no-tillage systems to control emerged weeds.

	Time Of Application Relative To Planting					
Soil Texture	Greater Than 14 Days Before Planting	Less Than 14 Days Before Planting or After Planting But Prior to Corn Emergence	After Planting and/or Corn Emergence			
Coarse	Do not apply more than 14 days before planting on coarse textured soils	3.3-3.9	3.3-3.9			
Medium	3.6-5.1	3.6-4.2	3.6-4.2			
Fine	4.2-5.1	3.9-5.1	3.9-5.1			

#### Table 3: GF-2836 Use Rates <sup>†</sup> (Qts/acre) by Soil Texture in Reduced or No-Tillage Systems

<sup>+</sup> Rates are for single applications. Split applications of GF-2836 may be used; apply at least 60% of the specified rate up to 30 days before planting and the remaining balance, up to 40%, at planting.

### **Band Applications**

For band applications, use row and band width measurements (inches) to calculate the amount of GF-2836 to be applied per acre as follows:

Band width in inches	Х	Rate per acre for a	=	Amount of GF-2836
Row width in inches		broadcast treatment		to apply per acre

### Weeds Controlled

GF-2836 applied as directed in this label will control or partially control the weeds listed in Table 4. Additional weeds may be controlled with tank mixes. See the "Tank Mix Combinations" section of this label for tank mix directions. Always consult the tank mix product labels for specific use rates and directions. Always follow the most restrictive label directions when tank mixing GF-2836 with another product. GF-2836 may be tank mixed with any other registered corn product as long as compatibility is verified and tank mixing is not prohibited by the tank mix product label. Note: This product contains atrazine and may not control weeds that are known or suspected to be triazine resistant.

	C = Control PC = Partial		C = Control PC = Partial
Grasses and Sedges	Control	Broadleaves	Control
barnyardgrass	С	beggarweed, Florida	С
crabgrass spp.	С	carpetweed	С
crowfootgrass	С	cocklebur (2)	PC
cupgrass, southwestern	С	galinsoga	С
cupgrass, woolly	PC	jimsonweed	С
foxtail, giant	С	kochia	PC
foxtail, green	С	lambsquarters, common	С
foxtail, robust (purple, white)	С	morningglory spp.	С
foxtail, yellow	С	nightshade, black	С
goosegrass	С	nightshade, hairy	С
johnsongrass, seedling	PC	pigweed, redroot	С
millet, foxtail	С	purslane, common	С
millet, wild proso	PC	pusley, Florida	С
nutsedge , yellow (1,2)	С	ragweed, common	С
panicum, browntop	С	ragweed, giant	PC
panicum, fall	С	sicklepod	С
panicum, Texas (3)	С	sida, prickly	С
rice, red	С	smartweed spp.	С
sandbur, field	PC	velvetleaf (2)	PC
shattercane	PC	waterhemp, tall	С
signalgrass, broadleaf (3)	С		
sprangletop, red	С		
witchgrass	С		

(1) Yellow nutsedge requires a minimum of 4.0 quarts per acre. Incorporation will improve control.

(2) Activity may be reduced under dry conditions or following early (more than 14 days) preplant applications. Sequential herbicides or additional atrazine may be needed for complete control.

- (3) Best control is achieved when GF-2836 is applied within 5 days of planting and rainfall occurs shortly after application or mechanical incorporation is used to activate the herbicide. If rainfall does not occur within 7 days after application, shallow cultivation will enhance activity. Excessive rainfall after application may reduce control. Under adverse weather conditions and/or heavy infestations, a cultivation or follow-up herbicide may be needed.
- (4)

# GF-2836 Tank Mix Combinations

When tank mixing or sequentially applying atrazine or simazine or products containing either a.i. to corn, the total pounds of simazine and/or atrazine applied (Ib ai/A) must not exceed 2.5 pounds of active ingredient per year.

For all applications, do not exceed the maximum rate of acetochlor as specified in the Maximum Acetochlor Application Rate per Calendar Year section of this label.

# Use of Spray Adjuvants

GF-2836 is a preemergence herbicide for which spray adjuvants have little or no effect on performance. However, several herbicides used in tank mixtures with GF-2836 require use of adjuvants to aid in the burndown of emerged weeds. Use only those adjuvants specified on tank mix product labels and approved for agricultural crop use. Adjuvants and/or low rate liquid fertilizers (28%, 30% or 32% UAN) or ammonium sulfate (AMS) may be used with tank mixes applied preplant or preemergence to the crop. **Note:** Do not use liquid fertilizers as the carrier when GF-2836 is applied postemergence to corn as severe injury may result. The addition of liquid fertilizers used as adjuvants with GF-2836 tank mixes applied postemergence to corn under environmental stress conditions may result in significant crop injury and should be avoided if the risk of crop injury is unacceptable.

# **Preplant or Preemergence Tank Mix Combinations**

Tank mix combinations may be used in conventional, reduced or no-till systems and be applied by the same methods and at the same timings as GF-2836 unless otherwise specified in the tank mix product label.

When tank mixing GF-2836 with atrazine, do not exceed the maximum allowable rate of atrazine in your county or state. In some atrazine management areas, atrazine is more restricted. Consult your county extension office or state university for further information.

Tank Mix Herbicide <sup>†</sup>	Comments
Atrazine 4L	<ul> <li>Preplant surface, preplant incorporated, preemergence. If emerged weeds are greater than 1.5 inches tall at the time of application, add an appropriate postemergence herbicide</li> <li>Longer growing season areas</li> <li>High rainfall areas</li> <li>Heavy broadleaf weed pressure</li> </ul>
Balance Pro	<ul> <li>Not labeled in all states; please refer to the Balance Pro label for precautionary statements, directions for use, geographic and other restrictions</li> <li>Field corn only</li> <li>Refer to the use rates section for GF-2836 for minimum use rates</li> </ul>
Hornet WDG	<ul> <li>Tank mixing 3.0 – 4.0 oz/acre Hornet<sup>®</sup> WDG herbicide provides consistent control of velvetleaf, lambsquarters, pigweed species, waterhemp and triazine resistant varieties of these species. Will also provide improved control of cocklebur, common ragweed, giant ragweed, common sunflower and jimsonweed.</li> </ul>
Princep 4L	Improve crabgrass or fall panicum control.
Python WDG	<ul> <li>Tank mixing 0.8 – 1.0 oz/acre Python<sup>®</sup> WDG herbicide provides consistent control of velvetleaf, lambsquarters, pigweed species, waterhemp and triazine resistant varieties of these species.</li> </ul>
Surpass EC	Tank mix 1 pt/acre for enhanced annual grass and nutsedge control

Conventional Tillage Corn (GF-2836 Plus):

<sup>†</sup> Products that are not listed may be used: Perform a compatibility test and check the label of the tank mix product label for application rates, applicable use directions, precautions and limitations.

Reduced or No-Tillage C	Corn (GF-2836 Plus):
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Tank Mix Herbicide <sup>†</sup>	Comments
Atrazine 4L	Longer growing season areas
	High rainfall areas
	Heavy broadleaf weed pressure
	<ul> <li>If emerged weeds are greater than 1.5 inches tall at the time of</li> </ul>
	application, add an appropriate postemergence herbicide
Balance Pro	<ul> <li>Not labeled in all states; refer to the label for Balance Pro label for precautionary statements, directions for use, geographic and other use restrictions</li> </ul>
	Field corn only
	<ul> <li>Refer to use rate section for GF-2836 for minimum use rates</li> </ul>

Banvel/Clarity Marksman	<ul> <li>Apply preplant or preemergence in reduced / no-till systems for burndown of existing weeds</li> <li>Preemergence on medium and fine textured soils with &gt;2.5% OM only</li> </ul>
Durango DMA, Roundup WeatherMAX, Touchdown	Burndown existing weeds
Gramoxone Inteon	Control annual weeds, suppress perennial weeds
Pendimax <sup>®</sup> / Prowl	<ul> <li>Preemergence to early postemergence (up to 3" tall corn) but before weeds are more than 1" tall.</li> </ul>
Princep 4L	Improved crabgrass or fall panicum control
Surpass EC	Enhanced annual grass and nutsedge control
2,4-D	Burndown existing weeds

<sup>†</sup> Formulations that are not listed may be used: Perform a compatibility test and check the product label for application rates, applicable use directions, precautions and limitations.

#### GF-2836 and Durango DMA, 2,4-D

In reduced or no-tillage corn, Durango DMA, Roundup WeatherMAX, Gramoxone Inteon, Touchdown, and/or 2,4-D can be used to burn down existing weeds. Burndown herbicides should be applied to emerged weeds when they are small; weeds less than 6 inches tall are easiest to control. Consult the burndown product labels for further information on weeds controlled.

# **Postemergence Tank Mix Combinations**

GF-2836 may be applied before, in combination with, or following the use of one or more of the following herbicides: Accent, Aim, atrazine, Banvel, Basis, Basis Gold, Beacon, Buctril, Buctril/atrazine, Clarity, Distinct, Exceed, Hornet WDG, Liberty, Lightning, Marksman, Peak, Permit, Prowl, Pendimax, Pursuit, Shotgun, Spirit, and Steadfast. Refer to the product label(s) regarding use directions, precautions and restrictions, and the list of weeds controlled. GF-2836 may be tank mixed with any product approved for use on corn unless it is prohibited on the tank mix product label. **Note:** Do not use liquid fertilizer as the carrier when GF-2836 is applied postemergence to corn as severe injury may result. The addition of liquid fertilizers used as adjuvants with GF-2836 tank mixes applied postemergence to corn under environmental stress conditions may result in significant crop injury and should be avoided if the risk of crop injury is unacceptable.

When **tank mixing**, refer to the tank mix product label and follow the additional use directions given in this table. **GF-2836 can be applied to corn up to 11" tall.** 

Tank Mix Herbicide	Rate	Comments
Hornet WDG	2-5 oz/acre	• Always add NIS at 0.25% v/v or COC at 1% v/v.
Aim herbicide	0.3 oz/acre	<ul> <li>Always add a NIS at 0.25% v/v.</li> </ul>
Banvel Clarity Marksman	0.5 - 1.0 pt/acre 0.5 - 1.0 pt/acre 2 - 3.5 pt/acre	<ul> <li>Early postemergence up to 8" tall corn on all soils. If grasses are more than 2- leaf stage, combine with another herbicide to control these weeds.</li> <li>The maximum atrazine application rate for corn is 2.5 pounds active ingredient per calendar year or 2.0 pounds atrazine active ingredient for postemergence application if no atrazine was applied preemergence.</li> </ul>

#### Postemergence Tank Mixes (GF-2836 Plus):

Buctril Buctril/atrazine	1.5 pt/acre 2.0 pt/acre	<ul><li>Refer to product label for use directions.</li><li>Refer to label for Shotgun herbicide for timing</li></ul>
Shotgun herbicide	2 - 3 pt/acre	and use directions.
Atrazine	0.5 - 2.0 lb ai/acre	<ul> <li>Preplant surface, preplant incorporated, preemergence or early postemergence (up to 8" tall corn). If emerged weeds are greater than 1.5 inches tall at the time of application, add an appropriate postemergence herbicide. Note: The maximum atrazine application rate for corn is 2.5 pounds atrazine active ingredient per acre per calendar year.</li> </ul>
Distinct	4.0 - 6.0 oz/acre	<ul> <li>Always add a NIS at 0.25% v/v and 1.25% UAN.</li> <li>Can be applied up to 10-inch corn.</li> </ul>
		•
Liberty	16 - 28 oz/acre	• For use on liberty tolerant corn only. Apply to grass and broadleaves up to 6" tall. Do not add additional surfactant.
Lightning	1.28 oz/acre	• For use on Clearfield corn only. Use a NIS at 25%v/v and a liquid nitrogen fertilizer at 1 - 2 qt per acre or ammonium sulfate at 2.5 lb per acre.
Pendimax / Prowl	1.8 - 3.6 pt/acre	• Preemergence to early postemergence (up to 3" tall corn) but before weeds are more than 1" tall.
Pursuit 2.5L Pursuit 70DG	4.0 fl oz/acre 1.4 fl oz/acre	<ul> <li>Use only on Clearfield varieties.</li> <li>Apply preplant surface, preplant incorporated, preemergence or early postemergence (up to 3" tall weeds).</li> </ul>
Resource	4.0 - 6.0 oz/acre	<ul> <li>Apply to weeds less than 5" tall. Add a crop oil concentrate at 1 - 2 pt/acre and either 28% nitrogen at 2% v/v or ammonium sulfate at 2.5 lb/acre. May cause some burn or spotting to corn leaves.</li> </ul>
Spirit	1.0 oz/acre	<ul> <li>Always add crop oil concentrate at 1% v/v.</li> <li>See label for geographic restrictions.</li> </ul>
2,4-D Ester	See Label	<ul> <li>Apply preplant surface or preemergence to control emerged broadleaf weeds in corn.</li> </ul>
Accent 75WDG Beacon 75WDG Basis Steadfast	1/4 - 2/3 oz/acre 0.76 oz/acre 1/4 - 2/3 oz/acre 0.75 oz/acre	<ul> <li>Minimum GF-2836 use rates (qts/acre): <u>Soil</u> &lt;3%OM 3-7%OM &gt;7%OM Coarse 2.7 2.7 3.6 3.9-4.2 Fine 2.7 2.7-3.6 4.2     </li> <li>Always add NIS at .25% (v/v); and in addition if applied in dry conditions, add 4% (v/v) clear liquid fertilizer.     </li> <li>Banvel, Clarity, Marksman, Buctril, Buctril/ atrazine may be added to this mixture to provide burndown and residual control of broadleaf weeds.     </li> </ul>
Basis Gold	14.0 oz/acre	● Minimum GF-2836 use rates (qts/acre):           Soil         <3%OM         3-7%OM         >7%OM           Coarse         2.7         2.7         3.6           Medium         2.7         2.7-3.6         3.9-4.2

Fine2.72.7-3.64.2• Always add crop oil concentrate at 1.0% v/v (2.0% v/v under dry arid conditions) and 28% liquid nitrogen at 2 qt/acre or ammonium sulfate		
<ul> <li>at 2 lb/acre.</li> <li>Banvel, Clarity, Marksman, Buctril, or Tough herbicide may be added to this mixture to provide burndown and residual control of broadleaf weeds.</li> </ul>		
<ul> <li>The maximum atrazine application rate for corn is 2.5 pounds active ingredient per calendar year or 2.0 pounds atrazine active ingredient for postemergence application if no atrazine was applied preemergence.</li> </ul>		

### Appendix I

#### Procedure for Testing the Compatibility of GF-2836 and Tank Mixes with Fluid Fertilizers.

Since fluid fertilizers vary, the following procedure is suggested for determining whether GF-2836 may be combined with a specific fluid fertilizer for spray tank application.

#### Materials Needed:

- GF-2836 and any tank mix products.
- Fluid fertilizer to be used.
- Adjuvant for fertilizer tank mix: Use any adjuvant cleared for use on growing crops under 40 CFR 180.1001 to improve the compatibility of GF-2836 with fluid fertilizers. The adjuvant that provides the best emulsification depends on the specific fertilizer under consideration.
- Two 1 quart, wide mouth glass jars with lid or stopper.
- Measuring spoons (a 25-ml pipette or graduated cylinder provides more accurate measurement).
- Measuring cup, 8 ounces (257 ml).

#### **Procedure:**

- 1. Pour one pint (about 473 ml) of the fluid fertilizer into each of the quart jars.
- 2. Add GF-2836 and any tank mix combination to the jars. The order of addition is wettable powders first with mixing, followed by flowables with mixing and emulsifiable concentrates last. The rate of wettable powders and dry flowables is 1 1/2 teaspoons per pound of product per acre to be applied. Emulsifiable concentrates should be added at the rate of 1/2 teaspoon for each pint per acre to be applied. Premixing the wettable powders in 1 ounce of water before adding to the pint of fluid fertilizer will improve the compatibility of the final mixture.
- 3. Add 1/2 teaspoon (2 ml) adjuvant to one of the jars, label it as "with", and mix. The rate of 1/2 teaspoon per pint is equal to 3 pints of adjuvant per 100 gallons of fluid fertilizer.
- 4. Close both jars with lids or stoppers and mix the contents by turning the jars upside down ten times.
- 5. Inspect the surface and body of the mixtures:
  - (a) Immediately after completing the jar inversions
  - (b) After allowing the jars to stand quietly for 30 minutes
  - (c) And then again after turning the jars upside down 10 times after the 30 minute inspection

#### **Evaluation:**

If either mixture remains uniform for 30 minutes, the combination may be used. Should either mixture separate after 30 minutes, but readily remix uniformly with 10 jar inversions, the mixture can be used if adequate agitation is maintained in the tank. If the mixture with adjuvant is satisfactory but the mixture without adjuvant is not, be sure to use the adjuvant in the spray tank. Add the adjuvant first at a rate of 3

pints per 100 gallons of fluid fertilizer. Foaming may be minimized by using only moderate agitation. If non-dispersible oil, sludge, or clumps of solids form in the mixtures, the combination should not be used.

#### Appendix II

#### **Dry Bulk Fertilizer Impregnation**

Impregnation of bulk fertilizer is restricted to commercial facilities. On-farm fertilizer impregnation is prohibited. No more than 500 tons of bulk fertilizer can be impregnated per day. No single facility may impregnate fertilizer with this product for more than 30 days per calendar year."

The commercial facility impregnating the dry bulk fertilizer must inform, in writing, the user (applicator) of the dry bulk fertilizer that:

- Applicator must wear long-sleeved shirt, long pants, shoes, and socks
- The restricted entry interval is 12 hours.

All individual state regulations relating to dry bulk fertilizer blending, registration, labeling and application are the responsibility of the individual and/or company selling GF-2836.

When applying GF-2836 alone or in tank mixes with dry bulk fertilizers, follow all directions for use and precautions on the respective tank mix product labels regarding rates, soil texture, application methods and rotational restrictions. Use a minimum of 200 pounds dry fertilizer per acre.

Fertilizer	N	Р	к
Ammonium Phosphate-Sulfate	16	20	0
Ammonium Sulfate	21	0	0
Diammonium Phosphate	18	46	0
Monoammonium Phosphate	11	56	0
Potassium Chloride	0	0	60
Potassium Sulfate	0	0	52
Urea <sup>†</sup>	45	0	0

**Table 5:** Approved Dry Fertilizer Ingredients for Use with GF-2836.

<sup>†</sup> Some ureas may be phytotoxic when high rates are applied to corn. Use only urea rates known to be safe for corn application.

For impregnating the pesticides on dry fertilizers, use an appropriate mixer equipped with suitable spraying equipment. The spray nozzles should be positioned inside the mixer to provide uniform spray coverage of the tumbling fertilizer. The GF-2836 should be sprayed uniformly onto the fertilizer using a fine spray pattern. Tank mix components may be applied as separate ingredients with powders and dry flowables added first or they may be mixed in a slurry in the proper ratio and added jointly. GF-2836 may also be impregnated on the go and applied with pneumatic applicators.

The following table provides a reference to determine the amount of GF-2836 to be mixed per ton of dry bulk fertilizer for a range of herbicide rates.

		GF-2836 Fertilizer Impregnation Rate Conversion Table			
		Quarts of GF-2836 per Ton of Fertilizer to Deliver:			
Fertilizer Rate		3.3 qts/acre	4.1 qts/acre	4.8 qts/acre	
(lbs per acre)	Acres per Ton	-			

200	10	33.0	40.5	48.0
250	8	26.4	32.4	38.4
300	6.7	22.1	27.0	32.0
350	5.7	18.9	23.1	27.5
400	5	16.5	20.3	24.0
450	4.5	14.7	18.0	21.3

To determine the amount of GF-2836 needed for other fertilizer rates, use the following formula:

GF-2836 (quarts/acre)X 2000 = Quarts of GF-2836Pounds of fertilizer/acreper ton of fertilizer

If the herbicide/fertilizer mixture is too wet, use of a drying agent is required to provide a dry, free-flowing mixture. For mixtures to be used in spinning-disc applicators, Micro-Cel E calcium silicate powder (Manville, Filtration & Minerals) is recommended for use as a drying agent. Mixtures to be used in pneumatic applicators should use Micro-Cel E or Agsorb 16/30 RVM-MS granular clay (Oil-Dri Corporation). The drying agents should be added separately and uniformly to the prepared pesticide/fertilizer mixture, in a quantity that is sufficient to provide a suitable free-flowing mixture. Generally, less than 2% Micro-Cel E or 5% Agsorb 16/30 RVM-MS by weight is required.

**Precaution:** To avoid potential for explosion, do not impregnate GF-2836 on ammonium sorbate nitrate, potassium nitrate, or sodium nitrate fertilizer or fertilizer blends. Do not impregnate on single (0-20-0) or triple (0-46-0) super phosphate. Do not impregnate on agricultural limestone because GF-2836 will not be absorbed.

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