

SEP - 8 1995

Ms. Janet M. Overholt
American Cyanamid Co.
P.O. Box 400
Princeton, NJ 08543

Dear Ms. Overholt:

Subject: Minor Label Change
ASSERT® SG HERBICIDE
EPA Reg. No. 241-349
Your submission dated Aug. 15, 1995

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable and a stamped copy is enclosed for your records.

Sincerely yours,

Robert J. Taylor
Product Manager 25
Fungicide-Herbicide Branch
Registration Division (17505C)

Enclosure

CONCURRENCES

SYMBOL							
SURNAME							
DATE							

ASSERT® SG
herbicide

For Use In Wheat and Barley

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ACCEPTED
with COMMENTS
In EPA Letter Dated

SEP - 8 1995

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.
and p-Toluic acid, 241-349

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.....67.0%

INERT INGREDIENTS33.0%

TOTAL.....100.0%

(One Pound contains 0.67 lbs of active ingredient)

EPA Reg. No. 241-349

EPA Est. No. 33560-TN-01

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.)

STATEMENT OF PRACTICAL TREATMENT

IF IN EYES: Hold eyelids open and flush with a steady, gentle stream of water for 15 minutes. Get medical attention.

IF SWALLOWED: Drink promptly large quantity of milk, egg white, gelatin solution, or if these are not available, large quantities of water. Avoid alcohol. Get medical attention.

IF INHALED: Remove victim to fresh air.

IF ON SKIN: Wash with plenty of soap and water. Get medical attention.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

See Next Page For Additional Precautionary Statements

In case of an emergency endangering life or property involving this product,
call collect, day or night (201) 835-3100.

Net Contents:

(Company Logo)
AMERICAN CYANAMID COMPANY
AGRICULTURAL DIVISION
CROP PROTECTION CHEMICALS DEPARTMENT
WAYNE, NJ 07470 © 1995

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PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER

Corrosive, Causes Irreversible Eye Damage

DANGER! DO NOT get in eyes or on clothing. Harmful if inhaled, swallowed or absorbed through skin. Avoid breathing dust, vapor or spray mist. Avoid contact with skin, eyes or clothing.

Personal Protective Equipment (PPE):

Applicators and other handlers must wear:

- long-sleeved shirt and long pants
- waterproof gloves
- 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 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.

<p>User Safety Recommendations:</p> <p>Users should:</p> <ul style="list-style-type: none"> o Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. o Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. o 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.
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ENVIRONMENTAL HAZARDS

DO NOT apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. **DO NOT** contaminate water when disposing of equipment washwaters.

DIRECTIONS FOR USE

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

ASSERT SG 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 SG. American Cyanamid Company will not be responsible for losses or damages resulting from the use of this product in any manner not specifically recommended by American Cyanamid. User assumes all risks associated with such non-recommended use. Keep container closed to avoid spills and contamination.

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 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
- waterproof gloves
- shoes plus socks
- protective eyewear.

STORAGE AND DISPOSAL

Stability of ASSERT SG is not affected by freezing and thawing.

DO NOT contaminate water, food or feed by storage or disposal. Store ASSERT SG 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 PLASTIC BAGS: Completely empty contents of bag into application equipment. Then dispose of bag in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke. Cardboard boxes may be offered for recycling if allowed by state and local authorities.

CONTAINER DISPOSAL FOR PLASTIC CONTAINERS: 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.

DISCLAIMER

The label instructions for the use of this product reflect the opinion of experts based on research and field use. 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 the use of, or application of the product contrary to label instructions, all of which are beyond the control of American Cyanamid Company. All such risks shall be assumed by the user.

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American Cyanamid Company shall not be responsible for losses or damages resulting from use of this product in any manner not set forth on this label. User assumes all risks associated with the use of this product in any manner not specifically set forth on this label.

American Cyanamid Company warrants only that the material contained herein conforms to the chemical description on the label and is reasonably fit for the use therein described when used in accordance with the directions for use, subject to the risks referred to above. **CYANAMID DOES NOT MAKE OR AUTHORIZE ANY AGENT OR REPRESENTATIVE TO MAKE ANY OTHER WARRANTIES, EXPRESS OR IMPLIED AND EXPRESSLY EXCLUDES AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.**

BUYER'S EXCLUSIVE REMEDY AND AMERICAN CYANAMID'S EXCLUSIVE LIABILITY, WHETHER IN CONTRACT, TORT, NEGLIGENCE, STRICT LIABILITY OR OTHERWISE, SHALL BE LIMITED TO REPAYMENT OF THE PURCHASE PRICE OF ASSERT SG. In no case shall Cyanamid or the seller be liable for consequential, special or indirect damages resulting from the use or handling of this product.

USES WITH OTHER PRODUCTS (TANK MIXES)

If this product is used in combination with any other product except as specifically recommended in writing by American Cyanamid Company, then American Cyanamid Company shall have no liability for any loss, damage, or injury arising out of its use in any such combination not so specifically recommended. If used in a combination recommended by American Cyanamid Company, the liability of American Cyanamid Company shall in no manner extend to any damage, loss or injury not directly caused by the inclusion of the American Cyanamid Company product in such combination use, and in any event shall be limited to return of the amount of the purchase price of the product.

For additional information regarding the use of ASSERT SG herbicide, call telephone number (800) 942-0500.

GENERAL INFORMATION

Use of ASSERT SG 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.

Naturally occurring biotypes* of some of the weeds listed on this label may not be effectively controlled by this and/or other products with either the ALS/AHAS enzyme inhibiting mode of action. Other herbicides with the ALS/AHAS enzyme inhibiting mode of action include the sulfonylureas (e.g. Accent¹, Ally¹, Amber², Harmony Extra¹, etc.), and the sulfonamides (e.g., Broadstrike³ etc.). If naturally occurring ALS/AHAS resistant biotypes are present in the field, ASSERT and/or any other ALS/AHAS enzyme inhibiting mode of action herbicide should be tank-mixed or applied sequentially with an appropriate registered herbicide having a different mode of action to ensure control.

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

See your local Cyanamid representative for more information.

GENERAL MIXING INSTRUCTIONS

A NON-IONIC SURFACTANT CONTAINING AT LEAST 80% ACTIVE INGREDIENT MUST BE USED WITH ASSERT SG HERBICIDE. DO NOT use liquid fertilizer as a substitute for surfactant. **DO NOT** use a surfactant that also acts as a buffering agent, or ASSERT SG may precipitate. If a precipitate forms due to incompatible tank-mix partners, contact your Cyanamid 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 Cyanamid representative for instructions.

VIGOROUS AGITATION OF THE ENTIRE TANK INCLUDING THE TANK BOTTOM IS REQUIRED TO RAPIDLY DISSOLVE THE WATER SOLUBLE GRANULES OF ASSERT SG HERBICIDE. Poor agitation and dead spots in the tank will retard rapid and thorough dissolving of ASSERT SG herbicide.

PREMIXING INSTRUCTIONS (if tank agitation is inadequate)

Premix the desired amount of ASSERT SG in clean water in a clean polyethylene plastic bucket. Use polyethylene plastic or stainless steel stirring rod or water pressure to mix until the granules of ASSERT SG dissolve. **DO NOT** allow premix solution to contact skin or clothing. Add premix solution into the spray tank as described in Mixing Instructions. Thoroughly rinse all of the ASSERT SG into the spray tank.

MIXING INSTRUCTIONS

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

1. Fill spray tank to **one-half full** with **clean water**.
2. Start **vigorous agitation** that thoroughly mixes the entire tank, including the tank bottom.

When using **ASSERT SG alone**:

3. Add **ASSERT SG** to the partially filled tank while continuing agitation.
4. Continue filling the tank with clean water while **maintaining agitation**.
5. After the ASSERT SG is dissolved and the tank is filled, add the **non-ionic surfactant** to the tank at a rate of 2 pints surfactant per 100 gallons of final spray solution.
6. Continue at Step 7 below.

When **tank mixing ASSERT SG** with labeled tank mix partner(s):

3. 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 SG.

4. After the herbicide solution is thoroughly mixed, add **ASSERT SG** to the partially filled tank while continuing agitation.
5. Continue filling the tank with clean water while **maintaining agitation**.
6. After the ASSERT SG is dissolved and thoroughly mixed with the tank mix partners, and the tank is filled, add the **non-ionic surfactant** at a rate of 2 pints per 100 gallons final spray solution.

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

7. Then **crop oil** can be added at a rate of 2 pints (1 quart) per acre of spray solution. **When using crop oil as an adjuvant, it is required to also add an approved non-ionic surfactant (NIS) to the tank, unless the crop oil includes a NIS at a concentration which will give a final spray solution concentration of at least 0.25% NIS.**
8. An **antifoaming agent** and **drift retardant** may be added last if necessary.
9. Maintain continuous agitation until spraying is completed.
10. After spraying, examine bottom of spray tank for undissolved **ASSERT SG** which indicates that bottom agitation was inadequate. If this happens, add clean water to dissolve **ASSERT SG**. Increase bottom agitation, or use **PREMIX INSTRUCTIONS**.

HOW TO USE ASSERT SG PLUS SUN-IT II⁴ spray adjuvant 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 SG** application. Note: When using other brands of crop oil, or petroleum or vegetable-based crop oils, a non-ionic surfactant must be included with **ASSERT SG**.

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 SG** with a non-phosphorous liquid fertilizer, follow instructions on the **ASSERT SG** label for the compatibility test of **SUN-IT II**. When tank mixing **ASSERT SG** 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 SG** with any product not registered in specific states of intended use.

APPLICATIONS WITH LIQUID FERTILIZERS

GENERAL

ASSERT SG can be applied with a non-phosphorus liquid fertilizer such as 28-0-0. Non-phosphorus liquid fertilizers can be applied with **ASSERT SG** alone or in combination with MCPA ester⁵, 2,4-D ester⁵, or Bromoxynil + MCPA ester⁵(Bronate⁶) to wheat and barley. Follow all **ASSERT SG** label recommendations regarding timing of application, special instructions and precautions. Apply the **ASSERT SG/non-phosphorus** liquid fertilizer combination with a minimum of 8 - 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 SG** to remain overnight in a liquid fertilizer solution.

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

LIQUID FERTILIZER COMPATIBILITY DETERMINATIONS

If a liquid fertilizer and herbicide(s) mixture does not mix or 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 SG alone or with other herbicides in the specific liquid fertilizer to be used according to the following directions:

NOTE: Be sure to conduct a JAR TEST using the granular formulation, ASSERT SG herbicide. It may not be compatible with the mixing procedures used for the liquid formulation, ASSERT herbicide.

1. Add 1 pint clean water to a one-quart jar; check for any particulate matter in the water. Add the correct amount of ASSERT SG as specified in the table below. Close jar and shake vigorously; note time to completely dissolve (under 2 minutes). The aqueous ASSERT SG solution should have a slightly cloudy appearance. If granules remain in the jar (only partially dissolved), this indicates an alkaline water condition, and the water may need an acidifying conditioning adjuvant.
2. Add 1 pint of liquid fertilizer solution to each of 2 other one-quart jars.
3. Add 1/2 teaspoon of adjuvant to one jar. Mix well.
4. (a) When using ASSERT SG alone, add to each jar the correct amount of ASSERT SG as specified in the table below.
 (b) When using ASSERT SG tank mixtures, first add the specified quantity of MCPA ester, 2,4-D ester, or Bronate (Bromoxynil + MCPA ester) to each jar. Close jars and shake thoroughly until well mixed. Then add to each jar the correct amount of ASSERT SG as specified in the table below.
5. Close jars and shake vigorously for 2 minutes. Then add 1/4 teaspoon of non-ionic surfactant and, if used, the correct amount of crop oil, antifoaming agent and drift retardant. Shake vigorously for 10 seconds.
6. Let jars stand for 30 minutes and then observe the results. Look for signs of non-dissolution, separation, an oily layer or globules, sludge, flakes or other precipitates.
7. If the ASSERT SG granules did not dissolve (compared to Step 1), then conduct a second premixing test using an ASSERT SG solution as follows.
 - (a) Repeat all steps starting at Step 2.
 - (b) In Step 4, dissolve the correct amount of ASSERT SG in 2 fluid ounces of clean water in separate one-quart jars. Slowly pour the ASSERT SG solution into the liquid fertilizer solution (reduce liquid fertilizer dilution for added water) while agitating the mixture.
8. Determine compatibility.
 - (a) If a mixture without adjuvant does not separate, use this mixture in your spray tank.
 - (b) If a 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 ASSERT SG granules did not dissolve or separation of the mixture occurs, and premixing and/or agitation and/or adjuvant do not correct this problem, **DO NOT** use the herbicide(s) in that specific liquid fertilizer.

**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 SG	MCPA ester	2,4-D ester	Bronate ⁶ .
	(level teaspoons)	(teaspoons)	(teaspoons)	(teaspoons)
5	2	2	2	2
10	1	1	1	1
15	1/2	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 SG or ASSERT SG tank mixture in 8-10 more gallons of water per acre with ground equipment or in 5 or more gallons of water per acre by aircraft. **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.**

Use 50-mesh or larger strainer screens.

Aerial Application

Uniformly apply 5 GALLONS PER ACRE BY AERIAL APPLICATION. THOROUGH UNIFORM SPRAY COVERAGE IS REQUIRED TO MAXIMIZE WEED CONTROL.

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 SG must absorb into plant leaves for 3 hours prior to overhead irrigation or rainfall.

Spray a tank mixture of ASSERT SG plus sulfonylurea broadleaf herbicide (Ally, Express, Finesse, Glean, Harmony Extra, Harmony)⁴ within 6 hours of mixing.

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

For optimum weed control under cool conditions, it is recommended to apply ASSERT SG 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 SG within a rate range.
- 3) Use SUN-IT II or non-ionic surfactant plus crop oil concentrate.

IMPORTANT

DO NOT make more than one application of ASSERT SG 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 SG at recommended rates in wheat, barley and sunflowers:

Soybean	Corn	Edible beans	Sunflowers
Safflower	Wheat	Barley	

If ASSERT SG and Glean⁴, ASSERT SG and Ally⁴, or ASSERT SG and Finesse⁴ 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 SG application. **DO NOT** plant other rotational crops than those listed above for 15 months following an ASSERT SG application.

Use of ASSERT SG 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.

WHEAT AND BARLEY

GENERAL INFORMATION

ASSERT SG 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 SG 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 SG when freezing temperatures have occurred or are forecast. Allow at least 2 days of non-freezing temperatures before and after ASSERT SG application or reduced weed control may occur.

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Wild oats will be controlled with ASSERT SG applied when wild oats are in the 1 to 4 true leaf stage.

If unfavorable growing conditions exist, ASSERT SG 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 SG alone or in combination can be applied by ground equipment or aircraft.

Maximum weed control with ASSERT SG 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 SG 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.

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

WEED	Application Leaf stage	STATES			
		MN, ND, & SD	MT & WY	So. ID, CO & UT	WA, OR, & No. ID
----- ounces/acre -----					
GRASSES:		^e			
WILD OATS	1 - 4	7.5-11.2	9.0-11.2	9.7-11.2	11.2 ^b
Roughstalk bluegrass	1 - 4	9.0	11.5	11.2	11.2
Interrupted windgrass	2 - 4	---	---	---	11.2
BROADLEAVES:					
Wild mustard	1 - 6	7.5	9.0	9.7	11.2
London rocket	1 - 6	7.5	9.0	9.7	11.2
Field pennycress	1 - 4	9.0	11.2	11.2	11.2
Flixweed	1 - 4	9.0	11.2	11.2	11.2
Tansymustard	1 - 6	9.0	11.2	11.2	11.2
Catchweed bedstraw ^c	1 - 3	11.2	11.2	11.2	11.2
Tartary buckwheat ^c	1 - 3	11.2	11.2	11.2	11.2
Wild buckwheat ^d	1 - 3	9.0	9.0	9.0	9.0

- a When 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.
- b In eastern Washington and Northern Idaho a rate of 9.7 to 11.2 ounces/acre of ASSERT SG may be applied to spring wheat or barley growing under favorable conditions.
- c When ASSERT SG is applied up to the 3 leaf stage, plants stop growing, resulting in a non-competitive plant.
- d When ASSERT SG is applied at a rate of 9.0 oz/acre, it will provide suppression of wild buckwheat
- e In MN, ND, and SD when wild oats are 3 leaves or greater and populations are in excess of 25 plants per square foot, use the highest label rate of 11.2 pts per acre.

HERBICIDE COMBINATIONS

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

MCPA ester ⁵ 1	2,4-D ester ⁵ 1	Bromoxynil + MCPA ester ⁵ (Bronate ⁶)
Glean	Ally	Harmony ¹
Express ¹	Finesse ¹	Harmony Extra ¹

NOTE: DO NOT tank mix ASSERT SG 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.

DO NOT tank mix ASSERT SG with 2,4-D ester unless the crop is fully tillered. **DO NOT** tank mix ASSERT SG with Banvel⁷, any product containing dicamba⁸, 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.

ASSERT® SG/AVENGE® tank mix for wild oat control:

ASSERT SG 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 SG should be mixed at a rate of 5.6 ounces per acre with AVENGE at 2 pints per acre.

This mixture can be applied from the 2-5 true leaf stage of wild oats. **DO NOT** apply this tank mix when the wheat/barley flagleaf is exposed. The tank mix should be applied in 8-10 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 gpa or 5 gallons 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 on the AVENGE label for surfactant requirements.

WEED SPECIES NAMES

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

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¹Trademark of E.I. duPont Nemours and Co., Inc.

²Trademark of Ciba Corporation.

³Trademark of DowElanco.

⁴Trademark of AGSCO, Inc.

⁵
MCPA ester, 2,4-D ester, and Bromoxynil + MCPA ester are sold under various brand names.

⁶
Trademark of Rhone Poulenc.

⁷
Trademark of Sandoz Crop Protection Corp.

⁸
Dicamba is and active ingredient of various herbicides sold under various brand names.

AMERICAN CYANAMID COMPANY
AGRICULTURAL DIVISION
CROP PROTECTION CHEMICALS DEPARTMENT
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