



# DuPont™ Cimarron® Plus

HERBICIDE

GROUP	2	HERBICIDE
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*For Use on Rangeland, Pastures, Grass Hay Fields or CRP*

<i>Active Ingredients</i>	<i>By Weight</i>
Metsulfuron Methyl	
Methyl 2-[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]benzoate	48%
Chlorsulfuron	
2-Chloro-N-[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)aminocarbonyl]benzenesulfonamide	15%
<i>Other Ingredients</i>	37%
TOTAL	100%

EPA Reg. No. 352-670

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 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.

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

**IF SWALLOWED:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything to an unconscious person.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-441-3637 for emergency medical treatment information.

#### PRECAUTIONARY STATEMENTS

##### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**CAUTION!** Causes moderate eye irritation. Harmful if swallowed or absorbed through skin. Avoid contact with skin, eyes, or clothing. Avoid breathing dust or spray mist. Remove and wash contaminated clothing before reuse. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals..

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Mixers, loaders, applicators, and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical Resistant Gloves made of any waterproof material such as polyethylene or polyvinylchloride.
- 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 Statement:** When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

### **USER SAFETY RECOMMENDATIONS**

Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

### **ENVIRONMENTAL HAZARDS**

Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinsate.

## **DIRECTIONS FOR USE**

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

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

### **AGRICULTURAL USE REQUIREMENTS**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 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 waterproof material
- Shoes plus socks.

### **NON-AGRICULTURAL USE REQUIREMENTS**

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses. Noncrop weed control is not within the scope of the Worker Protection Standard. Do not enter or allow others to enter the treated area until sprays have dried.

DuPont™ CIMARRON® Plus must be used in accordance with the directions for use on this label; in separately published DuPont instructions; or as otherwise permitted by FIFRA. Always read the entire label including the Limitations of Warranty and Liability.

## **PRODUCT INFORMATION**

CIMARRON® Plus is registered for use on land primarily dedicated to the production of grass forage in rangeland, pastures, grass hay fields or grasses in the Conservation Reserve Program (CRP). This product may also be used on selected uncultivated areas (fence rows, farmyards, and rights-of-way) directly adjacent to, or which transect or pass through, treated pastures, rangeland, or CRP, where grazing or harvesting for animal feed of those uncultivated areas may occur. Check with your state extension or Department of Agriculture before use to be certain CIMARRON® Plus is registered in your state. Do not use CIMARRON® Plus in the following counties of Colorado: Alamosa, Conejos, Costilla, Rio Grande, and Saquache.

CIMARRON® Plus is a dry-flowable granule that controls or suppresses broadleaf weeds and brush. CIMARRON® Plus is mixed in water or can be pre-slurried in water and added to liquid nitrogen carrier solutions and applied as a uniform broadcast spray. A spray adjuvant must be used in the spray mix unless otherwise specified on this label. CIMARRON® Plus is noncorrosive, nonflammable, nonvolatile and does not freeze.

CIMARRON® Plus controls weeds by preemergence and postemergence activity. For best results, apply CIMARRON® Plus to young, actively growing weeds. Weeds hardened off by cold weather or drought stress may not be controlled. The use rate depends upon the weed spectrum and size of weeds at application. The degree and duration of control may depend on the following factors:

- weed spectrum and infestation intensity
- weed size and maturity at application
- environmental conditions during and following treatment
- application rate and coverage

It is permissible to treat intermittently flooded low lying sites, seasonally dry flood plains and transitional areas between upland and lowland sites when no water is present. It is also permissible to treat marshes, swamps and bogs after water has receded as well as seasonally dry flood deltas. DO NOT make applications to natural or man-made bodies of water such as lakes, reservoirs, ponds, streams and canals.

### **BIOLOGICAL ACTIVITY**

DuPont™ CIMARRON® Plus is absorbed through the foliage and roots of broadleaf weeds, rapidly inhibiting their growth. Leaves of susceptible plants appear chlorotic from 1 to 3 weeks after application and the growing point subsequently dies. The final effects on annual weeds are evident about 4 to 6 weeks after application. The ultimate effects on perennial weeds and woody plants occur in the growing seasons following application.

One to two inches of rainfall or sprinkler irrigation (enough to wet the top 2-3 inches of soil profile) is needed to move CIMARRON® Plus into the weed root zone before the next flush of weeds emerge. The amount of moisture required for sufficient activation increases with crop or weed residue and for finer textured soils. Without sufficient rainfall or sprinkler irrigation to move CIMARRON® Plus into the weed root zone, weeds that germinate after treatment will not be controlled.

Application of CIMARRON® Plus provides the best control in vigorously growing grasses that shade competitive weeds. Weed control in areas of thin grass may not be as satisfactory. However, a grass canopy that is too dense at application can intercept spray and reduce weed control.

CIMARRON® Plus is safe to desirable grass species under normal conditions. However, grasses that are stressed from adverse environmental conditions (such as extremes in temperatures or moisture), abnormal soil conditions (such as soils low in potassium), or cultural practices (such as over-grazing), may be injured by applications of CIMARRON® Plus. In addition, different species of grass crops may be sensitive to treatment with CIMARRON® Plus under otherwise normal conditions (see Application Timing for Established Grasses). Application of CIMARRON® Plus to these species may result in injury.

In warm, moist conditions, the expression of herbicide symptoms is accelerated in weeds and brush; in cold and/or dry conditions, expression of herbicide symptoms is delayed. In addition, weeds and brush hardened-off by drought stress are less susceptible to CIMARRON® Plus. Weed and brush control or suppression may be reduced if rainfall, sprinkler irrigation or snowfall occurs within 4 hours after application.

Weed control should be part of an overall management plan which includes good fertility, adequate moisture (rainfall, irrigation), insect and rodent control, and other agronomic practices that maximize grass growth. Consult your state cooperative extension service, local agricultural dealer, professional consultant or other qualified authority for specific instructions regarding proper management of rangeland, pastures, and grass hay fields.

### **IMPORTANT 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 CIMARRON® Plus, or drain or flush equipment on or near desirable trees or other plants, or 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, golf courses, athletic fields, commercial sod operations, or other high-maintenance, fine turfgrass areas, or similar areas.
  - Do not use on grasses grown for seed.
- Do not contaminate irrigation ditches or water used for domestic purposes.
- Do not apply to irrigated land where the tailwater will be used to irrigate crops.
- Do not apply to frozen or snow covered ground as surface runoff may occur.
- Treatment of powdery, dry soil or light, sandy soil when there is little likelihood of rainfall soon after treatment may result in off target movement and possible damage to susceptible crops when soil particles are moved by wind or water. Injury to crops may result if treated soil is washed, blown, or moved onto land used to produce crops. Injury may be more severe when the crops are irrigated. Do not apply CIMARRON® Plus when these conditions are identified and powdery, dry soil or light or sandy soil are known to be prevalent in the area to be treated.
- Do not apply more than 2.0 ounces of CIMARRON® Plus per acre per year when applying to rangeland, pastures, grass hay fields or grasses in the Conservation Reserve Program (CRP).
- If tank-mixing or sequentially applying products containing metsulfuron methyl to rangeland, pastures, grass hay fields or grasses in the Conservation Reserve Program (CRP) do not apply more than the equivalent of 1 ounce of metsulfuron methyl active ingredient per acre per year.

- If tank-mixing or sequentially applying products containing chlorsulfuron to rangeland, pastures, grass hay fields or grasses in the Conservation Reserve Program (CRP), do not apply more than the equivalent of 1 ounce of chlorsulfuron active ingredient per acre per year.

### **IMPORTANT PRECAUTIONS**

- DuPont™ CIMARRON® Plus may cause injury to desirable trees and plants when contacting their roots, stems or foliage. These plants are most sensitive to CIMARRON® Plus during their development or growing stage.
- Grass species or varieties may differ in their response to various herbicides. DuPont recommends that you first consult your state experiment station, university, or extension agent as to sensitivity to any herbicide. If no information is available, limit the initial use of CIMARRON® Plus to a small area. Components in a grass seed mixture will vary in tolerance to CIMARRON® Plus so the final stand may not reflect the seed ratio.
- Under certain conditions such as heavy rainfall, high pH, prolonged cold weather, or wide fluctuations in day/night temperatures prior to or soon after CIMARRON® Plus application, temporary discoloration and/or grass injury may occur. CIMARRON® Plus should not be applied to grass that is stressed by severe weather conditions, drought, low fertility, water-saturated soil, disease, or insect damage, as grass injury may result. Severe winter stress, drought, disease, or insect damage before or following application also may result in grass injury.
- Applications may make some toxic plants more palatable as the weeds are dying. Do not graze treated areas until toxic plants are dry and unpalatable to livestock.
- Applications of CIMARRON® Plus to pastures, rangeland or CRP undersown with legume crops may cause severe injury to the legumes. Legumes in a seeding mixture may be severely injured or killed following an application of CIMARRON® Plus.
- Applications made where runoff water flows onto agricultural land may injure crops. Applications made during periods of intense rainfall, to soils saturated with water, or soils through which rainfall will not readily penetrate may result in runoff and movement of CIMARRON® Plus. Treated soil should be left undisturbed to reduce the potential for CIMARRON® Plus movement by soil erosion due to wind or water.
- For ground applications applied to weeds when dry, dusty field conditions exist, control of weeds in wheel track areas may be reduced.
- Avoid disturbing (e.g. mowing) treated areas for at least 7 days following application.

### **INVASIVE SPECIES MANAGEMENT**

This product may be considered for use on public, private, and tribal lands to treat certain weed species infestations that have been determined to be invasive, consistent with the Federal Interagency Committee for the Management of Noxious and Exotic Weeds (FICMNEW) National Early Detection and Rapid Response (EDRR) System for invasive plants. Effective EDRR systems address invasions by eradicating the invader where possible, and controlling them when the invasive species is too firmly established to be feasibly eradicated. Once an EDRR assessment has been completed and action is recommended, a Rapid Response needs to be taken to quickly contain, deny reproduction, and if possible eliminate the invader. Consult your appropriate state extension service, forest service, or regional multidisciplinary invasive species management coordination team to determine the appropriate Rapid Response provisions and allowed treatments in your area.

### **WEED RESISTANCE**

CIMARRON® Plus, which contains the active ingredients, metsulfuron methyl and chlorsulfuron, is a Group 2 herbicide based on the mode of action classification system of the Weed Science Society of America. When herbicides with mode of action classifications that affect the same biological sites of action are used repeatedly over several years to control the same weed species in the same treatment area, naturally-occurring resistant biotypes may survive a correctly applied herbicide treatment, propagate, and become dominant in that area. 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 biological 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 such as retreatment, tank-mix partners and/or sequential herbicide applications that affect a different site of action. Weed escapes that are allowed to go to seed, and movement of plant material between treatment areas on equipment 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 to determine appropriate actions for treating specific resistant weed biotypes in your area.

### **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.

## **RANGELAND, PASTURES, GRASS HAY FIELDS AND CRP**

### **NEW PLANTINGS**

DuPont™ CIMARRON® Plus is recommended for the control or suppression of broadleaf weeds to aid in the establishment of the following perennial native or improved grasses planted in rangeland, pastures, grass hay fields or acres enrolled in the Conservation Reserve Program (CRP):

Blue Grama	Green sprangletop	Orchardgrass	slender
Bluestems -	Indiangrass	Sideoats grama	streambank
big	Kleingrass	Switchgrass -	tall
little	Lovegrasses -	blackwell	thickspike
plains	atherstone	Wheatgrasses -	western
sand	sand	crested	Wildrye grass -
WW spar	weeping	intermediate	Russian
Buffalograss	wilman	pubescent	

Maximize potential for grass establishment by consulting with the Natural Resources and Conservation Service or other local experts concerning planting techniques and other cultural practices. Due to the inability of newly planted grass stands to sufficiently compete with weeds, and the severity of weed pressure in new grass stands, performance from CIMARRON® Plus may not always be satisfactory. An additional herbicide application with a different mode of action or mowing may be needed. Only make one CIMARRON® Plus application in the year of planting.

#### **Preplant (prior to planting) or Preemergence (after planting but before grass emergence)**

Apply CIMARRON® Plus preplant or preemergence at 0.125 ounce/acre plus a non-ionic surfactant at the rate of 4 pints/100 gallons of spray solution on all labeled grasses except orchardgrass and Russian wildrye grass. Do not apply CIMARRON® Plus preplant or preemergence to orchardgrass and Russian wildrye grass as severe crop injury may result.

#### **Early postemergence to new plantings**

Apply CIMARRON® Plus at 0.125 ounce/acre, plus a non-ionic surfactant at the rate of 2 to 4 pints/100 gallons of spray solution on all labeled grasses anytime after grass emergence. Do not use a spray adjuvant other than non-ionic surfactant. Because grass species differ in time of emergence, apply only after majority of grasses are in the 3 to 4 leaf stage.

#### **Postemergence to stands with 1-5 leaf grasses planted the previous season**

Apply CIMARRON® Plus at 0.125 ounce/acre plus a non-ionic surfactant at the rate of 2 to 4 pints/100 gallons of spray solution, on all labeled grasses when the majority of the grasses have one or more leaves. Do not use a spray adjuvant other than non-ionic surfactant.

## **ESTABLISHED GRASSES**

### **Use Rates for Established Grasses**

Apply 0.125 to 1.25 ounces CIMARRON® Plus per acre as a broadcast application to established grasses in rangeland, pastures, grass hay fields or acres enrolled in the Conservation Reserve Program (CRP) and/or undesirable vegetation in uncultivated areas (fence rows, farmyards, and rights-of-way) which are adjacent to, or pass through or transect, treated rangeland, pastures, grass hay fields or CRP. Include a spray adjuvant (see SPRAY ADJUVANTS section). Do not apply more than 4 applications per year. Allow at least 14 days between applications. Do not apply more than 2.0 ounces of CIMARRON® Plus per acre per year.

### **Application Timing for Established Grasses**

CIMARRON® Plus may be applied to established native grasses such as bluestems and grama, and on other established pasture grasses such as bermudagrass, bluegrass, orchardgrass, bromegrass, fescue and timothy that were planted the previous growing season (or earlier) and are fully tillered, unless otherwise directed on this label. CIMARRON® Plus may also be applied to established grasses that have been inter-seeded with cereal grasses for grazing (such as barley, oats, rye and wheat). Specific application timing information on several of these grass species follows:

<b>Pasture Grass</b>	<b>Minimum time from grass establishment to CIMARRON® Plus application</b>
Bermudagrass	2 months
Bluegrass, bromegrass (except Matua bromegrass) and orchardgrass	6 months
Timothy	12 months
Fescue	24 months

### **Buffalograss Precautions:**

Do not use DuPont™ CIMARRON® Plus on buffalograss that has been established for less than one year or on stands grown for seed production. Do not apply more than 0.625 ounces per acre of CIMARRON® Plus per application to buffalograss.

### **Fescue Precautions:**

Note that CIMARRON® Plus may temporarily stunt fescue, cause it to turn yellow, or cause seedhead suppression. To minimize these symptoms, take the following precautions:

- make application later in the spring after the new growth is 5 to 6 inches tall, or in the fall
- do not use more than 0.5 ounces per acre of CIMARRON® Plus per application
- use a non-ionic surfactant at 0.5 to 1 pint per 100 gallon of spray solution (0.06 to 0.12% v/v). Do not use a spray adjuvant other than non-ionic surfactant.
- do not use surfactant when liquid nitrogen is used as a carrier

The first cutting yields may be reduced due to seedhead suppression resulting from treatment with CIMARRON® Plus.

### **Timothy Precautions:**

Timothy should be at least 6" tall at application and be actively growing. Applications of CIMARRON® Plus to timothy under any other conditions may cause crop yellowing and/or stunting. To minimize these symptoms, take the following precautions:

- make applications in the late summer or fall
- do not use more than 0.375 ounce/acre of CIMARRON® Plus
- use the lowest recommended rate for target weeds
- use a non-ionic surfactant at 0.5 pint per 100 gallons (0.06% v/v). Do not use a spray adjuvant other than non-ionic surfactant
- do not use surfactant when liquid nitrogen is used as a carrier
- tank mix CIMARRON® Plus with 2,4-D

### **Other Pasture and Rangeland Grasses:**

Do not use on bentgrass or susceptible grass pastures such as carpetgrass, Matua bromegrass or St. Augustine grass. Applications of CIMARRON® Plus may cause severe injury to and/or loss of Pensacola bahiagrass, ryegrass (Italian or perennial) and Garrison's creeping foxtail pastures.

Varieties and species of forage grasses differ in their tolerance to herbicides. When using CIMARRON® Plus on a particular grass for the first time, limit use to a small area. If no injury occurs throughout the season, larger acreage may be treated the following season.

## **SPOT APPLICATIONS**

CIMARRON® Plus may be used for suppression of weeds and brush on the WEEDS CONTROLLED OR SUPPRESSED list using spot applications or Individual Plant Treatments (IPT) in rangeland, pastures, grass hay fields or acres enrolled in the Conservation Reserve Program (CRP) and/or for undesirable vegetation in uncultivated areas (fence rows, farmyards, and rights-of-way) which are adjacent to, or pass through or transect, treated rangeland, pastures, grass hay fields or CRP.

### **Use Rates for Spot Applications**

For spot applications, mix 1.25 ounces of CIMARRON® Plus per 100 gallons of water. Include a spray adjuvant (see SPRAY ADJUVANTS section). A dye may be added to the tank to help mark plants that have been sprayed. Thorough coverage of all foliage and stems is necessary to optimize results. Spray entire canopy to wet but not to the point of dripping. On tall, dense stands, it is often necessary to spray from all sides to obtain adequate coverage. Do not apply more than 2.0 ounces of CIMARRON® Plus per acre per year.

### **Application Timing for Spot Applications**

Make a foliar application of CIMARRON® Plus during the period from full leaf expansion in the spring until the development of fall coloration.

## **SPRAY ADJUVANTS**

Unless otherwise recommended, applications of CIMARRON® Plus must include either an oil concentrate or a nonionic surfactant. If another herbicide is tank mixed with CIMARRON® Plus, select adjuvants authorized for use with both products. Antifoaming agents may be used if needed. All adjuvants used must contain only EPA-exempt ingredients.

### Crop Oil Concentrate (COC) or Modified Seed Oil (MSO)

- Apply at 1% v/v (1 gal per 100 gal spray solution) or 2% under arid conditions.
- Oil adjuvants must contain at least 80% high quality, petroleum (mineral) or modified vegetable seed oil with at least 15% surfactant emulsifiers.

### Nonionic Surfactant (NIS)

- Apply at 0.25% v/v (1 qt per 100 gal spray solution) or 0.5% under arid conditions.
- Surfactant products must contain at least 60% nonionic surfactant with a hydrophilic/lipophilic balance (HLB) greater than 12.
- On fescue and timothy pastures use only NIS at a more limited rate. See Fescue or Timothy Precautions.

### Ammonium Nitrogen Fertilizer

An ammonium nitrogen fertilizer can be added to NIS, COC or MSO and may enhance weed control.

- Use 2 quarts/acre of a high-quality urea ammonium nitrate (UAN), such as 28%N or 32%N, or 2 pounds/acre of a spray grade ammonium sulfate (AMS). Use 4 quarts/acre UAN or 4 pounds/acre AMS under arid conditions.
- Do not use low rates of fertilizer as a substitute for NIS, COC or MSO.
- See "Tank Mixtures with Liquid Solution Fertilizer" for instructions on using fertilizer as a carrier in place of water.

### 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.

## WEED CONTROL INFORMATION

DuPont™ CIMARRON® Plus may be applied post emergence to control or suppress weeds listed on, but not limited to, this label. For best results, treat weeds when they are small and actively growing. Unless otherwise directed, treat when broadleaf weeds are less than 4" tall or in diameter (natural size - not after mowing or grazing). Broadleaf pasture species, such as alfalfa and clover, are highly sensitive to CIMARRON® Plus and will be severely stunted or injured.

### WEEDS CONTROLLED OR SUPPRESSED

#### 0.125 to 0.25 ounce per acre

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Blue/purple mustard*	Cutleaf evening primrose*‡	Miners lettuce	Treacle mustard†
Broomweed, common	Dandelion	Plains coreopsis	(Bushy Wallflower)
Bur buttercup (testiculate)	False chamomile	Plantain (except buckhorn)	Tumble/Jim Hill mustard
Buttercup	Field pennycress (fanweed)	Prickly lettuce*†	Volunteer sunflower*
Canada thistle*‡	Filaree	Prostrate knotweed*‡	Waterpod
Carolina geranium	Flixweed*†	Russian thistle*†	Wild buckwheat*‡
Coast fiddleneck (tarweed)	Groundsel (common)	Shepherd's purse	Wild garlic*
Common chickweed†	Kochia*†	Smallseed falseflax†	Wild mustard†
Common purslane	Lambsquarters (common†, slimleaf)	Smartweed (green, ladythumb, pale)	Wild sunflower*‡
Conical catchfly	Mayweed chamomile	Snow speedwell	
Corn gromwell*‡		Tansymustard*	
Cowcockle			

#### 0.25 to 0.375 ounce per acre (all weeds above plus the following)

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Annual marshelder	Common yarrow	Musk thistle*	Western snowberry‡
Bitter sneezeweed	Curly dock	Pigweed (redroot†, smooth†, tumble)	Wild carrot
Blackeyed-Susan	Henbit	Purple scabious	Woolly croton*
Buckbrush‡	Horsemint (beebalm)	Scotch thistle*	
Burclover	Marestail/Horseweed†		

#### 0.375 to 0.625 ounce per acre (all weeds above plus the following)

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Annual sowthistle	Corn cockle	Pennsylvania smartweed	Silky crazyweed
Aster	Crown vetch	Pensacola bahiagrass*	(locoweed)
Bittercress	Dogfennel	Redstem filaree	Sweet clover
Chicory	Goldenrod	Rough fleabane	Wild lettuce
Clover	Maximillion sunflower	Seaside arrowgrass	Wood sorrel
Cocklebur†	Multiflora rose*‡	Sericea lespedeza*	Yankee weed

## 0.625 to 1.25 ounce per acre (all weeds above plus the following)

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Black henbane	Common mullein	Halogeton	Rosering gaillardia
Blackberry	Dewberry	Honeysuckle	Spotted knapweed*
Broom snakeweed*	Dyer's woad	Multiflora rose and other	Teasel
Buckhorn plantain	Fringed sagebrush*	wild roses*	Wild caraway
Common crupina	Gorse	Plumeless thistle	Yucca*

## 1.25 ounce per acre (all weeds above plus the following)

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Ash‡	Greasewood	Rush skeletonweed*‡	Thimbleberry
Aspen‡	Gumweed	Salmonberry	Tree of heaven
Black locust‡	Hawthorne‡	Salsify	Western salsify
Bull thistle	Houndstongue	Scouringrush	Whiteweed (hoary cress)
Camelthorne‡	Lupine	Scotch thistle	Wild Iris
Cherry‡	Perennial Pepperweed	Snowberry (Common, Mountain)	Willow
Common tansy	Poison hemlock	St. Johnswort	Yellow poplar
Elm‡	Purple loosestrife	Sulphur cinquefoil	
Field bindweed‡	Purple scabious		

\* See the **Specific Weed Instructions** section.

‡ **Weed suppression** is a reduction in weed competition (reduced population and/or vigor) as visually compared to an untreated area. The degree of suppression varies with the rate used, the size of the weeds, and the environmental conditions following treatment.

† Naturally occurring resistant biotypes of these weeds are known to occur. See WEED RESISTANCE section of the label for more information.

## **SPECIFIC WEED INSTRUCTIONS**

**Note:** For best results, thorough spray coverage of all weed species listed below is very important.

**Blue/Purple Mustard, Flixweed, and Tansymustard:** For best results, apply DuPont™ CIMARRON® Plus in tank mixtures with 2,4-D or MCPA postemergence to mustards, but before bloom.

**Broom Snakeweed:** For best results, apply CIMARRON® Plus at 0.625 to 1.0 ounce per acre during and after full flowering stage in the fall when growth conditions are good. Applications of CIMARRON® Plus in the spring are best timed at peak plant growth when growing conditions are good and may provide suppression only. Applications made during drought conditions may not give satisfactory results.

**Canada Thistle:** For suppression with broadcast applications, apply either CIMARRON® Plus or CIMARRON® Plus with 2,4-D or MCPA in the spring after the majority of thistles have emerged and are small (rosette stage to 6" elongating stems) and actively growing. The application will inhibit the ability of emerged thistles to compete with grass.

For suppression with spot applications, apply as a foliar spray once plant is fully leafed.

**Corn Gromwell, Cutleaf Evening Primrose and Prostrate Knotweed:** Apply CIMARRON® Plus when weeds are actively growing, are no larger than 2" tall, and when crop canopy will allow thorough coverage. Tank mixing 2,4-D or MCPA with CIMARRON® Plus can improve results.

**Fringed Sagebrush:** For control, apply CIMARRON® Plus at 0.625 to 1.25 ounces plus 2,4-D LV ester at 0.5 to 1.0 pound active ingredient per acre. Applications can be made in the spring or early summer after 6 inches of new growth has occurred and plants are actively growing.

**Kochia, Russian thistle, Prickly lettuce:** Naturally occurring resistant biotypes of these weeds are known to occur. For best results, use CIMARRON® Plus in a tank mix with dicamba (such as "Banvel" or "Clarity") and 2,4-D. CIMARRON® Plus should be applied in the spring when kochia, Russian thistle, and prickly lettuce are less than 2" tall or 2" across and are actively growing.

**Multiflora Rose:** For control with broadcast applications, apply CIMARRON® Plus as a broadcast application when multiflora rose is less than 3' tall. Application should be made in the spring, soon after multiflora rose is fully leafed.

**Musk Thistle, Scotch Thistle:** Apply CIMARRON® Plus at 0.25 ounces per acre in the spring or early summer prior to flowering or in the fall after newly emerged plants have reached the rosette stage of growth. Certain biotypes of musk and scotch thistles are less sensitive to CIMARRON® Plus and may not be controlled. Use of CIMARRON® Plus at 0.25 ounces per acre may provide some additional control of these less sensitive biotypes, but may not achieve acceptable control. Consult with your local DuPont representative, dealer or applicator for specific use rate and tank mix recommendations for your area. Fall applications should be made before the soil freezes.

**Pensacola bahiagrass control in established Bermudagrass pasture:** Apply CIMARRON® Plus at 0.375 ounces per acre after greenup in the spring but before bahiagrass seedhead formation. Application should be made when moisture is sufficient to enhance grass growth.

CIMARRON® Plus is very effective for removal of bahiagrass from bermudagrass pastures. In highly infested pastures, the use of CIMARRON® Plus can clear the areas of useful forage until the bermudagrass has time to cover the area. Therefore, CIMARRON® Plus treatments should be spread out over a period of years. Do not apply to an entire farm or ranch in one year. Fertilization (particularly with nitrogen and potassium) and/or replanting may accelerate the process of reestablishment of

bermudagrass. Under heavy bahiagrass pressure, grazing pressure, or adverse weather conditions (heat and drought), bahiagrass regrowth may occur.

DuPont™ CIMARRON® Plus should not be applied in liquid fertilizer solutions for Pensacola bahiagrass control, as poor control and/or regrowth may occur.

CIMARRON® Plus should not be used for the control of common or Argentine bahiagrass.

**Plumeless Thistle:** For control of plumeless thistle apply CIMARRON® Plus at 0.625 ounces per acre in the spring or early summer prior to flowering or in the fall after newly emerged plants have reached the rosette stage of growth. Fall applications should be made before the soil freezes.

**Rush skeletonweed:** For best results, apply CIMARRON® Plus at 1.25 ounces per acre with 8 fluid ounces of dicamba (such as "Banvel" or "Clarity") and 16 fluid ounces of 2,4-D per acre.

**Sericea lespedeza:** For best results, apply CIMARRON® Plus at 0.625 ounces per acre beginning at flower bud initiation through the full bloom stage of growth. Do not make applications if drought conditions exist at intended time of application.

**Spotted Knapweed:** For best results, apply CIMARRON® Plus at 0.625 ounces per acre with 8 fluid ounces of dicamba (such as "Banvel" or "Clarity") and 16 fluid ounces of 2,4-D per acre.

**Snowberry (Western, Common, Mountain):** For control of snowberry, apply CIMARRON® PLUS at 1.25 ounces after the plants are actively growing. Applications can be made throughout the growing season but before fall defoliation. Tank mixtures with 2,4-D ester improve control (refer to Tank Mixtures section of this label for additional information).

**Sunflower (wild or volunteer):** Apply CIMARRON® Plus plus 2,4-D or MCPA after the majority of sunflowers have emerged, are 2" to 4" tall and are actively growing. Use spray volumes of at least 3 gal by air or 10 gal by ground.

**Wild Buckwheat:** For best results, apply CIMARRON® Plus plus 2,4-D or MCPA when plants have no more than 3 true leaves (not counting the cotyledons). If plants are not actively growing, delay treatment until environmental conditions favor active weed growth.

**Wild Garlic:** For best results, apply CIMARRON® Plus at 0.125 to 0.25 ounces per acre in the early spring when wild garlic is less than 12" tall with 2" to 4" of new growth.

**Woolly Croton:** For best results, apply CIMARRON® Plus at 0.25 to 0.375 ounces per acre in the late spring or early summer from cotyledon through 2 true leaf stage.

**Yucca:** Apply CIMARRON® Plus at 0.625 to 1.25 ounce plus 2,4-D LV ester at 1.0 to 1.25 pound active ingredient per acre in the spring through the fall prior to frost. A second application of CIMARRON® Plus at 0.375 to 0.625 ounce plus 2,4-D LV ester at 1.0 pound active ingredient per acre is recommended within two years of the initial treatment to control yucca seedlings and regrowth from rootstocks.

For best results, use a Crop Oil Concentrate (COC), Modified Seed Oil (MSO), or Modified Seed Oil/Organosilicone (MSO/OS) adjuvant type. The addition of ammonium nitrogen fertilizer may improve control. See Spray Adjuvants section for additional information. Aerial is the preferred application method.

Variation in weather (moisture and temperature extremes), yucca physiological condition, soil type, and extent of yucca root system will determine treatment effectiveness.

## **TANK MIXTURES**

CIMARRON® Plus may be tank mixed with other suitable registered herbicides, insecticides, and fungicides. Read and follow all manufacturer's label directions for the companion pesticide. If those directions conflict with this label, do not tank mix the pesticide with CIMARRON® Plus.

Since formulations may be changed and new ones introduced, it is recommended that users premix a small quantity of a desired tank mix and observe for possible adverse changes (settling out, flocculation, etc.). Avoid mixtures of several materials and very concentrated spray mixtures. For best results, use of spray equipment having continuous agitation is recommended.

### **With Insecticides and Fungicides**

CIMARRON® Plus may be tank mixed or used sequentially with insecticides such as DuPont™ PREVATHON® and fungicides registered for use on pastures, grass hay fields, rangeland or CRP. However, under certain conditions (drought stress or cold weather), tank mixes or sequential applications of CIMARRON® Plus with organophosphate insecticides (such as parathion) may produce temporary grass yellowing or, in severe cases, grass injury. The potential for grass injury is greatest when wide fluctuations in day/night temperatures occur just prior to or soon after application. Test these mixtures in a small area before treating large areas. Do not use CIMARRON® Plus plus malathion, as grass injury will result.

### **Herbicide Tank Mixtures for Pastures or Rangeland:**

CIMARRON® Plus may be tank mixed with other suitable registered pasture and rangeland herbicides to control weeds listed as WEEDS SUPPRESSED, weeds resistant to CIMARRON® Plus, or weeds not listed under WEEDS CONTROLLED.

CIMARRON® Plus can be applied in a tank mix with one of the following products. Refer to companion herbicide labels to confirm that the product is labeled for control of the weeds targeted and is registered for use in your state.

<b>Product</b>	<b>Rate (oz product/A)</b>
“Grazon” P+D or “Weedmaster”	8 to 32
“Tordon” 22K	4 to 16
“Remedy” Ultra	8
<b>Product</b>	<b>Rate (oz A.I./A)</b>
2,4-D	8 to 16
Dicamba (such as “Banvel” or “Clarity”)	2 to 16
2,4-D + Dicamba	3 + 1 to 12 + 4

### **Herbicide Tank Mixtures for CRP:**

#### ***Preplant***

DuPont™ CIMARRON® Plus may be tank mixed with glyphosate (such as "Roundup PowerMax") as a pre-plant (prior to the planting of CRP grasses) treatment to control broadleaf and grassy weeds. When using a glyphosate tank mix, allow at least 7 days after application before planting grasses. Refer to glyphosate containing product labels and fact sheets for all use instructions, label rates, weed control claims, warnings and precautions.

#### ***Postemergence***

For best weed control performance in CRP, use CIMARRON® Plus in a tank mix with 2,4-D (ester formulations perform best) or dicamba (such as "Banvel" or "Clarity").

CIMARRON® Plus can be tank mixed with 2,4-D at 0.25 pound a.i./A for all labeled grasses larger than the 5-leaf stage. For fully tillered stands, up to 0.5 pound a.i./A of 2,4-D may be used. A spray adjuvant may be added. However, the addition of spray adjuvant may increase the chance of grass injury.

CIMARRON® Plus can also be tank mixed with dicamba (such as "Banvel" or "Clarity"). Use no more than 0.125 to 0.25 pound a.i./A of dicamba plus CIMARRON® Plus after majority of grasses are in the 3-leaf stage. In established grasses (2nd year stands), use no more than 0.25 to 0.5 pound a.i./A dicamba plus CIMARRON® Plus. A spray adjuvant may be added. However, the addition of spray adjuvant may increase the chance of grass injury.

#### **With Liquid Nitrogen Solution Fertilizer**

Liquid nitrogen fertilizer solutions may be used as a carrier in place of water. Run a tank mix compatibility test before mixing CIMARRON® Plus in fertilizer solution. CIMARRON® Plus must first be slurried with clean water and then added to liquid nitrogen solutions (e.g., 28-0-0, 32-0-0). Ensure that the agitator is running while the CIMARRON® Plus is added.

Use of this mixture may result in temporary grass yellowing or burn as commonly seen with liquid fertilizer applications.

If using low rates of liquid nitrogen fertilizer (between 5 and 50% of the spray solution volume) in the spray solution, the addition of a non-ionic surfactant is necessary. Add surfactant at 0.25 pint per 100 gallon of spray solution (0.03%). Do not use a spray adjuvant other than non-ionic surfactant.

When using high rates of liquid nitrogen fertilizer (equal to or greater than 50% of the spray solution volume) in the spray solution, adding a spray adjuvant increases the risk of grass injury. Consult your agricultural dealer, consultant, fieldman, or DuPont representative for a specific recommendation before adding an adjuvant to these tank mixtures.

If 2,4-D or MCPA is included with CIMARRON® Plus and fertilizer mixture, ester formulations tend to be more compatible (See manufacturer’s label). Do not add a spray adjuvant when using CIMARRON® Plus in tank mix with 2,4-D ester and liquid nitrogen fertilizer solutions greater than 5% of the spray solution volume.

When making a combined application of liquid fertilizer and herbicides, thorough spray coverage of the weeds is still important. Flat fan nozzles or equivalent delivering a medium size droplet will provide best results. Cluster nozzles delivering a very course droplet may not provide satisfactory weed control.

The use of liquid nitrogen fertilizer solutions greater than 5% of the spray solution volume with CIMARRON® Plus at rates greater than 0.25 ounces may cause grass injury.

Do not use low rates of liquid fertilizer as a substitute for a spray adjuvant.

Do not tank mix CIMARRON® Plus with liquid fertilizer solutions with a pH less than 3.0.

## GRAZING/HAYING

There are no grazing or hay harvest restrictions for non-lactating or lactating livestock including cattle, horses, sheep, goats, and other animals when DuPont™ CIMARRON® Plus is applied as directed to range, pasture, grass hay fields, CRP, and/or undesirable vegetation in uncultivated areas (fence rows, farmyards, and rights-of-way) which are adjacent to, or pass through or transect, treated rangeland, pastures, grass hay fields or CRP. Grazing animals do not have to be moved off the area before, during, or after applying CIMARRON® Plus.

Coveralls, shoes plus socks and chemical resistant gloves made of any waterproof material must be worn if cutting within 4 hours of treatment.

## ROTATION INTERVALS IN PASTURE, RANGELAND, GRASS HAY FIELDS OR CRP FOR OVERSEEDING, RENOVATION AND RECROP

Location	Crop or Grass Species	Maximum CIMARRON® Plus Rate (ounce/acre)	Minimum Rotation Interval (months)
AL, AR, FL, GA, KY, LA, MS, NC, OK, SC, TN, TX, VA, WV	Alfalfa, red clover, white clover, sweet clover, bermudagrass, bluegrass, ryegrass, tall fescue	Up to 0.25	4
	Wheat (except durum)	Up to 0.375	1
	Durum, barley, oat	Up to 0.375	10
ALL STATES NOT INCLUDED ABOVE	Red clover, white clover, and sweet clover	Up to 0.25	12
	Bermudagrass, bluegrass, ryegrass	Up to 0.25	6
	Tall Fescue	Up to 0.25	18
	Wheat (except durum)	Up to 0.25	1
	Durum, barley, oat	Up to 0.25	10
ALL AREAS WITH SOIL pH OF 7.5 OR LESS	Russian wildrye	Up to 0.625	1
	Green needlegrass, switchgrass, sheep fescue	Up to 1.25	1
	Meadow brome, smooth brome, alta fescue, red fescue, meadow foxtail, orchardgrass, Russian wildrye, timothy	Up to 1.25	2
ALL AREAS WITH SOIL pH OF 7.9 OR LESS	Alkali sacaton, mountain brome, blue grama thickspike wheatgrass	Up to 1.25	1
	Sideoats grama, switchgrass	Up to 0.625	2
	Western wheatgrass	Up to 1.25	2
	Sideoats grama, switchgrass, big bluestem	Up to 1.25	3
	Field corn, Soybeans	Up to 0.375	12
	STS® soybean	Up to 0.25	6
AL, AR, FL, GA, KY, LA, MS, NC, OK, SC, TN, TX, VA, WV WITH SOIL pH OF 7.0 OR LESS	Field corn, Soybeans	Up to 0.625	12
	STS® soybean	Up to 0.25	6
		Up to 1.25	12

## CROP ROTATION

Before using CIMARRON® Plus, carefully consider your crop rotation plans and options. If rotational flexibility is desired, do not treat all of your pasture acres at the same time.

### MINIMUM ROTATIONAL INTERVALS

Minimum rotation intervals are determined by the rate of breakdown of CIMARRON® Plus applied. CIMARRON® Plus breakdown in the soil is affected by soil pH, presence of soil microorganisms, soil temperature, and soil moisture. Low soil pH, high soil temperature, and high soil moisture increase CIMARRON® Plus breakdown in soil, while high soil pH, low soil temperature, and low soil moisture slow CIMARRON® Plus breakdown. Of these 3 factors, only soil pH remains relatively constant. Soil temperature, and to a greater extent, soil moisture, can vary significantly from year to year and from area to area. For this reason, soil temperatures and soil moisture should be monitored regularly when considering crop rotations.

### SOIL pH LIMITATIONS

CIMARRON® Plus should not be used on soils having a pH above 7.9, because soil residual activity could extend crop rotation intervals beyond normal. Under certain conditions, CIMARRON® Plus could remain active in the soil for 34 months or more, injuring subsequent crops.

## **CHECKING SOIL pH**

Before using DuPont™ CIMARRON® Plus, determine the soil pH of the areas of intended use. To obtain a representative pH value for the test area, take several 0" to 4" samples from different areas of the field and analyze them separately. Consult local extension publications for additional information on recommended soil sampling procedures.

## **BIOASSAY**

A field bioassay must be completed before rotating to any crop or grass species/variety not listed in the Rotation Intervals Table, or if the soil pH is not in the specified range, or if the use rate applied is not specified in the table. To conduct a field bioassay, grow test strips of the crop(s) or grass(es) you plan to grow in fields previously treated with CIMARRON® Plus. Crop or grass response to the bioassay will indicate whether or not to rotate to the crop(s) or grass(es) grown in the test strips. If a field bioassay is planned, check with your local Agricultural dealer or DuPont representative for information detailing the field bioassay procedure.

## **APPLICATION INFORMATION**

### **PRODUCT MEASUREMENT**

CIMARRON® Plus is measured using the CIMARRON® Plus volumetric measuring cylinder. The degree of accuracy of this cylinder varies by +/- 7.5%. For more precise measurement, use scales calibrated in ounces.

### **MIXING INSTRUCTIONS**

1. Fill the tank a quarter to one third full of water (If using liquid nitrogen fertilizer solution in place of water, see Tank Mixtures sections for additional details).
2. While agitating, add the required amount of CIMARRON® Plus.
3. Continue agitation until the CIMARRON® Plus is fully dispersed, at least 5 minutes.
4. Once the CIMARRON® Plus is fully dispersed, maintain agitation and continue filling tank with water. CIMARRON® Plus should be thoroughly mixed with water before adding any other material.
5. As the tank is filling, add tank mix partners (if desired) then add the necessary volume of spray adjuvants. Always add spray adjuvants last.
6. If the mixture is not continuously agitated, settling will occur. If settling occurs, thoroughly re-agitate before using.
7. Apply CIMARRON® Plus spray mixture within 24 hours of mixing to avoid product degradation.
8. If CIMARRON® Plus and a tank mix partner are to be applied in multiple loads, pre-slurry the CIMARRON® Plus in clean water prior to adding to the tank. This will prevent the tank mix partner or adjuvant from interfering with the dissolution of the CIMARRON® Plus.

Do not use CIMARRON® Plus with spray additives that reduce the pH of the spray solution to below 3.0.

### **APPLICATION METHOD**

#### **Ground Broadcast Application**

To obtain optimum spray distribution and thorough coverage, use flat-fan or low-volume flood nozzles. For flat-fan nozzles, use at least 10 GPA for broadcast applications.

For flood nozzles on 30" spacings, use at least 10 gallons per acre (GPA), flood nozzles no larger than TK10 (or equivalent), and a pressure of at least 30 pounds per square inch (psi). For 40" nozzle spacings, use at least 13 GPA; for 60" spacings, use at least 20 GPA. It is essential to overlap the nozzles 100% for all spacings.

With "Raindrop RA" nozzles, use at least 30 GPA and ensure that nozzle spray patterns overlap 100%.

Use 50-mesh screens or larger.

#### **Ground Spot Application**

Spot applications may be made using equipment such as back pack, ATV, or hand sprayers. Thorough coverage of foliage and stems is necessary to optimize results. Use an adjustable conejet nozzle with an orifice size of X6 to X12 or equivalent. The application volume required will vary with the height and density of the weeds or brush and the application equipment used.

#### **Aerial Application**

Use nozzle types and arrangements that provide optimum spray distribution and maximum coverage.

Use a minimum of 3 GPA.

When applying CIMARRON® Plus by air in areas adjacent to sensitive crops, use solid stream nozzles oriented straight back. Adjust the swath to avoid spray drift damage to sensitive crops downwind and/or use ground equipment to treat the border edge of fields. See the SPRAY DRIFT MANAGEMENT section of this label.

#### **Chemigation**

Do not apply through any type of irrigation system.

## **SPRAY EQUIPMENT**

For specific application equipment, refer to the manufacturer's recommendations for additional information on GPA, pressure, speed, nozzle types and arrangements, nozzle heights above the target canopy, etc.

Be sure to properly calibrate air or ground equipment before application. Select a spray volume and delivery system that will ensure thorough coverage and a uniform spray pattern with minimum drift. Use higher spray volumes to obtain better coverage when the crop canopy is dense. Avoid swath overlapping, and shut off spray booms while starting, turning, slowing, or stopping to avoid crop injury.

Do not make applications using equipment and/or spray volumes or under weather conditions that might cause spray to drift onto nontarget sites. For additional information on spray drift, refer to the SPRAY DRIFT MANAGEMENT section of the label.

Continuous agitation is required to keep DuPont™ CIMARRON® Plus in suspension.

### **Before Spraying CIMARRON® Plus**

Spray equipment must be clean before CIMARRON® Plus is sprayed. Follow the cleanup procedures specified on the labels of previously applied products. If no directions are provided, follow the six steps outlined below.

### **At the End of the Day**

When multiple loads of CIMARRON® Plus herbicide are applied, it is recommended that at the end of each day of spraying, the interior of the tank be rinsed with fresh water and then partially filled, and the boom and hoses flushed. This will prevent the buildup of dried pesticide deposits that can accumulate in the application equipment.

### **After Spraying CIMARRON® Plus and Before Spraying Crops Other Than Pasture, Rangeland or CRP**

To avoid subsequent injury to desirable crops, thoroughly clean all mixing and spray equipment immediately following applications of CIMARRON® Plus as follows:

1. Drain tank; thoroughly rinse spray tanks, boom, and hoses with clean water. Loosen and physically remove any visible deposits.
2. Fill the tank with clean water and 1 gal of household ammonia\* (contains 3% active) for every 100 gal of water. Flush the hoses, boom, and nozzles with the cleaning solution. Then add more water to completely fill the tank. Circulate the cleaning solution through the tank and hoses for at least 15 min. Flush the hoses, boom, and nozzles again with the cleaning solution, and then drain the tank.
3. Remove the nozzles and screens and clean separately in a bucket containing cleaning agent and water.
4. Repeat step 2.
5. Rinse the tank, boom, and hoses with clean water.
6. If only Ammonia is used as a cleaner, the rinsate solution may be applied back to the crop(s) listed on this label. Do not exceed the maximum-labeled use rate. If other cleaners are used, consult the cleaner label for rinsate disposal instructions. If no instructions are given, dispose of the rinsate on site or at an approved waste disposal facility.

\* Equivalent amounts of an alternate-strength ammonia solution or a DuPont-approved cleaner can be used in the cleanout procedure. Carefully read and follow the individual cleaner instructions. Consult your agricultural dealer, applicator, or DuPont representative for a listing of approved cleaners.

### **Notes:**

1. Attention: Do not use chlorine bleach with ammonia, as dangerous gases will form. Do not clean equipment in an enclosed area.
2. Steam-cleaning aerial spray tanks is recommended prior to performing the above cleanout procedure to facilitate the removal of any caked deposits.
3. When CIMARRON® Plus is tank mixed with other pesticides, all required cleanout procedures should be examined and the most rigorous procedure should be followed.
4. In addition to this cleanout procedure, all precleanout guidelines on subsequently applied products should be followed as per the individual labels.
5. Where routine spraying practices include shared equipment frequently being switched between applications of CIMARRON® Plus and applications of other pesticides to CIMARRON® Plus sensitive crops during the same spray season, it is recommended that a sprayer be dedicated to CIMARRON® Plus to further reduce the chance of crop injury.

## **SPRAY DRIFT MANAGEMENT**

The interaction of many equipment and weather-related factors determines the potential for spray drift. The user is responsible for considering all these factors when making application decisions. Follow the additional precautions below to minimize the potential for spray drift. All aerial and ground application equipment must be properly maintained and calibrated using appropriate carriers. AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR.

**Ground Application:** With ground equipment, spray drift can be lessened by keeping the spray boom as low as possible (i.e., a release height of 4 feet or less above the application target); by applying 10 gallons or more of spray per acre; by keeping the

operating spray pressures at the manufacturer's recommended minimum pressures for the specific nozzle type used; and by spraying when the wind velocity is low (follow all applicable state regulations). Do not make ground applications within a surface temperature inversion when applying near an area requiring protection to avoid an unreasonable adverse effect. Applicators may determine presence of an inversion by noting the presence of ground fog, light variable wind, or layering of smoke and dust. Be particularly alert to the potential for a surface temperature inversion when winds are calm. Direct the sprays no higher than the tops of target vegetation, and maintain spray pressures at levels which provide coarse to very coarse spray droplets to minimize drift.

**Aerial Application:** The following drift management requirements must be followed to avoid off-target drift movement from aerial applications:

1. The distance between the outer most operating nozzles on the boom must not exceed 75% of the wingspan. For helicopters, use a boom length and position that prevents droplets from entering the rotor vortices.
2. Nozzles should always point backward parallel with the air stream. Where states have more stringent regulations, they must be observed. The applicator should be familiar with and take into account the information presented below.

### **DRIFT CONTROL ADJUVANTS**

A drift control adjuvant may be used to reduce the potential for drift. However, because it is the combined physical-chemical properties of all the ingredients in the spray mix that can determine drift potential, the applicator must confirm that the drift control adjuvant used is having the desired effect with the tank mix that is being applied. If a drift control adjuvant is used, follow the use directions and precautions on the manufacturer's label. Do not use an adjuvant which increases viscosity with application systems that cannot accommodate viscous sprays.

### **IMPORTANCE OF DROPLET SIZE**

Since the most effective way to reduce drift potential is to apply large droplets, equipment producing a coarse to very coarse droplet spectrum must be used when applying this product. The best drift management strategy is to apply the coarsest drop size spectrum that provides 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 “SURFACE TEMPERATURE INVERSIONS” sections of this label.

#### **Controlling Droplet Size – Ground Application**

- Volume - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- Pressure - Do not exceed the manufacturer's recommended pressures. Use the lower spray pressures recommended for the nozzle. Higher pressure generally 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 according to manufacturer's specifications which is designed for the intended application, and that produces a coarse to very coarse droplet size spectrum. With most nozzle types, narrower spray angles produce larger droplets. To further reduce drift, low-drift or drift reducing nozzles should be used.

#### **Controlling Droplet Size - Aircraft**

- Number of Nozzles - Use the minimum number of nozzles that provide uniform coverage.
- Nozzle Orientation - For some nozzle types, such as solid streams, orienting nozzles so that the spray is emitted backwards, parallel to the air stream minimizes the effects of air shear and will produce a coarser droplet spectrum than other orientations. For applications of this product, nozzles must be oriented in a manner that results in the application of a coarse to very coarse droplet size spectrum.
- Nozzle Type - Use a nozzle type according to manufacturer's specifications which is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Solid stream and other drift reducing nozzles should be used.

### **BOOM LENGTH AND HEIGHT**

- Boom Height (ground) - Setting the boom at the lowest referenced height (if specified) which provides uniform coverage reduces the exposure of droplets to evaporation and wind. The boom should remain level with the crop and have minimal bounce. Apply at a height no greater than 4 feet above the top of the largest plants.
- Application Height (aircraft) – Apply at a height no greater than 10 feet above the top of the largest plants, unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.
- Boom Length (aircraft) - The distance between the outermost operating nozzles on the boom must not exceed 3/4 (75%) of the wingspan - longer booms increase drift potential. For helicopters, use a boom length and position that prevents droplets from entering the rotor vortices.

## ***SWATH ADJUSTMENT***

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

## ***WIND (GROUND AND AERIAL APPLICATION)***

Drift potential is lowest with a sustained wind of 2-10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given wind speed. Application should be avoided during gusty conditions, and when winds are below 2 mph due to variable wind direction and high potential for a temperature inversion. Avoid applying during calm conditions which may be conducive to air inversions. 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 (GROUND AND AERIAL APPLICATIONS)***

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

## ***SURFACE TEMPERATURE INVERSIONS (GROUND AND AERIAL APPLICATIONS)***

Applications must not occur during a local, surface temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds which are common during inversions. Temperature inversions are characterized by increasing temperatures with height 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 the 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.

## ***SHIELDED SPRAYERS (GROUND APPLICATION)***

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. Do not apply this product in a way that will contact workers or other people, either directly or through drift. Only protected handlers may be in the area during application.

## ***SENSITIVE AREAS***

This product should be applied only 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 the sensitive areas). Small quantities of spray may seriously injure susceptible crops either during active growth periods or dormancy.

## **STORAGE AND DISPOSAL**

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

**Pesticide Storage:** Store product in original container only. Store in a cool, dry place.

**Pesticide 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 Rigid Plastic and Metal Containers (Capacity Equal to or Less Than 5 Gallons):** 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 and drain for 10 seconds after the flow begins to drip. Fill the container one fourth 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 Rigid Plastic and Metal Containers (Capacity Greater Than 5 Gallons):** 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 one fourth 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 Rigid 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.

**All Refillable Containers:** Refillable container. Refilling Container: Refill this container with DuPont™ CIMARRON® Plus containing metsulfuron methyl and chlorsulfuron 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 container, contact DuPont 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 DuPont 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.

Do not transport if 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 DuPont at 1-800-441-3637, day or night.

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## SL - 1929 030915 03-04-15

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It is impossible to eliminate all risks associated with the use of this product. Such risks arise from weather conditions, soil factors, off target movement, unconventional farming techniques, presence of other materials, the manner of use or application, or other unknown factors, all of which are beyond the control of DuPont. These risks can cause: ineffectiveness of the product, crop injury, or injury to non-target crops or plants. **WHEN YOU BUY OR USE THIS PRODUCT, YOU AGREE TO ACCEPT THESE RISKS.**

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For product information call: 1-888-6-DUPONT [1-888-638-7668]

Internet address: [www.cropprotection.dupont.com](http://www.cropprotection.dupont.com)

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