



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

February 18, 2021

Julie Porter
Director of Regulatory Compliance
AMVAC Chemical Corporation
4695 MacArthur Court, Suite 1200
Newport Beach, CA 92660

Subject: PRIA Label Amendment – Increase the corn and fallow maximum use rates,
update Directions for Use language, change primary brand name
Product Name: Impact Herbicide
EPA Registration Number: 5481-524
Application Date: April 30, 2020
Decision Number: 562854

Dear Ms. Porter:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

The alternate brand name “**Impact Herbicide**” has been updated as the primary brand name. The primary brand name “**Topramezone SC Herbicide**” has been updated as the alternate brand name.

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 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.

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 FIFRA 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

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substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6.

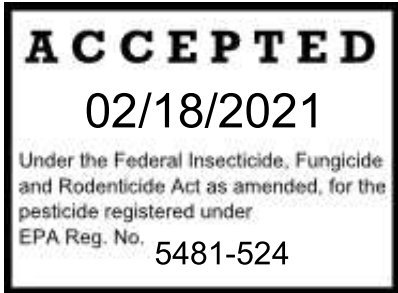
If you have any questions, please contact Endia Blunt by phone at 703-347-0788, or via email at Blunt.Endia@epa.gov.

Sincerely,

A handwritten signature in cursive script that reads "Mindy Ondish".

Mindy Ondish
Product Manager 23
Herbicide Branch
Registration Division (7505P)
Office of Pesticide Programs

Enclosure



IMPACT

HERBICIDE

For control of emerged weeds in all types of field corn, seed corn, popcorn, and sweet corn, and weed control between crops.

Active Ingredient:

Topramezone [3-(4,5-dihydro-3-isoxazolyl)-2-methyl-4-(methylsulfonyl) phenyl] (5-hydroxy-1-methyl-1H-pyrazol-4-yl) methanone.....29.7%

Inert Ingredients:..... 70.3%

Total:..... 100.0%

(1 gallon contains 2.8 pounds of TOPRAMEZONE free acid)

KEEP OUT OF REACH OF CHILDREN
CAUTION/PRECAUCION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.
(If you do not understand this label, find someone to explain it to you in detail).

FIRST AID	
If in eyes:	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15 - 20 minutes. • Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
If swallowed:	<ul style="list-style-type: none"> • 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 to an unconscious person.
If on skin or clothing:	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 - 20 minutes. • Call a poison control center or doctor for treatment advice.
EMERGENCY INFORMATION	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
FOR THE FOLLOWING EMERGENCIES, PHONE 24 HOURS A DAY:	
For Medical Emergencies phone:.....	1-888-681-4261
For Transportation Emergencies, including spill, leak or fire, phone: CHEMTREC®.....	1-800-424-9300
For Product Use Information phone: AMVAC®.....	1-888-462-6822

See back panel for additional Precautionary Statements.

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Net Contents:

EPA Est. No.

Letter(s) in lot number correspond(s) to superscript in EPA Est. No.



AMVAC Chemical Corporation
4695 MacArthur Court, Suite 1200
Newport Beach, CA 92660 U.S.A.

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Harmful if swallowed or absorbed through the skin. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of barrier laminate, polyethylene, Viton ≥ 14 mils, rubber ≥ 14 mils, or polyvinyl chloride ≥ 14 mils.
- Shoes plus socks

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove clothing/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 Controls

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 170.607(d-f)], the handler PPE requirements may be reduced or modified as specified in the WPS.

Environmental Hazards

DO NOT apply directly to water, or areas where surface water is present, or to inter-tidal areas below the mean high water mark. DO NOT contaminate water when disposing of equipment wash water.

Product must be used in a manner which will prevent back siphoning in wells, spills or improper disposal of excess pesticide, spray mixtures or rinsate.

DIRECTIONS FOR USE

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.

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.

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 barrier laminate, polyethylene, Viton ≥ 14 mils, rubber ≥ 14 mils, or polyvinyl chloride ≥ 14 mils.
- Shoes plus socks

All applicable directions, restrictions, precautions and Limited Warranty and Disclaimer are to be followed. This labeling must be in the user's possession during application.

I. INFORMATION

IMPACT is a systemic herbicide for selective control or growth suppression of emerged broadleaf and grass weeds in field corn (grown for grain, silage or seed), popcorn (grown for ear, kernel or seed) and sweet corn (grown for ear, kernel or seed), and between crop applications. This product may be used on conventional and herbicide resistant/tolerant corn hybrids. AMVAC has not tested all inbred lines of corn for tolerance to IMPACT. Before using IMPACT, refer to seed company recommendations for use on inbred lines of field corn, popcorn and sweet corn.

Susceptible weeds will stop growing soon after IMPACT application while death of weeds may take several more days, depending on growing conditions before and after application, and weed species and size. When applied broadcast to emerged weeds as directed, IMPACT will control or suppress the broadleaf weeds listed in Table 1 and the grass weeds listed in Table 2.

IMPACT may be tank-mixed with other herbicides to provide both broader spectrum and residual weed control. Refer to Tank Mixes in the Crop Use Directions (Section VII). It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing.

IMPACT applications must also include recommended spray additives. Refer to Additives and Mixing Order (Sections III and IV).

Table 1. Emerged Broadleaf Weeds Controlled or Partially Controlled with IMPACT and Maximum Weed Size at Application

Annual Broadleaf Weeds ¹	IMPACT 0.75 fl oz per acre	IMPACT 1.0 fl oz per acre
	Weeds ≤ 4 inches in Size ²	Weeds ≤ 6 inches in Size ²
Amaranth, Palmer	C	C
Amaranth, Powell	C	C
Bindweed, field	PC	PC
Burcucumber	C ^{3,4}	C ⁴
Buckwheat, wild	NC	C ^{3,4}
Canola, volunteer	C	C
Carpetweed	C	C
Chickweed, common	C	C
Cocklebur, common	C	C
Dandelion	PC	PC
Devil's-claw	C ^{3,4}	C ⁴
Galinsoga, hairy	C	C
Henbit	C	C
Jimsonweed	C	C
Kochia	C ⁴	C ⁴
Ladysthumb	C ⁴	C ⁴
Lambsquarters, common	C	C
Lettuce, prickly	C	C
Mallow, common	C ^{3,4}	C ^{3,4}
Mallow, Venice	C ^{3,4}	C ^{3,4}
Marestail (horseweed)	C	C
Morningglory, entireleaf	C ^{3,4}	C ^{3,4}
Morningglory, ivyleaf	C ^{3,4}	C ^{3,4}
Mustard, wild	C	C
Nightshade, black	C	C
Nightshade, Eastern black	C	C
Nightshade, hairy	C	C
Pigweed, prostrate	C	C
Pigweed, redroot	C	C
Pigweed, smooth	C	C
Pigweed, tumble	C	C
Purslane, common	PC ³	C ^{3,4}
Pusley, Florida	C ³	C
Ragweed, common	C	C
Ragweed, giant	C	C
Shepherd's-purse	C	C
Sida, prickly	C ^{3,4}	C ⁴
Smartweed, Pennsylvania	C ⁴	C ⁴
Sunflower, wild (common)	C	C
Thistle, Canada	PC ³	PC
Thistle, Russian	C	C
Velvetleaf	C	C
Waterhemp, common	C	C
Waterhemp, tall	C	C

¹Refer to Section X for a list of scientific names.

²Broadleaf Weed Rating: C=Control; PC=Partial Control; NC=Not Controlled.

³Apply before weed exceeds 3 inches in height.

⁴The addition of atrazine at minimum 0.5 lb per acre is required for control.

Table 2. Emerged Annual Grass Weeds Controlled or Partially Controlled with IMPACT at 0.75 to 2.0 fl oz/A and Maximum Weed Size at Application

Annual Grass Weeds ¹	IMPACT 0.75 fl oz per acre	IMPACT 1.0 fl oz per acre	IMPACT 1.5 – 2.0 fl oz per acre
	Grasses ≤ 3 Inch Size ²	Grasses ≤ 4 Inch Size ²	Grasses ≤ 4 Inch Size ²
Barnyardgrass	C ⁵	C	C
Crabgrass, large	C ⁵	C ⁵	C
Crabgrass, smooth	C ⁵	C ⁵	C
Cupgrass, woolly	PC	C ³	C
Foxtail, giant	C	C	C
Foxtail, green	C ⁵	C	C
Foxtail, yellow	PC	C ^{3,5}	C
Goosegrass	C	C	C
Johnsongrass, rhizome	NC	NC	PC ⁴
Johnsongrass, seedling	PC	C	C
Millet, wild-proso	C	C	C
Panicum, fall	PC	C ^{3,5}	C
Panicum, Texas	PC	PC	C ^{4,5}
Sandbur, field	NC	PC	C ^{4,5}
Shattercane	PC	PC	C ^{4,5}
Signalgrass, broadleaf	PC	C ^{3,5}	C ⁵

¹Refer to Section X for a list of scientific names.

²Grass Weed Rating: C=Control; PC=Partial Control; NC = Not Controlled.

³Apply before grass exceeds 3 inches in height.

⁴For best performance on these grass weeds use a rate of 2 fl oz per acre.

⁵The addition of atrazine at minimum 0.5 lb per acre is required for control.

Herbicide Group and Site of Action

IMPACT is absorbed by leaves, roots, and shoots and translocated to the growing points of sensitive weeds to provide control of emerged weeds. IMPACT controls weeds by inhibiting carotenoid biosynthesis (HPPD inhibitor GROUP 27). Temperature and moisture conditions for active plant growth are important for optimum IMPACT activity. IMPACT applications to weeds during periods of stress conditions such as extreme cold or hot temperatures, and/or moisture stress can result in reduced herbicidal performance.

WEED RESISTANCE MANAGEMENT

It is critical to adopt a diversified weed management system in order to provide appropriate stewardship for this group 27 herbicide and to ensure consistent weed control and to best protect potential crop yield. Herbicide best management practices should be augmented with cultural (e.g., crop rotation) and mechanical (e.g., tillage) tactics. Effort should be expended to keep escaped weeds from contributing seeds to the soil weed seed bank. Scouting soon after herbicide application is an important strategy to identify weed population shifts or herbicide-resistant biotypes before the problems become more difficult to manage. Take precautions to keep equipment free of weed seeds when moving from field to field. This is extremely important if fields are custom harvested.

By adopting best management practices and providing stewardship to protect against the evolution of herbicide resistance, crop yield potential is higher and thus economic returns are greater.

To delay herbicide resistance take one or more of the following steps:

- Rotate the use of IMPACT herbicide within a growing season and among growing seasons with herbicide groups other than 27 that control the same weeds.
- Use tank mixtures with herbicides from a different group if such use is permitted; where information on resistance in target weed species is available, use the less resistance-prone partner at a rate that will control the target weed(s) equally as well as the more resistance-prone partner. Consult your local extension service or certified crop advisor if you are unsure as to which active ingredient is currently less prone to resistance.
- Adopt an integrated weed-management program for herbicide use that includes scouting and uses historical information related to herbicide use and crop rotation, and that considers tillage (or other mechanical control methods), cultural (e.g., higher crop seeding rates; precision fertilizer application method and timing to favor the crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.
- Scout fields prior to application to identify the weed species present and to determine if the intended application of the product, and tank-mix partners if needed, will be effective on the stages of weed growth observed in a specific field.
- Following herbicide application, scout the fields to confirm efficacy of the treatment and to monitor weed populations for early signs of resistance development. Indicators of possible herbicide resistance include: (1) failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds; (2) a spreading patch of non-controlled plants of a particular weed species; (3) surviving plants mixed with controlled individuals of the same weed species.
- **If resistance is suspected, prevent weed seed production in the affected area by using an alternative herbicide from a different group or by a mechanical method such as hoeing or tillage.** Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields, and planting clean seed.
- Do not rely on a single herbicide site of action (i.e. herbicide group number) for weed control during the growing season.
- Avoid making application of herbicides having the same group number(s) more than twice per season.
- Use a preemergence herbicide providing residual control of grass and broadleaf weeds to reduce weed emergence and competition with the crop and allow more timely postemergence herbicide application.
- If a weed pest population continues to progress after treatment with this product, discontinue use of this product, and switch to another management strategy or herbicide with a different herbicide group number, if available.
- Contact your local extension specialist or certified crop advisor to determine if suspected resistant weeds to these herbicide group number(s) have been found in your region, for additional herbicide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.
- For further information on product performance and weed resistance management or to report suspected weed resistance, contact your local AMVAC representative directly or at 1-888-462-6822.

Crop Tolerance

IMPACT should be applied during favorable growing conditions for optimum crop tolerance and weed control. Crops under environmental stress are more likely to show injury from any herbicide application. Rarely, plants under extremely stressful growing conditions and treated with IMPACT may show minor, transient bleaching of the portion of the leaves intercepting the spray application. These symptoms are temporary and crop growth is not affected.

Cultivation

Avoid disturbing (e.g., cultivation) treated areas for at least 7 days following an application of IMPACT to allow maximum possible herbicide uptake, translocation, and weed control. If cultivation is part of a diverse weed management program, it is important to avoid deep cultivation that will move dormant weed seeds into the soil zone where germination is likely.

Insecticide Information

IMPACT may be used sequentially or in combination with soil-applied or foliar-applied insecticides registered for use in corn.

Cleaning Spray Equipment

To avoid injury to sensitive crops, drain and clean application equipment thoroughly using a strong detergent or commercial sprayer cleaner according to the manufacturer's directions. Equipment should be cleaned and triple rinsed before and after applying this product.

II. APPLICATION INSTRUCTIONS

IMPACT is effective for control of many emerged annual weeds in conservation and conventional-tillage crop production systems.

Do not apply IMPACT within 30 feet of native plant community.

The applicator is responsible for any loss or damage that results from spraying IMPACT in a manner other than recommended in this label. In addition, applicator must follow all applicable state and local regulations and ordinances when making applications.

IMPACT Application Rate and Timing:

- Apply up to a total of 2.0 fluid ounces of IMPACT (0.044 lb topramezone), in a single application or sequential applications, per acre per growing season.
- IMPACT can be applied up to 45 days prior to corn harvest.
- Apply IMPACT to emerged broadleaf and grass weeds that are actively growing.
- For optimal weed control apply IMPACT before weeds exceed labeled maximum size.
- IMPACT should be applied a minimum of one hour before rainfall or overhead irrigation.

Spray Coverage

Weeds must be thoroughly covered with spray droplets to achieve consistent control of emerged weeds. Dense leaf canopies will shelter small weeds and can prevent adequate spray coverage on these weeds resulting in poor overall weed control.

Ground Application Methods and Equipment

Uniformly apply IMPACT with properly calibrated ground equipment in 15 or more gallons of water per acre. Use water volumes of greater than 15 gallons per acre when treating larger weeds and/or dense weed infestations. Select nozzle types, spray pressure, and carrier volume that deliver medium to coarse spray droplets (250-400 microns in diameter) which will thoroughly cover target weeds and will penetrate to smaller weeds which are sheltered by larger weeds. Do not use nozzle types that produce very coarse, extremely coarse or ultra-coarse spray droplets, as this may result in unsatisfactory weed control. Refer to ASABE S572.1 droplet size classification located at www.ASABE.org. IMPACT application can be made with drop nozzles if the crop canopy prevents adequate weed coverage using broadcast application methods.

Spray Drift

Do not apply when weather conditions favor spray drift to adjacent crops and vegetation; injury to sensitive plant species can occur if contacted by drift. To avoid spray drift from treated areas, do not make applications when wind speeds exceed 10 mph or during periods of temperature inversions.

Use of nozzles that are designed to provide larger droplet sizes will reduce spray drift potential. Agriculturally approved drift-reducing additives may also be used with IMPACT in accordance with the product labels.

Aerial Application Methods and Equipment

Uniformly apply with properly calibrated aerial equipment in 3 or more gallons of water per acre. Adequate spray volume must be used to provide accurate and uniform distribution of spray particles over the treated area and to avoid drift of spray particles to non-target areas.

To avoid injury to sensitive crops from drift, aerial applicators must adhere to the following SPECIAL AERIAL USE DIRECTIONS AND PRECAUTIONS.

- Nozzle height above ground must be a maximum of 10 feet.
- Nozzles must be pointed towards the rear of the aircraft. The downward angle of the nozzle should not be greater than 20 degrees.
- To minimize wing-tip vortex roll, nozzles or spray boom must not be located any closer to end of wing or rotor than three-fourths the distance from the center of the aircraft.
- Use a maximum spray pressure of 40 psi.
- A buffer zone must be established between the area to be sprayed and sensitive crops.
- DO NOT spray when wind velocity is greater than 5 mph or during periods of temperature inversions. Coarse sprays (larger droplets) are less likely to drift.

III. ADDITIVES

Applications of IMPACT to emerged weeds require the addition of an adjuvant **AND** a nitrogen fertilizer source to achieve optimum control, unless specific directions are given in Section VII. Crop Use Directions – Tank Mixes. When using an adjuvant with this product, selecting an adjuvant that meets the standards of the Chemical Producers and Distributors Association (CPDA) adjuvant certification program is recommended. See Tables 1 and 2 for Maximum Weed Size when determining additive rates specified below.

1. ADJUVANTS: When applying IMPACT alone or in a tank-mix with atrazine, use either a methylated seed oil (MSO) or high surfactant methylated oil concentrate (HSMOC) with IMPACT for best performance across a wide range of environmental conditions. MSO or HSMOC must contain a minimum of 10% or 40% emulsifiers, respectively. Apply either MSO adjuvants at rates of 1.0 to 1.5 gallons per 100 gallons of water (1.0% to 1.5% v/v), or HSMOC adjuvants at rates of 2 to 3 quarts per 100 gallons of water (0.5% to 0.75% v/v). Use the full adjuvant rate when making an application in arid conditions, or during periods of hot dry weather and to larger weeds.

In tank mixtures with oil-based residual corn herbicides, a reduced rate of MSO at 2 quarts per 100 gallons of water (0.5% v/v) or HSMOC at 1 quart per 100 gallons of water (0.25% v/v) is recommended to minimize potential for temporary foliar necrosis in corn.

When tank-mixing IMPACT with surfactant-loaded glyphosate, MSO at rates of 2 to 4 quarts per 100 gallons of water (0.5% to 1.0% v/v) or HSMOC at rates of 1 to 2 quarts per 100 gallons of water (0.25% to 0.5% v/v) is recommended.

In situations, where glyphosate is used in a tank mixture for grass weeds not labeled for control with Impact, and in tank mixtures with any product prohibiting use of MSO or HSMOC or conditions of high temperature and very high humidity, COC at 1% v/v or NIS at 0.25% v/v may replace these adjuvants.

AND

2. NITROGEN FERTILIZER SOURCE: Recommended nitrogen based fertilizers include urea ammonium nitrate (UAN; 28-32%) at 2.5 gallons per hundred gallons of water (2.5% v/v). Instead of a liquid fertilizer, dry spray grade ammonium sulfate (AMS) at 2.0 to 3.0 pounds per acre, or a liquid AMS product delivering 3.4 pounds per gallon of AMS, may be used. Use of AMS is strongly recommended as an additive where water hardness (high mineral content) is a concern. Use the full AMS rate when making an application in arid conditions, or during periods of hot dry weather and to larger weeds.

IV. MIXING ORDER

Following are mixing order guidelines for IMPACT when tank-mixing with other recommended herbicides and components, including spray adjuvants and liquid fertilizers. Maintain tank agitation during the mixing process and continue agitation while spraying until the application is completed. In the event that the application is stopped and the tank mixture settles, it is critical to agitate the mixture thoroughly before spraying is resumed.

TANK-MIX PREPARATION:

1. Fill spray tank $\frac{1}{2}$ to $\frac{3}{4}$ full with clean water and start agitation.
2. Add water-soluble PVA packet products, if included, and thoroughly mix until fully dissolved.
3. Add water-soluble additives, including dry or liquid nitrogen fertilizers such as AMS or UAN.
4. Add IMPACT herbicide.
5. Add other water-dispersible products such as dispersible granules, dry flowables, suspension concentrates, or liquid flowables.
6. Add water-soluble products.
7. Add emulsifiable concentrates, including MSO adjuvants.
8. Fill the remainder of spray tank with water and ensure thorough mixing of all products.

V. TANK MIX INFORMATION

IMPACT is recommended to be used sequentially or tank mixed with other herbicides as part of a complete weed control program. Tank mix recommendations are for use only in states where the sequential or tank mix product and application site is registered. Refer to Crop Use Directions (Section VII) for more details and for specific tank mix restrictions. Read and follow the applicable Restrictions and Limitations (Section VI) and Directions for Use on all products included in any tank mix. The most restrictive labeling applies to tank mixes. Liquid fertilizer is not recommended as a carrier for in-crop applications of IMPACT herbicide in corn. Use only water as a carrier.

VI. RESTRICTIONS AND LIMITATIONS

- Maximum use rate per year: Do not apply more than 0.044 lbs. of topramezone per acre or the equivalent of 2.0 fluid ounces of IMPACT per acre.
- DO NOT apply IMPACT within 45 days of corn harvest (fresh market sweet corn, silage, fodder, or grain).
- DO NOT graze or feed treated corn forage, silage, fodder, or grain for at least 45 days after an application of IMPACT.
- DO NOT apply this product through any type of irrigation system.

Table 3. ROTATIONAL CROP RESTRICTIONS

The following rotational crops may be planted after uniformly applying IMPACT at the application rates in corn shown in the chart below. Do not plant earlier than the specified interval at the rates shown in the chart below, as crop injury could occur. Avoid over-applications by minimizing overlaps of spray swaths and by switching off spray boom when turning (end rows). In the event of a crop loss due to weather or other causes, any corn type can be replanted at any time following an application of IMPACT herbicide. If IMPACT was tank-mixed with other

herbicides, the label with the most restrictive replanting and crop rotation restrictions for these herbicides must also be followed.

Rotational Crop	Rotational Interval (Months)		
	IMPACT Application Rate (fl oz per acre)		
	0.5	0.75	1.0-2.0
Corn, sweet corn and popcorn (all types)	0	0	0
Sugarcane	0	0	0
Cereal grains (wheat, barley, oats, rye)	3	3	3
Grass, grown for seed and forage	3	3	3
Rice	3	3	3
Alfalfa	9	9	9
Cotton	9	9	9
Flax	9	9	9
Peanut	9	9	9
Potato	9	9	9
Sorghum	9	9	9
Soybean	9	9	9
Sunflower	9	9	9
Canola	9	9	18
Dry Bean (excluding cranberry bean)	9	9 ¹	18 ²
Green Bean (including seed production)	9 ³	9 ^{3,4}	18 ⁵
Pea	9	9	18 ²
Sugar beet	9 ⁴	9 ⁴	18 ²
All Other Crops	18	18	18

¹ 18 month interval in MI, MN, MT, ND, SD, WI, and WY.

² 9 month interval in ID, OR, and WA.

³ 18 month interval in ID, UT, and in area East of Cascade Mountains in OR and WA.

⁴ 18 month interval in CO, MI, MN, MT, NE (Panhandle counties), ND, SD, WI, and WY.

⁵ 9 month interval in area West of Cascade Mountains in OR and WA.

VII. CROP USE DIRECTIONS

CORN (Field, Pop, Seed and Sweet)

IMPACT can be selectively applied to emerged weeds in all corn types including conventional hybrids and all hybrids which contain herbicide-resistant traits. In addition, IMPACT may be applied on inbred lines used in field corn, popcorn and sweet corn seed production. Refer to seed company recommendations before application of IMPACT on inbred lines.

IMPACT may be used in tank mixtures or sequential applications with other herbicides that are registered for use in corn. If IMPACT is tank mixed with other products, follow the label restrictions (including adjuvant recommendations) for the most restrictive of the tank mix products. See Section III for adjuvant recommendations.

For best performance, a tank-mixture of IMPACT with atrazine at 0.25 to 1.5 pound per acre is recommended. Lower atrazine rates (0.25 to 0.5 pound per acre) provide enhanced control (takedown) of emerged weeds, while rates of 1.0 pound per acre and higher provide additional soil residual control and potentially a second effective mode of action to manage weed resistance.

Table 4. TANK MIXTURES OR SEQUENTIAL APPLICATIONS

IMPACT may be tank-mixed or applied sequentially with one or more of, but not limited to, the following corn herbicides:

Brand Name (EPA Reg. No.)	Active Ingredient
AAtrex [®] 4L herbicide (EPA Reg. No. 100-497)	Atrazine
Accent [®] Q herbicide (EPA Reg. No. 352-773)	Nicosulfuron
Aim [®] EC herbicide (EPA Reg. No. 279-3241)	Carfentrazone
Anthem [®] ATZ herbicide (EPA Reg. No. 279-3449)	Atrazine/pyroxasulfone/fluthiacet-methyl
Anthem [®] herbicide (EPA Reg. No. 279-3450)	Pyroxasulfone/fluthiacet-methyl
Basagran [®] herbicide (EPA Reg. No. 66330-413)	Bentazon
Bicep II Magnum [®] (EPA Reg. No. 100-817)	S-metolachlor/atrazine
Breakfree [®] NXT ATZ herbicide (EPA Reg. No. 352-893)	Acetochlor/atrazine
Breakfree [®] NXT herbicide (EPA Reg. No. 352-894)	Acetochlor
Buctril [®] 4EC herbicide (EPA Reg. No. 264-540)	Bromoxynil
Cadet [®] herbicide (EPA Reg. No. 279-3338)	Fluthiacet-methyl
Cinch ATZ herbicide (EPA Reg. No. 352-624)	S-metolachlor/atrazine
Cinch [®] herbicide (EPA Reg. No. 352-625)	S-metolachlor
Degree Xtra [®] herbicide (EPA Reg. No. 524-511)	Acetochlor/atrazine
DiFlexx [®] herbicide (EPA Reg. No. 264-1173)	Dicamba
Dual II Magnum [®] (EPA Reg. No. 100-818)	S-metolachlor
Durango [®] DMA herbicides (EPA Reg. No. 62719-556)	Glyphosate
Enlist Duo [™] herbicide ¹ (EPA Reg. No. 62719-649)	2,4-D choline/glyphosate
Enlist One [®] herbicide ¹ (EPA Reg. No. 62719-695)	2,4-D choline
G-Max Lite [™] herbicide (EPA Reg. No. 7969-200)	Dimethenamid-P/atrazine
Guardman Max [®] (EPA Reg. No. 7969-192)	Dimethenamid-P/atrazine
Harness [®] herbicide (EPA Reg. No. 524-473)	Acetochlor
Harness [®] Xtra herbicide (EPA Reg. No. 524-480)	Acetochlor/atrazine
Hornet [®] WDG herbicide (EPA Reg. No. 62719-315)	Clopyralid/flumetsulam
Impact CORE [®] herbicide (EPA Reg. No. 5481-648)	Acetochlor/topramezone
ImpactZ [®] herbicide (EPA Reg. No. 5481-612)	Atrazine/topramezone
Keystone [®] NXT (EPA Reg. No. 62719-671)	Acetochlor/atrazine
Liberty [®] 280 SL herbicide (EPA Reg. No. 7969-448)	Glufosinate-ammonium
Outlook [®] herbicide (EPA Reg. No. 7969-156)	Dimethenamid-P
Permit [®] herbicide (EPA Reg. No. 81880-2-10163)	Halosulfuron
Prowl [®] H2O herbicide (EPA Reg. No. 241-418)	Pendimethalin
Resource [®] herbicide (EPA Reg. No. 59639-82)	Flumiclorac
Roundup PowerMAX [®] (EPA Reg. No. 524-549)	Glyphosate
Sinate [®] herbicide (EPA Reg. No. 5481-637)	Glufosinate-ammonium/topramezone
Status [®] herbicide (EPA Reg. No. 7969-242)	Dicamba/Diflufenzopyr
Steadfast [®] Q herbicide (EPA Reg. No. 352-774)	Nicosulfuron/rimsulfuron
Stinger [®] herbicide ¹ (EPA Reg. No. 62719-73)	Clopyralid
Surpass [®] NXT (EPA Reg. No. 62719-672)	Acetochlor
Warrant [®] herbicide (EPA Reg. No. 524-591)	Acetochlor
Zidua SC herbicide (EPA Reg. No. 7969-374)	Pyroxasulfone
Zidua [®] herbicide (EPA Reg. No. 7969-338)	Pyroxasulfone

¹Use of additives specified in Section III above are either not specified and/or contain a cautionary statement on labels of these herbicides due to potential for crop injury, and should not be used in tank mixtures with IMPACT.

VIII. BETWEEN CROP APPLICATION

Fallow Weed Management

IMPACT may be used as a foliar application to control emerged broadleaf and grass weeds at any time of the year during the period following crop harvest and before the following crop is planted. The following crop may be planted after observing the required interval as defined in the Rotational Crop Restrictions section (Table 3). Several cover crops used to manage soil erosion, soil fertility, or soil moisture, and which will not be used for grazing or harvest, have shown tolerance to IMPACT and may be planted a minimum of 28 days following between-crop applications. Consult AMVAC representatives or university extension personnel for information on tolerance of specific cover crops.

Application Rate and Timing

Apply IMPACT as a broadcast spray up to a rate of 2.0 fl oz/A. Best product performance is obtained when weeds are small and actively growing. Thorough coverage of existing weeds is essential, and higher spray volume may be needed for best performance. Sequential application may be made with a minimum of 14 days between applications, but DO NOT exceed the maximum cumulative (both corn and between crop application uses) amount of 2.0 fl oz/A of IMPACT per year.

IX. SEQUENTIAL HERBICIDE COMBINATIONS AND USES

In addition to the control of many emerged broadleaf weeds, IMPACT controls or suppresses the growth of several emerged grass weed species. To target a broader spectrum of annual grasses, IMPACT should be used as a sequential treatment following a residual grass herbicide, or premixtures of these products containing Group 3 or 15 herbicides such as Prowl[®] H₂O, Bicep II Magnum, Dual II Magnum[®], Harness[®], Harness Xtra, or Zidua[®]. (EPA registration numbers can be found in Section VII.) IMPACT can also be used in sequential programs with registered burndown herbicides.

When IMPACT is used in sequential applications prior to or following other products containing Group 27 herbicides such as isoxaflutole (e.g., Corvus[®] (EPA Reg. No. 264-1066), Balance[®] Flexx™ (EPA Reg. No. 264-1067)), mesotrione (e.g., Callisto[®] (EPA Reg. No. 100-1131), Lexar[®] EZ (EPA Reg. No. 100-1414), Lumax[®] EZ (EPA Reg. No. 100-1442)), or tembotrione (e.g., Laudis[®] (EPA Reg. No. 264-860), Capreno[®] (EPA Reg. No. 264-1063)), use of a tank mix partner with a different effective mode of action is recommended at full use rate to reduce risk of selection for HPPD resistant weed biotypes.

X. SCIENTIFIC NAMES OF WEEDS SPECIFIED IN THIS LABEL

Common Name	Scientific Name	Common Name	Scientific Name
Amaranth, Palmer	<i>Amaranthus palmeri</i>	Morningglory, ivyleaf	<i>Ipomoea hederacea</i>
Amaranth, Powell	<i>Amaranthus powellii</i>	Mustard, wild	<i>Sinapis arvensis</i>
Bindweed, Field	<i>Convolvulus arvensis</i>	Nightshade, Black	<i>Solanum nigrum</i>
Barnyardgrass	<i>Echinochloa crus-galli</i>	Nightshade, Eastern	<i>Solanum ptycanthum</i>
Buckwheat, Wild	<i>Fallopia convolvulus</i>	Black Nightshade, Hairy	<i>Solanum sarrachoides</i>
Burcucumber	<i>Sicyos angulatus</i>	Panicum, Fall	<i>Panicum dichotomiflorum</i>
Canola, Volunteer	<i>Brassica</i> spp.	Panicum, Texas	<i>Panicum texanum</i>
Carpetweed	<i>Mollugo verticillata</i>	Pigweed, Prostrate	<i>Amaranthus blitoides</i>
Chickweed, Common	<i>Stellaria media</i>	Pigweed, Redroot	<i>Amaranthus retroflexus</i>
Crabgrass, Large	<i>Digitaria sanguinalis</i>	Pigweed, Smooth	<i>Amaranthus hybridus</i>
Crabgrass, Smooth	<i>Digitaria ischaemum</i>	Pigweed, Tumble	<i>Amaranthus album</i>
Cocklebur, Common	<i>Xanthium strumarium</i>	Purslane, Common	<i>Portulaca oleracea</i>
Cupgrass, Woolly	<i>Eriochloa villosa</i>	Pusley, Florida	<i>Richardia scabra</i>
Dandelion	<i>Taraxacum officinale</i>	Ragweed, Common	<i>Ambrosia artemisiifolia</i>
Devil's-claw	<i>Proboscidea louisianica</i>	Ragweed, Giant	<i>Ambrosia trifida</i>
Foxtail, Giant	<i>Setaria faberi</i>	Sandbur, Field	<i>Cenchrus longispinus</i>
Foxtail, Green	<i>Setaria viridis</i>	Shattercane	<i>Sorghum bicolor</i>
Foxtail, Yellow	<i>Setaria glauca</i>	Shepherd's-purse	<i>Capsella bursa-pastoris</i>
Galinsoga, Hairy	<i>Galinsoga ciliata</i>	Sida, Prickly	<i>Sida spinosa</i>
Goosegrass	<i>Eleusine indica</i>	Signalgrass, Broadleaf	<i>Brachiaria platyphylla</i>
Henbit	<i>Lamium amplexicaule</i>	Smartweed, Pennsylvania	<i>Polygonum pennsylvanicum</i>
Jimsonweed	<i>Datura stramonium</i>	Sunflower, Wild (common)	<i>Helianthus annuus</i>
Johnsongrass	<i>Sorghum halepense</i>	Thistle, Canada	<i>Cirsium arvense</i>
Kochia	<i>Kochia scoparia</i>	Thistle, Russian	<i>Salsola iberica</i>
Ladysthumb	<i>Polygonum persicaria</i>	Velvetleaf	<i>Abutilon theophrasti</i>
Lambsquarters, Common	<i>Chenopodium album</i>	Waterhemp, Common	<i>Amaranthus rudis</i>
Lettuce, Prickly	<i>Lactuca serriola</i>	Waterhemp, Tall	<i>Amaranthus tuberculatus</i>
Mallow, Common	<i>Malva neglecta</i>		
Mallow, Venice	<i>Hibiscus trionum</i>		
Marestail (Horseweed)	<i>Conyza canadensis</i>		
Millet, Wild-Proso	<i>Panicum miliaceum</i>		
Morningglory, entireleaf	<i>Ipomoea hederacea</i>		

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store product in original container only. Store product in a cool, dry place. Do not store this product under wet conditions. If this product has been stored where freezing temperatures have occurred, agitate or mix contents of container well before use. Avoid cross-contamination with other pesticides.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility. Improper disposal of excess pesticide, spray mix, or rinsate is a violation of federal law. If these wastes cannot be disposed of according to label instructions, contact state agency responsible for pesticide regulation or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER HANDLING: Nonrefillable container. Do not reuse or refill this container. Triple rinse (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 $\frac{1}{4}$ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank and store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or reconditioning, 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.

LIMITED WARRANTY AND DISCLAIMER

The manufacturer warrants (a) that this product conforms to the chemical description on the label; and (b) that the directions, warnings, and other statements on this label are based upon responsible experts' evaluations of reasonable tests of effectiveness, of toxicity to laboratory animals and to plants and residues on food crops, and upon reports of field experience. Tests have not been made on all varieties of food crops and plants, or in all states or under all conditions. THIS WARRANTY DOES NOT EXTEND TO THE USE OF THIS PRODUCT CONTRARY TO LABEL INSTRUCTIONS, OR UNDER CONDITIONS NOT REASONABLY FORESEEABLE.

THERE ARE NO EXPRESS WARRANTIES OTHER THAN THOSE SET FORTH HEREIN. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE MANUFACTURER NEITHER MAKES NOR INTENDS, NOR DOES IT AUTHORIZE ANY AGENT OR REPRESENTATIVE, TO MAKE ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, AND IT EXPRESSLY EXCLUDES AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY OF FITNESS FOR A PARTICULAR PURPOSE, OR ANY WARRANTY OF QUALITY OR PERFORMANCE. THIS WARRANTY DOES NOT EXTEND TO, AND THE BUYER SHALL BE SOLELY RESPONSIBLE FOR, ANY AND ALL LOSS OR DAMAGE WHICH RESULTS FROM THE USE OF THIS PRODUCT IN ANY MANNER WHICH IS INCONSISTENT WITH THE LABEL DIRECTIONS, WARNINGS OR CAUTIONS.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BUYER'S EXCLUSIVE REMEDY AND MANUFACTURER'S OR SELLER'S EXCLUSIVE LIABILITY FOR ANY AND ALL CLAIMS, LOSSES, DAMAGES, OR INJURIES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, WHETHER OR NOT BASED IN TORT, CONTRACT, NEGLIGENCE, STRICT LIABILITY IN TORT OR OTHERWISE, SHALL BE LIMITED, AT THE MANUFACTURER'S OPTION, TO REPLACEMENT OF, OR THE REPAYMENT OF THE PURCHASE PRICE FOR, THE QUANTITY OF PRODUCT WITH RESPECT TO WHICH DAMAGES ARE CLAIMED. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, MANUFACTURER OR SELLER SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.

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[optional marketing statements]

- The most flexible solution to deliver effective control of grasses and broadleaf weeds early post in corn.
- Excellent corn safety, wide application window and flexibility with other products — no restrictions with EC tank-mix products, safety with soil and foliar insecticides and use on all corn types makes IMPACT Herbicide one of the most versatile herbicides available for your corn acres.
- The Standard in Corn Safety®
- Excellent corn safety
- Offers The Standard in Corn Safety® in all types of corn
- Flexible application window
- HPPD herbicides have similar behavior in terms of efficacy under cooler temperature regimes.
- No label restrictions with either soil applied or foliar insecticides registered for use in corn
- Does not kill established perennial grasses in waterways and terraces – providing ease of application
- Tough on weeds. Not corn.
- Tough on weeds & grass. Not corn.
- IMPACT Herbicide delivers the flexibility and power for effective postemergence control of grass and broadleaf weeds in all types of corn.
- Unleash the power of IMPACT Herbicide
- Control yield-robbing grass and broadleaf weeds in all types of corn – with excellent safety.
- IMPACT Herbicide brings the power you need to control tough weeds including glyphosate-resistant species.
- Not all HPPDs are created equal regarding safety to corn. Do not risk crop injury and go with IMPACT Herbicide.
- Results show exceptional safety of IMPACT in corn
- Even at Exaggerated Rates, Excellent Corn Development and Yield Was Observed
- Wide application window keeps weeds under control even during unexpected weather.
- Flexible Application Window - Work around uncontrollable spring weather.
- IMPACT can be used with any soil or foliar applied insecticides registered for use on corn.
- Flexible tank-mix partner with traditional grass or broadleaf herbicide premixes providing control of emerged grass and broadleaf weeds plus residual control.
- Safety margin of IMPACT in all types of corn is unequaled by competitive HPPD herbicides.
- Flexible tank-mix partner with traditional grass or broadleaf herbicide premixes.
- Can be tank-mixed with S-metolachlor, metolachlor and acetochlor EC formulations.
- Can be tank-mixed with atrazine, glyphosate, glufosinate and residual herbicides such as S-metolachlor, metolachlor and acetochlor EC formulations.
- Not all HPPDs are created equal for grass control. IMPACT delivers consistent grass control with or without glyphosate.
- Controls tough grass and broadleaf weeds without glyphosate
- Use IMPACT and beat yield robbing grass and broadleaf weeds to the punch without glyphosate
- Proven control of grasses without the need to tank-mix glufosinate or glyphosate.
- Unleash the power of IMPACT herbicides on resistant weeds
- Control tough glyphosate-resistant weeds and yield-robbing grasses with the knock-down power of IMPACT Herbicides.
- Broad-Spectrum Weed Control.
- Make an IMPACT on Resistant Weeds
- IMPACT Herbicides provide proven power against resistant weeds.

- Resistant Weeds Can't Stand Up to IMPACT Herbicides
- Control yield-robbing grass and broadleaf labeled weeds in all types of corn – with application flexibility.
- IMPACT Brand Herbicides bring the power you need to control tough grass and broadleaf weeds including glyphosate-resistant species.
- The proven power for postemergence control of annual grass and broadleaf weeds including glyphosate-resistant biotypes in corn.
- IMPACT controls glyphosate-resistant broadleaf weeds.
- IMPACT controls emerged grass and broadleaf weeds to complement the residual partner.
- The proven power for postemergence control of annual grass and broadleaf weeds including glyphosate-resistant biotypes in corn.
- Powerful, flexible and proven control of tough grass and broadleaf weeds in corn.
- IMPACT brings the power you need to control tough grass and broadleaf weeds including glyphosate-resistant species.
- IMPACT Brand Herbicides deliver the flexibility and power for effective postemergence control of grass and broadleaf weeds in corn.
- Proven control and an exceptional partner for high-performance herbicide programs.
- Convenient, easy-to-use formulation to get growers in the field fast
- Powerful, proven, flexible weed control in all corn
- Powerful protection on all types of corn.
- IMPACT Herbicide one of the most versatile herbicides available for your corn acres.
- A Flexible Solution to Deliver Effective Early Postemergence Control of Grass and Broadleaf Weeds in Corn
- Flexibility That Fits... IMPACT Herbicide
- The safe, more flexible solution to weed control in all corn