



# Banvel<sup>®</sup> + 2,4-D

**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 INGREDIENTS:\***

Dimethylamine salt of dicamba (3,6-dichloro- <i>o</i> -anistic acid).....	12.4%
Dimethylamine salt of 2,4-dichlorophenoxyacetic acid** .....	35.7%

**INERT INGREDIENTS:** ..... 51.9%

**TOTAL** ..... 100.0%

\* This product contains 10.3% 3,6 dichloro-*o*-anistic acid (dicamba) or 1 pound per gallon (120 grams per liter) and 29.6% 2,4-D or 2.87 pounds per gallon (344 grams per liter).

\*\* Isomer specific by AOAC method 978.05, 15th Edition.

**FIRST AID**

**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 by mouth to an unconscious person.

**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 INHALED:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.

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

**EMERGENCY TELEPHONE NUMBERS:** Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

**FOR 24-HOUR EMERGENCY MEDICAL ASSISTANCE CALL:**  
1-866-303-6952

**FOR CHEMICAL EMERGENCY:** Spill, leak, fire, exposure, or accident call CHEMTREC 1-800-424-9300

**SHAKE WELL BEFORE USING**

**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 to you in detail.)

See inside of booklet for complete Precautionary Statements and Directions For Use.

EPA Reg. No. 66330-287  
AD110408

EPA Est. No. 68323-TX-01  
2040578

Product of U.S.A.

**Net Contents: 2.5 gallon**

# Precautionary Statements

## Hazards to Humans and Domestic Animals

# DANGER

Corrosive. Causes irreversible eye damage. Harmful if absorbed through skin or swallowed. Do not get in eyes or on clothing. Avoid contact with skin.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

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

#### Applicators and other handlers must wear:

1. Long-sleeved shirt and long pants
2. Chemical-resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride.
3. Shoes plus socks
4. Protective eyewear

#### Mixers and loaders who- do not use a mechanical system (probe and pump) must wear:

1. Coveralls
2. Chemical-resistant apron

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

### ENGINEERING CONTROLS 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.

**-For containers of 5 gallons or more:** Do not open pour product from this container. 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.

**-For containers greater than 1 gallon but less than 5 gallons:** When handlers use a mechanical system (probe and pump), 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)], the handler PPE requirements may be reduced or modified as specified in the WPS.

### USER SAFETY RECOMMENDATIONS

#### Users should:

1. Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
2. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
3. 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

This product is toxic to aquatic invertebrates. Drift or runoff may adversely affect aquatic invertebrates and non-target plants. For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters or rinsate. 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 and 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 an 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 supplemental 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
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks
- Protective eyewear

### 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.

## GENERAL INFORMATION

Banvel + 2,4-D 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

Banvel + 2,4-D contains two active ingredients: dicamba and 2,4-D. Banvel + 2,4-D is readily absorbed by plants through shoot and root uptake, translocates throughout the plant's system, and accumulates in areas of active growth. Banvel + 2,4-D 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 rinsing the equipment before and after applying this product.

# STORAGE AND DISPOSAL

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

**Pesticide Storage:** Do not store below 32 degrees F or above 100 degrees F. Store in original container in a well ventilated area separately from fertilizer, feed, and foodstuffs. Avoid cross-contamination with other pesticides.

**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 mix, or rinsate is a violation of federal law. If these wastes cannot be disposed of according to label instructions contact the state agency responsible for pesticide regulation or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

## **Container Disposal:**

**Plastic or Metal Containers 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. Repeat this procedure two more times Offer for recycling, if available, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

# APPLICATION INSTRUCTIONS

Apply Banvel + 2,4-D at the rates and growth stages listed in Tables 1 and 2 as follows unless instructed differently by section Crop-Specific Information. Applications can be made to actively growing weeds as aerial, broadcast, band, or spot spray applications. Banvel + 2,4-D may be applied using water or sprayable fluid fertilizer as a carrier. Sprayable fluid fertilizer may be used as the carrier in preplant or preemergence uses 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). 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 stated 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 can prevent adequate spray coverage.

# SENSITIVE CROP PRECAUTIONS

Banvel + 2,4-D 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 Banvel + 2,4-D during their development or growing stage. FOLLOW THE PRECAUTIONS LISTED BELOW WHEN USING BANVEL + 2,4-D.

- Do not treat areas where either possible downward movement into the soil or surface washing may cause contact of Banvel + 2,4-D with roots of desirable plants such as trees and shrubs.
- Avoid making applications when spray particles may be carried by air currents to areas where sensitive crops and plants are growing, or when temperature inversions exist. Do not spray near sensitive plants if wind is gusty or in excess of 5 mph and moving in the direction of adjacent sensitive crops. 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.

- Use coarse sprays to avoid potential herbicide drift. Select nozzles which are designed to produce minimal amounts of fine spray particles. Examples of nozzles designed to produce coarse sprays via ground application are Delavan Raindrops, Spraying Systems XR flat fans or large capacity flood nozzles such as D10, TK10, or greater capacity tips. Keep the spray pressure at or below 20 psi and the spray volume at or above 20 gpa, unless otherwise required by the manufacturer or drift-reducing nozzles. Consult your spray nozzle supplier concerning the choice of drift-reducing nozzles. Consult your spray nozzle supplier concerning the choice of drift-reducing with nozzles.
- Agriculturally approved drift-reducing additives may be used.
- Do not apply Banvel + 2,4-D adjacent to sensitive crops when the temperature on the day of application is expected to exceed 85°F as drift is more likely to occur.
- To avoid injury to desirable plants, equipment used to apply Banvel + 2,4-D should be thoroughly cleaned (See PROCEDURE FOR CLEANING SPRAY EQUIPMENT) before reusing to apply any other chemicals.

All crop uses of Banvel + 2,4-D are intended for a normal growing interval between planting and harvest. No crop rotation restrictions exist if normal harvest of treated crop has occurred. If this interval is shortened, such as in cover crops that will be plowed under, do not follow up with the planting of a sensitive crop.

Crops growing under stress conditions such as drought, poor fertility, or foliar damage due to hail, wind or insects, can exhibit various injury symptoms that may be more pronounced if herbicides are applied.

Consult your local or state authorities for possible application restrictions and advice concerning these and other special local use situations. Tank mix recommendations are for use only in states where the tank mix product and application site are registered.

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

Weeds Controlled (including ALS-and triazine-resistant	Banvel + 2,4-D Rate Per Acre (according to weed growth stage)					
	1/2 pint	1 pint	1 1/2 pints	2 pints	3 pints	4 pints
Beebalm, Spotted	–	–	–	Pre-bloom	Post bloom	–
Broomweed	1 - 3"	3" branching	–	Branching	–	After branching
Buckwheat, Wild	–	1 - 6"	–	–	–	–
Buffalobur	–	–	–	1 - 6"	–	–
Burdock	–	pre-flower	–	–	–	–
Buttercup	–	pre-flower	–	early bloom	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"	12 - 30"	–	–	–
Devils-claw	–	–	–	< 8"	–	–
Dogfennel	–	–	–	10 - 15"	–	–
Evening primrose	–	< 2"	–	2 - 6"	–	–
FalseFlax, Smallseed	–	< 2"	–	–	–	–
Fleabane, Annual	–	1 - 4"	4 - 8"	8"	–	–
Flixweed	–	< 3"	–	–	–	–
Henbit	–	–	pre-flower	–	flower	–
Knotweed Spp.	–	< 3" runners	–	< 3" runners	–	Actively growing

(continued)

**Table 1. Application Rate and Timing-Annual Weeds (continued)**

Weeds Controlled (including ALS- and triazine-resistant)	Banvel + 2,4-D Rate Per Acre (according to weed growth stage)					
	1/2 pint	1 pint	1 1/2 pints	2 pints	3 pints	4 pints
Kochia	–	1 - 6"	6 - 10"	10 - 20"	–	Actively growing
Lambsquarters, Common	–	1 - 6"	6 - 10"	10 - 20"	–	Actively growing
Mallow, common	–	< 3"	–	–	–	–
Morningglory, Ivyleaf , Tall	–	pre-flower pre-flower	–	Post-flower Early bolt	–	–
Mustards, Annual , tansy	–	Rosette < 3"	–	–	–	–
Pennycress, field	–	–	–	rosette	–	–
Pepperweed, Virginia	–	–	1 - 3"	3 - 6"	post branching	–
Pigweed, Prostrate , Redroot , Smooth , Tumble	–	< 3" < 3" < 3" < 3"	–	–  mature	–	–
Poorjoe	–	Prior to flower	–	–	–	Actively growing
Purslane, Common	–	< 3"	3 - 8"	–	–	–
Ragweed, Common Western Lanceleaf	1 - 3"	3 - 6"	6 - 10"	> 10" Actively growing	–	–
Sedge <sup>1</sup>	–	–	–	–	–	–
Shepardspurse	–	rosette	–	–	–	–
Smartweed, Pennsylvania	–	< 4"	–	–	4 - 12"	–
Sneezeweed, bitter	–	1 - 4"	prior to flower	flower	–	–
Sowthistle	–	rosette	–	bolting	–	–
Sunflower	–	1 - 3"	3 - 6"	6 - 24"	–	–
Thistle, Russian	–	–	–	rosette	–	–
Velvetleaf	–	< 6"	6 - 20"	> 20"	–	–

<sup>1</sup> Adding crop oil concentrate has shown to improve performance on actively growing annual sedge.

## AERIAL APPLICATION METHODS AND EQUIPMENT

### 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 safe 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 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.

Do not treat areas where either possible downward movement into the soil or surface washing may cause contact of Banvel + 2,4-D with the roots of desirable plants such as trees and shrubs.

Avoid making applications when spray particles may be carried by air currents to areas where sensitive crops and plants are growing. Do not spray near sensitive plants if 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. Agriculturally-approved drift-reducing additives may be used.

Do not use aerial equipment or apply Banvel + 2,4-D when sensitive crops and plants are growing in the vicinity of area to be treated.

## PROCEDURE FOR CLEANING SPRAY EQUIPMENT

The steps listed below are suggested for thorough cleaning of spray equipment following applications of Banvel + 2,4-D or tank mixes of Banvel + 2,4-D.

- 1) Hose down thoroughly the inside as well as outside surfaces of equipment while filling the spray tank half full of water. Flush by operating sprayer until the system is purged of the rinse water.
- 2) Fill tank with water while adding 1 quart of household ammonia for every 25 gallons of water. Operate the pump to circulate the ammonia solution through the sprayer system for 15 to 20 minutes and discharge a small amount of the ammonia solution through the boom and nozzles. Let the solution stand for several hours, preferably overnight.
- 3) Flush the solution out of the spray tank through the boom.
- 4) Remove the nozzles and screens and flush the system with two full tanks of water.

The steps listed below are suggested for thorough cleaning of spray equipment used to apply Banvel + 2,4-D as a tank mix with wettable powders (WP), emulsifiable concentrates (EC), or other types of water-dispersible formulations. Banvel + 2,4-D tank mixes with water-dispersible formulations require the use of a water/detergent rinse.

- 5) Complete step 1.
- 6) Fill tank with water while adding 2 lbs. of detergent for every 40 gallons of water. Operate the pump to circulate the detergent solution through the sprayer system for 5 to 10 minutes and discharge a small amount of the solution through the boom and nozzles. Let the solution stand for several hours, preferably overnight.
- 7) Flush the detergent solution out of the spray tank through the boom.
- 8) Repeat step 1, and follow with steps 2, 3 and 4.

**Table 2. Application Rate and timing-biennial and Perennial Weeds**

Weeds Controlled	Banvel + 2,4-D Rate Per Acre (according to weed growth stage)					
	1/2 pint	1 pint	1 1/2 pints	2 pints	3 pints	4 - 6 pints
Bindweed, Field	-	-	-	-	-	Actively growing
Bittercress	-	2 - 3"	-	-	-	-
Buckeye species <sup>1</sup>	-	-	-	-	full leaf	-
Bullnettle <sup>2,5</sup>	-	-	-	flower	-	-
Chicory	-	-	-	-	Early bolting	-
Clover, bur	-	-	pre-flower	-	-	-
Dandelion, common	-	rosette	-	bolting	-	-
Dewberry, Southern <sup>1</sup>	-	-	-	-	-	spring or fall
Dock, curly	-	-	Prior to bolting	-	After bolting	-
Elderberry <sup>2</sup>	-	-	-	-	-	Actively growing
Goldenrod, Missouri	-	-	-	3 - 15"	flower	-

**Table 2. Application Rate and timing-biennial and Perennial Weeds (continued)**

Weeds Controlled	Banvel + 2,4-D Rate Per Acre (according to weed growth stage)					
	1/2 pint	1 pint	1 1/2 pints	2 pints	3 pints	4 - 6 pints
Goldenweed, Common	-	-	-	-	-	Actively growing
Groundsel, Texas	-	rosette	Post-bolting	-	-	-
Honeysuckle, Hairy	-	-	-	-	spring or fall	-
Horsenettle, Carolina <sup>1</sup>	-	-	-	-	-	flower or berry
Ivy, Poison	-	-	-	after bloom	-	-
Knapweed, Black <sup>2</sup> , Russian <sup>2</sup> , Spotted	-	-	-	-	-	Actively growing
Marshelder <sup>5</sup>	-	-	-	< 12"	12"/ pre bloom	-
Mesquite	-	-	-	-	-	45 - 90 after bud break
Milkweed <sup>1,5</sup>	-	-	-	pre flower	-	flower
Nightshade , Silverleaf <sup>1</sup> , Black <sup>1</sup>	-	-	-	full flower	-	Actively growing
Persimmon, Eastern <sup>3</sup>	-	-	-	-	-	Actively growing
Prickly Lettuce	-	-	-	rosette	-	Actively growing
Rabbitbrush <sup>2</sup>	-	-	-	-	-	-
Ragwort, tansy	-	-	-	rosette	-	Actively growing
Redvine <sup>2</sup>	-	-	-	-	-	Actively growing
Sagebrush, Fringed <sup>2</sup>	-	-	-	-	-	Actively growing
Smartweed	-	-	-	-	-	-
Sorrel, Red	-	-	rosette	bolting	flower	Actively growing
Sowthistle <sup>2</sup>	-	-	-	-	-	Actively growing
Spurge, Leafy <sup>2</sup>	-	-	-	-	-	full leaf
Tallow tree, Chinese <sup>4,5</sup>	-	-	-	-	-	-
Thistle, Bull , Canada <sup>2</sup> , Musk , Plumless	-	-	rosette	bolting	-	Actively growing
	-	-	-	-	-	-
	-	-	-	rosette/ bolting	-	-
	-	-	rosette	bolting	-	-
Vetch, Hairy	-	1 - 4"	4 - 8"	8" full flower	-	-
Yankeeweed	-	-	-	10 - 18"	-	rosette
Yellow Starthistle <sup>1</sup>	-	-	-	-	-	-

(continued)



**Table 2. Application Rate and timing-biennial and Perennial Weeds (continued)**

- <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 Banvel + 2,4-D each year for three consecutive years. For increased control of weeds such as blackberry and dewberry, Banvel + 2,4-D 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 Banvel + 2,4-D herbicide by banding, determine the amount of herbicide and water volume needed using the following formula

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

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

**Ground Application (Broadcast)**

**Spray Solution 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.

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

**Spot or Small Area Application**

Banvel + 2,4-D 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 Banvel + 2,4-D in water according to Table 3 (assuming that the spot treatment rate equates to 60 gallons per 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.

**Application Equipment:** Select nozzles designed to produce minimal amounts of fine spray particles 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 Banvel + 2,4-D 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 tablespoon

**ADDITIVES FOR WATER SPRAY SOLUTION**

To improve burndown of emerged weeds, surfactants and/or low use rate of liquid fertilizers (28-0-0,32-0-0) or crop oil concentrate may be used with Banvel + 2,4-D or Banvel + 2,4-D 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 CONTAIN AMMONIUM SULFATE (AMS) OR CROP OIL CONCENTRATE TO ANY FOOD/FEEED CROP USE LISTED ON THIS LABEL. FOR FEED/FOOD CROP USES, 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. Consult your local Agricultural Extension Agent for recommendations for your area. For additional information, see Compatibility Test for Mix Components.

## Oil Concentrate

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

1. be nonphytotoxic,
2. contain only EPA-exempt ingredients,
3. provide good mixing quality in the jar test, and
4. be successful in local experience.

The exact composition of suitable products will vary; however, vegetable 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

When an adjuvant is to be used with this product, Arysta recommends the use of a Chemical Producers and Distributors Association (CPDA) certified adjuvant.

- 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 80% active nonionic spray surfactant per 100 gallons of water. For certain weeds, use a higher spray surfactant rate.

**Table 4. Additive Rate per Acre**

Additive	Rate Per Acre
Nonionic Surfactant	2 - 4 pints per 100 gallons
Sprayable liquid fertilizers (28-0-0, 32-0-0)	2 - 4 quarts
Crop Oil Concentrate	1 quart*

\* see manufacturer's label for specific rate recommendations

## GENERAL TANK MIXING INFORMATION

BANVEL + 2,4-D IS FORMULATED TO MIX WITH WATER OR LIQUID FERTILIZER SOLUTION (28-0-0 OR 32-0-0), HOWEVER DUE TO VARIABILITY IN MANUFACTURING, MIXING AND INGREDIENTS, ALWAYS PERFORM A JAR TYPE COMPATABILITY TEST PRIOR TO USING THIS PRODUCT WITH ANY NEW SPRAY SOLUTION SOURCE.

### Tank Mix Partners/Components

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

Aim™ (carfentrazone-ethyl)

Ally® (metsulfuron-methyl)

Amber® (triasulfuron)

Asulox® (asulam)

Atrazine

Banvel® (dicamba)

Basagran® (bentazon)

Bronate® (bromoxynil + MCPA)

Buctril® (bromoxynil)

Canvas® (thifensulfuron + tribenuron + metsulfuron)

Clarity® (dicamba)

Curtail® (clorpyralid + 2,4-D)

Cyclone® (paraquat)

Dakota® (fenoxaprop-p-ethyl + MCPA)

Distinct® (diflufenzopyr)

Evik® (ametryn)

Express® (thifensulfuron + tribenuron-methyl)

Fallowmaster® (glyphosate + dicamba)

Finesse® (chlorsulfuron + metsulfuron-methyl)

Glean® (chlorsulfuron)

Gramoxone® Extra (paraquat)

Harmony® Extra (thifensulfuron + tribenuron-methyl)

*(continued)*

Karmex® (diuron)  
Kerb® (pronamide)  
Laddok® S-12 (bentazon + atrazine)  
Landmaster® (glyphosate + 2,4-D)  
Lexone® (metribuzin)  
MCPA  
Paramount® (quinclorac)  
Peak® (pro sulfuron)  
Permit® (halosulfuron-methyl)

Rave™ (dicamba + triasulfuron)  
Roundup Ultra® (glyphosate)  
Sencor® (metribuzin)  
Sinbat® (terbacil)  
Stingee® (clopyralid)  
Tiller® (fenoxaprop-p-ethyl + 2,4-D + MCPA)  
Tordon® (picloram)  
Touchdown® (sulfosate)  
2,4-D

See section Crop-Specific 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 Banvel + 2,4-D with other pesticides (fungicides, herbicides, insecticides, or miticides), additives, or fertilizers. Arysta LifeScience does not recommend using tank mixes other than those listed on Arysta LifeScience labeling. Local agricultural authorities may be a source of information when using other than Arysta LifeScience recommended tank mixes.

## COMPATIBILITY TEST FOR TANK MIX COMPOUNDS IN WATER CARRIER

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 then compatible, use the compatibility agent as directed on its label. If the solution is still incompatible, do not mix the ingredients in the same tank.

## 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 PVA 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, or suspo-emulsions).
- 5) Water-soluble products. (such as Banvel + 2,4-D)
- 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.

## SPRAYABLE LIQUID FERTILIZERS

Banvel + 2,4-D can be applied in combination with a sprayable liquid fertilizer carrier.

When tank mixing with liquid fertilizer always add the fertilizer to the spray tank first, filling tank more than one half full and agitate thoroughly before adding Banvel + 2,4-D. Always predetermine the compatibility with liquid fertilizer by mixing small proportional quantities in advance. Agitation must be maintained during filling and application operations to ensure that Banvel + 2,4-D is evenly mixed with the fertilizer. 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.

Leaf burn may occur when Banvel + 2,4-D is applied with liquid fertilizer, but new leaves are not adversely affected. Do not apply fertilizers or spray additives with Banvel + 2,4-D if leaf burn is a major concern due to environmental conditions, crop or variety sensitivity. Do not apply Banvel + 2,4-D in combination with fertilizer or spray additive if restricted under the individual crop use directions.

## RESTRICTIONS AND LIMITATIONS

- Maximum seasonal use rate: refer to Table 5
- Preharvest Interval (PHI): refer to section Crop-Specific Information
- Restricted Entry Interval (REI): 48 hours

## CROP ROTATIONAL RESTRICTIONS

The interval between application and planting rotational crop is given below. Always exclude if 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 Banvel + 2,4-D applications of 6 pints per acre or less: No rotational cropping restrictions apply at 120 days or more following application. Additionally, for this label including sorghum, follow the preplant use directions in section 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 Banvel + 2,4-D 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 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 the effectiveness of Banvel + 2,4-D.

**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 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 any other 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
Between Crop Application	6 pints	8 pints	yes	yes
Pasture, Hay, Silage	4 pints	8 pints	yes	yes
Sugarcane	6 pints	16 pints	yes	yes
Sorghum	1 pint	1 pint	yes	yes
Wheat	2 pints	3.33 pints	yes	yes

<sup>1</sup> refer to section Crop-Specific Information for grazing and feeding restrictions

## FOOD/FEEB CROP-SPECIFIC INFORMATION PASTURES, RANGELAND AND GRASS (HAY, SILAGE)

Banvel + 2,4-D is recommended for use for pasture (including pasture grown for hay), rangeland, and grass grown for hay or silage. 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 Banvel + 2,4-D per acre are for spot treatments only.

Retreatments may be made as needed; however, do not exceed a total of 8 pints of Banvel + 2,4-D 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 Banvel + 2,4-D greater than 2 pints per acre are applied.

In newly established hybrid Bermudagrass, Pangolagrass, and stargrasses (*Cynodon* spp.), use 2-4 pints of Banvel + 2,4-D per acre to control or suppress weeds after planting vegetative propogules (stolens) of hybrid bermudagrasses. In addition to the weeds listed in Tables 1 and 2, this rate of Banvel + 2,4-D will control or suppress annual sedges, broadleaf signalgrass, crabgrass, and goosegrass. Best results will be obtained if Banvel + 2,4-D 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), lespedeza, 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 repeat applications.

For pasture renovations, wait 3 weeks per quart (2 pints) of Banvel + 2,4-D 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 the 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

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

Ally®	Clarity®
Amber®	Rave®
Banvel®	

## SORGHUM RATES AND TIMINGS

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

Applications of Banvel + 2,4-D to sorghum during periods of rapid growth may result in temporary leaning of plants or rolling of 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 Banvel + 2,4-D. Do not use surfactants or oils with postemergence applications of Banvel + 2,4-D on sorghum crops. Do not use Banvel + 2,4-D if the potential for sorghum injury is not acceptable.

If sorghum is grown for pasture, hay, or silage, refer to Pasture and Rangeland in section Crop-Specific Information for live-stock grazing and feeding restrictions.

Do not apply Banvel + 2,4-D to sorghum grown for seed production. Make no more than one postemergence application per growing season.

## **SORGHUM TANK MIXES**

Banvel + 2,4-D may be applied in tank mixes with one of the following herbicides:

- Atrazine
- Basagran®
- Buctril®
- Laddok® S-12
- Paramount®
- Peak®
- Permit®

## **SUGARCANE**

Applications of Banvel + 2,4-D can be made any time after the 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 the listed rate ranges when treating dense vegetation growth.

Rate: For control of listed annual broadleaf weeds, apply 2 pints of Banvel + 2,4-D per treated acre.

For suppression of listed perennial weeds, apply 1-6 pints of Banvel + 2,4-D per treated acre. Retreatments may be made as needed, however, do not exceed 16 pints of Banvel + 2,4-D per treated acre during a growing season.

## **SUGARCANE TANK MIXES**

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

- Asulox®
- Atrazine
- Evik®
- Lexone®
- Sencor®
- Sinbar®

## **WHEAT- (FALL AND SPRING SEEDED)**

If small grains are grown for pasture or hay only, refer to Pasture, rangeland and Grass (Hay and Silage). Do not graze or harvest for livestock feed prior to crop maturity.

Do not use Banvel + 2,4-D in wheat underseeded with legumes.

## **EARLY SEASON APPLICATIONS**

Apply 0.5-1 pint of Banvel + 2,4-D 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 Banvel + 2,4-D 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

Banvel + 2,4-D can be used to control weeds that may interfere with harvest of wheat. Apply up to 2 pints of Banvel + 2,4-D 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 7 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, Banvel + 2,4-D may be tank mixed with other herbicides such as Ally or Roundup® Ultra that are registered for preharvest use in wheat.

Preharvest use of Banvel + 2,4-D is not registered for use in California.

## WHEAT TANK MIXES

<b>Tank Mix Partner</b>	<b>Rate Per Acre</b>
Aim™	0.3 ounce
Ally®	0.05 - 0.1 ounce <sup>1</sup>
Amber®	0.14 - 0.28 ounce <sup>1</sup>
Bronate®	0.75 - 1.5 pints
Buctril®	1 - 1.5 pints
Canvas®	0.2 - 0.4 ounce <sup>1</sup>
Curtail®	2 - 2.67 pints
Dakota®	16 fluid ounces
Express®	0.083 - 0.167 ounce <sup>1</sup>
Finesse®	0.167 - 0.33 ounce <sup>1</sup>
Glean®	0.167 ounce
Harmony® 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> ( Sencor®, Lexone®)	0.25 - 0.375 pound a.i
Peak® <sup>1</sup>	0.25 - 0.38 ounce
Stinger®	4 - 5.33 fluid ounces
Tiller® <sup>2</sup>	1 - 1.7 pints

1 Do not use low rates of sulfonyleurea herbicides, such as Ally, Amber, Canvas, Express, Finesse, Glean, Harmony Extra, and Peak on more mature weeds or on dense vegetative growth.

2 Do not use Banvel + 2,4-D as a tank mix treatment with Dakota or Tiller on Durum wheat. Do not tank mix with Tiller if wild oat is the target weed.

3 Tank mixes with Karmex and metribuzin are for -use in fall-seeded wheat only.

4 Banvel + 2,4-D contains 0.36 pounds a.e. of 2,4-D per pint. When tank mixing with 2,4-D, do not exceed a combined total of 1.0 pound a.e. per acre of 2,4-D and do not exceed 0.5 pound a.e. of 2,4-D unless injury to wheat is acceptable.

## BETWEEN CROP APPLICATIONS, CONSERVATION RESERVE PROGRAMS, GENERAL FARMSTEAD AND FALLOW SYSTEMS

These uses are considered Food/Feed Crops when harvested, grazed or foraged. Consult Table 3 for adjuvant restrictions and Table 7 for specific use directions.

# 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:

Banvel + 2,4-D can be applied either postharvest in the fall, spring, or summer during the fallow period or to crop stubble/set-aside acres. Apply Banvel + 2,4-D as a broadcast or spot treatment to emerged and actively growing weeds after crop harvest (postharvest) and before a killing frost or in the fallow cropland or crop stubble the following spring or summer.

See Crop Rotational Restrictions in section General Restrictions and Limitations for the recommended interval between application and planting to prevent crop injury.

## RATES AND TIMINGS

Apply 0.5-6 pints of Banvel + 2,4-D 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 Banvel + 2,4-D per treated acre during a growing season. For best performance, apply Banvel + 2,4-D 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 Banvel + 2,4-D 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 Banvel + 2,4-D. For seedling control, a follow-up program or other culture 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 Banvel + 2,4-D per acre for control of annual weeds, or 2-8 pints of Banvel+ 2,4-D per acre for control of biennial and perennial weeds:

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

## CONSERVATION RESERVE PROGRAMS AND GENERAL FARMSTEAD

Banvel + 2,4-D is recommended for use for Conservation Reserve Programs, general farmstead (non-cropland only), weed and brush control, or in State Recognized Noxious Weeds 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 Banvel + 2,4-D per acre are for spot treatments only.

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

## FARMSTEAD AND FENCEROW TREATMENT APPLICATION INSTRUCTIONS

Banvel + 2,4-D 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 oil 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 fencerows surrounding pasture and ranch lands, and fallow fields, use a tank mix of 2.5% of Banvel + 2,4-D, 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
- 3) **Banvel + 2,4-D:** 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 an oil layer forms, increase the amount of emulsifier or change to a more effective emulsifier.

## SRAYING 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 wetting the foliage.
4. Do not apply under drip line of desirable trees or adjacent to desirable vegetation.

## 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 adjacent to desirable vegetation.

### FOR CUT SURFACE TREATMENTS:

Apply Banvel + 2,4-D 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 Banvel + 2,4-D.

**Stump Treatments:** Spray or paint freshly cut surface with Banvel + 2,4-D. The cambium layer (the area adjacent to the bark) should be thoroughly wet. Treat stumps within 6 hours after cutting.

**Table 6. The following list of trees and vines can be controlled on farmsteads and fencerows as foliar, basal, or cut surface treatments:**

Alder	Blackgum
Ash	Cedar
Aspen	Cherry
Basswood	Chinquapin
Beech	Cottonwood
Blackberry	Creosotebush

(continued)

**Table 6. The following list of trees and vines can be controlled on farmsteads and fencerows as foliar, basal, or cut surface treatments: (continued)**

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

## WEEDS LISTED IN THIS LABEL

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>
Devilsclaw	<i>Proboscidea luisianica</i>
Dogfennel (Cypressweed)	<i>Eupatorium capillifolium</i>
Eveningprimrose, Cutleaf	<i>Oenothera lacinata</i>

(continued)

## WEEDS LISTED IN THIS LABEL (continued)

COMMON NAME	SCIENTIFIC NAME
<b>ANNUALS</b>	
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>
Morningglory, Ivyleaf	<i>Ipomea hederacea</i>
, Tall	<i>Ipomea purpurea</i>
Mustard, Annual	<i>Brassica spp.</i>
, Tansy	<i>Descurainia pinnata</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>
Sunflower, Common (Wild)	<i>Helianthus annuus</i>
Thistle, Russian	<i>Salsola iberica</i>
Velvetleaf	<i>Abutilon theophrasti</i>

## BIENNIALS AND PERENNIALS

COMMON NAME	SCIENTIFIC NAME
Bindweed, Field	<i>Convolvulus arvensis</i>
Bittercress	<i>Cardamine spp.</i>
Buckeye	<i>Aesculus spp.</i>
Bullnettle	<i>Cnidoscopus stimulosus</i>

(continued)

## BIENNIALS AND PERENNIALS (continued)

Chicory	<i>Cichorium intybus</i>
Clover, Hop	<i>Trifolium aureum</i>
Dandelion	<i>Taraxacum officinale</i>
Dock, Curly	<i>Pumex crispus</i>
Elderberry	<i>Sambucus canadensis</i>
Goldenrod, Missouri	<i>Solidago missouriensis</i>
Goldenweed, Common	<i>Isocoma coronopifolia</i>
Groundsel	<i>Senecio vulgaris</i>
Honeysuckle, Hairy	<i>Lonicera</i>
Horsenettle	<i>Solanum carolinense</i>
Ivy, Poison	<i>Rhus radicans</i>
Knapweed, Black , Russian , Spotted	<i>Centaurea nigra</i> <i>Centaurea repens</i> <i>Centaurea maculostys</i>
Marshelder	<i>Ina annua</i>
Mesquite	<i>Prosopis juliflora</i>
Milkweed	<i>Asclepius</i>
Nightshade, Silverleaf , Black	<i>Solanum elaeagnifolium</i> <i>Solanum nigrum</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>Pumex 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 , Canada , Musk , Plumless	<i>Cirsium vulgare</i> <i>Cirsium arvense</i> <i>Carduus nutans</i> <i>Carduus acanthoides</i>
Vetch	<i>Vicia spp.</i>
Yankeeeweed	<i>Eupatorium compositifolium</i>

## FOOD/FEED CROP USES

This product can be used on the following crops:

Grain Sorghum  
Grass (Hay or Silage)  
Pastures  
Rangeland  
Sugarcane  
Wheat

## NON-CROPLAND USES

\*Conservation Reserve Program Land  
\*Fallow Systems (Between Crop Applications)  
\*General Farmstead

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

## Warranty and Disclaimer Statement

The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Such risks may arise from weather conditions, soil factors, off-target movement, unconventional farming techniques, the presence of other materials, the manner of use or application, or other unknown factors, all of which are beyond the control of Arysta LifeScience North America, LLC ("Arysta"), and can cause crop injury, injury to non-target crops or plants, ineffectiveness of the product, or other unintended consequences. All such risks shall be assumed by the user or buyer. Arysta 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 described above, when used in accordance with the Directions for Use under normal conditions. This warranty does not extend to the use of this product contrary to label instructions or under conditions not reasonably foreseeable to Arysta, and is subject to the inherent risks described above.

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## NOTES







# Banvel® + 2,4-D

**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 INGREDIENTS:\***

Dimethylamine salt of dicamba (3,6-dichloro- <i>o</i> -anisic acid) .....	12.4%
Dimethylamine salt of 2,4-dichlorophenoxyacetic acid** .....	35.7%
<b>INERT INGREDIENTS: .....</b>	<b>51.9%</b>

<b>TOTAL .....</b>	<b>100.0%</b>
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\* This product contains 10.3% 3,6 dichloro-*o*-anisic acid (dicamba) or 1 pound per gallon (120 grams per liter) and 29.6% 2,4-D or 2.87 pounds per gallon (344 grams per liter).

\*\* Isomer specific by AOAC method 978.05, 15th Edition.

EPA Reg. No. 66330-287

EPA Est. No. 68323-TX-01

## SHAKE WELL BEFORE USING 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 to you in detail.)

See inside of booklet for complete Precautionary Statements and Directions For Use.

### FIRST AID

**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 by mouth to an unconscious person.

**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 INHALED:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.

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

**EMERGENCY TELEPHONE NUMBERS:** Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

FOR 24-HOUR EMERGENCY MEDICAL ASSISTANCE CALL: 1-866-303-6952  
FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident call CHEMTREC 1-800-424-9300

**Net Contents: 2.5 gallon**

AD110408  
2040578

Product of U.S.A.

## PRECAUTIONARY STATEMENTS Hazards To Humans And Domestic Animals

### DANGER

Corrosive. Causes irreversible eye damage. Harmful if absorbed through skin or swallowed. Do not get in eyes or on clothing. Avoid contact with skin.

### ENVIRONMENTAL HAZARDS

This product is toxic to aquatic invertebrates. Drift or runoff may adversely affect aquatic invertebrates and non-target plants. For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters or rinsate. 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 and loading equipment on an impervious pad to contain spills will help prevent groundwater contamination.

### 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 supplemental 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. Refer to booklet under "Agricultural Use Requirements" in the Directions For Use section for information about this standard.

### STORAGE AND DISPOSAL

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

**Pesticide Storage:** Do not store below 32 degrees F or above 100 degrees F. Store in original container in a well ventilated area separately from fertilizer, feed, and foodstuffs. Avoid cross-contamination with other pesticides. **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 mix, or rinsate is a violation of federal law. If these wastes cannot be disposed of according to label instructions contact the state agency responsible for pesticide regulation or the Hazardous Waste representative at the nearest EPA Regional Office for guidance. **Container Disposal: Plastic or Metal Containers 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. Repeat this procedure two more times. Offer for recycling, if available, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning, if burned, stay out of smoke.

Manufactured For:

**Arysta LifeScience North America, LLC**

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