

# Cemax™

## herbicide



Department of Agriculture  
STATE OF HAWAII



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**LICENSED**

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**8690.8**

### Dispersible Granules

#### Active Ingredient

PERIOD **2009-2011** LIC. NO. PERIOD **2012-2014** LIC. NO. PERIOD **2015-2017** LIC. NO.

*By Weight*

Chlorimuron Ethyl

Ethyl 2-[[[(4-chloro-6-methoxypyrimidin-2-yl)amino]carbonyl]amino]sulfonyl]benzoate 25.0%

#### Other Ingredients

75.0%

Total

100.0%

EPA Reg. No. 352-436-85588

EPA Est. No. \_\_\_\_\_

#### Nonrefillable Container

Net: \_\_\_\_\_

OR

#### Refillable Container

Net: \_\_\_\_\_

### KEEP OUT OF REACH OF CHILDREN CAUTION

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:** Hold open eye and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

**IF ON SKIN OR CLOTHING:** 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.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-888-261-1410 for medical emergencies involving this product.

#### PRECAUTIONARY STATEMENTS

##### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**Caution!** May irritate eyes, nose, throat and skin.

May be harmful if absorbed through skin. Avoid breathing dust or spray mist.

Avoid contact with skin, eyes, and clothing. Get medical attention if irritation persists.

#### 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 A on an EPA chemical resistance category selection chart.

##### Applicators and other handlers must wear:

Long-sleeved shirt and long pants.

Chemical Resistant Gloves made of any water proof material such as polyethylene or polyvinyl chloride.

Shoes plus socks.

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

#### ENGINEERING CONTROL STATEMENTS

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 part 170 Section 170.240 (d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

Important: When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for "Applicators and Other Handlers" and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown.

## **USER SAFETY RECOMMENDATIONS**

**USERS SHOULD:** Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

## **ENVIRONMENTAL HAZARDS**

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 cleaning equipment or disposing of equipment washwaters or rinsate. Do not apply where/when conditions favor runoff.

## **PESTICIDE HANDLING**

- Calibrate sprayers only with clean water away from the well site.
- Make scheduled checks of spray equipment.
- Ensure that all operation employees accurately measure pesticides.
- Mix only enough product for the job at hand.
- Avoid overfilling of spray tank.
- Do not discharge excess material on the soil at a single spot in the field or mixing/loading station.
- Dilute and agitate excess solution and apply at labeled rates or uses.
- Avoid storage of pesticides near well sites.
- When triple-rinsing the pesticide container, be sure to add the rinsate to the spray mix.

## **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 any water proof material such as polyethylene or polyvinyl chloride.

Shoes plus socks.

Use only in the geographies identified in the “Rotational Crop Guidelines” section of this label.

Cemax™ herbicide is a dispersible granule formulation to be mixed with water and sprayed for selective postemergence weed control of many broadleaf weeds and yellow nutsedge in soybeans, peanuts, and noncrop areas.

Cemax™ herbicide must be used only in accordance with directions on this label or in separately published Agsurf directions.

## **SPECIFIC USES – SOYBEANS**

### ***Timing to Crop Stage***

Cemax™ herbicide may be applied any time after the first trifoliolate has opened but no later than 60 days before soybean maturity.

### Timing to Weeds

- Apply Cemax™ herbicide when weeds are young and actively growing (after the first true leaves have expanded, but before the weeds exceed the size indicated below).
- Applications made to weeds larger than the sizes indicated below, or to weeds under stress may result in unsatisfactory control (see the “Environmental Conditions and Biological Activity” section).

### Cultivation

Do not cultivate within 7 days of application. Cultivation may put weeds under stress by pruning roots, thus diminishing control.

Cultivation approximately 14 days after application will help control suppressed weeds.

### Rate

When applied as directed, Cemax™ herbicide will control the following weeds:

Weeds	Maximum Height (Inches)		
	1/2 oz /A	2/3 oz /A	3/4 oz /A
Beggarticks (Bidens sp)	4	6	8
Bristly Starbur	2	3	4
Cocklebur	6	8	12
Cowpea	–	5	6
Dandelion (above ground portion)	4	4	4
Florida Beggarweed	4	5	6
Hemp Sesbania	4	5	6
Jerusalem Artichoke (above ground portion)	–	–	8
Jimsonweed	4	5	6
Marestail	3	5	6
Morningglory*			
Entireleaf	2	3	4
Ivyleaf	2	3	4
Pitted	2	3	4
Smallflower	2	3	4
Tall	2	3	4
Mustard	4**	5**	6**
Pigweed, Redroot	2	3	4
Prickly Lettuce	–	4	6
Ragweed, Common	–	3	4
Ragweed, Giant	–	4*	6
Sicklepod*	2	3	4
Smartweed			
Ladysthumb	2	3	4
Pennsylvania	2	3	4
Sunflower	5	6	8
Wild Poinsettia	–	2	4
Yellow, Nutsedge	3	3	4
Velvetleaf***	–	4	6

\* See Split Applications section.

\*\* Diameter

\*\*\* Include an ammonium nitrogen fertilizer.

When applied as directed, Cemax™ herbicide will suppress the following weeds:

Weeds	Maximum HEIGHT (Inches)		
	1/2 oz /A	2/3 oz /A	3/4 oz /A
Burcucumber*	–	3	6
Canada Thistle	–	3	4
Purple Nutsedge	3	4	5
Smooth Pigweed	2	3	4
Tropical Spiderwort	2	2	2

\* See Split Applications section.

### ***Split Applications***

A second application of Cemax™ herbicide may be made 2–3 weeks after the initial application to control weeds with multiple germination flushes or suppressed weeds such as burcucumber, cocklebur, cowpea, giant ragweed, morningglory, pigweed, sicklepod, and velvetleaf. Do not make more than 2 applications of Cemax™ herbicide in a single season.

### **Spray Adjuvants**

Applications of Cemax™ herbicide must include a crop oil concentrate or nonionic surfactant except as specified in this labeling. An ammonium nitrogen fertilizer may also be required. If another herbicide is tank mixed with Cemax™ herbicide, select adjuvants authorized for use with both products. Adjuvants must contain only EPA-exempt ingredients (40 CFR 1001).

#### ***Nonionic Surfactant***

- Add a nonionic surfactant at the rate of 2 pt per 100 gal of spray solution (0.25% v/v).
- Surfactant products must contain at least 60% nonionic surfactant with a hydrophilic/lipophilic balance (HLB) greater than 12.

#### ***Crop Oil Concentrate***

For improved weed control under hot, dry conditions, or for control of tough weeds like Giant Ragweed, a crop oil concentrate may be used in place of a nonionic surfactant.

- Apply crop oil concentrate at the rate of 8 pt per 100 gal of spray solution (1.0% v/v).
- Use a good-quality, petroleum-based or methylated seed oil-based crop oil concentrate with at least 15% surfactant emulsifiers and 80% oil.
- Crop oil concentrate may increase the potential for crop injury in soybeans.

#### ***Ammonium Nitrogen Fertilizer***

In addition to a nonionic surfactant or crop oil concentrate, an ammonium nitrogen fertilizer is required to control velvetleaf.

- Use 2 qt/acre of a high-quality urea ammonium nitrate (UAN), such as 28% N or 32% N, or 2 lb/acre of a spray-grade ammonium sulfate (AMS).
- Use 4 qt/acre UAN or 4 lb/acre AMS under arid conditions.
- Always use the lower rates of fertilizer with spray volumes of less than 15 gallons per acre.

#### ***Special Adjuvant Types***

- Combination adjuvant products may be used at doses that provide the required amount of NIS, COC, MSO and/or ammonium nitrogen fertilizer. Consult product literature for use rates and restrictions.
- In addition to the adjuvants specified above, other adjuvant types may be used if they provide the same functionality and have been evaluated and approved by Agsurf Product Management.

### **Tank Mixes**

Other than the exceptions noted, and in addition to the tank mix partners and rates indicated in this label, Cemax™ herbicide may be tank mixed or followed with sequential applications of other products registered for use in soybeans. Cemax™ herbicide may be applied in tank mix combinations with full or reduced rates of other products provided:

- The tank mix product is labeled for the same timing, method of application, adjuvants, and use restrictions as Cemax™ herbicide.
- The tank mix is not specifically prohibited on the label of the tank mix product.
- The tank mix combination is compatible as determined by a “jar test” described in the TANK MIX COMPATIBILITY TESTING section below.

Weed control and crop safety resulting from the use of tank mixtures not specifically noted on this label, or in separately published Agsurf recommendations, are the responsibility of the user.

### **Tank Mix Compatibility Testing**

Perform a jar test prior to tank mixing to ensure compatibility of Cemax™ herbicide and other pesticides. Use a clear glass quart jar with lid and mix the tank mix ingredients in their relative proportions. Invert the jar containing the mixture several times and observe the mixture for approximately 1/2 hour. If the mixture balls-up, forms flakes, sludges, gels, oily film or layers, or other precipitates, it is not compatible.

### **Soybean Precautions**

- Do not tank mix Cemax™ herbicide with “Python” WDG due to risk of crop injury.
- Do not tank mix Cemax™ herbicide with organophosphate insecticides or apply Cemax™ herbicide within 14 days before or after an application of an organophosphate insecticide, as severe crop injury may occur.

- Temporary leaf yellowing and/or retardation of soybean growth may occur following application of Cemax™ herbicide. These effects will generally be most evident 5-7 days after application to soybeans under stress. Under favorable soybean growing conditions, the crop will quickly recover.
- Do not graze treated fields or harvest for forage or hay.
- Cemax™ herbicide should not be used on soils with a history of nutrient deficiency (such as iron chlorosis). Crop injury may occur.
- Do not apply to land that has been or will be treated with chlorsulfuron and/or metsulfuron methyl containing herbicides in the states of Kansas, Nebraska, or South Dakota without carefully observing the rotational crop intervals for those products.

## SOYBEAN TANK MIX APPLICATIONS

### Cemax™ herbicide and glyphosate tankmixes

A tank mix of Cemax™ herbicide at 0.25 to 0.33 oz/acre plus glyphosate (equivalent to 1 qt of a 4 lb/gallon formulation) will control the weeds listed in the table below. For best control of morningglories and dandelion, the higher rate of Cemax™ herbicide is recommended.

- When tank mixing Cemax™ herbicide + glyphosate herbicides, it is recommended to add 4.25 -17 lb ammonium sulfate per 100 gallons of spray mixture.
- The addition of surfactant at 0.25% v/v (1 qt per 100 gallons of spray) to some Cemax™ herbicide + glyphosate tank mixes may improve weed control. Since some glyphosate products differ in their adjuvant contents, some glyphosate products, such as "Glyphomax" or "Roundup Original" allow for the addition of surfactants.
- See the glyphosate manufacturer's label for specific ammonium sulfate and surfactant recommendation.

Weeds Controlled	Maximum weed height in inches 0.25 - 0.33 oz/ac Cemax™ herbicide + glyphosate*
Barnyardgrass	6
Cocklebur	8
Corn, volunteer	20
Crabgrass species	10
Dandelion	4
Foxtail species	10
Hemp sesbania	4
Jimsonweed	10
Ladysthumb	8
Lambsquarters	6
Morningglory, entireleaf, ivyleaf,	4
pitted, tall	4
Nightshade, eastern black	5
Nutsedge, yellow	6
Panicum, fall, texas	10
Pigweed, redroot, rough	12
Pigweeds, other	8
Prickly sida	4
Ragweed, common, giant	8
Sicklepod	4
Signalgrass, broadleaf	4
Smartweed, pennsylvania	8
Sunflower	8
Velvetleaf	4
Waterhemp species	4

\*equivalent of 1 qt/ac of 4 lb/gal glyphosate

A tank mix of Cemax™ herbicide at 0.5 oz/ac plus glyphosate (equivalent to 1 qt of a 4 lb/gallon formulation) will suppress tropical spiderwort that is no larger than 2 inches in size.

### Cemax™ herbicide and “Flexstar”, “Reflex”, “Ultra Blazer”, “Cobra” or “Phoenix” Herbicides

For control of small waterhemp, eastern black nightshade and improved common ragweed control, Cemax™ herbicide may be tank mixed with:

- 0.75 – 1.25 pt/acre “Flexstar”
- 0.75 – 1.5 pt/acre “Reflex”
- 0.5 – 1.5 pt/acre “Ultra Blazer”
- 4 – 6 fluid oz/acre “Cobra”, or
- 8 fluid oz/acre “Phoenix”

Refer to the “Flexstar”, “Reflex”, “Ultra Blazer” “Cobra” and “Phoenix” labels for the appropriate rate based on the weed sizes to be controlled. Nonionic surfactant or crop oil concentrate must be added.

**For best results with Cemax™ herbicide plus “Reflex” or “Flexstar”,** use a methylated seed oil-based or petroleum oil-based crop oil concentrate at 8 pt per 100 gallon spray solution (1% v/v). Alternately, use nonionic surfactant at 2 pt per 100 gallon spray solution (.25%v/v).

**For best results with Cemax™ herbicide plus “Ultra Blazer”,** use nonionic surfactant at 1-2 pt per 100 gallon spray solution. Use of crop oil concentrate is not recommended, as severe injury may occur.

**For best results with Cemax™ herbicide plus “Cobra”,** use crop oil concentrate at 4 pt per 100 gallon spray solution (0.5% v/v).

**For best results with Cemax™ herbicide plus “Phoenix”,** use nonionic surfactant at 2 pt per 100 gallon spray solution.

For control of Prickly Sida and Hemp Sesbania, tank mix 0.5 oz Cemax™ herbicide with 8-12.5 fl. oz “Cobra”.

Use the higher “Cobra” rate when prickly sida or hemp sesbania are heavy or if prickly sida and hemp sesbania approach the maximum size of 1" or 4", respectively. Include a nonionic surfactant at 1-2 pt per 100 gallons of spray solution (0.125 - 0.25% v/v). Do not use crop oil concentrate when tank mixing Cemax™ herbicide and “Cobra” at these rates.

**Precautions for tank mixes of Cemax™ herbicide, or Cemax™ herbicide + “Harmony” GT XP plus “Flexstar”, “Reflex”, “Ultra Blazer”, “Cobra”, or “Phoenix”**

Tank mix applications of Cemax™ herbicide or Cemax™ herbicide + “Harmony” GT XP plus “Flexstar”, “Reflex”, “Ultra Blazer”, “Cobra” or “Phoenix” may not control weeds listed on the Cemax™ herbicide or Cemax™ herbicide + “Harmony” GT XP label as completely as applications of Cemax™ herbicide or Cemax™ herbicide + “Harmony” GT XP alone.

### Cemax™ herbicide and Postemergence Grass Herbicides

Cemax™ herbicide and Cemax™ herbicide tank mixes may be tank mixed with postemergence grass herbicides such as “Assure” II herbicide. For best results, apply Cemax™ herbicide 7 days before or 1 day after the grass herbicide. Refer to the grass herbicide label for precautions and specific use information.

### Cemax™ herbicide and “Harmony” GT XP Herbicide

Cemax™ herbicide may be tank mixed with “Harmony” GT XP for broad spectrum weed control as follows:

Weeds	Cemax™ herbicide + “Harmony” GT XP oz/Acre		
	Maximum Height (Inches)		
	1/4 + 1/12	1/3 + 1/12	1/2 + 1/24
Buffalobur	-	6**	-
Cocklebur	4	6	6
Jimsonweed	5	5	4
Lambsquarters	4	4	-
Marestail	5	5	6
Milkweed, common	-	6	-
Morningglory species			
Entireleaf	2**	2**	2
Ivyleaf	2**	2**	2
Pitted	2**	2**	2
Smallflower	2**	2**	2
Tall	2**	2**	2
Mustard, wild	4 (dia)	4 (dia)	4 (dia)
Pigweed, Redroot	12	12	4
Pigweed, Other	8	8	4
Ragweed, common	3**	3	3
Smartweeds, annual	8	8	4
Sicklepod	-	-	2
Sunflower	8	8	5
Velvetleaf*	8	8	4
Yellow Nutsedge	-	3**	3

\* Requires the addition of ammonium fertilizer. See Spray Adjuvants for Soybeans.

\*\* Suppression only.

### **Cemax™ herbicide + “Harmony” GT XP tank mixes – improved broadleaf weed control**

For control of small waterhemp, eastern black nightshade and improved common ragweed control, Cemax™ herbicide + “Harmony” GT XP may be tank mixed with:

- 0.75 – 1.25 pt/acre “Flexstar”
- 0.75 – 1.5 pt/acre “Reflex”
- 0.5 – 1.5 pt/acre “Ultra Blazer”
- 4 – 6 fluid oz “Cobra”, or
- 8 fluid oz/acre “Phoenix”

Refer to the “Flexstar”, “Reflex”, “Ultra Blazer”, “Cobra” and “Phoenix” labels for the appropriate rate based on the weed sizes to be controlled. Nonionic surfactant or crop oil concentrate must be added to the tank mix. Use as directed below in “Cemax™ herbicide + “Harmony” GT XP – Application Information”.

See Precautions for Cemax™ herbicide + “Harmony” GT XP plus “Flexstar”, “Reflex”, “Ultra Blazer”, “Cobra” or “Phoenix” tank mixes in the preceding section “Cemax™ herbicide plus “Flexstar”, “Reflex”, “Ultra Blazer”, “Cobra” or “Phoenix” herbicide”.

#### ***Cemax™ herbicide + “Harmony” GT XP – Application Information***

- Applications must include a nonionic surfactant at the rate of 1-2 pt per 100 gal of spray solution (0.125%-0.25% v/v). Using the higher rate of nonionic surfactant, particularly under hot, humid conditions, may result in temporary crop injury.

- Do not use “Dash” with Cemax™ herbicide + “Harmony” GT XP tank mixes, or severe injury may occur.
- Under dry conditions or during cool weather a crop oil concentrate may be used to enhance weed control. Use at the rate of 4 pt per 100 gal of spray solution (0.5% v/v).
- The use of crop oil concentrate may increase temporary crop injury.
- When tank mixing Cemax™ herbicide + “Harmony” GT XP treatments with “Assure” II or other postemergence grass herbicides, add nonionic surfactant at 1-2 pt per 100 gal of spray solution.

#### ***Cemax™ herbicide + “Harmony” GT XP Precautions***

- Do not use crop oil concentrate when tank mixing Cemax™ herbicide + “Harmony” GT XP treatments with postemergence grass herbicides such as “Assure” II, or severe crop injury may result.
- Do not tank mix Cemax™ herbicide + “Harmony” GT XP with “Poast Plus”, as severe crop injury may result.
- Cemax™ herbicide tank mix with “Harmony” GT XP is not recommended in the States of Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, South Carolina and Texas, as excessive crop injury may occur.

### **Cemax™ herbicide and “FirstRate” Herbicide**

For improved Ragweed or Cocklebur control, add between 0.075 – 0.15 oz per acre “FirstRate” to 0.5 oz per acre Cemax™ herbicide. These tank mixes will control up to 8" Cocklebur or Common Ragweed and up to 12" Giant Ragweed. Use the lower amount of “FirstRate” when weeds are less than the maximal size and under good growing conditions. Use the higher amount of “FirstRate” when weeds are approaching the maximum size and/or under unfavorable growing conditions.

A good quality petroleum-based or methylated seed oil-based Crop Oil Concentrate must be added to the tank mix at the rate of 8 pints per 100 gallons of spray solution (1% v/v). An ammonium nitrogen fertilizer may be added as directed under the “Spray Adjuvants” section.

**Do not use “Harmony” GT XP herbicide with this tank mix of Cemax™ herbicide plus “FirstRate”, or unacceptable severe crop injury will result.**

## **REGIONAL RECOMMENDATIONS**

### ***Postemergence use in Northwest Iowa***

In Iowa, west of SR63 and north of I-80, one-half ounce Cemax™ herbicide may be applied before July 15 to soybeans growing in well-drained, high-fertility soils of 3% or greater organic matter and pH of 7.5 or less. Do not exceed 0.5 ounce per acre in a single growing season.

### ***Expanded Application Timing***

Cemax™ herbicide at 1 to 3 oz/acre can be used for weed control in all states in the Cemax™ herbicide Central and Southern Rotational Regions, excluding the state of Florida (see Rotational Crop Guidelines).

Cemax™ herbicide can be applied to no-till or conservation tillage fields anytime after the Fall harvest, but prior to soybean emergence. Do not apply to frozen ground.

## Application Rates

Medium and Fine Soils  
1.5 - 4% organic matter

Rate

### Central Region States

No pH restriction\*

1 oz/acre

composite soil pH of 7 or less

1.25 - 3 oz/acre

### Southern Region States

No pH restriction

1 - 1.5 oz/acre

composite soil pH of 7 or less

greater than 1.5  
up to 3 oz/acre

\* In Michigan, New York and Wisconsin, do not apply the 1 oz/acre rate to soils exceeding pH 7.6. In all other states, the soil pH is unrestricted for 1 oz/acre rate.

For season-long control of all grass and broadleaf weeds following 1 – 3 oz/acre applications of Cemax™ herbicide, a planned sequential program is required. Use higher rates of Cemax™ herbicide where longer residual control is desired.

## Weeds Controlled

### Burndown Control of existing winter and summer annual weeds

Cemax™ herbicide applications in the fall through early spring will provide burndown control of certain broadleaf weeds no greater than 3 inches in height. To obtain burndown of the weed species listed below:

- addition of crop oil concentrate at 1% v/v (1 gallon per 100 gallons of final spray volume) is required.
- use a minimum of 20 gallons per acre with spray nozzles that provide thorough spray coverage of the weeds.
- 2,4-D LVE may be added for enhanced burndown control.

Bittercress, small-flowered  
Bushy wallflower  
Buttercup, smallflower  
Butterweed  
Dandelion  
Deadnettle, purple, red  
Garlic, wild\*  
Henbits  
Lambsquarters\*\*  
Lettuce, prickly  
Marestail\*  
Mustard wild  
Pennycress  
Pepperweed

Pigweed  
Ragweed, common  
Ragweed, giant  
Shepherdspurse  
Smartweed, annual  
Speedwell, field, purselane  
Sunflower  
Tansy mustard  
Thistle, canadian (above ground portion)  
Velvetleaf  
Whitlowgrass  
Yellow rocket

\* Addition of 1 pt/acre 2,4-D LVE is required for the 1 oz/acre rate and recommended for all rates.

\*\* Addition of 1 pt/acre 2,4-D LVE required.

### Chickweed Burndown

- For best results: add 0.08 – 0.33 oz “Express” XP herbicide to Cemax™ herbicide for control of up to 6 inch common chickweed. For other weeds “Express” XP controls, see the “Express” XP label. “Express” XP must be added at least 45 days prior to soybean planting.
- Alternatively, “Sencor” or glyphosate-containing products registered for soybeans may be used for chickweed burndown.

To burndown annual grasses and broadleaf weeds listed above when they exceed the recommended heights, Cemax™ herbicide may be tank mixed with one or more of such products as: “Gramoxone” Extra, 2,4-D LVE, “Sencor”, or glyphosate-containing products registered for soybeans. When tankmixing with glyphosate-containing products, replace the crop oil concentrate with nonionic surfactant at 0.25% v/v (1 quart per 100 gallons final spray volume) and follow the manufacturer’s instructions for ammonium sulfate addition. To select the proper burndown product, identify the weeds to be controlled and consult the product labels to determine which product is needed.

**Preemergence or Residual Control**

- Fall through early spring applications of 1.25 – 3 oz/acre Cemax™ herbicide will provide acceptable preemergence control or partial control (suppression) of the following weeds through normal planting dates.

**Control**

- Cocklebur
- Lambsquarters
- Marestail
- Pigweeds, redroot, smooth
- Purselane Speedwell
- Ragweed, common
- Smartweeds, annual
- Velvetleaf

**Suppression**

- annual grasses\*  
(foxtails, barnyardgrass, crabgrass, panicum)
- Chickweed, common
- Jimsonweed
- Morningglory, annual\*
- Nutsedge, yellow\*
- Prickly Sida (teaweed)\*
- Ragweed, giant\*

- Fall through early spring applications of 1 oz/acre Cemax™ herbicide will provide limited residual control of the above-listed weeds to contribute to a clean seed at planting.

\* With 1 oz/acre applications of Cemax™ herbicide - heavy weed pressure, delayed planting, or adverse environmental conditions may require additional burndown control measures at planting. For enhanced residual control, such products like 2-4 oz/acre “Sencor” may be tank mixed with 1 oz/acre Cemax™ herbicide.

**Planned Sequential Programs**

Cemax™ herbicide applied under the expanded application timing will not provide adequate season-long preemergence control of annual grasses and broadleaf weeds.

- for season-long control in glyphosate-tolerant soybeans, follow Cemax™ herbicide with an in-season glyphosate-containing herbicide.
- for season-long control in non-GMO soybeans, follow Cemax™ herbicide with sequential programs based on the targeted weeds.

To insure maximal rotation flexibility when considering a sequential program of Cemax™ herbicide followed by Cemax™ herbicide or “Synchrony” XP, carefully consider: the soil pH, the recommendations below, the rotational information in this section, and the Rotational Crop Guidelines in this label.

**Applications of 1 oz/acre Cemax™ herbicide (Central and Southern States) to soils with pH greater than 7:** Do not apply additional chlorimuron-ethyl-containing herbicides (Cemax™ herbicide, “Synchrony” XP) except in the states of AL, AR, GA, KY, LA, MO bootheel, MS, NC, OK, SC, TN, TX, where up to 0.5 oz/acre Cemax™ herbicide may be applied.

**Applications of 1.5 oz/acre Cemax™ herbicide (Southern Region States) to soils with pH greater than 7:** Do not apply additional chlorimuron-ethyl-containing herbicides (Cemax™ herbicide, “Synchrony” XP)

**Applications of 1-3 oz Cemax™ herbicide to soils with pH less than 7:** may be followed with a single postemerge application of Cemax™ herbicide or “Synchrony” XP.

**Expanded Application Rate Cemax™ herbicide oz/acre**

**Cemax™ herbicide oz/acre**

**“Synchrony” XP oz/acre**

Expanded Application Rate Cemax™ herbicide oz/acre	Cemax™ herbicide oz/acre	“Synchrony” XP oz/acre
up to 2	up to 3/4	up to 3/4
2.1 - 2.5	up to 2/3	up to 3/4
2.6 - 3	up to 1/4	-

Refer to the sequential herbicide labels for specific information regarding use rates, application timing, crop rotations and other restrictions and precautions.

**Rotational Information**

Even though Cemax™ herbicide may be applied in the fall, for the purposes of re-cropping, do not start counting months for re-cropping until normal soybean planting time in the Spring.

For Rotational information following 1 oz/acre Cemax™ herbicide in Central Region States, and up to 1.5 oz/acre applications in Southern Region States, use Recrop Interval 2 or 3 under the Section ‘Rotational Crop Guidelines’ depending on whether the use was in a Central or Southern region state.

For all other Applications of Cemax™ herbicide under the Expanded Application Timing Use, follow the recropping intervals given in the table below.

Crop rotation intervals noted in the table below are based on crops grown under favorable growing conditions. Crops grown under unfavorable environmental conditions, such as drought, nutrient deficiency, high salts, disease and insect pressure may demonstrate reduced tolerance to crop protection chemicals. When deciding on a particular crop to replant in your fields, carefully consider your particular soil and other field conditions.

Crop	Recropping Interval in Months
Soybeans	anytime
Cereal grains, pasture grasses	4
Peanuts	8
Alfalfa	10
Cotton, Rice	10
Tobacco and Tomato transplants	10
Field Corn*	10**
Clover, Sorghum	12
Dry Beans, Kidney Beans, Snap Beans, Peas	12
Cucumber, Flax, Pumpkin	18
Sunflower, Sweet Corn, Watermelon	18
Cabbage, Canola, Lentils, Mustard	18
Carrot, Onion, Potato (all types), Sugarbeets and any other crop not listed	30†

\* Field Corn is defined to include only that corn grown for grain, silage, popcorn, and seed corn. However, because seed corn inbred lines may vary in their sensitivity to trace amounts of herbicide carryover, Agsurf cannot warrant that seed corn can be recropped without damage or yield loss. Users should seek the advice of their seed corn company agronomists regarding inbred sensitivity to herbicides prior to planting any inbred lines.

\*\*In the states of DE, KY, MD, MO bootheel, NJ, NC, SC, TN, VA, and WV, field corn may be recropped after 9 months if the Cemax™ herbicide rate does not exceed 2.5 oz/acre.

† Carrots, onions, potato (all types), sugarbeets, and any other crop not listed may be recropped after 18 months in the states of AL, AR, DE, GA, KY, LA, MD, MS, MO bootheel, NJ, NC, SC, TN, VA, and WV.

## SPECIFIC USES – PEANUTS

Cemax™ herbicide is recommended for the control of Florida beggarweed in peanuts in the states of Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina, and Virginia.

Cemax™ herbicide is also recommended for the suppression of bristly starbur in peanuts in the above mentioned states.

### Timing to Crop Stage

Cemax™ herbicide can be applied from 60 days after crop emergence to 45 days before harvest. Where peanut stands are erratic or have been replanted, do not apply Cemax™ herbicide until 60 days after the youngest peanuts have emerged.

### Rate for Use on Peanuts

Make a single postemergence application of 1/2 oz Cemax™ herbicide per acre for the control of actively growing Florida beggarweed and the suppression of bristly starbur.

### Timing to Weeds

#### *Florida Beggarweed*

- Apply before Florida beggarweed reaches 10" in height or begins to bloom.
- Florida beggarweed that regrows from mowing, cultivation, or from a previous application of "Cadre" DG herbicide will only be suppressed.

#### *Bristly Starbur*

- Apply before bristly starbur reaches 10" in height.
- Include ammonium sulfate or feed-grade urea at 2 lb per acre. Alternatively, a high-quality grade of ammonium-based nitrogen fertilizer may be used at 8 pt per acre.
- Include a nonionic surfactant in addition to an ammonium-based fertilizer.
- Fertilizer containing elemental sulfur should not be used.

### Spray Adjuvants for Peanuts

- A nonionic surfactant must be included in the spray solution at the rate (concentration) of 2 pt per 100 gal of spray solution so that a minimum of 0.125% v/v of actual nonionic surfactant is applied.
- At least 60% of the formulation should be actual nonionic surfactant.
- Use only EPA approved surfactants authorized for use on food.
- Do not use a crop oil concentrate (either vegetable- or petroleum-based), as crop injury will result.

## Peanut Varieties

Varietal tolerance to Cemax™ herbicide applications may vary. When using Cemax™ herbicide for the first time on a variety other than those listed, treat only a portion of the field. If crop growth appears normal after 14 days, the balance of the acreage may be treated.

- Southern Runner has shown moderate tolerance to Cemax™ herbicide. Do not apply tank mixes of Cemax™ herbicide + 2,4-DB to Southern Runner.

Applications of Cemax™ herbicide applied from 60 days after crop emergence to 45 days before peanut harvest on current runner-type tomato spotted wilt virus tolerant varieties may result in an increase in tomato spotted wilt virus symptoms which may impact peanut yield.

Do not apply to early bunch or Spanish-type varieties due to the risk of excessive crop injury.

Cemax™ herbicide may cause a reduction in peanut vine length. Under normal growing conditions test data has shown no adverse effects on yields.

The following conditions prior to or following Cemax™ herbicide application can affect peanut yields:

- Environmental stress (drought)
- Damage from previous crop protection product application
- Damage from insects, nematodes, or disease
- Tank mixing Cemax™ herbicide with elemental sulfur or products containing elemental sulfur.
- Cemax™ herbicide applications other than those directed on this label

## Peanut Tank Mix Applications

### *Cemax™ herbicide + “Bravo 720” (chlorothalonil)*

Cemax™ herbicide may be tank mixed with 1.5 pt “Bravo 720,” or any equivalent amount of other chlorothalonil-based product per acre in peanuts.

- Applications of Cemax™ herbicide + “Bravo 720” must include a nonionic surfactant at 2 pt per 100 gal of spray solution so that a minimum of 0.125% v/v actual nonionic surfactant is applied.

Refer to the specific chlorothalonil product label for specific use directions and precautions.

### *Cemax™ herbicide + 2,4-DB*

Cemax™ herbicide may be tank mixed with 2,4-DB in peanuts.

- Do not apply more than 8/10 pt “Butyrac 200” in the tank mix as excessive crop injury can occur.
- Increased crop response (foliar yellowing, stem discoloration, and reduction in peanut growth) can occur with the tank mix.
- Applications of Cemax™ herbicide + 2,4-DB must include a nonionic surfactant at 2 pt per 100 gal so that a minimum of 0.125% v/v actual nonionic surfactant is applied.

Refer to the 2,4-DB product labels for specific use directions and precautions.

## Peanut Restrictions

- Make only one application of Cemax™ herbicide to peanuts per season.
- Do not apply within 45 days of harvest.
- Do not graze treated fields or harvest for forage or hay.
- Applications to peanuts under stress resulting from weather (drought), insects, previous herbicide injury, or disease (fungi or nematodes) may result in crop injury.
- Cemax™ herbicide may cause temporary reduction in peanut growth. This interruption of peanut plant growth does not affect yields.
- Applications of Cemax™ herbicide in combination with sulfur or elemental sulfur-containing products will result in crop injury.
- Cemax™ herbicide may be used on peanuts following application of “Pursuit”. Follow the rotational crop guidelines on the respective labels. The most restrictive interval shall apply.

## SPECIFIC USES – NONCROP AREAS

Cemax™ herbicide is recommended for postemergence control of certain annual weeds on noncrop sites such as fence rows, roadsides, equipment storage areas, and other similar areas.

- For control of cocklebur, velvetleaf, and other annuals, apply 1–2 oz Cemax™ herbicide per acre to weeds that are within the labeled size as stated in the Rate section at the beginning of this label.
- Add a nonionic surfactant at 2 pt per 100 gal of spray solution so that a minimum of 0.125% v/v of actual nonionic surfactant is applied.

## Noncrop Ground Application

For optimum spray distribution and thorough coverage, use flat fan nozzles. Use a minimum of 10 gal of spray volume per acre (GPA). Do not apply by air.

## Noncrop Restrictions

Do not make more than two applications per calendar year to noncrop areas.

Do not graze treated fields or harvest for forage or hay.

## MIXING INSTRUCTIONS FOR SOYBEANS/PEANUTS

The following steps should be followed when preparing to spray Cemax™ herbicide:

1. Fill the spray tank 1/4 to 1/3 full of water.
2. While agitating, add the required amount of Cemax™ herbicide.
3. Continue adequate agitation.
4. Cemax™ herbicide should be thoroughly mixed with water in the spray tank before adding any other material (in order: tank mix herbicide, surfactant, crop oil concentrate, or nitrogen-based fertilizer). Agitation is required for uniform mixing and application.
5. Apply Cemax™ herbicide spray preparation within 24 hours of product mixing, or product degradation may occur.
6. If the mixture has settled, thoroughly reagituate before using.

## APPLICATION INFORMATION

### Ground Application (See Also Spray Drift Management)

#### *Broadcast Application*

- Postemergence, use a minimum of 10 gal water per acre. Under heavy weed pressure or dense crop foliage, increase minimum spray volume to 15-25 gal per acre. For best performance, select nozzle and pressure combinations that deliver medium to coarse spray droplets, as indicated, for example, by ASAE standard S572.
- Preemergence in soybeans, use a minimum of 10 gal water per acre. For best performance, select nozzle and pressure combinations that deliver coarse to very coarse spray droplets, as indicated, for example, by ASAE standard S572.
- For burndown applications of existing vegetation, use a minimum of 15 gal water per acre. For large weeds and/or heavy residue, increase gallonage to ensure coverage. For best performance, select nozzle and pressure combinations that deliver medium to coarse spray droplets, as indicated, for example, by ASAE standard S572.

#### *Band Application*

- Because band applicators spray a narrower area than broadcast applicators, use proportionately less spray solution for band applications.
- Carefully calibrate the band applicator to not exceed the labeled rate.
- Flat fan nozzles are preferred.
- Carefully follow the nozzle manufacturer's instructions for nozzle orientation, distance of the nozzles from the crop and weeds, spray volumes, calibration, and spray pressure for band applications.

### Aerial Application (See Also Spray Drift)

- Use nozzle types and arrangements that will provide optimum spray distribution and maximum coverage at 3–5 gal per acre.
- Use a minimum of 3 gal water per acre. Under heavy weed pressure or dense crop foliage, increase the minimum spray volume to 5 gal per acre.
- Do not apply during a temperature inversion, when winds are gusty, or when other conditions could produce poor coverage and/or off-target spray movement.

## ENVIRONMENTAL CONDITIONS AND BIOLOGICAL ACTIVITY

Cemax™ herbicide rapidly inhibits the growth of susceptible weeds. Leaves of susceptible plants yellow 3-5 days after application, followed, in controlled plants, by the death of the growing point. Cemax™ herbicide will provide complete control of susceptible weeds in 7–21 days. Suppressed plants may remain green but will be stunted and noncompetitive.

Cemax™ herbicide will provide best results when applied to young, actively growing weeds. Degree of control depends on: rate used; weed spectrum; weed size (if weeds are large, use higher rates and spray volume); growing conditions at and following treatment; soil moisture; precipitation; and spray adjuvants. Treating weeds under stress or large weeds may result in only partial control. Stress may be caused by:

- abnormal weather (hot or cold)
- mechanical injury from cultivation
- drought
- water-saturated soil

- disease
- insect injury
- prior herbicide injury

Stress affects some weeds, such as pigweed, more than others. Delay application until stress passes and weeds start to grow again.

Severe stress (drought, disease, insect damage, or nutrient deficiency such as iron chlorosis) following application may also result in crop injury and/or poor weed control.

Do not apply Cemax™ herbicide if rain is expected within 1 hour or weed control may decrease.

## ROTATIONAL CROP GUIDELINES

**Important:** Crops other than soybeans or peanuts planted the season following a Cemax™ herbicide application can vary in their sensitivity to low concentrations of Cemax™ herbicide remaining in the soil.

Crop rotation intervals noted in the table below are based on crops grown under favorable growing conditions. Crops grown under unfavorable environmental conditions, such as drought, nutrient deficiency, high salts, disease and insect pressure may demonstrate reduced tolerance to crop protection chemicals. When deciding on a particular crop to replant in your fields, carefully consider your particular soil and other field conditions.

- Rotation or crop intervals must be followed.
- When Cemax™ herbicide is applied in sequence with “Canopy” or “Canopy XL”, follow the crop rotational guidelines listed on the “Canopy” and “Canopy XL” labels.

**Northern Region:** The states of Iowa (west of State Route 63 and north of I-80), Minnesota, Nebraska (fields north of route 30 and west of Route 281), New York (fields north of Interstate 90), South Dakota and Wisconsin (fields north of Interstate 90 between Lacrosse and Madison and fields north of Interstate 94 between Madison and Milwaukee).

**Central Region:** The states of Delaware, Illinois, Indiana, Iowa (east of State Route 63 or south of I-80), Kansas, Maryland, Michigan, Missouri (except the Bootheel), Nebraska (fields south of Route 30 and east of Route 281), New Jersey, New York (fields south of Interstate 90), Ohio, Pennsylvania, Virginia, West Virginia and Wisconsin (fields south of Interstate 90 between Lacrosse and Madison and fields south of Interstate 94 between Madison and Milwaukee).

**Southern Region:** The states of Alabama (except the “Black Belt” where soil pH must be less than 7.0), Arkansas, Florida, Georgia, Kentucky, Louisiana, Missouri (Bootheel region only), Mississippi (except the “Black Belt” where soil pH must be less than 7.0), North Carolina, Oklahoma, South Carolina, Tennessee and Texas (fields east of Route 183).

### ***Follow Recrop Interval 1 if:***

- The field is located in a Northern, Central or Southern region state (all pH soils)

AND

- A single application of Cemax™ herbicide with a total rate of no more than 1/3 oz/acre for the growing season is applied.

### ***Follow Recrop Interval 1 if:***

- The field is located in a Northern Region state with soil pH 7.0 or less

AND

- A maximum of 2 applications of Cemax™ herbicide with a total rate of no more than 3/4 oz/acre for the growing season are applied.

### ***Follow Recrop Interval 1 if:***

- The field is located in the Northern Region in the state of IA and the soil pH is 7.5 or less.

AND

- A maximum of 1/2 oz Cemax™ herbicide is applied by July 15.

### ***Follow Recrop Interval 2 if:***

- The field is located in a Central Region state (all pH soils)

AND, EITHER

- A maximum of 2 applications of Cemax™ herbicide with a total rate of no more than 1.0 oz/acre for the growing season are applied,

OR

- A maximum of 1/3 oz/acre of Cemax™ herbicide in sequence with “Synchrony” XP are applied.

**Follow Recrop Interval 2 if:**

- The field is located in a Central Region state with soil pH 7.0 or less  
AND, EITHER
- A maximum of 2 applications of Cemax™ herbicide with a total rate of no more than 1.5 oz/acre for the growing season are applied,

OR

- A maximum of 3/4 oz/acre of Cemax™ herbicide in sequence with “Synchrony” XP are applied.

**Follow Recrop Interval 3 if:**

- The field is located in a Southern Region state (all pH soils except those with pH greater than 7.0 in the Black Belt region of Alabama and Mississippi)

AND, EITHER

- A maximum of 2 applications of Cemax™ herbicide with a total rate of no more than 1.5 oz/acre for the growing season are applied,

OR

- A maximum of 3/4 oz/acre of Cemax™ herbicide in sequence with “Synchrony” XP are applied.

**Rotational Intervals (Months) following the use of 1/3 to 1 1/2 ounces Cemax™ herbicide\***

Crop	Interval 1	Interval 2	Interval 3
Soybeans	Anytime	Anytime	Anytime
Cereal Grains Pasture Grasses (such as Fescue and Ryegrass)	3	3	3
Dry Beans Kidney Beans Peas Snap Beans	9	9	9
Field Corn ** (States in Northern and Central Regions)	9	9	---
Field Corn ** (States of AR, KY, MO (Bootheel only), NC, OK, TN, and TX)	---	---	8
Field Corn ** (States of AL, FL, GA, LA, MS, and SC)	---	---	7
Sweet Corn + (States in Northern Region)	9	---	---
Popcorn Sorghum Tobacco (transplant) Tomato (transplant)	15	9	9
Peanuts	6	15	6
Rice	9	15	9
Cotton	9	9	8
Alfalfa, Clover	9	12	9
Cucumber, Sunflower, Watermelon	9	18	18
Cabbage Canola (Rapeseed) Flax Lentils Mustard Pumpkins	18	18	18
Carrots, Onions, Sugar Beets Any crop not listed	30	30	30
Sweet Potatoes, Yams	30	30	10
Potatoes	30	30	30
Potatoes (NC, VA††)	---	8††	8††

\* If Cemax™ herbicide or the latter part of a sequential treatment containing chlorimuron ethyl (such as “Synchrony” XP) is applied after August 1, extend rotational crop intervals 2 months for alfalfa, clover, corn, cotton, popcorn, rice, sorghum, tobacco, and tomato.

\*\*The term “Field Corn” is defined to include only that corn grown for grain or silage or for seed corn relative to the Rotational Crop Guidelines section of this label.

+ Rotational crop intervals are for processing Sweet Corn varieties only. The rotational crop interval for other Sweet Corn varieties is 18 months.

†† States of NC and VA in soils with organic matter greater than 1%.

## THE IMPORTANCE OF SOIL PH

Soil pH varies greatly, even within the same field. pH variations as much as 2 pH units are common. Composite soil samples taken across an entire field, such as those samples taken for soil fertility recommendations, may not detect areas of high pH. Subsampling is recommended for areas likely to have pH values higher than the field average. The following is a non-inclusive list of potential high pH areas where subsampling is recommended.

- Where different soil types are evident within a field, sample soil types separately.
- Where conditions vary within a field, sample areas separately, such as:
  - areas bordered by limestone gravel roads,
  - river bottoms subject to flooding,
  - low areas in hardpan soils where evaporative ponds may occur,
  - eroded hillsides,
  - along drain tile lines, and
  - areas where drainage ditch spoil has been spread.
- Where lime has not been deeply incorporated, soil may exhibit significantly higher pH values in the upper 3 inches of soil. Composite soil samples taken at a 6-8 inch depth may not reflect the elevated pH near the surface. In these cases shallow sampling, the upper 3 inches, is advised.

Determine soil pH by laboratory analysis using a 1:1 soil:water suspension.

## SPRAYER PREPARATION AND CLEANUP

Prior to application of Cemax™ herbicide, start with clean, well maintained application equipment. Immediately following application, thoroughly clean all application equipment. Postponing action, even for a few hours, only makes effective cleanup more difficult. Failure to clean spraying equipment thoroughly may result in injury to subsequently sprayed crops. When spraying multiple loads of Cemax™ herbicide over an extended period of time, rinse the equipment with clean water at the end of the day. Leave water in the equipment overnight to prevent deposits from drying on surfaces.

When applications of Cemax™ herbicide are completed and prior to using the sprayer and associated equipment for other products or for crops other than soybeans, thoroughly clean the equipment using the procedure below.

STEP 1. Drain spray equipment. Thoroughly rinse sprayer, and flush hoses, boom and nozzles with clean water.

Loosen and physically remove visible deposits.

STEP 2. Fill the sprayer with clean water and add household ammonia (one gallon of 3% active for every 100 gallons of water) or correct amount of an Agsurf approved cleaner\*. Flush hoses, boom and nozzles. Turn off the boom and top off the tank with clean water. Circulate through the spraying system for 15 minutes. Flush the hoses, boom and nozzles with the cleaning solution. Drain the tank.

STEP 3. Remove and clean nozzle, screens and strainers in a bucket of fresh cleaner and water.

STEP 4. Repeat STEP 2.

STEP 5. Thoroughly rinse the sprayer, hoses, boom and nozzles with clean water, several times.

Clean all other associated application equipment. Take all necessary safety precautions when cleaning equipment. Do not clean near wells, water sources or near desirable vegetation. Dispose of waste rinse water in accordance with local regulations.

\* Equivalent amounts of an alternate strength ammonia solution or a tank cleaner recommended for Sulfonylurea herbicide cleanout may also be used.

## SPRAY DRIFT MANAGEMENT

The interaction of many equipment and weather-related factors determines the potential for spray drift. The applicator is responsible for considering all these factors when making application decisions.

**AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR.**

## IMPORTANCE OF DROPLET SIZE

The most effective way to reduce drift potential is to apply large droplets (>150 - 200 microns). The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. The presence of sensitive species nearby, the environmental conditions, and pest pressure may affect how an applicator balances drift control and coverage.

APPLYING LARGER DROPLETS REDUCES DRIFT POTENTIAL, BUT WILL NOT PREVENT DRIFT IF APPLICATIONS ARE MADE IMPROPERLY OR UNDER UNFAVORABLE ENVIRONMENTAL CONDITIONS!

See **Wind, Temperature and Humidity**, and **Temperature Inversions** sections of this label.

### *Controlling Droplet Size - General Techniques*

- **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 penetration. WHEN HIGHER FLOW RATES ARE NEEDED, USE A HIGHER-CAPACITY NOZZLE INSTEAD OF INCREASING PRESSURE.
- **Nozzle Type** - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles.

### *Controlling Droplet Size - Aircraft*

- **Number of Nozzles** - Use the minimum number of nozzles with the highest flow rate that provide uniform coverage.
- **Nozzle Orientation** - Orienting nozzles so that the spray is emitted backwards, parallel to the airstream will produce larger droplets than other orientations.
- **Nozzle Type** - Solid stream nozzles (such as disc and core with swirl plate removed) oriented straight back produce larger droplets than other nozzle types.
- **Boom Length** - The boom length should not exceed 3/4 of the wing or rotor length - longer booms increase drift potential.
- **Application Height** - Application more than 10 ft above the canopy increases the potential for spray drift.

## BOOM HEIGHT(Ground)

Setting the boom at the lowest labeled height (if specified) which provides uniform coverage reduces the exposure of droplets to evaporation and wind. For ground equipment, the boom should remain level with the crop and have minimal bounce.

## WIND

Drift potential increases at wind speeds of less than 3 mph (due to inversion potential) or more than 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given wind speed. AVOID GUSTY OR WINDLESS CONDITIONS.

**Note:** Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

## TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, set up equipment to produce larger droplets to reduce effects of evaporation.

## TEMPERATURE INVERSIONS

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

## SENSITIVE AREAS

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

## SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce the effects of wind. However, it is the responsibility of the applicator to verify that the shields are preventing drift and not interfering with uniform deposition of the product.

## AIR ASSISTED (AIR BLAST) FIELD CROP SPRAYERS

Air assisted field crop sprayers carry droplets to the target via a downward directed air stream. Some may reduce the potential for drift, but if a sprayer is unsuitable for the application and/or set up improperly, high drift potential can result. It is the responsibility of the applicator to determine that a sprayer is suitable for the intended application, is configured properly, and that drift is not occurring.

**Note:** Air assisted field sprayers can affect product performance by affecting spray coverage and canopy penetration. Consult the application equipment section of this label to determine if use of an air assisted sprayer is recommended.

## RESTRICTIONS

Do not apply this product through any type of irrigation system.

Injury to or loss of desirable trees or vegetation may result from failure to observe the following:

- Do not apply Cemax™ herbicide or drain or flush equipment on or near desirable trees or other plants, on areas where their roots may extend, or in locations where the chemical may be washed or moved into contact with their roots.
- Do not use on lawns, walks, driveways, tennis courts, or similar areas.
- Prevent spray drift to desirable plants.
- Do not contaminate any body of water.
- Do not mix/load, or use within 50 feet of all wells including abandoned wells, drainage wells, and sink holes.
- Avoid storage of pesticides near well sites.
- Keep Cemax™ herbicide from coming in contact with fertilizers, insecticides, fungicides, and seeds during storage.
- Thoroughly clean all application equipment immediately after use and prior to spraying crops other than soybeans or peanuts.
- Calibrate sprayers only with clean water away from the well site.

## INTEGRATED PEST MANAGEMENT

This product may be used as part of an Integrated Pest Management (IPM) program that can include biological, cultural, and genetic practices aimed at preventing economic pest damage. IPM principles and practices include field scouting or other detection methods, correct target pest identification, population monitoring, and treating when target pest populations reach locally determined action thresholds. Consult your state cooperative extension service, professional consultants or other qualified authorities to determine appropriate action treatment threshold levels for treating specific pest/crop systems in your area.

## RESISTANCE

When herbicides that affect the same biological site of action are used repeatedly over several years to control the same weed species in the same field, naturally-occurring resistant biotypes may survive a correctly applied herbicide treatment, propagate, and become dominant in that field. Adequate control of these resistant weed biotypes cannot be expected. If weed control is unsatisfactory, it may be necessary to retreat the problem area using a product affecting a different site of action.

To better manage herbicide resistance through delaying the proliferation and possible dominance of herbicide resistant weed biotypes, it may be necessary to change cultural practices within and between crop seasons such as using a combination of tillage, retreatment, tank-mix partners and/or sequential herbicide applications that have a different site of action. Weed escapes that are allowed to go to seed will promote the spread of resistant biotypes.

It is advisable to keep accurate records of pesticides applied to individual fields to help obtain information on the spread and dispersal of resistant biotypes. Consult your agricultural dealer, consultant, applicator, and/or appropriate state agricultural extension service representative for specific alternative cultural practices or herbicide recommendations available in your area.

## STORAGE AND DISPOSAL

**Pesticide Storage:** Store product in original container only. Do not contaminate water, other pesticides, fertilizer, food or feed in storage.

**Pesticide Disposal:** Do not contaminate water, food, or feed by disposal. Waste resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

**Container Handling:** Refer to the Net Contents section of this product's labeling for the applicable "Nonrefillable Container" or "Refillable Container" designation.

**Nonrefillable Plastic and Metal Containers (Capacity Equal to or Less Than 50 Pounds):** Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

**Nonrefillable Plastic and Metal Containers (Capacity Greater Than 50 Pounds):** Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

**Nonrefillable Plastic and Metal Containers, e.g., Intermediate Bulk Containers [IBC] (Size or Shape Too Large to be Tipped, Rolled or Turned Upside Down):** Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying the contents from this container into application equipment or mix tank and before final disposal using the following pressure rinsing procedure. Insert a lance fitted with a suitable tank cleaning nozzle into the container and ensure that the water spray thoroughly covers the top, bottom and all sides inside the container. The nozzle manufacturer generally provides instructions for the appropriate spray pressure, spray duration and/or spray volume. If the manufacturer's instructions are not available, pressure rinse the container for at least 60 seconds using a minimum pressure of 30 PSI with a minimum rinse volume of 10% of the container volume. Drain, pour or pump rinsate into application equipment or rinsate collection system. Repeat this pressure rinsing procedure two more times. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

**Nonrefillable Paper or Plastic Bags, Fiber Sacks including Flexible Intermediate Bulk Containers (FIBC) or Fiber Drums With Liners:**

Nonrefillable container. Do not reuse or refill this container. Completely empty paper or plastic bag, fiber sack or drum liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. Then offer for recycling if available or dispose of empty paper or plastic bag, fiber sack or fiber drum and liner in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances.

**Refillable Fiber Drums With Liners:** Refillable container (fiber drum only). *Refilling Fiber Drum:* Refill this fiber drum with Cemax™ herbicide containing chlorimuron ethyl only. Do not reuse this fiber drum for any other purpose. Cleaning before refilling is the responsibility of the refiller. Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. *Disposing of Fiber Drum and/or Liner:* Do not reuse this fiber drum for any other purpose other than refilling (see preceding). Cleaning the container (liner and/or fiber drum) before final disposal is the responsibility of the person disposing of the container. Offer the liner for recycling if available or dispose of liner in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. If drum is contaminated and cannot be reused, dispose of it in the manner required for its liner. To clean the fiber drum before final disposal, completely empty the fiber drum by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. Then offer the fiber drum for recycling if available or dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances.

**All Other Refillable Containers:** Refillable container. *Refilling Container:* Refill this container with Cemax™ herbicide containing chlorimuron ethyl only. Do not reuse this container for any other purpose. Cleaning before refilling is the responsibility of the refiller. Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn out threads and closure devices. If damage is found, do not use the container, contact Agsurf at the number below for instructions. Check for leaks after refilling and before transporting. If leaks are found, do not reuse or transport container, contact Agsurf at the number below for instructions. *Disposing of Container:* Do not reuse this container for any other purpose other than refilling (see preceding). Cleaning the container before final disposal is the responsibility of the person disposing of the container. To clean the container before final disposal, use the following pressure rinsing procedure. Insert a lance fitted with a suitable tank cleaning nozzle into the container and ensure that the water spray thoroughly covers the top, bottom and all sides inside the container. The nozzle manufacturer generally provides instructions for the appropriate spray pressure, spray duration and/or spray volume. If the manufacturer's instructions are not available, pressure rinse the container for at least 60 seconds using a minimum pressure of 30 PSI with a minimum rinse volume of 10% of the container volume. Drain, pour or pump rinsate into application equipment or rinsate collection system. Repeat this pressure rinsing procedure two more times. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

**Outer Foil Pouches of Water Soluble Packets (WSP):** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available or, dispose of the empty outer foil pouch in the trash as long as WSP is unbroken. If the outer pouch contacts the formulated product in any way, the pouch must be triple rinsed with clean water. Add the rinsate to the spray tank and dispose of the outer pouch as described previously.

Do not transport if this container is damaged or leaking. If the container is damaged, leaking or obsolete, or in the event of a major spill, fire or other emergency, contact Agsurf at 1-888-261-1410, day or night.

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