

86363-6

12/10/2009

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U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs
Registration Division (7505P)
Ariel Rios Building
1200 Pennsylvania Ave., NW
Washington, D.C. 20460

EPA Reg. Number:

Date of Issuance:

86363-6

DEC 10 2009

Term of Issuance:

Conditional

Name of Pesticide Product:

Dicamba 2,4-D DMA

NOTICE OF PESTICIDE:

- x Registration
Reregistration
(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

Kaizen Technologies
410 N Boylan Avenue
Raleigh, NC 27603

Note: Changes in labeling, differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act. Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA sec. 3(c)(7)(A) provided that you:

- 1. Submit and/or cite all data required for registration/reregistration review of your product when the Agency requires all registrants of similar products to submit data.
2. Make the following label changes:
a. Under First Aid, within the If In Eyes section, add the bullet "Call a poison control center or doctor for treatment advice."
b. Under the Precautionary Statements add the bolded portion of the statement "Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco."
c. Within the Precautionary Statement area, add the bold word to the statement "If no such instructions for washables exist, use detergent and hot water."
d. Under Personal Protective Equipment (PPE), after Protective Eyewear add (such as goggles, faceshield or safety glasses).

Signature of Approving Official:

Date:

Kathryn V. Montague
Product Manager 23
Herbicide Branch
Registration Division (7505P)

[Handwritten signature of Kathryn V. Montague]

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- e. Under Endangered Species Concerns, change to read “The use of any pesticide in a manner that may kill or otherwise harm **an** endangered species or adversely modify their habitat, is a violation of federal law.”
- f. Under Drift Reduction Information, remove the statement “Leave an adequate buffer zone between area to be treated and sensitive plants.” This statement is too vague and is not enforceable.
- g. Under Aerial Application Methods and Equipment, remove the statement “do not use aerial equipment if spray particles can be carried by the wind into areas where sensitive crops or plants are growing or when temperature inversions exists.”
- h. The last statement on page 11 must be changed from “This product cannot be used to formulate or reformulate another pesticide product” to “This product is not intended for use to formulae or reformulate another pesticide product.”
- i. Clearly provide the maximum use rates (per applications and per year), as well as, maximum number of applications per year throughout the use directions on the label.
- j. Adjust the instructions for retreatments for Sugarcane, so that it coincides with the in the Crop Specific Restrictions and Limitations table.
- k. Spot treatments for pastures, rangelands, and grass (hay silage) are limited to 2.0 lb ae 2,4-D/acre. Please add language regarding this limitation, as pint formulation, to the text under crop specific information for pastures, rangeland and grass.
- l. Under Wheat add the direction “Applications are limited to 1 postemergence application per crop cycle, and 1 preharvest application per crop cycle, with a maximum application of 1.75 lb ae 2,4-D per crop cycle.”

m. Crop Specific Restrictions and Limitations Table:

**Between Crop Applications, add the following information:**

- “- Plant only labeled crops within 29 days following applications,  
Limited to 2 applications per year,  
Maximum of 2.0 lb ae 2,4-D and 1.0 lb ae dicamba per application,  
Minimum of 30 days between applications.”

**Pasture, Hay, Silage-current maximum seasonal rate must be reduced to comply with the RED-required rate of 4.0 lb ae 2,4-D/acre per year. Add the following information:**

- “- Minimum of 30 days between applications,  
Maximum of 2 applications per year,  
Maximum of 4.0 lb ae 2,4-D/acre per year”

**Sugarcane-maximum seasonal rate must be reduced to comply with the RED required rate of 4 lbs ae 2,4-D/acre per year. Add the following language:**

- “- Limited to one application per crop cycle.”  
Sorghum-add the following language:  
“- Limited to 1 application per crop cycle.”

**Wheat- list postemergence and preharvest applications separately, and add the following:**

**Postemergence:** “- Limited to 1 application per crop cycle, and  
Maximum of 1.25 lb ae 2,4-D per acre per application”

**Preharvest:** “- Limited to 1 preharvest application per crop cycle,  
Maximum of 0.5 lb ae 2,4-D per acre per application.”

n. Under the Warranty Disclaimer and Notice section, change statement “To the extent consistent with state law, to read **“To the extent consistent with applicable law.”**

o. Revise the EPA Registration Number to read, **“EPA Reg. No. 86363-6.”**

Submit one copy of the revised final printed label for the record.

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

A stamped copy of the label is enclosed for your records.

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# DICAMBA 2,4-D DMA

For use on Conservation Reserve Program Land, Fallow Systems (Between Crop Applications), General Farmstead, Sorghum, Grass (Hay or Silage), Pastures, Rangeland, Sugarcane, and Wheat

### ACTIVE INGREDIENT(S):

3,6-dichloromethoxybenzoic acid ..... 12.5%  
 Dimethylamine salt of 2,4-dichlorophenoxyacetic acid\*\* ..... 36.0%

INERT INGREDIENTS: ..... 51.5%

TOTAL: ..... 100.0%

This product contains 10.4% dicamba or 1 pound per gallon (120 grams per liter) and 29.9% 2,4-D or 2.87 pounds per gallon (344 grams per liter).

\*\* Isomer specific by AOAC method 978.05, 15<sup>th</sup> Edition

**KEEP OUT OF REACH OF CHILDREN**

**DANGER / PELIGRO**

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

See inside booklet for complete Precautionary Statements and Directions for Use

**ACCEPTED**

**WITH COMMENTS**

**In EPA Letter Dated:**

**DEC 10 2009**

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

86363-6

EPA Reg No. 86363-

NET CONTENTS:

EPA Est. No.

Manufactured For:  
Kaizen Technologies  
410 Boylan Avenue  
Raleigh, NC 27603

### FIRST AID

<b>IF IN EYES:</b>	<ul style="list-style-type: none"> <li>Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye.</li> </ul>
<b>IF SWALLOWED:</b>	<ul style="list-style-type: none"> <li>Call a poison control center or doctor immediately for treatment advice.</li> <li>Have a person sip a glass of water if able to swallow.</li> <li>Do not induce vomiting unless told to do so by a poison control center or doctor</li> <li>Do not give anything by mouth to an unconscious or convulsing person.</li> </ul>
<b>IF ON SKIN OR CLOTHING:</b>	<ul style="list-style-type: none"> <li>Take off contaminated clothing.</li> <li>Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>Call a poison control center or doctor for further treatment advice.</li> </ul>
<b>IF INHALED:</b>	<ul style="list-style-type: none"> <li>Move Person to fresh air.</li> <li>If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.</li> <li>Call a poison control center or doctor for further treatment advice.</li> </ul>

**HOT LINE NUMBER**

Have the product container or label with you when calling a poison control center, doctor, or going for treatment. For emergency information concerning this product, call the National Pesticides Information Center (NPIC) at 1-800-858-7378 seven days a week, 6:30 am to 4:30 pm Pacific Time (NPIC Web site: [www.npic.orst.edu](http://www.npic.orst.edu)). Outside of these times call your poison control center at 1-800-222-1222.

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

**PRECAUTIONARY STATEMENTS**

**Hazards to Humans and Domestic Animals**

**DANGER.** Corrosive. Causes irreversible eye damage. Do not get in eyes or on clothing. Wear goggles. Harmful if swallowed, inhaled or absorbed through skin. Avoid contact with skin. Avoid breathing spray mist. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

**Applicators and other handlers must wear:** Long-Sleeved shirt and long pants, Waterproof gloves, Shoes plus socks, and Protective Eyewear

**Mixers and loaders who do not use a mechanical system (probe and pump) must wear:** Coveralls, and Chemical resistant apron

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow the manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry. After each day of use, clothing or PPE must not be re-used until it has been cleaned.

**Engineering Control Statements**

When handlers use enclosed 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.

If this container contains over 1 gallon and less than 5 gallons, mixers and loaders who do not use a mechanical system (probe and pump) to transfer the contents of this container must wear coveralls or a chemical-resistant apron in addition to the other required PPE.

If this container contains 5 gallons or more in capacity, do not open pour. A mechanical system (such as a probe and pump or spigot) must be used for transferring the contents of this container. If the contents of a non-refillable pesticide container are emptied, the probe must be rinsed before removal. If the mechanical system is used in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240 (d) (4)), 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.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. If pesticide gets on skin, wash immediately with soap and water.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

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### ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic invertebrates. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift or runoff may adversely be hazardous to aquatic organisms in water adjacent to treated and non-target plants. Do not contaminate water by cleaning of equipment or disposing of equipment washwaters or rinsate.

**Groundwater Contamination:** This chemical has properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Application around a cistern or well may result in contamination of drinking water or groundwater. Most cases of groundwater contamination involving phenoxy herbicides such as 2,4-D have been associated with mixing/loading and disposal sites. Caution should be exercised when handling 2,4-D pesticides at such sites to prevent contamination of groundwater supplies. Use of closed systems for mixing or transferring this pesticide will reduce the probability of spills. Placement of the mixing/loading equipment on an impervious pad to contain spills will help prevent groundwater contamination.

#### Endangered Species Concerns:

The use of any pesticide in a manner that may kill or otherwise harm and endangered species or adversely modify their habitat is a violation of federal law.

### 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.

Unless otherwise directed in supplemented labeling, all applicable directions, restrictions, precautions and Conditions of Sale and Warranty are to be followed. This labeling must be in the user's possession during application.

### AGRICULTURAL USE REQUIREMENTS

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

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 48 hours. PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- coveralls worn over short-sleeve shirt and short pants
- chemical-resistant footwear plus socks
- chemical-resistant gloves made of a waterproof material
- chemical-resistant headgear for overhead exposure
- protective eyewear

#### SPRAY DRIFT MANAGEMENT:

A variety of factors, including weather conditions (e.g. wind direction, wind speed, temperature, relative humidity) and method of application (e.g. ground, aerial, airblast, chemigation) can influence pesticide drift. The applicator must evaluate all factors and make appropriate adjustments when applying this product.

**Droplet Size:** When applying sprays that contain 2,4-D as the sole active ingredient, or when applying sprays that contain 2,4-D mixed with active ingredients that require a Coarse or coarser spray, apply only as a Coarse or coarser spray (ASAE standard 572) or a volume mean diameter of 385 microns or greater for

spinning atomizer nozzles.

When applying sprays that contain 2,4-D mixed with other active ingredients that require a Medium or more fine spray, apply only as a Medium or coarser spray (ASAE standard 572) or a volume mean diameter of 300 microns or greater for spinning atomizer nozzles.

**Wind Speed:** Do not apply at wind speeds greater than 15 mph. Only apply this product if the wind direction favors on-target deposition and there are not sensitive areas (including, but not limited to, residential areas, bodies of water, known habitat for non-target species, non-target crops) within 250 feet downwind. If applying a Medium spray, leave one swath unsprayed at the downwind edge of the treated field.

**Temperature Inversions:** If applying at winds speeds less than 3 mph, this applicator must determine if: a) conditions of temperature inversion exist, or b) stable atmospheric conditions exist at or below nozzles height. Do not make applications into areas of temperature inversions or stable atmospheric conditions.

**Susceptible Plants:** Do not apply under circumstances where spray drift may occur to food, forage, or other plantings that might be damaged or crops thereof rendered unfit for sale, use, or consumption. Susceptible crops include, but are not limited to, cotton, okra, flowers, grapes (in growing stage), fruit trees (foliage), soybeans (vegetative stage), ornamentals, sunflowers, tomatoes, beans and other vegetables or tobacco. Small amounts of spray drift that might not be visible may injure susceptible broadleaf plants.

**Other State and Local Requirements:** Applicators must follow all state and local pesticide drift requirements regarding application of 2,4-D herbicides. Where states have more stringent regulations, they must be observed.

**Equipment:** All aerial and ground application equipment must be properly maintained and calibrated using appropriate carriers or surrogates.

- Additional requirements for aerial applications:

The boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter. Release spray at the lowest height consistent with efficacy and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety. This requirement does not apply to forestry or rights-of-way applications.

When applications are made with a crosswind, the swath will be displaced downwind. The applicator must compensate for this by adjusting the path of the aircraft upwind.

-Additional requirements for ground boom application

Do not apply with a nozzle height greater than 4 feet above the crop canopy.

**I. GENERAL INFORMATION**

**DICAMBA 2,4-D DMA** herbicide is a selective postemergence herbicide for controlling a wide spectrum of annual, biennial, and perennial broadleaf weeds and brush in grass forages and selected row crops.

**Mode of Action**

**DICAMBA 2,4-D DMA** contains two active ingredients uniquely formulated to be used alone or tank mixed with other listed products as well as liquid fertilizer solutions. **DICAMBA 2,4-D DMA** is readily absorbed by plants through shoot and root uptake, translocates throughout the plant's system, and accumulates in areas of active growth. **DICAMBA 2,4-D DMA** interferes with the plant's growth hormones (auxins) resulting in death of many broadleaf weeds.

**Cleaning Spray Equipment**

Clean application equipment thoroughly by using a strong detergent or commercial sprayer cleaner according to the manufacturer's directions and then triple rinse the equipment before after use applying this product.

**II. APPLICATION INSTRUCTIONS**

Apply **DICAMBA 2,4-D DMA** at the rates and growth stages listed in Tables 1 and 2 as follows unless instructed differently by section on "Food/Feed Crop Specific Information" or "Non-Food/Feed Use-Specific Information." Applications can be made to actively growing weeds as aerial, broadcast, band, or spot spray applications. **DICAMBA 2,4-D DMA** may be applied using water or sprayable fluid fertilizer as a carrier. Sprayable fluid fertilizer may be used as the carrier in preplant or pre-emergence use for all crops listed on this label. Postemergence uses with sprayable fluid fertilizer may be made on pasture, hayland, or wheat crops only.

The most effective application rate and timing varies based on the target weed species (refer to Table 1).

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In mixed populations of weeds the correct rate is determined by the weed species requiring the highest rate. Delaying application permits weeds to exceed the maximum size and will prevent adequate control.

**Irrigation:**

In irrigated areas, it may be necessary to irrigate before treatment to ensure active weed growth.

**Spray Coverage:**

Weeds must be thoroughly covered with spray. Dense leaf canopies shelter smaller weeds and prevent adequate spray coverage.

**Sensitive Crop Precautions:**

**DICAMBA 2,4-D DMA** may cause injury to desirable trees and plants, particularly beans, cotton, flowers, fruit trees, grapes, ornamentals, peas, potatoes, soybeans, sunflowers, tobacco, tomatoes and other broadleaf plants when contacting their roots, stems or foliage. These plants are most sensitive to **DICAMBA 2,4-D DMA** during their development or growing stage. Do not treat areas where either possible downward movement into the soil or surface washing may cause contact of **DICAMBA 2,4-D DMA** with the roots of desirable trees and shrubs.

**Drift Reduction Information:**

The following information may be helpful in reducing possible spray drift from ground or aerial applications.

- Avoid making applications when spray particle may be carried by air currents to areas where sensitive crops and plants are growing. Do not spray near sensitive plants if the wind is gusty or in excess of 5 mph and moving in the direction of nearby sensitive crops or if a temperature inversion exists. However, always make applications when there is some air movement to determine the direction and distance of possible spray drift. Leave an adequate buffer zone between area to be treated and sensitive plants. Coarse sprays are less likely to drift out of the target area than fine sprays. The use of agriculturally accepted drift retardants are acceptable and advised.
- Do not use aerial equipment or apply **DICAMBA 2,4-D DMA** when sensitive crops and plants are growing in the vicinity of area to be treated.

**AERIAL APPLICATION METHODS AND EQUIPMENT**

**Water Volume:** Use 3-10 gallons of water per acre. Use the higher spray volume when treating dense or tall vegetation.

**Application Equipment:** Select nozzles designed to produce minimal amounts of fine spray particles. Make applications at the lowest stage height to reduce the exposure of spray droplets to evaporation and wind.

The applicator must follow the most restrictive use cautions to avoid drift hazards, including those found in the this labeling as well as applicable state and local regulations and ordinances.

Do not use aerial equipment if spray particles can be carried by the wind into areas where sensitive crops or plants are growing or when temperature inversions exist.

**Table 1, Application Rate and Timing - Annual Weeds**

Weeds (including ALS - and resistant)	Rate Per Acre (according to weed growth stage)					
	0.5	1.0 pints	1.5 pints	2 pints	3 pints	4 pints
Beebalm, Spotted	-	-	-	pre-bloom	post-bloom	-
Broomweed	1-3"	3"	-	branching	-	after
Buckwheat, Wild	-	1-6"	-	-	-	-
Buffalobur	-	-	-	1-6"	-	flowering
Burdock	-	pre-	-	-	-	-
Buttercup	-	pre-	-	early	late bloom	-
Chickweed, Common	-	seedling	1-3"	-	-	-
Cockle, Cow	-	< 3"	-	-	-	-
Cocklebur, Common	-	1-6"	6-12"	12-18"	-	-
Coreopsis, Plains	-	1-6"	-	-	-	-
Croton, Woolly	1-4"	4-	12-30"	-	-	-



Devil's claw	-	-	-	< 8"	-	-
Dogfennel	-	-	-	10-15"	-	-
Evening Primrose	-	< 2"	-	2-6"	-	-
Falseflax, Smallseed	-	< 2"	-	-	-	-
Fleabane, Annual	-	1-4"	4-8"	8"	-	-
Fixweed	-	< 3"	-	-	-	-
Henbit	-	-	preflower	-	flower	-
Knotweed Spp.	-	< 3"	-	> 3" runners	-	-
Kochia	-	1-6"	6-10"	10-20"	-	-
Lambsquarters.	-	1-6"	6-10"	10-20"	-	-
Mallow, Common	-	< 3"	-	-	-	-
Morning glory, Ivyleaf	-	pre-	-	-	-	-
, Tall	-	pre-	-	post-flower	-	-
Mustards, Annual	-	Rosette	-	early bolt	-	-
, Tansy	-	< 3"	-	-	-	-
Nightshade, Black	-	-	-	full flower	-	actively
Pennycress, Field	-	-	-	rosette	-	-
Pepperweed, Virginia	-	-	1-3"	3-6"	after	-
Pigweed, Prostrate	-	< 3"	-	-	-	-
, Redroot	-	< 3"	3-10"	-	-	-
, Smooth	-	< 3"	-	-	-	-
, Tumble	-	< 3"	-	mature	-	-
Poorjoe	-	prior to	-	-	-	actively
Purslane, Common	-	< 3"	3-8"	-	-	-
Ragweed, Common	1-3"	3-6"	6-10"	>10"	-	-
Western, Lanceleaf	1-3"	3-6"	6-10"	actively growing	-	-
Sedge <sup>1</sup>	-	-	-	< 4 leaves	-	-
Shepherdspurse	-	rosette	-	-	-	-
Smartweed,	-	<4"	-	-	4-12"	-
Sneezeweed, Bitter	-	1-4"	prior to	flower	-	-
Sowthistle, Annual	-	rosette	-	bolting	-	-
Sunflower	-	1-3"	3-6"	6-24"	-	-
Thistle, Russian	-	-	-	< 3"	-	-
Velvetleaf	-	< 6"	6-20"	> 20"	-	-

<sup>1</sup> For use in non-food/feed crop. Adding crop oil concentrate has shown to improve performance on

**Table 2. Application Rate and Timing - Biennial and Perennial Weeds**

Weeds	Rate Per Acre (according to weed growth stage)					
	0.5	1.0	1.5	2 pints	3 pints	4 pints
Bindweed, Field	-	-	-	-	-	actively
Bittercress <sup>5</sup>	-	2-3"	-	-	-	-
Buckeye species <sup>1</sup>	-	-	-	-	full leaf	-
Bullnettle <sup>2, 5</sup>	-	-	-	flower	-	-
Chicory	-	-	-	-	early	-
Clove, Bur	-	-	pre-	-	-	-
Dandelion, Common	-	rosett	-	bolting	-	-
Dewberry, Southern <sup>1</sup>	-	-	-	-	-	spring or fall
Dock, Curly	-	-	prior to	-	after	-

Elderberry <sup>2</sup>	-	-	-	-	actively
Goldenrod, Missouri	-	-	3-15"	flower	-
Groundsel, Texas	-	rosett	post-	-	-
Honeysuckle, Hairy	-	-	-	spring or	-
Horsenettle, Carolina <sup>1</sup>	-	-	-	-	flower or berry
Ivy, Poison	-	-	-	after bloom	-
Knapweed, Black <sup>2</sup>	-	-	-	-	actively growing
, Russian <sup>2</sup>	-	-	-	-	actively growing
, Spotted	-	-	-	-	actively growing
Lettuce, Prickly	-	-	-	rosette	actively growing
Marshelder	-	-	-	<12"	12"/prebloom
Mesquite <sup>3</sup>	-	-	-	-	45-90 days after budbreak
Milkweed <sup>1, 5</sup>	-	-	-	pre-flower	Flower
Nightshade, Silverleaf <sup>1</sup>	-	-	-	-	full flower
Persimmon, Eastern <sup>3</sup>	-	-	-	-	actively growing
Rabbitbrush <sup>2</sup>	-	-	-	-	actively growing
Ragwort, Tansy	-	-	-	rosette	actively growing
Redvine <sup>2</sup>	-	-	-	-	actively growing
Sagebrush, Fringed <sup>2</sup>	-	-	-	-	actively growing
Smartweed, Perennial	-	-	-	-	actively growing
Sorrel, Red	-	-	rosette	bolting	flower
Sowthistle <sup>2</sup> , Perennial	-	-	-	-	actively growing
Spurge, Leafy <sup>2</sup>	-	-	-	-	full leaf
Tallow Tree, Chinese <sup>4, 5</sup>	-	-	-	-	actively growing
Thistle, Bull	-	-	rosette	bolting	-
, Canada <sup>2</sup>	-	-	-	-	-
, Musk	-	-	-	rosette/bolting	-
, Plumeless	-	-	rosette	bolting	-
Vetch, Hairy	-	1-4"	4-8"	8"full flower	-
Yankeeeweed	-	-	-	10-18"	-

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Yellow Starthistle <sup>1</sup>	-	-	-	-	-	Rosette
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- <sup>1</sup> May require repeat applications
- <sup>2</sup> Recommended rate will provide top growth suppression only.
- <sup>3</sup> For improved root kill or woody species such as mesquite and eastern persimmon spray 4 pints of per acre **DICAMBA 2,4-D DMA** each year for 3 consecutive years. For increased control of weeds such as blackberry and dewberry, **DICAMBA 2,4-D DMA** may be tank mixed with Ally® herbicide (0.1-0.2 ounces per acre), if labeled for the use site.
- <sup>4</sup> Under dense populations, a second application may be needed the following growing season.
- <sup>5</sup> Not for use in California.

**Ground Application (Banding)**

When applying **DICAMBA 2,4-D DMA** herbicide by banding, determine the amount of herbicide and water volume needed using the following formula:

$$\frac{\text{Bandwidth in inches} \times \text{Broadcast rate}}{\text{Banding herbicide Row width in inches per acre}} = \text{rate per acre}$$

$$\frac{\text{Bandwidth in inches} \times \text{Broadcast rate}}{\text{Banding water Row width in inches}} = \text{volume per acre}$$

**Ground Application (Broadcast)**

**Water volume:** Use 5-40 gallons of spray solution per broadcast acre for optimal performance. Use the higher spray volume when treating dense or tall vegetation.

**Application Equipment :** Select nozzle design to produce minimal amounts of fine spray particles. Spray nozzles as close to the weeds as is practical for good weed coverage.

**Spot or Small Area Application**

**DICAMBA 2,4-D DMA** may be applied to individual clumps or small areas of undesirable vegetation using handgun or similar types of application equipment. Apply diluted sprays to allow complete wetting (up to runoff) of foliage and stems. For knapsack or other small capacity sprayers, prepare a solution of **DICAMBA 2,4-D DMA** in water according to Table 3 (assuming that the spot treatment rate equates to 60 gallons pre acre on the broadcast basis.) Adding a surfactant (0.5% by volume) can help improve control.

For example, 5 gallons (40 pints or 640 fluid ounces) of herbicide solution would require 0.2 pints (3.2 fluid ounces) of surfactant.

Do not make spot treatments in addition to broadcast or band treatments.

**Application equipment :** Select nozzles designed to produce minimal amounts of fine spray particles. Spray with nozzles as close to the weeds as is practical for good weed coverage.

**Table 3. – Knapsack Sprayer Dilution Instructions**

Sprayer Capacity (gallons of water)	Amount of <b>DICAMBA + 2, 4-D DMA</b> to add to the spray tank
1 gallon	1 fluid ounce*
3 gallons	3 fluid ounces
5 gallons	5 fluid ounces

1 fluid ounce = 2 tablespoons

**III. ADDITIVES**

To improve burndown of emerged weeds, surfactants and/or low use rates of liquid fertilizers (28-0-0; 32-0-0), or crop oil concentrate may be used with **DICAMBA 2,4-D DMA** herbicide or **DICAMBA 2,4-D DMA** tank mixes applied after the weeds have emerged. Crop oil concentrate is for non-food/feed crop uses only. Do not apply tank mixes that include Ammonium Sulfate or Crop Oil Concentrate to any food/feed crop use listed on this label. For food/feed crop use, do not use liquid fertilizers that contain Ammonium Sulfate (AMS) as a source of nitrogen as tolerances in commodities derived from the crop may contain residues that exceed established tolerances.

**Oil Concentrate**

A crop oil concentrate must contain either a petroleum or vegetable oil base and must meet all of the following criteria:

- be non-phytotoxic
- contain only EPA-exempt ingredients
- provide good mixing quality in the jar test, and
- be successful in local experience

The exact composition of suitable products will vary; however, vegetable oil and petroleum oil concentrates should contain emulsifiers to provide good mixing quality. Highly refined vegetable oils have proven more satisfactory than unrefined vegetable oils. For additional information, see **Compatibility Test for Mix Components**.

Adjuvants containing crop oil concentrates may be used for preplant, pre-emergence and between cropping applications. Do not use crop oil concentrate for postemergence applications in food/feed crops (i.e. sorghum, grass (hay or silage), pastures, rangeland, sugarcane and wheat .)

**Nitrogen Source**

- **Sprayable liquid fertilizers:** Use one quart of sprayable liquid fertilizers (28-0-0; 32-0-0) per acre. Do not use brass or aluminum nozzles when spraying fertilizers.

**Nonionic Surfactant**

The standard label recommendation is 2-4 pints of an 80% active non-ionic spray surfactant per 100 gallons of water. For certain weeds, use a higher spray surfactant rate.

**Table 4. - Additive Rate Per Acre**

Additive <sup>1</sup>	Rate Additive Per Acre
Nonionic Surfactant	2-4 pints per 100 gallons
Sprayable Liquid Fertilizers (28-0-0; 32-0-0)	½ GPA of spray solution
Crop Oil Concentrate	1 quart*

\* See manufacturer's label for specific rate recommendations.

**IV. GENERAL TANK MIXING INFORMATION**

**Tank Mix Partners/Components**

The following products may be tank mixed with **DICAMBA 2,4-D DMA** according to the specific tank mixing instructions in this label and respective product labels.

- **Alm™** (carfentrazone-ethyl)
- **Ally®** (metsulfuron-methyl)
- **Amber®** (triasulfuron)
- **Basagran®** (bentazon)
- **Bronate®** (bromoxynil + MCPA)
- **Buctril®** (bromoxynil)

- **Canvas®** (thifensulfuron-methyl + tribenuron-methyl + metsulfuron-methyl)
- **Clarity®** (dicamba)
- **Curtail™** (clopyralid + 2,4-D)
- **Cyclone®** (paraquat)
- **Dakota®** (fenoxaprop-p-ethyl + MCPA)
- **Distinct®** (diflufenzopyr + dicamba)
- **Evik®** (ametryn)
- **Express®** (tribenuron-methyl)
- **Fallowmaster®** (glyphosate + dicamba)
- **Finesse®** (chlorsulfuron + metsulfuron-methyl)
- **Glean®** (chlorsulfuron)
- **Gramoxone® Extra** (paraquat)
- **Harmony® Extra** (thifensulfuron-methyl + tribenuron-methyl)
- **Karmex®** (diuron)
- **Kerb™** (pronamide)
- **Laddok® S-12** (bentazon + atrazine)
- **Landmaster®** (glyphosate + 2,4-D)
- **Lexone®** (metribuzin)
- **MCPA**
- **Paramount®** (quinclorac)
- **Peak®** (prosulfuron)
- **Permit®** (halosulfuron-methyl)
- **Rave™** (dicamba + triasulfuron)
- **Roundup® Ultra** (glyphosate)
- **Sencor®** (metribuzin)
- **Sinbar®** (terbacil)
- **Stinger™** (clopyralid)
- **Tiller®** (fenoxaprop-p-ethyl + 2,4-D + MCPA)
- **Tordon™** (picloram)
- **Touchdown®** (glyphosate)
- **2,4-D**

See **FOOD/FEED CROP SPECIFIC INFORMATION** section for more information for more details. Read and follow the applicable **Restrictions and Limitations and Directions for Use** on all products involved in tank mixing. The most restrictive labeling applies to tank mixes.

Physical incompatibility, reduced weed control, or crop injury may result from mixing **DICAMBA 2,4-D DMA** with other pesticides (fungicides, herbicides, insecticides, or miticides), additives, or fertilizers.

#### **Compatibility Test for Mix Components**

Before mixing components, always perform a compatibility jar test. For 20 gallons per acre spray volume, use 3.3 cups (800 ml) of water. For other spray volumes adjust accordingly. Only use water from the intended source at the source temperature.

Add components in the sequence indicated in the **Mixing Order** using 2 teaspoons for each pound or 1 teaspoon for each pint of recommended label rate per acre.

Always cap the jar and invert 10 cycles between component additions.

When the components have all been added to the jar, let the solution stand for 15 minutes. Evaluate the solution for uniformity and stability. The spray solution should not have free oil on the surface, nor fine particles that precipitate to the bottom, nor thick (clabbered) texture. If the spray solution is not compatible, repeat the compatibility test with the addition of a suitable compatibility agent. If the solution is still incompatible, do not mix the ingredients in the same tank.

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### Mixing Order

If an inductor is used, rinse it thoroughly after each component has been added. Maintain constant agitation during application.

1. **Water** Begin by agitating a thoroughly clean sprayer tank half full of clean water.
2. **Agitation.** Maintain constant agitation throughout mixing and application.
3. **Products in PVA bags.** Place any product contained in water-soluble bags into the mixing tank. Wait until all water-soluble PVA bags have fully dissolved and the product is evenly mixed in the spray tank before continuing.
4. **Water-dispersible products** (such as dry flowables, wettable powders, suspension concentrates, and suspo-emulsions)
5. **Water-soluble products** (such as DICAMBA 2,4-D DMA).
6. **Emulsifiable concentrates** (such as oil concentrate, when applicable).
7. **Water-soluble additives** (such as liquid fertilizers (28-0-0; 32-0-0), when applicable).
8. **Remaining quantity of water.**

\* If sprayable fluid fertilizer is used as the carrier, **DICAMBA 2,4-D DMA** must be diluted with a minimum of 5 parts water to 1 part **DICAMBA 2,4-D DMA**. Then add 0.25-0.05% volume/volume of a nonionic surfactant to the dilution before adding it to the sprayable fluid fertilizer to reduce the concern for compatibility problems with this mix. Always perform the **Compatibility Test** before mixing into the spray tank. Also, when using a sprayable fluid fertilizer as the carrier, any product contained in PVA bags must first be completely dissolved in water before the contents can be added to the fertilizer mix.

### V. RESTRICTIONS AND LIMITATIONS

- **Maximum seasonal use rate:** Refer to Table 5.
- **Preharvest Interval (PHI):** Refer to "Food/Feed Crop Specific Information"
- **Restricted entry Interval (RE):** 48 Hours
- **Crop Rotational Restrictions:** The interval between application and planting rotational crop is given below. Always exclude counting days when the ground is frozen. Planting at intervals less than specified below may result in crop injury. Moisture is essential for the degradation of this herbicide in soil. If dry weather prevails, use cultivation to allow herbicide contact with moist soil.

**Planting/replanting restrictions for DICAMBA 2,4-D DMA herbicide applications of 6 pints per acre or less:** No rotational cropping restrictions apply at 120 days or more following application. Additionally, for annual crop uses in this label including sorghum, follow the preplant use directions in section "Food/Feed Crop-Specific Information." For barley, oat, wheat, and other grass seedings, the interval between application and planting is 10 days per pint per acre.

**Planting/replanting restrictions for applications of more than 6 pints and up to 8 pints of DICAMBA 2,4-D DMA per acre:** Corn, sorghum, cotton (east of the Rocky Mountains) and all other crops grown in areas with 30" or more of annual rainfall may be planted 120 days or more after application. Barley, oat, wheat, and other grass seedings, may be planted if the interval from application to planting is 10 days per pint per acre east of the Mississippi River and 15 days per pint per acre west of the Mississippi River. For all other crops in areas with less than 30" of annual rainfall, the interval between application and planting is 180 days or more.

- **Rainfast Period:** Rainfall or irrigation occurring within 4 hours after postemergence applications may reduce effectiveness of **DICAMBA 2,4-D DMA**.
- **Stress:** Do not apply to crops under stress such as stress due to lack of moisture, hail damage, flooding, herbicide injury, mechanical injury, or widely fluctuating temperatures, as unsatisfactory control may result.
- Do not apply to crops that show **injury** (leaf phytotoxicity or plant stunting) produced by any other prior herbicide applications, because this injury may be enhanced or prolonged.
- Do not apply this product through any type of irrigation equipment. Do not contaminate irrigation ditches or water used for domestic purposes.
- This product cannot be used to formulate or reformulate another pesticide product.

**Table 5. Crop Specific Restrictions and Limitations**

Crop	Maximum Rate Per Acre Per Application	Maximum Rate Per Acre Per Season	Livestock Grazing or Feeding <sup>1</sup>	Aircraft Application
<p>Between Crop Applications Plant only labeled crops within 29 days following application. Limited to 2 applications per year. Maximum of 2.0 lb ae 2,4-D and 1.0 lb ae dicamba per applications. Minimum of 30 days between applications.</p>	6 pints	8 pints	Yes	Yes
<p>Pasture, Hay, Silage Minimum of 30 days between applications. Maximum of 2 applications per year. Maximum of 4.0 lb ae 2,4-D/acre per year.</p>	4 pints	8 pints	Yes	Yes
<p>Sugarcane Limited to one application per crop cycle.</p>	6 pints	16 pints	Yes	Yes
<p>Sorghum Limited to 1 application per crop cycle.</p>	1 pints	1 pints	Yes	Yes
<p>Wheat Limited to 1 application per crop cycle. Maximum of 1.25 lb ae 2,4-D per acre per application. Limited to 1 preharvest application per crop cycle.</p>	2 pints	3.33 pints	Yes	Yes
<p><sup>1</sup>Refer to FOOD/FEED CROP SPECIFIC INFORMATION for grazing and feeding restrictions.</p>				

**VI. FOOD/FEED CROP SPECIFIC INFORMATION**

**Pastures, Rangeland and Grass (Hay, Silage)**

DICAMBA 2,4-D DMA is recommended for use for pasture (including pasture grown for hay), rangeland, grass grown for hay or silage, between crop applications/fallow systems, Conservation Reserve Programs, and general farmstead (non-cropland only).

Refer to Tables 1 and 2 for rate selection based on targeted weed or brush species. Some weed species will require tank mixes for adequate control.

Rates above 4 pints of DICAMBA 2,4-D DMA per acre are for spot treatments only.

Retreatments may be made as needed; however, do not exceed a total of 8 pints of DICAMBA 2,4-D DMA per treated acre during a growing season.

Uses described in this section also pertain to small grains (such as barley, corn, forage sorghum, oats, rye, sudangrass, or wheat) grown for pasture, hay, and silage only. Newly seeded areas including small grains grown for pasture or hay, may be injured if rates of DICAMBA 2,4-D DMA are greater than 2 pints per acre are applied.

In newly established hybrid Bermudagrass, Pangolagrass, and stargrasses (*Cynodon* spp.) use 2 to 4 pints of DICAMBA 2,4-D DMA per acre to control or suppress weeds after planting vegetative propagules (stolens) of hybrid bermudagrasses. In addition to the weeds listed in Tables 1 and 2, this rate of DICAMBA 2,4-D DMA will control or suppress annual sedges, broadleaf signalgrass, crabgrass, and goosegrass.

Best results will be obtained if DICAMBA 2,4-D DMA is applied at the germinating stage of weeds. Under favorable conditions, this is usually 7-10 days after planting these grasses. Reduced control can be expected if weeds are allowed to reach 1" in height before application or if germination of weeds occurs 10 days after application.

Do not use on bentgrass, susceptible grass pastures (such as carpetgrass, buffalograss, or St. Augustine grass), lezpedeza, wild winter peas, vetch, clover, and alfalfa pastures as injury will occur.

When perennial weeds are reaching maturity, mowing and allowing some regrowth will enhance control. Difficult to control weeds and brush may require a repeat application.

For pasture renovations, wait 3 weeks per quart (2 pints) of DICAMBA 2,4-D DMA used per acre before interseeding or injury may occur.

If grasses are grown for seed or for seed-down purposes, do not apply after grass reaches joint stage.

**Grazing and Feeding Non-Lactating Animals:** There is no waiting period between treatment and grazing for non-lactating animals. Do not permit meat animals being finished for slaughter to graze treated fields within 30 days of slaughter.

**Grazing and Feeding Lactating Animals:** Do not graze lactating dairy animals within 7 days of treatment.

**Dry hay and Silage:** Treated grasses may be harvested for dry hay or silage but do not harvest within 37 days of treatment.

**Pasture and Rangeland Tank Mixes**

DICAMBA 2,4-D DMA may be applied in tank mixes with one or more of the following herbicides:



### Sorghum

#### **Rates and Timings**

Apply 1 pint of **DICAMBA 2,4-D DMA** per acre to sorghum in the 3-5 leaf stage (4"-8" tall.) For best performance apply when weeds are small (less than 3" tall).

Applications of **DICAMBA 2,4-D DMA** to sorghum during periods of rapid growth may result in temporary leaning of plants or rolling leaves. These effects are usually outgrown within 10-14 days. Sorghum growing under conditions of stress such as high moisture, low fertility, and abnormal temperature may be more sensitive to applications of **DICAMBA 2,4-D DMA**.

**Do not use surfactants or oils with postemergence applications of DICAMBA 2,4-D DMA on sorghum crops.**

**Do not use DICAMBA 2,4-D DMA** if the potential for sorghum injury is not acceptable.

If sorghum is grown for pasture, hay or silage, refer to "**Pastures, Rangeland and Grass (Hay, Silage)**" under "**Food/Feed Crop Specific Information**" for livestock grazing and feeding restrictions.

**Do not apply DICAMBA 2,4-D DMA** to sorghum grown for seed production.

Make no more than one postemergence application per growing season.

#### **Sorghum Tank Mixes**

**DICAMBA 2,4-D DMA** may be applied in tank mixes with one or more of the following herbicides:

Atrazine  
Basagran®  
Buctril®

Laddock® S-12  
Paramount®

Peak®  
Permit®

### Sugarcane

Applications of **DICAMBA 2,4-D DMA** can be made any time after weeds have emerged and are actively growing but prior to the close-in stage of sugarcane. When possible, direct the spray beneath the sugarcane canopy in order to minimize the likelihood of crop injury. The use of directed sprays will also aid in maximizing spray coverage of weed foliage. Application rates and timing are given below. Use the higher level of listed rate ranges when treating dense vegetative growth.

#### **Rate:**

- For control of listed annual broadleaf weeds, apply 2 pints of **DICAMBA 2,4-D DMA** per treated acre.
- For suppression of listed perennial weeds, apply 1-6 pints of **DICAMBA 2,4-D DMA** per treated acre.

Retreatments may be made as needed, however, do not exceed 16 pints of **DICAMBA 2,4-D DMA** per treated acre during a growing season.

#### **Sugarcane Tank Mixes**

**DICAMBA 2,4-D DMA** may be applied in tank mixes with one or more of the following herbicides:

Asulox®  
Atrazine  
Evik®

Lexone®  
Sencor®  
Sinbar®

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**Wheat**

**(Fall and Spring-seeded)**

If small grains are grown for pasture or hay only, refer to **Pastures, Rangeland and Grass (Hay, Silage)**.

Do not graze or harvest for livestock feed prior to crop maturity.

Do not use **DICAMBA 2,4-D DMA** in wheat underseeded with legumes.

**EARLY SEASON APPLICATION:**

Apply 0.5-1 pint of **DICAMBA 2,4-D DMA** per acre to wheat unless using one of the wheat specific programs below.

Early season applications to spring-seeded wheat must be made after tillering and before wheat reaches the 6-leaf stage.

Early season applications to fall-seeded wheat must be made after tillering and prior to the jointing stage.

Care should be taken in staging early developing wheat varieties such as TAM 107, Madison, or Wakefield to be certain that the application occurs prior to the jointing stage.

**SPECIFIC USE PROGRAMS FOR FALL-SEEDED WHEAT ONLY:**

Up to 1.33 pints of **DICAMBA 2,4-D DMA** per acre may be applied on fall-seeded wheat after the wheat begins to tiller for suppression of perennial weeds, such as field bindweed. Applications may be made in the fall following a frost but before a killing freeze. Periods of extended stress such as cold and wet weather may enhance the possibility of crop injury. For fall applications only, do not use if the potential for crop injury is not acceptable.

**PREHARVEST APPLICATIONS:**

**DICAMBA 2,4-D DMA** can be used to control weeds that may interfere with harvest of wheat. Apply up to 2 pints of **DICAMBA 2,4-D DMA** per acre as a broadcast or spot treatment to annual broadleaf weeds when wheat is in the hard dough stage and the green color is gone from the nodes (joints) of the stem. Best results will be obtained if application can be made when weeds are actively growing but before weeds canopy.

A waiting interval of 14 days is required before harvest.

Do not use preharvest-treated wheat for seed unless a germination test is performed on the seed with an acceptable result of 95% germination or better.

For control of additional broadleaf weeds or grasses, **DICAMBA 2,4-D DMA** may be tank mixed with other herbicides such as **Aly** or **Gly Star™ Plus** that are registered for preharvest use in wheat.

Preharvest use of **DICAMBA 2,4-D DMA** is not registered for use in California.

**Table 6. Wheat Tank Mixes**

Tank Mix Partner	Rate Per Acre
Aim™	0.3 ounce
Aly® <sup>1</sup>	0.05 - 0.1 ounce
Amber®	0.14 - 0.28 ounce
Bronate®	0.75 -1.5 pints
Buctril®	1-1.5 pints
Canvas® <sup>1</sup>	0.2- 0.4 ounce
Curtail™	2 - 2.67 pints
Dakota® <sup>2</sup>	16 fluid ounces

Express <sup>®1</sup>	0.083 - 0.167 ounce <sup>1</sup>
Finesse <sup>®1</sup>	0.167 - 0.33 ounce <sup>1</sup>
Glean <sup>®</sup>	0.167 ounce <sup>1</sup>
Harmony <sup>®</sup> Extra	0.167- 0.33 ounce <sup>1</sup>
Karmex <sup>®3</sup>	0.5 -1.5 pounds
2, 4-D amine	4 - 20 fluid ounces <sup>4</sup>
Metribuzin <sup>3</sup>	0.25 - 0.375 pounds a.i.
Peak <sup>®1</sup>	0.25 - 0.38 ounce
Stinger <sup>™</sup>	4 - 5.33 fluid ounces
Tiller <sup>®2</sup>	1 - 1.7 pints

<sup>1</sup> Do not use low rates of sulfonylurea herbicide, such as Ally®, Amber®, Canvas®, Express®, Finesse®, Glean®, Harmony® Extra, and Peak® on more mature weeds or on dense vegetative growth.

<sup>2</sup> Do not use DICAMBA 2,4-D DMA as a tank mix treatment with Dakota or Tiller on Durum wheat. Do not tank mix with Tiller if wild oat is the larger weed.

<sup>3</sup> Tank mixes with Karmex and metribuzin are for use in **fall-seeded wheat only**.

<sup>4</sup> DICAMBA 2,4-D DMA contains 0.36 pounds acid equivalent, of 2,4-D per pint. When tank mixing with 2,4-D do not exceed a combined total of 1.0 pound acid equivalent per acre of 2,4-D and do not exceed 0.5 pounds acid equivalent of 2,4-D unless injury to wheat is acceptable.

**Between Crop Applications/Fallow Systems, Conservation Reserve Programs, and General Farmstead**

These uses are considered Food/Feed Crops when harvested, grazed or foraged. Consult section on "General Tank Mixing Information" for adjuvant restrictions and section on "Additives" for specific use directions.

**VII. NON-FOOD/FEED USE (LAND NOT HARVESTED, GRAZED OR FORAGED) – SPECIFIC INFORMATION**

**Between Crop Applications**

**PREPLANT DIRECTIONS (POSTHARVEST, FALLOW, CROP STUBBLE, SET-ASIDE) FOR BROADLEAF WEED CONTROL:**

DICAMBA 2,4-D DMA can be applied postharvest in the fall, spring, or summer during the fallow period or to crop stubble/set-aside acres. Apply to weeds after crop harvest (postharvest) and before a killing frost or in the fallow cropland or crop stubble the following spring or summer.

See **RESTRICTIONS AND LIMITATIONS** for the recommended interval between application and planting to prevent crop injury.

**Rates and Timings:**

Apply 0.5-6 pints of DICAMBA 2,4-D DMA per acre. Refer to **Table 1** to determine use rates for specific targeted weed species. Retreatments may be made as needed; however, do not exceed a total of 8 pints of DICAMBA 2,4-D DMA per treated acre during a growing season. For best performance, apply DICAMBA 2,4-D DMA when annual weeds are less than 6" tall, when biennial weeds are in the rosette stage and to perennial weed regrowth in late summer or fall following a mowing or tillage treatment. The most effective control of upright perennial broadleaf weeds such as Canada thistle and Jerusalem artichoke occurs if DICAMBA 2,4-D DMA is applied when the majority of weeds have at least 4-6" of regrowth or for weeds such as field bindweed and hedge bindweed that are in or beyond the full bloom stage.

Avoid disturbing treated areas following application. Treatments may not kill weeds that develop from seed or underground plant parts such as rhizomes or bulblets, after the effective period for DICAMBA 2,4-D DMA. For seedling control, a follow-up program or other cultural practices could be instituted.

**Between Crop Tank Mixes:**

In tank mixes with one or more of the following herbicides, apply 0.5-2 pints of **DICAMBA 2,4-D DMA** per acre for control of annual weeds, or 2-8 pints of **DICAMBA 2,4-D DMA** per acre for control of biennial and perennial weeds.

Aim™	Cyclone®	Kerb™
Ally®	Distinct®	Landmaster®
Amber®	Fallowmaster®	BW
Atrazine	Finesse®	Paramount®
Bladex®	Glyphosate	Sencor®
Curtail™	Gramoxone®	Tordon™ 22K
	Extra	Touchdown®
		2,4-D

**Conservation Reserve Programs and General Farmstead**

**DICAMBA 2,4-D DMA** is recommended for use for Conservation Reserve Programs, general farmstead (non-cropland only), weed and brush control, or use in State Recognized Noxious Weed areas (non-cropland areas).

Refer to **Tables 1 and 2** for rate selection based on targeted weed or brush species. Some weed species will require tank mixes for adequate control.

Rates above 4 pints of **DICAMBA 2,4-D DMA** per acre are for spot treatments only.

Retreatments may be made as needed; however, do not exceed a total of 8 pints of **DICAMBA 2,4-D DMA** per treated acre during a growing season.

**Farmstead and Fence-row Treatment Application Instructions**

**DICAMBA 2,4-D DMA** may be applied using water or oil and water emulsions in spot application to control undesirable vegetation using handgun or similar types of application equipment. In addition to weed species listed in **Tables 1 and 2**, these treatments may be used to control or suppress woody plant species listed in **Table 6**.

To prepare soil and water emulsions, mix in the order and proportions indicated below.

The solution should remain milky colored without an oily layer on top when under agitation. If an oily layer forms, increase the amount of emulsifier or change to a more effective emulsifier.

Do not exceed 40 gallons of spray solution per treated acre per application. Forty gallons of spray solution contains 1.0 pound acid equivalent of dicamba and 2.87 pounds acid equivalent of 2,4-D. Spray plants to wet. Do not allow this spray mix to contact desirable vegetation.

To control brush, briars, and weeds along fence-rows surrounding pasture and ranch lands, and fallow fields, use a tank mix of 2.5% **DICAMBA 2,4-D DMA**, 87.5% water, 10% diesel oil, and sufficient emulsifier (to mix the diesel and emulsifier). The diesel oil in this tank mix will damage or kill desirable grasses and should not be used in pastures or where damage to desirable species cannot be tolerated.

- 1). **Water:** Begin by agitating a thoroughly clean sprayer tank with the desired quantity of clean water. Maintain constant agitation during complete mixing procedure.
- 2). **Emulsifier:** Add 0.5% volume to volume of water.
- 3). **DICAMBA 2,4-D DMA:** add 2.5 gallons per 100 gallons of total intended solution.
- 4). **Diesel Oil:** Add 10 gallons per 100 gallons of total intended solution.

Maintain constant agitation during application. Under good agitation, the spray solution should be milky white with no oil layer on top. If oil layer forms, increase the amount of emulsifier or change to a more effective emulsifier.

**FOR SPRAYING FOLIAR APPLICATIONS:**

1. Spray when leaves have reached full size but have not hardened due to drought or maturity.
2. Spray individual plants to wet with handgun.
3. For larger stems (up to 3" in diameter) and hard to control species, direct spray stream to base of stems to wet the stem at soil surface in addition to wetting the foliage.
4. Do not apply under drip line of desirable trees or adjacent to desirable vegetation.

**FOR DORMANT BASAL APPLICATIONS:**

1. Increase diesel oil content to 15% or 15 gallons of diesel oil per 100 gallons of total solution.
2. Spray in late winter and early spring before plants break dormancy.
3. Spray the bottom 24" of the target stem to wet on all sides.
4. For larger stems (up to 3" in diameter) and hard to kill species direct the spray solution to the base of target stems to wet the soil at the stem/soil junction in addition to wetting the stem.
5. Do not apply under drip line of desirable trees or adjacent to desirable vegetation.

**FOR CUT SURFACE TREATMENTS:**

Apply **DICAMBA 2,4-D DMA** in an undiluted state as a cut surface treatment to control unwanted trees and prevent sprouts of cut trees.

- **Frill or Girdle Treatments:** Make a continuous cut or a series of overlapping cuts using an axe to girdle tree trunk. Spray or paint the cut surface with **DICAMBA 2,4-D DMA**.
- **Stump Treatments:** Spray or paint freshly cut surface with **DICAMBA 2,4-D DMA**. The cambium layer (the area adjacent to the bark) should be thoroughly wet. Treat stumps within 6 hours after cutting.

**Table 7.** The following list of trees and vines can be controlled on farmsteads and fencerows as foliar, basal, or cut surface treatments:

Alder	Kudzu
Ash	Locust, Black
Aspen	Maple
Basswood	Mesquite
Beech	Oak
Blackberry	Oak, Poison
Blackgum	Olive, Russian
Cedar	Persimmon, Eastern
Cherry	Pine
Chinquapin	Plum, Sand (Wild Plum)
Cottonwood	Poplar
Creosotebush	Rabbitbrush
Dewberry	Redcedar, Eastern
Dogwood	Rose, McCartney
Elm	Rose, Multiflora
Grape	Sagebrush, Fringe
Greenbriar	Sassafras
Hawthorn (Thornapple)	Spruce
Hemlock	Sumac
Hickory	Sweetgum
Honeylocust	Sycamore
Honeysuckle	Tarbrush
Hornbeam	Willow
Huckleberry	Witchhazel
Huisache	Yaupon
Ivy, Poison	Yucca

**Weeds listed in this label:**

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Common Name	Scientific Name
<b>ANNUALS</b>	
Beebalm, Spotted	<i>Monarda punctata</i>
Broomweed, Common	<i>Gutierrezia dracunculoides</i>
Buckwheat, Wild	<i>Polygonum convulvulus</i>
Buffalobur	<i>Solanum rostratum</i>
Burdock	<i>Arctium spp.</i>
Buttercup, Corn	<i>Ranunculus arvensis</i>
Chickweed, Common	<i>Stellaria media</i>
Cockle, Corn	<i>Agrostemma githago</i>
Cocklebur, Common	<i>Xanthium strumarium</i>
Coreopsis, Plains	<i>Coreopsis tinctoria</i>
Croton, Woolly	<i>Croton capitatus</i>
Devil's claw	<i>Proboscidea luisianica</i>
Dogfennel (Cypressweed)	<i>Eupatorium capillifolium</i>
Eveningprimrose, Cutleaf	<i>Oenothera lacinata</i>
Falseflax, Smallseed	<i>Linum catharticum</i>
Fleabane, Annual	<i>Erigeron annuus</i>
Flixweed	<i>Descurainia sophia</i>
Henbit	<i>Lamium amplexicaule</i>
Knotweed, Prostrate	<i>Polygonum aviculare</i>
Kochia	<i>Kochia scoparia</i>
Lambsquarters, Common	<i>Chenopodium album</i>
Lettuce, Prickly	<i>Lactuca serriola</i>
Mallow, Common	<i>Malva neglecta</i>
Moringglory, Ivyleaf	<i>Ipomea hederacea</i>
Tall	<i>Ipomea purpurea</i>
Mustard, Annual	<i>Brassica spp.</i>
Tansy	<i>Descurainia pinnata</i>
Nightshade	<i>Solanum nigrum</i>
Pennycress, Field	<i>Thlaspi arvense</i>
Pepperweed, Virginia	<i>Lepidium virginicum</i>
Pigweed, Prostrate	<i>Amaranthus blitoides</i>
, Redroot	<i>Amaranthus retroflexus</i>
, Smooth	<i>Amaranthus hybridus</i>
, Tumble	<i>Amaranthus albus</i>
Poorjoe	<i>Diodia teres</i>
Purslane, Common	<i>Portulaca oleracea</i>
Ragweed, Common	<i>Ambrosia artemisiifolia</i>
, Lance-leaf	<i>Ambrosia bidentata</i>
, Western	<i>Ambrosia psilostachya</i>
Sedge	<i>Cyperus compressus</i>
Shepherdspurse	<i>Capsella bursa-pastoris</i>
Smartweed, Pennsylvania	<i>Polygonum pennsylvanicum</i>
Sneezeweed, Bitter	<i>Helenium amurum</i>
Sowthistle, Annual	<i>Sonchus oleraceus</i>
Sunflower, Common (wild)	<i>Helianthus annuus</i>
Thistle, Russian	<i>Salsola iberica</i>
Velvetleaf	<i>Abutilon theophrasti</i>

Common Name	Scientific Name
<b>BIENNALS AND PERENNIALS</b>	
Bindweed, field	<i>Convolvulus arvensis</i>

Bittercress	<i>Cardamine spp.</i>
Buckeye	<i>Aesculus spp.</i>
Bullnettle	<i>Cnidoscopus stimulosus</i>
Chicory	<i>Cichorium intybus</i>
Clover, Hop	<i>Trifolium aureum</i>
Dandelion	<i>Taraxacum officinale</i>
Dock, Curly	<i>Rumex crispus</i>
Elderberry	<i>Sambucus canadensis</i>
Goldenrod, Missouri	<i>Solidago missouriensis</i>
Goldenweed, Common	<i>Isocp, a cprpmopifolia</i>
Groundset	<i>Senecio vulgaris</i>
Honeysuckle, Hairy	<i>Lonicera</i>
Horsenettle	<i>Solanum caroliniense</i>
Ivy, Poison	<i>Rhus radicans</i>
Knapweed, Black	<i>Centaurea nigra</i>
,Russian	<i>Centaurea repens</i>
,Spotted	<i>Centaurea maculosus</i>
Marshelder	<i>Ina annua</i>
Mesquite	<i>Prosopis juliflora</i>
Milkweed	<i>Asciepius</i>
Nightshade, Silverleaf	<i>Solanum elaeagnifolium</i>
Persimmon, Eastern	<i>Diospyros virginiana</i>
Rabbitbrush	<i>Chrysanthemus pulchellus</i>
Ragwort, Tansy	<i>Senecio jacobia</i>
Redvine	<i>Brunnichia ovata</i>
Sagebrush, Fringed	<i>Artemisia frigida</i>
Smartweed, Swamp	<i>Polygonum coccineum</i>
Sorrel, Red (Sheep Sorrel)	<i>Rumex acetosella</i>
Sowthistle, Perennial	<i>Sonchus arvensis</i>
Spurge, Leafy	<i>Euphorbia esula</i>
Starthistle, Yellow	<i>Centauria solstitialis</i>
Tallow Tree, Chinese	<i>Sapium sebiferum</i>
Thistle, Bull	<i>Cirsium vulgare</i>
,Canada	<i>Cirsium arvense</i>
, Musk	<i>Carduus nutans</i>
, Plumeless	<i>Carduus acanthoides</i>
Vetch	<i>Vicia spp.</i>
Yankeeweed	<i>Eupatorium compositifolium</i>

**Food/Feed Crop Uses**

This product can be used on the following:

- Conservation Reserve Program Land
  - Fallow Systems (Between Crop Application)
  - General Farmstead
- Grain Sorghum, Grass (Hay or Silage), Pastures, Rangeland, Sugarcane, Wheat

Look inside for complete **Restrictions and Limitations and Application Instructions**

**Note:** These crops are considered Food/Feed crops only when harvested, grazed, or foraged. Otherwise, they are considered non-Food/Feed uses.

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### STORAGE AND DISPOSAL

**PROHIBITIONS:** Do not contaminate water, food, or feed by storage or disposal. Do not store under conditions that might adversely affect the container or its ability to function properly.

**Pesticide Storage:** Do not store below temperature of 32°F or above 100°F. Store in original container in a well-ventilated area separately from fertilizer, feed, and foodstuffs. Keep container tightly closed when not in use. Reduce stacking height where local conditions can affect package strength.

**Pesticide Disposal:** Pesticide wastes are toxic. Wastes resulting from this product may be disposed of on site or at an approved waste disposal facility. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law and may contaminate groundwater. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

#### **DISPOSAL STATEMENTS:**

**Nonrefillable container:** Do not reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state. Once cleaned, some agricultural plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or manufacturer, or contact The Agricultural Container Recycling Council (ACRC) at [www.acrecycle.org](http://www.acrecycle.org). Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

**For packages up to 5 gallons. 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 ¼ 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. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

**For packages greater than 5 gallons and less than 56 gallons: Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ 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. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

**For packages greater than 56 gallons:** To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

**For refillable containers:** Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.



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**Steps to be taken in case material is released or spilled:**

Dike and contain the spill with inert material (sand, earth, etc) and transfer liquid and solid diking material to separate containers for disposal. Remove contaminated clothing, and wash affected skin areas with soap and water. Wash clothing before re-use. Keep the spill out of all sewers and open bodies of water.

**CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY**

**NOTICE:** Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product should be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather, presence of other materials or other influencing factors in the use of the product, which are beyond the control of KAIZEN TECHNOLOGIES or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold KAIZEN TECHNOLOGIES and Seller harmless for any claims relating to such factors.

KAIZEN TECHNOLOGIES warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or KAIZEN TECHNOLOGIES, and Buyer and User assume the risk of any such use. KAIZEN TECHNOLOGIES MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

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