

241-285

7-15-2003

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JUL 15 2003

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

Mr. Edward Jordan
BASF Corporation
P.O. Box 13528
Research Triangle Park, NC 27709-3528

Dear Mr. Jordan:

Subject: BASF Assert Herbicide
EPA Registration Number 241-285
Application Dated June 26, 2003

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act as amended is acceptable, provided you make the following changes before you release the product for shipment.

1. Change the order of precautionary statements to match the order of first aid statements. They should be organized so that the order of the most severe routes of exposure are listed first.
2. It is suggested that your statement "Do not contaminate water, food, or feed by storage and disposal," be placed immediately under the heading "Storage and Disposal."
3. Please incorporate all supplemental labels into a master label within 18 months or your next label printing.

Submit three (3) copies of final printed labeling incorporating the above changes before you release the product for shipment. Amended labeling will supercede all previously accepted ones. A stamped copy of labeling is enclosed for your records.

Sincerely,

A handwritten signature in black ink, appearing to read "James A. Tompkins".

James A. Tompkins, haj
Product Manager 25
Herbicide Branch
Registration Division (7505C)

BASF

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ACCEPTED
with COMMENTS
In EPA Letter Dated

JUL 15 2003

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

241-285

Assert®

herbicide

For Use In Wheat (including Durum) And Barley

ACTIVE INGREDIENTS:

Imazamethabenz-methyl
m-Toluic acid, 6-(4-isopropyl-4-methyl-5-oxo-2-imidazolin-2-yl)-,
methyl ester and
p-Toluic acid, 2-(4-isopropyl-4-methyl-5-oxo-2-imidazolin-2-yl)-,
methyl ester 27.0%

INERT INGREDIENTS 73.0%

TOTAL 100.0%

(One gallon contains 2.5 lbs of active ingredient)

EPA Reg. No. 241-285

KEEP OUT OF REACH OF CHILDREN

DANGER!; PELIGRO!

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.)

See inside for **First Aid, Precautionary Statements, Directions for Use and Conditions of Sale and Warranty.**

® Registered Trademarks of BASF

BASF Corporation
26 Davis Drive, Research Triangle Park, NC 27709

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 the first 5 minutes, then continue rinsing. • 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 a person sip a glass of water if able to swallow. • Do not induce vomiting unless told to by a poison control center or doctor.
If on skin:	<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.
Note to Physician	
Probable mucosal damage may contraindicate the use of gastric lavage.	
HOTLINE	
<p>Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact BASF Corporation for emergency medical treatment information: 1-800-832-HELP (4357)</p> <p>In case of an emergency endangering life or property involving this product, call day or night 1-800-832-HELP (4357).</p>	

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER Corrosive, Causes Irreversible Eye Damage. **DO NOT get in eyes.** Avoid contact with skin and clothing. Avoid breathing vapor or spray mist. Use with adequate ventilation. Harmful if swallowed.

Personal Protective Equipment (PPE):

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category **B** on an EPA chemical resistance category selection chart.

Applicators and other handlers must wear:

- long-sleeved shirt and long pants
- chemical-resistant gloves, such as barrier-laminate or butyl rubber ≥ 14 mils
- shoes plus socks
- protective eyewear.

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

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maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

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

User Safety Recommendations
<p>Users should:</p> <ul style="list-style-type: none"> • 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 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

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** contaminate water when disposing of equipment washwaters.

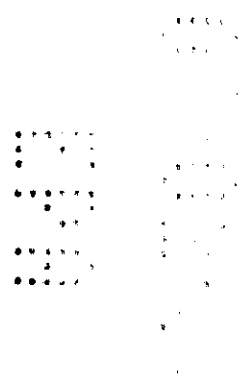
DIRECTIONS FOR USE

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.

ASSERT should be used only in accordance with recommendations on this label.

DO NOT apply this product through any type of irrigation system.

Observe all cautions and limitations on this label and on the labels of products used in combination with **ASSERT**. BASF Corporation will not be responsible for losses or damages resulting from the use of this product in any manner not specifically recommended by BASF. User assumes all risks associated with such non-recommended use. Keep container closed to avoid spills and contamination.



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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 48 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, such as barrier laminate or butyl rubber \geq 14 mils
- shoes plus socks
- protective eyewear.

STORAGE AND DISPOSAL

Keep from freezing. **DO NOT STORE BELOW 40°F (5°C)**. Ice will form in the container at 5°F (-15°C). If ice occurs from prolonged storage at temperatures of 5°F (-15°C) or below, place container at room temperature until ice melts. Stability of ASSERT is not affected by freezing and thawing.

DO NOT contaminate water, food or feed by storage or disposal. Store ASSERT only in original container. **DO NOT** mix or store in unlined containers.

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. 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 DISPOSAL FOR 2.5 GALLONS: Triple rinse (or equivalent). Then offer for recycling 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.

CONTAINER DISPOSAL FOR FIELD KEG, MINI-BULK AND BULK: Return empty container for reuse.

GENERAL INFORMATION

Use of ASSERT herbicide in accordance with label directions is expected to result in normal growth of rotational crops in most situations; however, various environmental and agronomic factors make it impossible to eliminate all risks associated with the use of this product and, therefore, rotational crop injury is always possible.

Following the use of this product and chemically related products with the same mode of action, naturally occurring biotypes* of some of the weeds listed on this label cannot be effectively controlled by this and related products. This product should be tank-mixed or applied sequentially with an appropriate registered herbicide having a different mode of action to ensure control of resistant biotypes.

*A weed biotype is a naturally occurring individual within a given species that has a slightly different, but distinct genetic makeup from other individuals.

See your local BASF representative for more information.

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MIXING INSTRUCTIONS

MIX ONLY WITH SURFACTANTS, ADJUVANTS, AND CROP OILS THAT ARE CLEARED FOR APPLICATION TO GROWING CROPS.

A NON-IONIC SURFACTANT CONTAINING AT LEAST 80% ACTIVE INGREDIENT MUST BE USED WITH ASSERT HERBICIDE.

When using **ASSERT** alone:

1. Fill spray tank to one-half to two-thirds full with clean water.
2. Start vigorous agitation that thoroughly mixes the entire tank, including the tank bottom.
3. Add **ASSERT** to the partially filled tank while continuing agitation.
4. When **ASSERT** is thoroughly mixed add the non ionic surfactant (NIS) to the tank at a rate of 2 pints surfactant per 100 gallons of final spray solution, and fill remainder of tank with clean water.

When tank mixing **ASSERT** with **AVENGE** wild oat herbicide or **other labeled tank mix partner(s)**:

1. Fill the spray tank two-thirds full with clean water.
2. Add the tank mix partner herbicide(s) to the spray tank first while agitating the solution. Add the broadleaf herbicide partner(s) before adding **AVENGE**[®] wild oat herbicide when using the **ASSERT/AVENGE** tank mix.

NOTE: TO PREVENT MIXING PROBLEMS, TANK MIX PARTNERS MUST BE THOROUGHLY MIXED BEFORE ADDING ASSERT.

3. After the herbicide solution is thoroughly mixed, add **ASSERT** to the partially filled tank while continuing agitation.
4. After the **ASSERT** is thoroughly mixed with the tank mix partners, add the NIS at a rate of 2 pints per 100 gallons final spray solution.

When using **ASSERT** alone or tank mixing with **labeled tank mix partner(s)**:

5. A crop oil concentrate, such as **SUN-IT II**[™], at a rate of 2 pints per acre may be added if conditions warrant (see **HOW TO USE ASSERT PLUS SUN-IT II SPRAY ADJUVANT or other crop oil in wheat and barley** below).
6. An antifoaming agent and drift retardant may be added last if necessary.
7. Completely fill the tank with water while continuing agitation.
8. Maintain continuous agitation until spraying is completed.

DO NOT use a surfactant that also acts as a buffering agent, or **ASSERT** may precipitate. If a precipitate forms due to incompatible tank-mix partners, contact your BASF representative. If test of clean water supply indicates that a precipitate forms due to highly-buffered alkaline or hard water, precondition your water with sodium bisulfate. Contact your BASF representative for instructions.

HOW TO USE ASSERT PLUS SUN-IT II[™] **spray adjuvant or other crop oil in wheat and barley:**

SUN-IT II spray adjuvant* may be used instead of a non-ionic surfactant or instead of a non-ionic surfactant plus crop oil in tank mix with an **ASSERT** application. When using a crop oil, or petroleum or vegetable-based crop oil (e.g. methylated seed oil, ethylated seed oil) as an adjuvant, it is required to also add an approved non-ionic surfactant (NIS) to the tank **unless** the adjuvant contains a NIS at a concentration which will give a final spray concentration of at least 0.25% NIS.

Use **SUN-IT II** at the rate of 1.5 to 2.0 pints per acre. Use the higher rate when weeds are at the maximum label size or under stress. **SUN-IT II** is recommended when weeds are under moisture or temperature stress. When using **ASSERT** with a non-phosphorous liquid fertilizer, follow instructions on the **ASSERT** label for the compatibility test of **SUN-IT II**. When tank mixing **ASSERT** with a labeled herbicide tank mix partner, determine whether **SUN-IT II** spray adjuvant (crop oil) is approved on that tank mix partner label.

***DO NOT** tank mix **ASSERT** with any product not registered in specific states of intended use.

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ASSERT®/AVENGE® Tank Mix for Wild Oat Control

ASSERT herbicide may be tank mixed with AVENGE wild oat herbicide for the control of **wild oats** only. Follow all varietal restrictions present on the AVENGE label. ASSERT should be mixed at a rate of 3/4 pints per acre with AVENGE at 2 pints per acre.

This mixture can be applied from the 2-5 true leaf (7 total leaves including tillers) stage of wild oats. **DO NOT** apply this tank mix when the wheat/barley flagleaf is exposed. The tank mix should be applied in a minimum of 10 gallons of water per acre (gpa) by ground equipment and in 5 or more gpa by aircraft. **FOR WILD OAT POPULATIONS IN EXCESS OF 25 PLANTS PER SQUARE FOOT, USE A MINIMUM SPRAY VOLUME OF 15 GALLONS PER ACRE BY GROUND OR 5 GALLONS PER ACRE BY AERIAL APPLICATION.** Use a non-ionic surfactant containing at least 80% active ingredient at a rate of 2 pints per 100 gallons spray solution up to an application rate of 15 gpa. For application rates greater than 15 gpa consult the SURFACTANT ADDITION TABLE below for surfactant requirements.

SURFACTANT ADDITION TABLE

Gallons Per Acre	Surfactant Required Per 100 Gallons (pints)
≤10	0
15	2
20	4

HERBICIDE COMBINATIONS

Mixtures of ASSERT and one or more of the following broadleaf herbicides may be tank mixed to obtain maximum wild oat and broadleaf control:

2,4-D ester

Ally®

Amber®

Bromoxynil + MCPA ester (Bronate®)

Canvas®4

Curtail M®

Express®

Finesse®

Glean®

Harmony Extra®

Harmony®

MCPA ester®

Peak®

Starane®

Starane® + Salvo®

Starane® + Sword®

NOTE: DO NOT tank mix ASSERT with any product not registered in specific states of intended use. Follow the most restrictive precautions, directions and recropping/rotation limitations that appear on the respective product labels. Tank mixtures must be applied prior to the development of the first internode (jointing) of the crop.

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DO NOT tank mix ASSERT with 2,4-D ester unless the crop is fully tillered.

DO NOT tank mix ASSERT with Banvel[®], any product containing dicamba[®], MCPA amine, or 2,4-D amine formulations. A waiting period of 4 days should be observed before applying any herbicide not listed as a tank mix partner.

APPLICATIONS WITH LIQUID FERTILIZERS

GENERAL

ASSERT can be applied with a non-phosphorus liquid fertilizer such as 28-0-0. Non-phosphorus liquid fertilizers can be applied with ASSERT alone or in combination with MCPA ester[®], 2,4-D ester[®], or Bromoxynil + MCPA ester[®] (Bronate[®]) to wheat and barley. Follow all ASSERT label recommendations regarding timing of application, special instructions and precautions. Apply the ASSERT/non-phosphorus liquid fertilizer combination with a minimum of 10 gallons per acre with ground equipment or a minimum of 5 gallons of spray solution per acre with aircraft.

NOTE: Herbicides can increase contact burn of fertilizers on plant foliage. Reduced gallons of fertilizer per acre may decrease leaf burn. **DO NOT** allow ASSERT to remain overnight in a liquid fertilizer solution.

All individual state regulations relating to fluid fertilizer mixing, registration, labeling and application are the responsibility of the individual and/or company selling the ASSERT/liquid fertilizer mixture.

LIQUID FERTILIZER COMPATIBILITY DETERMINATIONS

If a liquid fertilizer and herbicide(s) mixture separates in the spray tank, clogged equipment and uneven application can result, which can cause poor weed control and crop injury. Always predetermine the compatibility of ASSERT alone or with other herbicides in the specific liquid fertilizer to be used according to the following directions:

1. Add 1 pint of liquid fertilizer to each of 2 one-quart jars.
2. Add 1/2 teaspoon of adjuvant to one jar.
3. (a) When using ASSERT alone, add to each jar the correct amount of ASSERT as specified in the table below.
(b) When using ASSERT tank mixtures, first add the specified quantity of MCPA ester, 2,4-D ester, or Bromoxynil + MCPA ester and then add the correct amount of ASSERT.
4. Close both jars and shake thoroughly for 10 seconds. Let them stand for 30 minutes and then observe the results. Look for signs of separation, an oily layer or globules, sludge, flakes or other precipitates.
5. Determine compatibility:
 - (a) If the mixture without adjuvant does not separate, use this mixture in your spray tank.
 - (b) If the mixture with adjuvant does not separate, but the one without adjuvant separates, use the adjuvant mixture in your spray tank. Add the adjuvant to the liquid fertilizer as directed on the manufacturer's label.
 - (c) If either mixture separates, but mixes readily with shaking, the mixture can be used providing good agitation is maintained in the spray tank.
 - (d) If separation of the mixture occurs, and agitation and/ or adjuvant does not correct this problem, **DO NOT** use the herbicide(s) in that specific liquid fertilizer.

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Teaspoons of Specific Herbicide to be Added to 1 Pint of Liquid Fertilizer Solution

Gallons of Liquid Fertilizer Plus Water to be Applied per Acre	ASSERT	MCPA ester	2,4-D ester	Bronate
5	3	2	2	2
10	1 1/2	1	1	1
15	3/4	1/2	1/2	1/2

APPLICATION INSTRUCTIONS

The spray equipment must be clean and properly calibrated before treatments are applied. For best results, use flat fan nozzles, and a pressure of 20 to 40 psi to achieve uniform spray distribution and minimize drift. A drift retardant agent may be added to the tank if needed. **DO NOT** use flood jet nozzles. Keep the by-pass line on or near the bottom of the tank to minimize foaming.

Ground Application

Uniformly apply the recommended ASSERT or ASSERT tank mixture in a minimum of 10 gallons of water per acre with ground equipment. **FOR HIGH POPULATIONS OF WILD OATS (IN EXCESS OF 25 PLANTS PER SQUARE FOOT), USE A MINIMUM SPRAY VOLUME OF 15 GALLONS PER ACRE BY GROUND.**

Aerial Application

DO NOT make aerial applications of ASSERT in states where aerial applications of ASSERT are not specifically registered.

Uniformly apply with a minimum of 5 gallons of spray solution per acre by aircraft for all levels of wild oat populations.

During aerial applications, a flagman should be located at each end of the field, or attach an automatic mechanical flagging unit to the aircraft to ensure uniform application. **DO NOT** overlap spray by aerial or ground application.

THOROUGH UNIFORM SPRAY COVERAGE IS REQUIRED TO MAXIMIZE WEED CONTROL.

Avoid overlapping, and shut off spray booms while starting, turning, slowing or stopping, or injury to the crop or a rotational crop could result. **DO NOT** allow spray to drift onto adjacent crops as injury may occur. For optimum weed control, ASSERT must absorb into plant leaves for 3 hours prior to overhead irrigation or rainfall.

DO NOT apply ASSERT when freezing temperatures have occurred or are forecast. Allow at least 2 days of non-freezing temperatures before and after ASSERT application or reduced weed control may occur.

For optimum weed control under cool conditions, it is recommended to apply ASSERT using the following additional instructions:

- 1) Use a minimum spray volume of 15 gallons per acre by ground or 5 gallons per acre by aerial application.
- 2) Use the maximum rate of ASSERT within a rate range.
- 3) Use SUN-IT II or non-ionic surfactant plus crop oil concentrate.

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SPRAY DRIFT MANAGEMENT

Avoid spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-and-weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions. The following drift management requirements must be followed to avoid off-target drift management from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

1. The distance of the outer most nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees. Where states have more stringent regulations, they should be observed.

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

Importance of Droplet Size

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

Controlling Droplet Size

Volume - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.

Pressure - Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy protection. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.

Number of Nozzles - Use the minimum number of nozzles that provide uniform coverage.

Nozzle Orientation - Orienting nozzles so that the spray is released backwards, parallel to the airstream will produce larger droplets than other orientations. Significant deflection from the horizontal will reduce droplet size and increase drift potential.

Nozzle Type - Use a nozzle type that is designed for the intended application. With most nozzle type, narrower spray angles product larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce larger droplets than other nozzle types.

Boom Length - For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

Application - Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

Swath Adjustment

When applications are made with a cross-wind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.).

Wind

Drift potential is lowest between wind speeds of 2-10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. Note: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect drift.

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Temperature and Humidity

When making applications in low relative humidity, set up equipment to product larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature Inversions

Applications should not occur during a temperature inversion, because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun set and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves literally in a connected cloud (under low wind conditions) indicates an inversion, while smoke that moves upwards and rapidly dissipates indicates good vertical air mixing.

Sensitive Areas

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

IMPORTANT

DO NOT make more than one application of ASSERT per growing season. **DO NOT** graze treated fields or cut treated forage for silage or hay. Wheat and barley straw may be fed or used for bedding.

FOLLOW CROP RESTRICTIONS

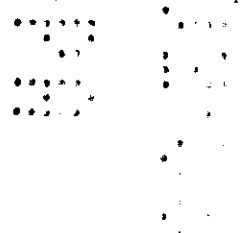
The following rotational crops may be planted the season after applying ASSERT at recommended rates in wheat and barley:

- Soybean
- Corn
- Edible beans
- Sunflowers
- Safflower
- Wheat
- Barley

If ASSERT and Glean[®], ASSERT and Ally[®], ASSERT and Canvas[®], ASSERT and Peak[®] or ASSERT and Finesse[®] are applied together in any type of tank mix during the same year, follow the most restrictive precautions, directions and recropping/rotation limitations that appear on the respective product labels.

DO NOT plant sugar beets for at least 20 months following an ASSERT application. **DO NOT** plant other rotational crops than those listed above for 15 months following an ASSERT application.

Use of ASSERT herbicide in accordance with label directions is expected to result in normal growth of rotational crops in most situations; however, various environmental and agronomic factors make it impossible to eliminate all risks associated with the use of this product and, therefore, rotational crop injury is always possible.



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WHEAT AND BARLEY

GENERAL INFORMATION

ASSERT is a selective herbicide for the postemergence control of wild oats, roughstalk bluegrass, interrupted windgrass, and certain broadleaved weeds in wheat and barley. Apply ASSERT postemergence to wheat (including durum) and barley from the 2 leaf stage of the crop, but before development of the first internode (jointing). **DO NOT** apply ASSERT when freezing temperatures have occurred or are forecast. Allow at least 2 days of non-freezing temperatures before and after ASSERT application or reduced weed control may occur.

Wild oats will be controlled with ASSERT applied when wild oats are in the 1 to 4 true leaf (6 total leaves including tillers) stage.

If unfavorable growing conditions exist, ASSERT may cause slight discoloration and delayed growth of durum wheat. The crop will recover under normal growing conditions and yields will not be affected.

ASSERT alone or in combination can be applied by ground equipment or aircraft.

Maximum weed control with ASSERT alone or in combination is obtained when temperature, moisture, fertility and cultural practices provide favorable conditions for active plant growth. **THOROUGH UNIFORM SPRAY COVERAGE IS REQUIRED TO MAXIMIZE WEED CONTROL. FOR HIGH POPULATIONS OF WILD OATS (IN EXCESS OF 25 PLANTS PER SQUARE FOOT), USE A MINIMUM SPRAY VOLUME OF 15 GALLONS PER ACRE BY GROUND OR 5 GALLONS PER ACRE BY AERIAL APPLICATION.**

ASSERT rapidly inhibits growth of susceptible weeds; however, typical symptoms (discoloration) of dying weeds may not be noticeable until 2-4 weeks after application. Weeds hardened by cold weather or drought stress may not be fully controlled and regrowth may occur; increase spray solution (gallons per acre) and surfactant under these conditions.

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RATES^a AND TIMING FOR WEED CONTROL IN WHEAT AND BARLEY

WEEDS	Application Leaf stage	STATES			
		MN, ND, & SD	MT & WY	So. ID CO & UT	WA, OR, & No. ID
		pints/acre			
GRASSES:					
WILD OATS	1 - 4	1.0 - 1.5 ^c	1.2 - 1.5	1.3 - 1.5	1.5 ^b
Roughstalk bluegrass	1 - 4	1.2	1.5	1.5	1.5
Interrupted windgrass	2 - 4	—	—	—	1.5
BROADLEAVES:					
Wild mustard	1 - 6	1.0	1.2	1.3	1.5
London rocket	1 - 6	1.0	1.2	1.3	1.5
Field pennycress	1 - 4	1.2	1.5	1.5	1.5
Flixweed	1 - 4	1.2	1.5	1.5	1.5
Tansymustard	1 - 6	1.2	1.5	1.5	1.5
Catchweed bedstraw ^c	1 - 3	1.5	1.5	1.5	1.5
Tartary buckwheat ^c	1 - 3	1.5	1.5	1.5	1.5
Wild buckwheat ^d	1 - 3	1.2	1.2	1.2	1.2

^aWhen two or more weed species are present, use the recommended rate to control the more difficult to control weed. When a rate range is possible, use the higher rate when weed density is high and/or weeds are large.

^bIn eastern Washington and Northern Idaho a rate of 1.3 to 1.5 pints/acre of ASSERT may be applied to spring wheat or barley growing under favorable conditions.

^cWhen ASSERT is applied up to the 3 leaf stage, plants stop growing, resulting in a non-competitive plant.

^dWhen ASSERT is applied at a rate of 1.2 pints/acre, it will provide suppression of wild buckwheat.

^eIn MN, ND, and SD when wild oats are 3 leaves (4 total leaves including tillers) or greater and populations are in excess of 25 plants per square foot, use the highest label rate of 1.5 pts per acre.

NOTE: For Use in California, refer to BASF's supplemental labeling entitled "For Use in Wheat and Barley For Use in California."

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WEED SPECIES NAMES	
Common Name	Scientific Name
Wild oats	<i>Avena fatua</i>
Roughstalk bluegrass	<i>Poa trivialis</i>
Interrupted windgrass	<i>Apera interrupta</i>
Wild mustard	<i>Brassica kaber</i>
London rocket	<i>Sisymbrium irio</i>
Field pennycress, Fanweed	<i>Thlaspi arvense</i>
Flixweed	<i>Descurainia sophia</i>
Tansymustard	<i>Descurainia pinnata</i>
Catchweed bedstraw	<i>Galium aparine</i>
Tartary buckwheat	<i>Fagopyrum tataricum</i>
Wild buckwheat	<i>Polygonum convolvulus</i>

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Conditions of Sale and Warranty

The **Directions For Use** of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or use of the product in a manner inconsistent with its labeling, all of which are beyond the control of BASF CORPORATION ("BASF") or the Seller. All such risks shall be assumed by the Buyer.

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