

228-379

11/16/2000

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U.S. ENVIRONMENTAL PROTECTION AGENCY  
Office of Pesticide Programs  
Registration Division (H7505C)  
401 "M" St., S.W.  
Washington, D.C. 20460

EPA Reg. Number:  
228-379

Date of Issuance:  
NOV 16 2000

Term of Issuance:  
Conditional

Name of Pesticide Product:  
Riverdale Banvel(R)  
Herbicide

NOTICE OF PESTICIDE:  
 Registration  
 Reregistration

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

Riverdale Chemical Company  
425 West 194th St.  
Glenwood, IL 60425-1584

**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/cite all data required for the registration/reregistration review of your product when the Agency requires all registrants of similar products to submit such data.
2. Make the following label changes:
  - a. Revise the EPA Registration Number to read, "EPA Reg. No. 228-379".
3. Submit two copies of the revised final printed label for the record.

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

Signature of Approving Official:

Date:

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page 2  
EPA Reg. No. 228-379

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.

Joanne I. Miller  
Product Manger (23)  
Herbicide Branch  
Registration Division (7505C)

Enclosure

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RIVERDALE

BANVEL®

HERBICIDE

FOR WEED CONTROL IN CORN, SORGHUM, SMALL GRAINS, PASTURE, HAY, RANGELAND, GENERAL FARMSTEAD (NON-CROPLAND), FALLOW, SUGARCANE, ASPARAGUS, TURF AND GRASS SEED CROPS.

Table with 2 columns: Ingredient Name and Percentage. Includes Dimethylamine salt of dicamba (48.2%), Inert Ingredients (51.8%), and Total (100.0%).

\*This product contains 40.0% 3,6-dichloro-*o*-anisic acid (dicamba) or 4 pounds per gallon (480 g/L).

EPA Reg. No. 228-

EPA Est. No. 228-IL-1

KEEP OUT OF REACH OF CHILDREN

WARNING/AVISO

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 additional precautionary statements.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

WARNING/AVISO

Causes eye irritation. Do not get in eyes, on skin, or on clothing. Harmful if swallowed. Avoid breathing spray mist. Wash thoroughly after handling.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
• Waterproof gloves
• Shoes plus socks
• Protective eyewear

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

ENGINEERING CONTROLS STATEMENTS

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides...

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
• Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
• Remove PPE immediately after handling this product. Wash the outside of gloves before removing.

ENVIRONMENTAL HAZARDS

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.

Apply this product only as directed on label.

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.

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.

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 24 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:

- Coveralls
• Waterproof gloves
• Shoes plus socks
• Protective eyewear

Before applying BANVEL® Herbicide (BANVEL), read all directions and precautions appearing on the container label and in this label. Failure to follow all directions and precautions may result in unsatisfactory weed control, crop injury, or illegal residues.

GENERAL INFORMATION

The following directions apply to all uses of BANVEL. Additional precautions and restrictions will be found in each specific use section.

Do not treat irrigation ditches or water used for crop irrigation or domestic uses.

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

MIXING AND APPLICATION

UNLESS OTHERWISE SPECIFIED UNDER THE INDIVIDUAL USE HEADINGS OF THIS LABEL, THE FOLLOWING DIRECTIONS APPLY TO ALL CROP AND NON-CROP USES OF BANVEL. REFER TO INDIVIDUAL USE SECTIONS FOR ADDITIONAL PRECAUTIONS, RESTRICTIONS, APPLICATION RATES AND TIMINGS.

BANVEL is a water-soluble formulation that can be applied using water or sprayable fluid fertilizer as the carrier. If a fluid fertilizer is to be used, a compatibility test (see COMPATIBILITY TEST) should be made prior to tank mixing.

Ground or aerial application equipment which will give good spray coverage of weed foliage should be used. HOWEVER, DO NOT USE AERIAL APPLICATION EQUIPMENT IF SPRAY PARTICLES CAN BE CARRIED BY WIND INTO AREAS WHERE SENSITIVE CROPS OR PLANTS ARE GROWING OR WHEN TEMPERAURE INVERSIONS EXIST.

Apply 3 to 50 gallons of diluted spray per treated acre when using ground application equipment, or 1 to 10 gallons of diluted spray per treated acre (2 to 20 gallons of diluted spray per treated acre for preharvest uses) in a water-based carrier when using aerial 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.

To avoid uneven spray coverage, BANVEL should not be applied during periods of gusty wind or when wind is in excess of 15 mph.

Avoid disturbing (e.g., cultivating or mowing) treated areas for at least 7 days following application.

BEST STEWARDSHIP PRACTICES

BANVEL provides effective broadleaf weed and brush control when properly applied. Best stewardship practices in all mixing, loading, and application operations not only maximize weed control, but also protect ground and surface waters and minimize off-target movement.

This chemical is known to leach through soil into ground water under certain conditions as a result of agricultural use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

GROUND AND SURFACE WATERS PROTECTION

1) Point source contamination — To prevent point source contamination, do not mix, load this pesticide product within 50 feet of wells (including abandoned wells and drainage wells), sink holes, perennial or intermittent streams and rivers, and natural or impounded lakes and reservoirs.

Mixing, loading, rinsing, or washing operations performed within 50 feet of a well are allowed only when conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be on or move across the pad. The pad must be self-contained to prevent surface water flow over or from the pad.

Care must be taken when using this product to prevent: a) back siphoning into wells, b) spills or c) improper disposal of excess pesticide, spray mixtures or rinsates. Check valves or antisiphoning devices must be used on all mixing equipment.

2) Movement by surface runoff or through soil — Do not apply under conditions which favor runoff. Do not apply to impervious substrates such as paved or highly

compacted surfaces in areas with high potential for ground water contamination. Ground water contamination may occur in areas where soils are permeable or coarse and ground water is near the surface. Do not apply to soils classified as sand with less than 3% organic matter and where ground water depth is shallow. To minimize the possibility of ground water contamination, carefully follow application rate recommendations as affected by soil type in the general information section of this label.

3) Movement by water erosion of treated soil — Do not apply or incorporate this product through any type of irrigation equipment nor by flood or furrow irrigation. Ensure treated areas have received at least one-half inch rainfall (or irrigation) before using tailwater for subsequent irrigation of other fields.

**SENSITIVE CROP PRECAUTIONS**

BANVEL 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 during their development or growing stage. FOLLOW THE PRECAUTIONS LISTED BELOW WHEN USING BANVEL.

- Do not treat areas where either possible downward movement into the soil or surface washing may cause contact of BANVEL 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, 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 applications 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 of drift-reducing nozzles. Consult with your spray nozzle supplier concerning the choice of drift-reducing nozzles.
- Agriculturally approved drift-reducing additives may be used.
- Do not apply BANVEL® herbicide 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 should be thoroughly cleaned (see PROCEDURE FOR CLEANING SPRAY EQUIPMENT) before reusing to apply any other chemicals.

All crop uses of BANVEL 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.

**BAND TREATMENTS**

BANVEL may be applied as a band treatment. Use the formulas below to determine the appropriate rate and volume per treated acre.

$$\frac{\text{Band width in inches}}{\text{Row width in inches}} \times \text{Broadcast RATE} = \text{Band RATE}$$

per treated acre                      per treated acre

$$\frac{\text{Band width in inches}}{\text{Row width in inches}} \times \text{Broadcast VOLUME} = \text{Band VOLUME}$$

per treated acre                      per treated acre

**COMPATIBILITY TEST**

Before mixing in the spray tank, it is advisable to test compatibility by mixing all components in a small container in proportionate quantities (see following table).

Amount of Herbicide to Add to One Pint of Spray Carrier  
(Assuming Volume is 25 Gallons per Acre)

HERBICIDE FORMULATIONS	RATE PER ACRE	LEVEL TEASPOONS
Dry	1 lb.	1 1/2
Liquid	1 pt.	1/2

If herbicide(s) do not ball-up or form flakes, sludge, gels, oily films or layers, or other precipitates, then the tested spray mix is compatible. Usually, incompatibility in any of the above described forms will occur within 5 minutes after mixing.

If components are incompatible, the use of a compatibility agent is recommended. Rerun the above COMPATIBILITY TEST with a suitable compatibility agent (1/4 teaspoon is equivalent to 2 pints per 100 gallons of fluid fertilizer).

**PROCEDURE FOR CLEANING SPRAY EQUIPMENT**

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

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 as a tank mix with wettable powders (WP), emulsifiable concentrates (EC), or other types of water-dispersible formulations. BANVEL 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.

**GENERAL WEED LIST**

This is a general list of weeds which may be treated with BANVEL® herbicide in accordance with this label as recommended under the RATES AND TIMING sections of the Individual Use Headings. Proper usage of this product will give control or growth suppression of many ANNUAL, BIENNIAL, and PERENNIAL broadleaf weeds, and many WOODY brush and vine species including:

**ANNUALS**

- |                                    |                                 |
|------------------------------------|---------------------------------|
| Amaranth, Spiny (Spiny Pigweed)    | Pennycress, Field               |
| Aster, Slender                     | (Fanweed, Frenchweed,           |
| Bedstraw                           | Stinkweed)                      |
| Beggarweed, Florida                | Pepperweed, Virginia            |
| Broomweed, Common                  | (Peppergrass)                   |
| Buckwheat, Wild                    | Pigweed, Prostrate              |
| Buffalobur                         | Pigweed, Redroot (Carelessweed) |
| Burclover, California              | Pigweed, Rough                  |
| Burcucumber                        | Pigweed, Smooth                 |
| Buttercup, Roughseed               | Pigweed (triazine resistant)    |
| Carpetweed                         | Pigweed, Tumble                 |
| Catchfly, Nightflowering           | Poorjoe                         |
| Chamomile, Corn                    | Puncturevine                    |
| Chickweed, Common                  | Purslane, Common                |
| Clovers (Annual)                   | Pusley, Florida                 |
| Cockle, Corn                       | Radish, Wild                    |
| Cockle, Cow                        | Ragweed, Common                 |
| Cocklebur, Common                  | Ragweed, Giant (Buffaloweed)    |
| Croton, Tropic                     | Ragweed, Lance-Leaf             |
| Croton, Woolly                     | Rubberwood, Bitter (Bitterweed) |
| Daisy, English                     | Sesbania, Hemp                  |
| Evening Primrose, Cutleaf          | Shepherdspurse                  |
| Fleabane, Annual                   | Sicklepod                       |
| Goosefoot, Nettleleaf              | Sida, Prickly (Teaweed)         |
| Henbit                             | Smartweed, Green                |
| Jimsonweed                         | Smartweed, Pennsylvania         |
| Knotweed                           | Sneezeweed, Bitter              |
| Kochia                             | Sowthistle, Annual              |
| Ladysthumb                         | Sowthistle, Spiny               |
| Lambsquarters, Common              | Spikeweed, Common               |
| Lambsquarters (triazine resistant) | Spurge, Prostrate               |
| Lettuce, Prickly                   | Spurry, Corn                    |
| Mallow, Common                     | Starbur, Bristly                |
| Mallow, Venice                     | Sumpweed, Rough                 |
| Mare's Tail (Horseweed)            | Sunflower, Common (Wild)        |
| Mayweed                            | Sunflower, Volunteer            |
| Morningglory, Ivyleaf              | Thistle, Russian                |
| Morningglory, Tall                 | Velvetleaf                      |
| Mustard, Tansy                     | Waterhemp                       |
| Mustard, Wild                      | Waterprimrose, Winged           |
| Mustard (Yellowtops)               | Wormwood, Annual                |
| Nightshade, Black                  |                                 |

**BIENNIALS**

- |                                  |                     |
|----------------------------------|---------------------|
| Burdock, Common                  | Plantain, Bracted   |
| Carrot, Wild (Queen Anne's Lace) | Ragwort, Tansy      |
| Cockle, White                    | Starthistle, Yellow |
| Evening Primrose, Common         | Sweetclover         |
| Geranium, Carolina               | Teasel              |
| Gromwell                         | Thistle, Bull       |
| Knapweed, Diffuse                | Thistle, Milk       |
| Knapweed, Spotted                | Thistle, Musk       |
| Mallow, Dwarf                    | Thistle, Plumless   |

**PERENNIALS**

*Alfalfa	Milkweed, Climbing
Artichoke, Jerusalem	Milkweed, Common
Aster, Spiny	Milkweed, Honeyvine
Aster, Whitehead	Milkweed, Western Whorled
Beadstraw, Smooth	Nettle, Stinging
Bindweed, Field	Nightshade, Silverleaf
Bindweed, Hedge	(White Horsenettle)
Blueweed, Texas	Onion, Wild
*Bursage	*Plantain, Broadleaf
(Bur Ragweed, Lakewood,	Plantain, Buckhorn
Povertyweed)	Pokeweed
Bursage, Woollyleaf (Lakewood)	Ragweed, Western
Buttercup, Tall	Redvine
Campion, Bladder	Sericia Lespedeza
Chickweed, Field	Smartweed, Swamp
Chickweed (Mouseear,	Snakeweed, Broom
Canada)	*Sorrel, Red (Sheep Sorrel)
Chicory	Sowthistle
*Clover, Hop	Sowthistle, Perennial
*Dandelion, Common	Spurge, Leafy
*Dock Broadleaf (Bitterdock)	Sundrop, Halfshrub
*Dock, Curly	(Evening Primrose)
Dogbane, Hemp	Thistle, Canada
*Dogfennel (Cypressweed)	Toadflex, Dalmation
Fern, Bracken	Tropical Soda Apple
Garlic, Wild	Trumpet creeper (Buckvine)
Goldenrod, Canada	Vetch
Goldenrod, Missouri	Waterhemlock
Goldenweed, Common	Waterprimrose, Creeping
Hawkweed	*Woodsorrel, Creeping
Henbane, Black	Common Yellow
Horsenettle, Carolina	Wormwood, Common
Ironweed	Wormwood, Louisiana
Knapweed, Black	*Yankeeweed
Knapweed, Russian	Yarrow, Common

\*Noted perennials may be controlled using BANVEL at rates lower than those recommended for other listed perennial weeds. (See APPLICATION RATES AND TIMING sections in this label.)

#### WOODY

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

\*Growth Suppression

#### FIELD, SEED\*, POPCORN\* AND SILAGE CORN

Observe all PRECAUTIONS, MIXING AND APPLICATION instructions as well as the following:

\*Do not apply BANVEL® herbicide to seed corn or popcorn without first verifying with your local seed corn company (supplier) the BANVEL selectivity on your inbred line or variety of popcorn. This precaution will help avoid potential injury of sensitive varieties.

BANVEL is not registered for use on sweet corn.

Direct contact of BANVEL with corn seed must be avoided. If corn seeds are less than 1 1/2 inches below the surface, delay application until corn has emerged.

Up to 2 applications of BANVEL may be made during a growing season. Do not exceed a total of 1 1/2 pints of BANVEL per treated acre per crop year. Allow two weeks or more between applications of BANVEL. See appropriate section for rate information. For combination options or sequential treatments, refer to appropriate section.

Applications of BANVEL to corn during periods of rapid growth may result in temporary leaning. Corn will usually become erect within 3 to 7 days. Cultivation should be delayed until after corn is growing normally to avoid breakage. 5/14

Agriculturally approved surfactants or sprayable fertilizers (1/2 to 1 gallon per acre of 28%, 30% or 32% urea ammonium nitrate or 2.5 pounds per acre spray grade ammonium sulfate<sup>1</sup>) may be added to the spray mixture to improve postemergence weed control, particularly in dry growing conditions.

<sup>1</sup>Not for use in California.

Do not use adjuvants containing penetrants such as petroleum-based oils after crop emergence or crop injury may result.

Corn may be harvested or grazed for feed once the crop has reached the ensilage (milk) stage or later in maturity.

Several synthetic pyrethroid insecticides are labeled for tank mix applications of BANVEL. Refer to their label for specific recommendations.

#### WEEDS CONTROLLED

BANVEL will control many ANNUAL broadleaf weeds or give growth suppression of many PERENNIAL broadleaf weeds commonly found in corn. (Refer to the GENERAL WEED LIST.)

For best performance, make application when weeds have emerged and are actively growing.

Preemergence control of cocklebur, velvetleaf, and jimsonweed may be reduced if conditions such as low temperature or lack of soil moisture cause delayed or deep germination of weeds.

#### PREPLANT/PREEMERGENCE IN NO-TILLAGE CORN

Applications of BANVEL may be made before, during, or after planting to emerged and actively growing broadleaf weeds. Apply BANVEL at 1 pint per treated acre on medium or fine textured soils containing 2% or greater organic matter. Use 1/2 pint per treated acre on coarse textured soils (sand, sandy loam, and loamy sand) or medium and fine textured soils with less than 2% organic matter.

When planting into a legume sod (e.g., alfalfa or clover), apply BANVEL after 4 to 6 inches of regrowth has occurred.

#### PREEMERGENCE IN CONVENTIONAL OR REDUCED TILLAGE CORN

BANVEL may be applied after planting and prior to corn emergence. Application at 1 pint per treated acre may be made to medium or fine textured soils which contain 2% or greater organic matter. DO NOT apply to coarse textured soils (sand, sandy loam, and loamy sand) until after crop emergence (see Early Postemergence uses below).

Preemergence application of BANVEL does not require mechanical incorporation to become active. A shallow mechanical incorporation is recommended if application is not followed by adequate rainfall or sprinkler irrigation. Avoid tillage equipment (e.g., drags, harrows) which concentrate treated soil over seed furrow.

#### EARLY POSTEMERGENCE (ALL TILLAGE SYSTEMS) (SPIKE THROUGH 8 INCH TALL CORN)

BANVEL at 1 pint per treated acre may be applied during the period from corn emergence through the five leaf stage or 8 inches tall, whichever comes first. Reduce the rate to 1/2 pint per treated acre if corn is growing on coarse textured soils (sand, sandy loam, and loamy sand). See Late Postemergence applications given below if the 6th true leaf is emerging from whorl or corn is greater than 8 inches tall.

#### LATE POSTEMERGENCE (ALL TILLAGE SYSTEMS) (8 TO 36 INCH TALL CORN)

Application of BANVEL at 1/2 pint per treated acre may be made from 8 to 36 inch tall corn or 15 days before tassel emergence, whichever comes first. For best performance, make applications when weeds are less than 3 inches tall.

Make directed spray application when: (1) corn leaves prevent proper spray coverage; (2) sensitive crops are growing nearby; (3) tank mixing with 2,4-D.

DO NOT apply BANVEL when soybeans are growing nearby if any of these conditions exist:

- corn is more than 24 inches tall
- soybeans are more than 10 inches tall
- soybeans have begun to bloom

#### OVERLAY (SEQUENTIAL) TREATMENTS

BANVEL® herbicide may be applied to ground previously treated with one or more of the following herbicides registered for use in corn:

acetochlor (Surpass®)	dimethenamid (FRONTIER®)
Harness® Plus	EPTC (Eradicane®)
alachlor (Lasso®)	Extrazine® II
Lasso MT®, Partner®	glyphosate (Roundup®)
atrazine	GUARDSMAN®
Bicep®	halosulfuron (Battalion®, Permit®)
Broadstrike® + Dual®	Lariat®
Broadstrike® Plus	MARKSMAN®
Bronco®	metolachlor (Dual)
Buller®	paraquat (Gramoxone®)
butylate	pendimethalin (Prow®)
(Sutan® + Genate™)	propachlor (Ramrod®)
CLARITY®	simazine (Princep®)
cyanazine (Bladex®)	Surpass® 100

6/14

Apply BANVEL at 1/2 pint per treated acre to ground previously treated with full rates of CLARITY or MARKSMAN Herbicides. Allow at least 2 weeks between applications.

READ AND FOLLOW LABEL DIRECTIONS FOR EACH OF THE ABOVE PRODUCTS.

**TANK MIX TREATMENTS FOR CORN**

BANVEL may be tank mixed with one or more of the following herbicides for control of grasses or additional broadleaf weeds. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, and other restrictions.

**RATES AND TIMINGS**

Banvel Plus	Preplant/Preemergent (No Tillage Corn)	Preemergent (Conventional or Reduced Tillage Corn)	Early Post-emergent (All Tillage Systems)	Late Post-emergent (All Tillage Systems)	Additional Directions
ACCENT® (nicosulfuron)	—	—	1/2-1 oz. a.i./A	1/2-1 oz. a.i./A (To improve spray coverage of weeds and reduce risk of corn injury, use drop pipes to direct spray beneath corn leaves when corn is greater than 8 inches tall.)	Application may be made to emerged weeds before corn is greater than 24 inches tall. Use non-ionic surfactant at .25% (V/V) with this tank mixture.
Atrazine	1 1/4-2 lbs. a.i./A	1 1/4-2 lbs. a.i./A	1 1/4-2 lbs. a.i./A. Crop oil concentrates may be used with this mixture if corn is 5 inches or less in height.	1 1/4-2 lbs. a.i./A. Do not apply if corn is greater than 12 inches tall.	Application may be made before grasses are 1 1/2 inches tall. Follow all state and federal restrictions pertaining to atrazine applications.
BEACON® (primisulfuron)	—	—	0.31-0.62 oz. a.i./A	0.31-0.62 oz. a.i./A (To improve spray coverage of weeds and reduce risk of corn injury, use drop pipes to direct spray beneath corn leaves when corn is greater than 8 inches tall.)	Application may be made to emerged weeds when corn is 4 to 24 inches tall. Use non-ionic surfactant at .25% (V/V) with this tank mixture.
BLADEX (cyanazine)	1 1/4-4 lbs. a.i./A	1 1/4-4 lbs. a.i./A	1/2-2 lbs. a.i./A (Use the 90 DF formulation only, after corn emergence.)	—	Application may be made before grasses are 1 1/2 inches tall, and before corn is beyond the 4 leaf stage.

Banvel Plus	Preplant/Preemergent (No Tillage Corn)	Preemergent (Conventional or Reduced Tillage Corn)	Early Post-emergent (All Tillage Systems)	Late Post-emergent (All Tillage Systems)	Additional Directions
DUAL (metolachlor)	1 1/2-3 lbs. a.i./A	1 1/2-3 lbs. a.i./A (Use only on fine or medium textured soils with 2.5% or greater organic matter.)	1 1/2-3 lbs. a.i./A	—	Application may be made before grasses reach the 2 leaf stage and before corn is greater than 3 inches tall.
FRONTIER (dimethenamid)	13-25 fl. oz. a.i./A	13-25 fl. oz./A (Use only on fine or medium textured soils with 2.5% or greater organic matter.)	13-25 fl. oz. a.i./A	—	Application may be made up to 8 inch tall corn. This treatment must be combined with a herbicide that provides postemergence control of grass weeds if they are greater than 1 inch tall at the time of application.
FRONTIER® 6.0 (dimethenamid)	16.0 to 32.0 fl. oz./A	16.0 to 32.0 fl. oz./A (use only on fine or medium textured soils with 2.5% or greater organic matter.)	16.0 to 32.0 fl. oz./A	—	Application may be made up to 8 inch tall corn. This treatment must be combined with a herbicide that provides postemergence control of grass weeds if they are greater than 1 inch tall at the time of application.
GRAMOXONE (paraquat)	1/4-1 lb. a.i./A	1/4-1 lb. a.i./A	—	—	Application may be made to emerged weeds but prior to corn emergence.
HARNESS PLUS® or SURPASS (acetochlor)	1 1/2-3 lbs. a.i./A	1 1/2-3 lbs. a.i./A. Use only on fine or medium textured soils with 2.5% or greater organic matter.	—	—	Application should be made prior to corn emergence.
LASSO (alachlor)	1 1/2-4 lbs. a.i./A	1 1/2-4 lbs. a.i./A (Use only on fine textured soils with greater than 2.5% organic matter.)	1 1/2-4 lbs. a.i./A	—	Application may be made before grasses reach the 2 leaf stage and before corn is greater than 3 inches tall. If micro-encapsulated forms of alachlor are used (Lasso MT, Partner), applications must be made prior to grass emergence.
PRINCEP (simazine)	2.0-3.0 lbs. a.i./A	2.0-3.0 lbs. a.i./A	—	—	Application may be made prior to corn or weed emergence.

Banvel Plus	Preplant/Preemergent (No Tillage Corn)	Preemergent (Conventional or Reduced Tillage Corn)	Early Post-emergent (All Tillage Systems)	Late Post-emergent (All Tillage Systems)	Additional Directions
PROWL (pendimethalin)	—	¾-1 ½ lbs. a.i./A (Use only on fine or medium textured soils with 2.5% or greater organic matter.)	¾-1 ½ lbs. a.i./A	—	Application may be made immediately after planting but prior to weed emergence. Corn should not be beyond the 2-leaf stage of growth.
ROUNDUP (glyphosate)	1.0-3.0 lbs. a.i./A	1.0-3.0 lbs. a.i./A	—	—	Application may be made to emerged weeds but prior to corn emergence.
STINGER® (clopyralid)	—	—	0.035-0.07 lb. a.i./A	0.035-0.07 lb. a.i./A	Applications may be made any time after corn emergence through 24 inch tall corn. Use drop nozzles to direct spray after corn exceeds the 8 inch stage. Apply when the majority of the thistle plants have emerged and are at least 4 inches in height, but before bud stage. Use higher rates listed for stand reduction of larger thistle plants or heavier infestations. Lower rates listed may provide seasonal thistle suppression only.
TOUGH® 3.75EC (pyridate)	—	—	0.47 lb. a.i./A	0.47-0.94 lb. a.i./A	Applications may be made to emerged, actively growing weeds. Directed applications are recommended when corn is large enough to prevent proper spray coverage.
2,4-D	¼-½ lb. a.i./A	¼-½ lb. a.i./A	Not recommended	½ lb. a.i./A	Drop pipes are to be used when corn height is 8 inches or greater. Keeping the spray off the corn leaves and out of the whorl will reduce the likelihood of crop injury and improve spray coverage of weed foliage.

**SORGHUM (MILO)**

Observe all PRECAUTIONS, including the reference to crops growing under stress.  
 Read and follow MIXING AND APPLICATION instructions.  
 Applications of BANVEL® herbicide 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 to 14 days.  
 Do not graze or feed treated sorghum forage or silage prior to mature grain stage. If sorghum is grown for pasture or hay, refer to the PASTURE use section. Do not apply BANVEL to sorghum grown for seed production.

Make no more than one application per growing season.

**WEEDS CONTROLLED**

BANVEL, when applied at the recommended rate for sorghum, will control many actively growing ANNUAL broadleaf weeds and will reduce competition from established PERENNIAL broadleaf weeds as well as control their seedlings. (Refer to GENERAL WEED LIST.)

**RATES AND TIMINGS**

BANVEL may be applied to emerged and actively growing weeds at least 15 days prior to planting. Postemergence application of BANVEL must be made after sorghum is in the spike stage (all sorghum emerged) but before sorghum is 15 inches tall. For best performance, make applications when sorghum is in the 3 to 5 leaf stage and weeds are small (less than 3 inches tall). Use drop pipes (drop nozzles) if sorghum is taller than 8 inches. Keeping the spray off the sorghum leaves and out of the whorl will reduce the likelihood of crop injury and improve spray coverage of weed foliage.

**BROADCAST RATE PER TREATED ACRE:** ½ pint (¼ lb. a.i.)

**TANK MIX TREATMENTS**

**BANVEL PLUS ATRAZINE**

For improved control of emerged, actively growing broadleaf weeds including triazine-resistant species and added suppression of perennial broadleaf weeds, tank mix ½ pint BANVEL with 0.5 to 1.25 lbs. a.i. atrazine per treated acre. For control of grasses (less than 1.5 inches tall), tank mix ½ pint BANVEL with 2 lbs. a.i. atrazine per treated acre. For best performance and minimal crop injury, make application when sorghum is 3-8 inches tall and when broadleaf weeds are small (less than 6 inches tall). Application of atrazine must be made before sorghum is beyond 12 inches tall. The atrazine rate will depend upon soil texture and length of residual weed control desired. Follow all State and Federal restrictions pertaining to atrazine applications.

**BANVEL PLUS BUCTRIL®**

For improved control of broadleaf weeds, tank mix ½ pint BANVEL with 1-1 ½ pints Buctril Herbicide per treated acre. Make application at 4 leaf to 15 inch tall sorghum. Use drop nozzles to direct spray beneath sorghum leaves when sorghum is greater than 8 inches tall.

**READ AND FOLLOW THE LABEL OF EACH TANK MIX PRODUCT USED FOR PRECAUTIONARY STATEMENTS, DIRECTIONS FOR USE, APPLICATION RATES AND TIMINGS AND OTHER RESTRICTIONS.**

**OVERLAY (SEQUENTIAL) TREATMENTS**

BANVEL may be applied to ground previously treated with one or more of the following herbicides:

Herbicide	Maximum Rate Per Treated Acre (lbs. a.i.)
alachlor (Lasso)	4.0
(Screen®-treated seed)	
atrazine <sup>1</sup>	2.5
metolachlor (Dual®)	2.5
(Concep®-treated seed)	
propachlor (Ramrod)	5.0

<sup>1</sup>Maximum use rate for atrazine is determined by soil type, tillage practices used, surface residue, and state or local restrictions. Follow the more restrictive requirements when determining the maximum use rate for atrazine.

**PREHARVEST USES**

**FOR USE ONLY IN THE STATES OF TEXAS AND OKLAHOMA**

BANVEL may be applied for weed suppression any time after the sorghum has reached the soft dough stage. An agriculturally approved surfactant may be used to improve performance. For aerial applications use at least 2 gallons of water-based carrier per treated acre.

Delay harvest until 30 days after treatment.

**BROADCAST RATE PER TREATED ACRE:** ½ pint (¼ lb. a.i.)

**SMALL GRAINS (WHEAT, BARLEY AND OATS) NOT UNDERSEED TO LEGUMES**

**IMPORTANT**

Observe all PRECAUTIONS. Read and follow CLEANING, MIXING AND APPLICATION instructions.

- If small grains are used for pasture or hay, the following restrictions apply:
- Animals cannot be removed from treated area for slaughter prior to 30 days after last application.
  - There is no waiting period between treatment and grazing for non-lactating dairy animals.
  - Treated areas may not be grazed by lactating dairy animals before 7 days after treatment.
  - Do not harvest hay from treated areas before 37 days after treatment.

**NOTE:** Observe all precautions and restrictions on the labels of products used in tank mix treatments.

**WEEDS CONTROLLED**

BANVEL® herbicide or combinations with listed tank mix partners will provide control or suppression of the ANNUAL broadleaf weeds listed below. For improved control of listed weeds, it is recommended that BANVEL be applied in a tank mix with other herbicides. Refer to specific crop for tank mix options.

Alkanet <sup>1</sup>	Mustard, Treacle <sup>1</sup>
Bedstraw, Catchweed <sup>1</sup>	Mustard, Tumble (Jim Hill) <sup>1</sup>
Bindweed, Field <sup>2</sup>	Mustard, Wild <sup>1</sup>
Buckwheat, Tartary	Nightshade, Black
Buckwheat, Wild	Nightshade, Cutleaf <sup>1</sup>
Carperweed <sup>1</sup>	Nightshade, Silverleaf <sup>2</sup>
Chamomile, Corn	(White Horsenettle)
Chervil, Bur <sup>1</sup>	Pennycress, Field
Chickweed, Common <sup>1</sup>	(Fanweed, Frenchweed, Stinkweed)
Cockle, Corn	Pepperweed, Peppergrass <sup>1</sup>
Cockle, Cow	Pigweed, Redroot (Carelessweed)
Cocklebur, Common	Pigweed, Rough
Cornflower (Bachelorbutton) <sup>1</sup>	Pigweed, Tumble
Dandelion, Common <sup>2</sup>	Pineappleweed <sup>1</sup>
Dock, Curly <sup>2</sup>	Plantain, Broadleaf <sup>2</sup>
Dragonhead, American <sup>1</sup>	Poppy, Red Horned <sup>1</sup>
Evening Primrose, Cutleaf <sup>1</sup>	Puncturevine <sup>1</sup>
Falseflax, Smallseeded <sup>1</sup>	Purslane, Common <sup>1</sup>
Fiddleneck (Tarweed) <sup>1</sup>	Radish, Wild <sup>1</sup>
Flixweed <sup>1</sup>	Ragweed, Common <sup>1</sup>
Fumitory <sup>1</sup>	Ragweed, Giant (Buffaloweed) <sup>1</sup>
Gromwell, Corn <sup>1</sup>	Rocket, London <sup>1</sup>
Groundsel, Common <sup>1</sup>	Rocket, Yellow <sup>1</sup>
Hempnettle <sup>1</sup>	Salsify (Goatsbeard) <sup>1</sup>
Henbit	Shepherdspurse <sup>1</sup>
Jacobs Ladder <sup>1</sup>	Smartweed, Green
Knawel (German Moss)	Smartweed, Pennsylvania
Knotweed, Prostrate	Sorrel, Red (Sheep Sorrel) <sup>1</sup>
Kochia	Sowthistle, Annual
Ladysthumb	Starthistle, Yellow <sup>1</sup>
Lambsquarters, Common	Sunflower, Common (Wild)
Lettuce, Miners <sup>1</sup>	Thistle, Canada <sup>2</sup>
Lettuce, Prickly	Thistle, Russian
Mallow, Common	Velvetleaf
Mayweed, Chamomile (Dogfennel) <sup>1</sup>	Vetch <sup>1</sup>
Mustard, Blue (Purple) <sup>1</sup>	Yarrow, Common <sup>2</sup>
Mustard, Tansy	

<sup>1</sup>These weeds will be controlled with BANVEL tank mixtures. Refer to tank mix label for specific weeds controlled.

<sup>2</sup>BANVEL tank mixes will provide suppression of established broadleaf weeds and control of their seedlings.

**RATES AND TIMINGS**

Application of BANVEL may be made before, during or after planting of small grains. For best performance, make applications when weeds are in the 2-3 leaf stage and rosettes are less than 2 inches across. Application of BANVEL to small grains during periods of rapid growth may result in crop leaning. This condition is temporary and will not reduce crop yields.

Use BANVEL at 2 to 4 fluid ounces per treated acre in wheat, fall seeded barley, and oats, and at 2 to 3 fluid ounces per treated acre in spring seeded barley. Use the higher level of listed rate ranges when treating difficult to control weeds such as kochia, wild buckwheat, cow cockle, prostrate knotweed, Russian thistle and prickly lettuce or when dense vegetative growth occurs.

BANVEL used in a tank mix with other herbicides offers the best spectrum of weed control and herbicide tolerant or resistant weed management. Refer to specific crop for BANVEL rate and application timing.

For applications prior to the emergence of weeds or when sulfonylurea resistant weeds are present or suspected, use a minimum of 3 fluid ounces per treated acre of BANVEL with a tank mix herbicide. Non-sulfonylurea herbicides such as 2,4-D or MCPA tank mixed with BANVEL will offer more consistent control of sulfonylurea resistant weeds.

When tank mixing with sulfonylurea herbicides, such as Ally<sup>®</sup>, Amber<sup>®</sup>, Express<sup>®</sup>, Finesse<sup>®</sup>, Glean<sup>®</sup> and Harmony<sup>®</sup> Extra, use an agriculturally approved surfactant of at least 80% active ingredient at the rate of 1-4 pints/100 gallons of spray or not more than 0.25-0.5% by volume. Use the highest rate of surfactant when using the lower rate ranges of the tank mix and/or when treating more mature and difficult to control weeds or dense vegetative growth.

**FALL AND SPRING SEEDED WHEAT**

BANVEL MUST BE APPLIED TO FALL SEEDED WHEAT PRIOR TO THE JOINTING STAGE. APPLICATIONS TO SPRING SEEDED WHEAT MUST BE MADE BEFORE WHEAT EXCEEDS THE 5 LEAF STAGE.

**TANK MIX TREATMENTS**

BANVEL may be tank mixed with one or more of the following herbicides. Read and follow the label of each tank mix product used for precautionary statements, directions for use, weeds controlled, and geographic and other restrictions.

**BROADCAST RATE PER TREATED ACRE**

<sup>1</sup>Apply 2 to 4 fluid ounces BANVEL<sup>®</sup> herbicide with:

Product	Active Ingredient	Formulation	Amount of Product Per Acre
2,4-D amine or ester	2,4-D	4 lb/gal	8-12 fluid oz (.25-.375 lb a.i./A) <sup>2</sup>

Product	Active Ingredient	Formulation	Amount of Product Per Acre
MCPA	MCPA	4 lb/gal	8-12 fluid oz (.25-.375 lb a.i./A) <sup>2</sup>
MCPA amine or ester	MCPA	4 lb/gal	8-12 fluid oz (.25-.375 lb a.i./A) <sup>2</sup>
Ally <sup>®</sup>	metsulfuron-methyl	60% DF	1/20-1/10 oz
Amber <sup>®</sup>	triasulfuron	75% DF	0.14-0.28 oz
Express <sup>®</sup>	thifensulfuron + tribenuron-methyl	75% DF	1/12-1/6 oz
Finesse <sup>®</sup>	chlorsulfuron + metsulfuron-methyl	75% DF	1/6-1/2 oz
Glean <sup>®</sup>	chlorsulfuron	75% DF	1/6 oz
Harmony <sup>®</sup>	thifensulfuron + tribenuron-methyl	75% DF	1/6-1/2 oz
Extra	chlorsulfuron	75% DF	1/6 oz
Buctril <sup>®</sup>	bromoxynil <sup>3</sup>	2 lb/gal	1-1.5 pts
Bronate <sup>®</sup>	bromoxynil + MCPA	4 lb/gal	1-2 pts
Curtail <sup>®</sup>	clopyralid + 2,4-D	2.38 lb/gal	2-2 2/3 pts
Sünger	clopyralid	3 lb/gal	3 1/4-1/2 pt
Karmex <sup>®4</sup>	diuron <sup>3</sup>	80% DF	1/2-1.5 lbs
Sencor <sup>®4</sup>	metribuzin <sup>3</sup>	75% DF	1-10 oz
Dakota <sup>®5</sup>	fenoxaprop-ethyl + MCPA	3.1 lb/gal	16 oz
Tiller <sup>®5</sup>	fenoxaprop-ethyl + MCPA + 2,4-D	2.7 lb/gal	1-1.7 pts

<sup>1</sup>Early developing wheat varieties such as TAM 107, MADISON, or WAKEFIELD must receive application between early tillering and the jointing stage. Care should be taken staging these varieties to be certain that the application occurs prior to the jointing stage.

<sup>2</sup>When using formulations other than 4 lb/gal use pounds active/acre listed.

<sup>3</sup>Herbicides with the same active ingredient and/or different formulations may be used.

<sup>4</sup>Tank mixtures for fall seeded wheat only.

<sup>5</sup>Use 2 fluid ounces of BANVEL only. Do not use if wild oats is the target weed. Do not use BANVEL as a tank mix treatment with Dakota or Tiller on Durum wheat.

**SPECIAL USE TANK MIXES FOR SPRING AND FALL SEEDED WHEAT (SEE FOOTNOTES FOR APPLICABLE USES)**

Apply 3 to 4<sup>1</sup> fluid ounces BANVEL with:

Product <sup>2</sup>	Active Ingredient	Formulation	Amount of Product Per Acre
2,4-D or MCPA amine	2,4-D or MCPA	4 lb/gal	1-2 pt <sup>3</sup> (.5-1.0 lb a.i./A) <sup>4</sup>
2,4-D or MCPA ester	2,4-D or MCPA	4 lb/gal	1-1.5 pt <sup>3</sup> (.5-.75 lb a.i./A) <sup>4</sup>
Ally	metsulfuron-methyl	60% DF	1/20-1/10 oz
Amber	triasulfuron	75% DF	0.14-0.28 oz
Express	thifensulfuron + tribenuron-methyl	75% DF	1/12-1/6 oz
Finesse	chlorsulfuron + metsulfuron-methyl	75% DF	1/6-1/2 oz
Glean	chlorsulfuron	75% DF	1/6 oz
Harmony	thifensulfuron + tribenuron-methyl	75% DF	1/6-1/2 oz
Extra	metsulfuron-methyl + 2,4-D	60% DF + 4 lb/gal	1/20-1/10 oz + 8 fluid oz
Ally + 2,4-D amine or ester <sup>5</sup>	triasulfuron + 2,4-D	75% DF + 4 lb/gal	0.14 oz -0.28 oz + 8 fluid oz
Amber + 2,4-D amine or ester <sup>5</sup>	(thifensulfuron + tribenuron-methyl) + 2,4-D	75% DF + 4 lb/gal	1/12-1/6 oz + 8 fluid oz
Express + 2,4-D amine or ester <sup>5</sup>	(chlorsulfuron + metsulfuron-methyl) + 2,4-D	75% DF + 4 lb/gal	1/6-1/2 oz + 8 fluid oz
Finesse + 2,4-D amine or ester <sup>5</sup>	chlorsulfuron + 2,4-D	75% DF + 4 lb/gal	1/6 oz + 8 fluid oz
Glean + 2,4-D amine or ester <sup>5</sup>	(thifensulfuron + tribenuron-methyl) + 2,4-D	75% DF + 4 lb/gal	1/6-1/2 oz + 8 fluid oz
Harmony Extra + 2,4-D amine or ester <sup>5</sup>	glyphosate	3 lb/gal	12-16 fluid oz
Roundup RT <sup>6</sup>			

<sup>1</sup>BANVEL may be used at 6 fluid ounces on fall seeded wheat in Western Oregon as a spring application only. In CO, KS, NM, OK and TX up to 8 fluid ounces of BANVEL may be applied on fall seeded wheat after it exceeds the 3 leaf stage for suppression of perennial



weeds, such as field bindweed. Applications may be made in the fall following a frost but before a killing freeze. BANVEL may be tank mixed with 2,4-D amine at 8 fluid ounces after wheat begins to tiller. 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.

<sup>2</sup>Do not use low rates of sulfonylurea herbicides, such as Ally, Amber, Express, Finesse, Glean, and Harmony Extra on more mature weeds and/or on dense vegetative growth.

<sup>3</sup>NOTE: For use on Fall Seeded Wheat Only. Do Not Use unless potential crop injury will be acceptable.

<sup>4</sup>When using formulations other than 4 lb/gal use pounds active/acre listed.

<sup>5</sup>Use for improved control of Russian thistle, flaxweed, gromwell, mayweed and fiddleneck.

<sup>6</sup>BANVEL may be applied at 2 fluid ounces with Roundup RT or any glyphosate formulation labeled for use as a preplant application to small grains with no waiting period prior to planting. Read and follow label directions of the tank mix product for adjuvant use recommendations.

**FALL SEEDED BARLEY**

BANVEL MUST BE APPLIED TO FALL SEEDED BARLEY PRIOR TO THE JOINTING STAGE.

NOTE: For spring barley varieties that are seeded during the winter months or later, follow the rates and timings given for spring seeded barley.

**TANK MIX TREATMENTS**

BANVEL may be tank mixed with one or more of the following herbicides. Read and follow the label of each tank mix product used for precautionary statements, directions for use, weeds controlled, geographic and other restrictions.

**BROADCAST RATE PER TREATED ACRE**

Apply 2 to 4 fluid ounces BANVEL<sup>®</sup> herbicide with:

Product <sup>1</sup>	Active Ingredient	Formulation	Amount of Product Per Acre
2,4-D amine or ester	2,4-D	4 lb/gal	8 fl oz (0.25 lb ai/A) <sup>2</sup>
MCPA amine or ester	MCPA	4 lb/gal	8-12 fl oz (0.25-0.375 lb ai/A)
Ally <sup>®</sup>	metasulfuron-methyl	60% DF	1/20-1/10 oz
Amber <sup>®</sup>	triasulfuron	75% DF	0.14-0.28 oz
Express <sup>®</sup>	thifensulfuron + tribenuron-methyl	75% DF	1/12-1/6 oz
Finesse <sup>®</sup>	chlorsulfuron + metasulfuron-methyl	75% DF	1/6-1/3 oz
Glean <sup>®</sup>	chlorsulfuron	75% DF	1/6 oz
Harmony <sup>®</sup>	thifensulfuron + tribenuron-methyl	75% DF	1/6-1/3 oz
Extra <sup>®</sup>	metribuzin <sup>3</sup>	75% DF	1-10 oz
Sencor <sup>®</sup>	bromoxynil	2 lb/gal	1-1 1/2 pt
Buctril <sup>®</sup>	bromoxynil + MCPA	4 lb/gal	3/4-1 1/2 pt
Bronate <sup>®</sup>			

<sup>1</sup>Do not use low rates of sulfonylureas (Ally, Amber, Express, Finesse, Glean, and Harmony Extra) on more mature weeds and/or on dense vegetative growth.

<sup>2</sup>When using formulations other than 4 lb/gal use pounds active/acre listed.

<sup>3</sup>Herbicides with the same active ingredient and/or different formulations may be used.

**SPRING SEEDED BARLEY**

BANVEL MUST BE APPLIED BEFORE SPRING SEEDED BARLEY EXCEEDS THE 4 LEAF STAGE.

**TANK MIX TREATMENTS**

BANVEL may be tank mixed with one or more of the following herbicides. Read and follow the label of each tank mix product used for precautionary statements, directions for use, weeds controlled, geographic and other restrictions.

**BROADCAST RATE PER TREATED ACRE**

Apply 2 to 3 fluid ounces BANVEL with:

Product <sup>1</sup>	Active Ingredient	Formulation	Amount of Product Per Acre
MCPA amine or ester	MCPA	4 lb/gal	8-12 fluid oz (0.25-0.375 lb ai/A) <sup>2</sup>
Ally	metasulfuron-methyl	60% DF	1/20-1/10 oz
Amber	triasulfuron	75% DF	0.14-0.28 oz
Express	thifensulfuron + tribenuron-methyl	75% DF	1/12-1/6 oz
Finesse	chlorsulfuron + metasulfuron-methyl	75% DF	1/6-1/3 oz
Glean	chlorsulfuron	75% DF	1/6 oz
Harmony	thifensulfuron + tribenuron-methyl	75% DF	1/6-1/3 oz
Extra	metribuzin <sup>3</sup>	75% DF	1-10 oz
Sencor	bromoxynil	2 lb/gal	1-1 1/2 pt
Buctril	bromoxynil + MCPA	4 lb/gal	3/4-1 1/2 pt
Bronate			

<sup>1</sup>Do not use low rates of sulfonylureas (Ally, Amber, Express, Finesse, Glean, and Harmony Extra) on more mature weeds and/or on dense vegetative growth.

<sup>2</sup>When using formulations other than 4 lb/gal use pounds active/acre listed.

<sup>3</sup>Herbicides with the same active ingredient and/or different formulations may be used.

**FALL AND SPRING SEEDED OATS**

BANVEL MUST BE APPLIED BEFORE SPRING SEEDED OATS EXCEED THE 5 LEAF STAGE. APPLICATIONS TO FALL SEEDED OATS MUST BE MADE PRIOR TO THE JOINTING STAGE.

**TANK MIX TREATMENTS**

BANVEL may be tank mixed with one or more of the following herbicides. Read and follow the label of each tank mix product used for precautionary statements, directions for use, weeds controlled, geographic and other restrictions.

**BROADCAST RATE PER TREATED ACRE**

Apply 2 to 4 fluid ounces BANVEL with:

Product	Active Ingredient	Formulation	Amount of Product Per Acre
MCPA amine or ester	MCPA	4 lb/gal	8-12 fluid oz (0.25-0.375 lb ai/A) <sup>1</sup>

<sup>1</sup>When using formulations other than 4 lb/gal use pounds active/acre listed.

**SUGARCANE**

Observe all PRECAUTIONS. Read and follow MIXING AND APPLICATION instructions.

Consult your local or state authorities for possible application restrictions, especially concerning aerial applications and advice concerning special local use situations.

**WEEDS CONTROLLED**

BANVEL, when applied at the recommended rates, will control many ANNUAL, BIENNIAL and PERENNIAL broadleaf weeds commonly found in sugarcane. (Refer to GENERAL WEED LIST.)

**RATES AND TIMINGS**

Application of BANVEL may be made any time after weeds have emerged and are actively growing but before the close-in stage of sugarcane. Application rates and timings of BANVEL are given below. Use the higher level of listed rate ranges when treating dense vegetative growth.

Weed Stage & Type	Product Amount	Broadcast Rate Per Treated Acre lbs. a.i.
Annual		
Small, actively growing	1/2-1 pt.	1/6-1/2
Established weed growth	1-1 1/2 pts.	1/2-3/4
Biennial	1-2 pts.	1/2-1
Perennial	2-4 pts.	1-2*

\*Application made over the top of actively growing sugarcane may result in crop injury.

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.

Retreatments may be made as needed, however, do not exceed a total of 4 pints (2 lbs. a.i.) of BANVEL per treated acre during a growing season.

**TANK MIX TREATMENTS**

BANVEL<sup>®</sup> herbicide may be tank mixed with one or more of the following herbicides for control of grasses or additional broadleaf weeds. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, weeds controlled, geographic and other restrictions.

Herbicide	Rate Per Treated Acre (lbs. a.i.)
ametryn (Evik <sup>®</sup> )	3/8-8
asulam (Asulox <sup>®</sup> )	2-3 1/2
atrazine	3/8-4
2,4-D	1/2-3*

\*Application of BANVEL plus 2,4-D tank mix at the higher listed rate ranges may result in crop injury.

**PASTURE, HAY, RANGELAND AND GENERAL FARMSTEAD (NON-CROPLAND)**

BANVEL is recommended for use on pasture, hay, rangeland, and general farmstead (non-cropland) (including fence rows and non-irrigation ditchbanks) for broadleaf weed and brush control. BANVEL may also be applied to non-cropland areas for the control of broadleaf weeds in Noxious Weed Control Programs, Districts or Areas including broadcast or spot treatment of roadsides and highways, utilities, railroad and pipeline rights-of-way. Noxious weeds must be recognized at the state level but programs may be administered at state, county or other level.

Observe all PRECAUTIONS. Read and follow MIXING AND APPLICATION instructions.

BANVEL uses described in this section also pertain to small grains (such as barley, forage sorghum, oats, rye, sudangrass or wheat) grown for pasture use only.

**NEWLY SEEDED AREAS.** including small grains grown for pasture may be severely injured if rates of BANVEL greater than 1 pint/A are applied.

**ESTABLISHED GRASS CROPS** growing under stress can exhibit various injury symptoms that may be more pronounced if herbicides are applied. Furthermore, rates of BANVEL in excess of 2 quarts (2 lbs. a.i.) per treated acre may cause temporary injury to many grass species.

Bentgrass, carpetgrass, buffalograss and St. Augustine grass may be injured at rates exceeding 1 pint BANVEL (½ lb. a.i.) per treated acre. Usually colonial bentgrasses are more tolerant than creeping types. Velvetgrasses are most easily injured. Treatments will kill or injure alfalfa, clovers, lespedeza, wild winter peas, vetch and other legumes.

**ANIMALS CANNOT BE REMOVED FROM TREATED AREA FOR SLAUGHTER PRIOR TO 30 DAYS AFTER LAST APPLICATION.**

**THERE IS NO WAITING PERIOD BETWEEN TREATMENT AND GRAZING FOR NON-LACTATING ANIMALS.**

**TIMING RESTRICTIONS FOR LACTATING DAIRY ANIMALS FOLLOWING TREATMENT**

BANVEL Rate per Treated Acre	Days Before Grazing	Days Before Hay Harvest
Up to 1 pint (½ lb. a.i.)	7 days	37 days
Up to 1 quart (1 lb. a.i.)	21 days	51 days
Up to 2 quarts (2 lbs. a.i.)	40 days	70 days

**NOTE:** Observe all precautions and restrictions on labels of products used in tank mixtures.

**MIXING AND APPLICATION**

BANVEL can be applied using water, oil in water emulsions including invert systems, or sprayable fluid fertilizer as a carrier. A COMPATIBILITY TEST (see COMPATIBILITY TEST section) should be made prior to tank mixing.

To prepare oil in water emulsions, half-fill spray tank with water, then add the appropriate amount of emulsifier. With continuous agitation, slowly add the herbicide and then the oil (such as diesel oil or fuel oil) or a premix of oil plus additional emulsifier to spray tank. Complete filling of spray tank with water. Maintain vigorous agitation during spray operation to prevent oil and water from forming separate layers.

BANVEL may be applied broadcast using either ground or aerial application equipment. When using ground equipment, apply 3 to 600 gallons of diluted spray per treated acre. Volume of spray applied will depend on the height, density, and type of weeds or brush being treated and on the type of equipment being used. When using aerial equipment apply 1 to 40 gallons of diluted spray per treated acre in a water-based carrier.

BANVEL may be applied to individual clumps or small areas (SPOT TREATMENT) of undesirable vegetation using handgun or similar types of application equipment. Apply diluted sprays to allow complete wetting (up to run-off) of foliage and stems.

Herbicide adjuvants or other spray additives (emulsifiers, surfactants, wetting agents, drift control agents, or penetrants) may be used for wetting, penetration, or drift control. Spray additives must be agriculturally approved when used in pasture applications. If spray additives are used, read and follow all use recommendations and precautions on product label.

**WEEDS CONTROLLED**

BANVEL, when applied at recommended rates, will give control of many ANNUAL, BIENNIAL, and PERENNIAL broadleaf weeds, and many WOODY brush and vine species commonly found in pasture, hay, rangeland and general farmstead (non-cropland) areas. (Refer to GENERAL WEED LIST.) Noted (\*) PERENNIAL weeds may be controlled with lower rates of either BANVEL or BANVEL plus 2,4-D. See RATES AND TIMINGS below.

**RATES AND TIMINGS**

Application rates and timing of BANVEL are given below. Use the higher level of listed rate ranges when treating dense or tall vegetative growth.

Weed Stage & Type	Product Amount	Broadcast Rate Per Treated Acre (lbs. a.i.)
<b>Annual</b>		
Small, actively growing	½-1 pt.	¼-½
Established weed growth	1-1 ½ pts.	½-¾
<b>Biennial<sup>1</sup></b>		
<b>Rosette diameter</b>		
Less than 3 inches	½-1 pt.	¼-½
3 inches or more	1-2 pts.	½-1
<b>Bolting</b>	2-3 pts.	1-1 ½
<b>Perennial</b>		
Suppression or top growth control	½-1 qt.	½-1
Noted (*) Perennials	1-2 qts.	1-2
Other Perennials	2 qts.	2
<b>Woody Brush &amp; Vines</b>		
Top growth suppression	½-1 qt.	½-1
Top growth control <sup>2</sup>	1-2 qts.	1-2
Stems and stem suppression	2 qts.	2

<sup>1</sup>For best performance, make application when Biennial weeds are in the rosette stage.

<sup>2</sup>Species noted in GENERAL WEED LIST section will require tank mixtures for adequate control.

Retreatments may be made as needed; however, do not exceed a total of 2 quarts (2 lbs. a.i.) of BANVEL® herbicide per treated acre during a growing season.

**TANK MIX TREATMENTS**

READ AND FOLLOW THE LABEL OF EACH TANK MIX PRODUCT USED FOR PRECAUTIONARY STATEMENTS, DIRECTIONS FOR USE, APPLICATION RATES AND OTHER RESTRICTIONS. BANVEL may be tank mixed with one or more of the following herbicides for control of grasses, additional broadleaf weeds, and woody brush and vines.

Herbicide	Rate Per Treated Acre (lbs. a.i.)
Pasture, hay, rangeland, and general farmstead (non-cropland) use:	
glyphosate (Roundup®)	¼-3¼
metsulfuron methyl (Ally)	0.0038-0.011
paraquat (Gramoxone)	½-1
picloram (Tordon®)	¼-3
triclopyr (Garlon®)	¾-9
2,4-D	¼-6

Due to the variations that may occur in formulated products and specific use ingredients (e.g. water supplies), a COMPATIBILITY TEST (see COMPATIBILITY TEST) is recommended prior to actual tank mixing.

**CUT SURFACE TREE TREATMENTS**

BANVEL may be applied as a cut surface treatment for control of unwanted tree and prevention of sprouts of cut trees. A mix of 1 part BANVEL with 1 to 10 parts water should be used in application. Use the lower dilution when treating difficult-to-control species.

**FRILL OR GIRDLE TREATMENTS:** Make a continuous cut or a series of overlapping cuts using an axe to girdle tree trunk. Spray or paint cut surface with the BANVEL/water mix.

**STUMP TREATMENTS:** Spray or paint freshly cut surface with the water mix. The area adjacent to the bark should be thoroughly wet.

**NOTE:** For more rapid foliar effects, 2,4-D may be added to the BANVEL/water mix.

**DORMANT APPLICATIONS FOR CONTROL OF MULTIFLORA ROSE**

BANVEL can be applied when plants are dormant as an undiluted SPOT-CONCENTRATE directly to the soil or as a LO-OIL BASAL BARK treatment using an oil-water emulsion solution.

SPOT-CONCENTRATE applications of BANVEL should be applied directly to the soil as close as possible to the root crown but within 6-8 inches of the crown. On sloping terrain, application should be made to the uphill side of the crown. Do not make application when snow or water prevents applying BANVEL directly to the soil. The use rate of BANVEL is dependent on the canopy diameter of the multiflora rose. Examples: Use BANVEL Herbicide at ¼, 1, or 2 ¼ fluid ounce of product respectively, for 5, 10, or 15 feet canopy diameters. Do not exceed total of 2 qts. BANVEL per acre per year.

LO-OIL BASAL BARK applications of BANVEL should be applied to the basal stem region from the ground line up to a height of 12 to 18 inches. Spray until runoff, with special emphasis on covering the root crown. For best results, make application when plants are dormant. Do not make application after bud break or when plants are showing signs of active growth. Do not make application when snow or water prevents applying BANVEL to the ground line. Refer to MIXING AND APPLICATIONS above in this section for method of preparing oil-in-water emulsion. Example for making approximately 2 gallons of a LO-OIL spray solution mixture: combine 1 ½ gallons water plus 1 ounce emulsifier plus 1 pint BANVEL plus 2 ½ pints of No. 2 diesel fuel. Adjust amounts of materials used proportionately to the amount of final spray solution desired. Do not exceed 8 gallons of spray solution mix applied per acre per year.

**CONSERVATION RESERVE PROGRAM (CRP) ACRE**

BANVEL is recommended for use on both newly seeded and established grasses grown in Conservation Reserve or Federal Set-Aside Programs.

Observe all PRECAUTIONS, MIXING AND APPLICATION directions.

BANVEL treatment will injure or may kill alfalfa, clovers, lespedeza, wild winter peas, vetch, and other legumes.

Agriculturally approved surfactants may be added to the spray mixture to improve postemergence weed control, particularly in dry growing conditions.

Do not use adjuvants containing penetrants such as petroleum based oils after grass emergence on newly seeded grasses.

**NEWLY SEEDED AREAS**

BANVEL® herbicide may be applied either preplant or postemergence to newly seeded grasses or small grains such as barley, oats, rye, sudangrass, wheat, or other grain species grown as a cover crop. Postemergence applications may be made after seedling grasses exceed the 3 leaf stage. Rates of BANVEL greater than 1 pint per treated acre may severely injure newly seeded grasses. Preplant applications—injury to new seedlings may occur if intervals between application and grass planting are less than 45 days per pint of BANVEL per treated acre West of the Mississippi River or 20 days per pint East of the Mississippi River.

**ESTABLISHED GRASS STANDS**

Established grass stands are perennial grasses planted one or more seasons prior to treatment. Certain species: bentgrass, carpetgrass, smooth brome, buffalograss or St. Augustine grass may be injured when treated with BANVEL at rates exceeding 1 pint per treated acre.

**WEEDS CONTROLLED**

BANVEL, when applied at recommended rates, will control many ANNUAL and BIENNIAL weeds and provide control or suppression of many perennial weeds. (Refer to GENERAL WEED LIST.)

**RATES AND TIMINGS**

Application rates and timing of BANVEL treatment are given below. Use the higher rate of the rate range when vegetation is either dense or tall, or when weeds are growing under stressed conditions such as drought or cool temperature.

Weed Type* & Stage	Broadcast Rate Per Treated Acre	
	Amount of Formulated BANVEL	Equivalent lbs. a.i.
	-pints-	
<b>Annuals</b>		
Small, actively growing	1/2-1	1/4- 1/2
Established weed growth	1	1/2
<b>Biennials**</b>		
Rosette diameter		
a) Less than 3 inches	1/2-1	1/4- 1/2
b) 3 inches or greater	1-2	1/2-1
c) bolting biennial	2-3	1-1 1/2
<b>Perennials**</b>		
Suppression/Control	2-4	1-2

\*For best results, treat Biennial weeds with BANVEL when they are in the rosette stage of growth. Retreatments may be made as needed; however, DO NOT EXCEED A TOTAL OF 2 QUARTS (2 lbs. a.i.) of BANVEL per treated acre during a growing season.

\*\*Biennial and Perennial weeds will require follow-up (sequential) treatments for seedling control and escapes.

**TANK MIX TREATMENTS**

To control grasses and additional broadleaf weeds, BANVEL may be tank mixed with other herbicides registered for use in Conservation Reserve Programs such as 2,4-D, glyphosate (Roundup), paraquat (Gramoxone), metsulfuron (Ally) and others.

READ AND FOLLOW THE LABEL OF EACH TANK MIX PRODUCT USED FOR PRECAUTIONARY STATEMENTS, DIRECTIONS FOR USE, APPLICATION RATES, AND OTHER RESTRICTIONS.

**ASPARAGUS FOR USE ONLY IN THE STATES OF CALIFORNIA, OREGON AND WASHINGTON**

**IMPORTANT**

Observe all PRECAUTIONS. Read and follow MIXING AND APPLICATION instructions.

If spray contacts emerged spears, crooking (twisting) of some spears may result. If such crooking occurs, discard affected spears.

Do not harvest prior to 24 hours after treatment.

Do not use in the Coachella Valley of California.

Multiple applications may be made per growing season. Do not exceed a total of 1 pint of BANVEL per treated acre per crop year.

**RATES AND TIMINGS**

Apply BANVEL to emerged and actively growing weeds in 40 to 60 gallons of diluted spray per treated acre immediately after cutting the field, but at least 24 hours before the next cutting.

Weeds	Rate Per Treated Acre
Mustard, Black Pigweed, Redroot (Carelessweed) Sowthistle, Annual *Thistle, Canada Thistle, Russian	1/2-1 pt. (1/4- 1/2 lb. a.i.)
*Bindweed, Field Chickweed, Common Goosefoot, Nettleleaf Radish, Wild Thistle, Milk	1 pt. (1/2 lb. a.i.)

BANVEL may be applied in a tank mixture with either 2,4-D or Roundup Herbicide for improved control of noted (\*) weeds. READ AND FOLLOW 2,4-D or Roundup Herbicide PRODUCT LABELING FOR PRECAUTIONARY STATEMENTS, DIRECTIONS FOR USE, APPLICATION RATES AND TIMINGS, AND OTHER RESTRICTIONS.

**TURF AND LAWNS FOR USE IN GENERAL FARMSTEAD (NON-CROPLAND) AND SOD FARMS**

**IMPORTANT**

Observe all PRECAUTIONS. Read and follow MIXING AND APPLICATION instructions.

To avoid injury to newly seeded grasses, application of BANVEL® herbicide should be delayed until after the second mowing. Furthermore, application rates in excess of 1 pint (1/2 lb. a.i.) per treated acre may cause noticeable stunting or discoloration of sensitive grass species such as bentgrass, carpetgrass, buffalograss, and St. Augustine grass.

In areas where roots of sensitive plants extend, do not apply in excess of 1/4 pint (1/4 lb. a.i.) of BANVEL per treated acre on coarse textured (sandy-type) soils, or in excess of 1/2 pint (1/2 lb. a.i.) per treated acre on fine textured (clayey-type) soils. Do not make repeat applications in these areas for 30 days and until previous applications of BANVEL have been activated in the soil by rain or irrigation.

**WEEDS CONTROLLED**

BANVEL, when applied at recommended rates, will give control of many ANNUAL, BIENNIAL, and noted (\*) PERENNIAL broadleaf weeds commonly found in turf. BANVEL will also give growth suppression of many other listed PERENNIAL broadleaf weeds and WOODY brush and vine species. (Refer to GENERAL WEED LIST.)

**MIXING AND APPLICATION**

Apply 30 to 200 gallons of diluted spray per treated acre (3 qts. to 4 1/4 gals. per 1,000 sq. ft.), depending on density or height of weeds treated and on the type of equipment used.

**RATES AND TIMINGS**

Use the higher level of listed rate ranges when treating dense vegetative growth.

Weed Stage & Type	BANVEL		
	Pints per treated acre	lbs. a.i. per treated acre	Teaspoons per 1000 sq. ft.
<b>Annual</b>			
Small, actively growing	1/2-1	1/4- 1/2	1-2 1/4
Established weed growth	1-1 1/2	1/2- 3/4	2 1/4-3 1/4
<b>Biennial, Rosette diameter</b>			
Less than 3 inches	1/2-1	1/4- 1/2	1-2 1/4
3 inches or more	1-2	1/2-1	2 1/4-4 1/2
<b>Perennials and Woody Brush and Vines</b>	1-2	1/2-1	2 1/4-4 1/2

For best performance, apply when weeds are emerged and actively growing.

Retreatments may be made as needed; however, do not exceed a total of 2 pints (1 lb. a.i.) BANVEL per treated acre during a growing season.

**TANK MIX TREATMENTS**

READ AND FOLLOW THE LABEL OF EACH TANK MIX PRODUCT USED FOR PRECAUTIONARY STATEMENTS, DIRECTIONS FOR USE, APPLICATION RATES AND TIMINGS AND OTHER RESTRICTIONS.

Tank mix treatments of BANVEL may be made with 2,4-D, MCPA, MCPP, or bromoxynil for control of additional weeds listed on the tank mix product label.

Apply 1/3 to 1/2 pint (1/10 to 1/4 lb. a.i.) of BANVEL per treated acre with 1/2 to 1 1/2 lbs. acid equivalent of 2,4-D, MCPA, or MCPP, or with 1/8 to 1/2 lb. a.i. of bromoxynil. Use the higher level of the listed rate ranges when treating established weeds. Repeat treatments may be made as needed; however, do not exceed 2 pints (1 lb. a.i.) of BANVEL per treated acre during the growing season.

**GRASS SEED CROPS GRASSES GROWN FOR SEED SUCH AS BERMUDA GRASS, BLUEGRASS, FESCUE AND RYEGRASS**

**IMPORTANT**

Observe all PRECAUTIONS. Read and follow MIXING AND APPLICATION instructions.

Refer to the PASTURE, HAY, RANGELAND, AND GENERAL FARMSTEAD (NON-CROPLAND) section for possible grazing and feeding restrictions.

Do not use on bentgrass unless possible crop injury can be tolerated.

**WEEDS CONTROLLED**

BANVEL will provide control or suppression of annual broadleaf weeds listed below. For improved control of listed weeds plus additional weeds, it is recommended that BANVEL be applied in a tank mix with other herbicides.

Alfalfa <sup>1</sup>	Chamomile, Corn
Bedstraw, Catchweed	Chickweed, Common
Bindweed, Field	Chickweed, Mouseear
Buttercup, Corn	Clover
Buttercup, Creeping	Cockle, White
Buttercup, Western Field	Dock, Broadleaf
Catchfly, Nightflowering	Dock, Curly

Hemlock, Poison  
Knapweed, Russian<sup>1</sup>  
Knapwe  
Knotweed, Prostrate  
Kochia  
Ladysthumb  
Lambsquarters, Common

Lettuce, Pricky  
Mayweed (Dogfennel)  
Ragwort, Tansy  
Sorrel, Red (Sheep Sorrel)  
Sowthistle, Annual  
Starwort, Little  
Thistle, Canada<sup>1</sup>

<sup>1</sup>Top growth only.

**RATES AND TIMINGS**

Apply 1/2 to 1 pint of BANVEL per treated acre on SEEDLING GRASS after the crop reaches the 3 to 5 leaf stage. Apply up to 2 pints of BANVEL on well-established perennial grass. DO NOT APPLY AFTER THE GRASS SEED CROP BEGINS TO JOINT. For best performance, make applications when weeds are in the 2 to 4 leaf stage and rosettes are less than 2 inches across. Use the higher level of listed rate ranges when treating more mature weeds or dense vegetative growth.

**TANK MIX TREATMENTS**

For control of grasses or additional broadleaf weeds, BANVEL may be tank mixed with all broadleaf herbicides registered for use in Grass Seed Production. Read and follow the label of each tank mix product used for precautionary statements, directions for use, weeds controlled and geographic and other restrictions.

**BROADCAST RATE PER TREATED ACRE:**

Apply 1/2 to 2 pints BANVEL with:

Product	Active Ingredient	Formulation	Amount of Product Per Acre
2,4-D amine or ester	2,4-D	4 lb/gal	1-4 pts (5-2.0 lbs a.i./A) <sup>1</sup>
MCPA amine	MCPA	4 lb/gal	1-2 pts (5-1.0 lb a.i./A) <sup>1</sup>
Buctril <sup>®</sup>	bromoxynil <sup>2</sup>	2 lb/gal	1-2 pts
Curtail <sup>®</sup>	clopyralid + 2,4-D	2.38 lb/gal	1 3/4-4 pts
Karmex <sup>®</sup>	diuron <sup>2</sup>	80% DF	2-4 lbs
Stinger <sup>®</sup>	clopyralid	3 lb/gal	1/4-1 pt

<sup>1</sup>When using formulations other than 4 lb/gal use pounds active/acre listed.

<sup>2</sup>Herbicides with the same common name and/or different formulations may be used.

**ANNUAL GRASS CONTROL**

For suppression of ANNUAL GRASS WEEDS such as:

Brome, Downy (Cheatgrass)  
Brome, Rippgut  
Fescue, Rattail  
Windgrass

Apply up to 4 pints of BANVEL per treated acre in the fall or late summer after harvest and burning of established grass seed crops. Applications should be made immediately following the first irrigation when the soil is moist and before weeds have more than 2 leaves.

**PREPLANT DIRECTIONS (POST HARVEST/FALLOW/CROP STUBBLE/SET-A-SIDE) FOR BROADLEAF WEED CONTROL BEFORE WHEAT, CORN, SORGHUM, SOYBEANS**

**IMPORTANT**

Observe all precautions. Read and follow mixing and application instructions.

**WEEDS CONTROLLED**

BANVEL may be applied alone or in tank mix combinations with other herbicides registered for this use.

BANVEL can be applied either POST HARVEST in the fall, spring or summer during the FALLOW period or to CROP STUBBLE/SET-A-SIDE acres. BANVEL, when applied at the recommended rates, will control many ANNUAL broadleaf weeds, see the WEEDS CONTROLLED section under SMALL GRAINS. In addition, BANVEL Herbicide will control or suppress the following BIENNIAL and PERENNIAL broadleaf weeds:

Alfalfa <sup>1</sup>	Knapweed, Spotted
Artichoke, Jerusalem	Nightshade, Silver
Bindweed, Field	Redvine
Bindweed, Hedge	Smartweed, Swamp
Blueweed, Texas	Sowthistle, Perennial <sup>1</sup>
Bursage (Bur Ragweed, Povertyweed, Lakeweed) <sup>1</sup>	Spurge, Leafy
Dandelion, Common <sup>1</sup>	Thistle, Bull
Dock, Curly <sup>1</sup>	Thistle, Canada <sup>2</sup>
Dogbane, Hemp	Thistle, Milk
Garlic, Wild <sup>2</sup>	Thistle, Musk
Horsenettle, Carolina	Thistle, Plumeless
Knapweed, Diffuse	Thistle, Scotch
	Trumpet creeper (Buckvine)

<sup>1</sup>PERENNIALS may be controlled using BANVEL at rates lower than those recommended for other listed PERENNIAL weeds. (See RATES AND TIMINGS under this heading.)

<sup>2</sup>See the SPECIAL TANK MIX TREATMENTS section under this heading for specific control programs for these weeds.

**RATES AND TIMINGS**

Apply BANVEL as a broadcast or spot treatment to emerged and actively growing weeds after crop harvest (post harvest) and before a killing frost or in the fallow cropland or crop stubble the following spring or summer. Agriculturally approved spray additives, such as surfactants or oils, may be used to enhance spray coverage and the herbicide's penetration of weed foliage. See CROPPING RESTRICTIONS for recommended interval between application and planting to prevent crop injury.

For best performance, make application when ANNUAL weeds are less than 6 inches 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. Most effective control of upright PERENNIAL broadleaf weeds, such as Canada thistle and Jerusalem artichoke, occurs if application is made when the majority of weeds, such as field bindweed and hedge bindweed, are in or beyond the full bloom stage.

Avoid disturbing treated areas following application. Treatments may not kill weeds which develop from seed or underground plant parts, such as rhizomes or bulblets, after the effective period for BANVEL. For seeding control, a follow-up program or other cultural practices could be instituted. For small grain in-crop uses of BANVEL, see the RATES AND TIMINGS section under the SMALL GRAINS heading for details.

**BANVEL RATES PER TREATED ACRE**

Weed Type	Amount of Product Per Treated Acre
Annual	1/2-1 pt (8 to 16 fl oz)
Biennial	1-2 pt (16 to 32 fl oz)
Perennial	1-4 pt (16 to 64 fl oz)
Perennial suppression	1-2 pt (16 to 32 fl oz)
Noted <sup>(1)</sup> perennials	2-4 pt (32 to 64 fl oz)
Other perennials	4 pt (64 fl oz)

Retreatments may be made as needed; however, do not exceed a total of 4 pints of BANVEL per treated acre during any given fallow period.

**TANK MIX TREATMENTS**

BANVEL may be tank mixed with one or more of the following herbicides for control of grasses or additional broadleaf weeds. Read and follow the label of each tank mix product used for precautionary statements, directions for use, rates and timings, weeds controlled, geographic and other restrictions.

**BANVEL BROADCAST RATE PER TREATED ACRE FOR ANNUAL WEED CONTROL:**

Apply 1/4 to 1 pint BANVEL with:

Product	Active Ingredient	Formulation	Amount of Product Per Acre
Aatrex <sup>®</sup>	atrazine	4 lb/gal	0.5-6 pt
4L <sup>1</sup>			
Aatrex <sup>®</sup>	atrazine	90% DF	0.5-3.3 lb
Nine-O <sup>®1</sup>			
Ally <sup>2</sup>	metsulfuron-methyl	75% DF	0.1 oz
Amber <sup>2</sup>	triasulfuron	75% DF	0.28-0.35 oz
Bladex <sup>1</sup>	cyanazine	90% DF	2.7-3.6 lb
Cyclone <sup>®</sup>	paraquat	2 lb/gal	1-2 pt
Fallow	glyphosate + dicamba	1.6 lb/gal	22-44 fluid oz
Master <sup>®</sup>			
Finesse <sup>®2</sup>	chlorsulfuron + metsulfuron-methyl	75% DF	0.2 oz
Gramoxone <sup>®</sup>	paraquat	2.5 lb/gal	1.5 pt
Extra			
Kerb <sup>®1</sup>	pronamide	50-W	0.5-1 lb
Landmaster <sup>®</sup>	glyphosate + 2,4-D	2.4 lb/gal	27-54 fluid oz
BW			
Roundup or Roundup RT	glyphosate	3 lb/gal	8-48 fluid oz
Sencor <sup>®</sup> DF <sup>1</sup>	metribuzin	75% DF	0.5-1 lb
Sencor <sup>®</sup> 4 <sup>1</sup>	metribuzin	4 lb/gal	0.75-1 1/2 pt
2,4-D	2,4-D	4 lb/gal	1-2 pt (0.5-1 lb ai/A) <sup>3</sup>

<sup>1</sup>Tank mixes of BANVEL with these products may be subject to special restrictions. See the product label of the tank mix partner for intended use rates, restrictions and other precautions.

<sup>2</sup>When tank mixing with sulfonyleurea herbicides refer to the product label for rates and restrictions. Use a surfactant of at least 80% active ingredient at the rate of 1-2 quarts/100 gallons of spray or not more than 0.25-0.5% by volume. Use the highest rate of surfactant when using the lower rate ranges of the tank mix and/or when treating more mature weeds or dense vegetative growth. Sulfonyleurea-resistant weeds may not be controlled by tank mixes of BANVEL and a sulfonyleurea. Refer to the BANVEL tank mix section for alternative tank mixes.

<sup>3</sup>When using formulations other than 4 lb/gal use pounds active/acre listed.

**BANVEL BROADCAST RATE PER TREATED ACRE FOR BIENNIAL AND PERENNIAL WEED CONTROL:**

Apply 1 to 4 pints of BANVEL with:

Product	Active Ingredient	Formulation	Amount of Product Per Acre
Curtail <sup>1</sup> 2,4-D	clopyralid + 2,4-D 2,4-D	2.38 lb/gal	2-4 pts
		4 lb/gal	2-6 pts (1.0-3 lb a.i./A) <sup>1</sup>
Landmaster <sup>1</sup> BW	glyphosate + 2,4-D	2.4 lb/gal	54 fluid oz
Roundup <sup>1</sup>	glyphosate	3.0 lb/gal	1-5 qts
Roundup RT	glyphosate	3.0 lb/gal	1-5 qts
Tordon <sup>1</sup> 22K	picloram	2 lb/gal	1/2-1 pt

<sup>1</sup>When using formulations other than 4 lb/gal use pounds active/acre listed.

**SPECIAL TANK MIX TREATMENTS**

For suppression of PERENNIAL weeds, apply 1/2-1 pint of BANVEL with 8-16 fluid ounces of Roundup Herbicide or Roundup RT per treated acre.

For wild garlic control, apply 1 pint BANVEL with 3 pints of 2,4-D LV ester (4 lb/gal) per treated acre. Apply when wild garlic is 4 to 8 inches tall.

For Canada thistle control, use BANVEL, BANVEL plus Curtail, or BANVEL plus Roundup Herbicide or Roundup RT tank mix treatments.

Application may be made during fallow periods for control of volunteer barley, bulbous bluegrass, downy brome, jointed goatgrass, common rye and volunteer wheat when they are actively growing. Use 1 pint BANVEL with 1/2-1 lb Kerb 50-W. Fall seeded wheat may be planted 9 months or more after application. For best performance, make application between mid-October and mid-December, prior to soil freeze up.

During fallow periods, apply BANVEL plus Landmaster BW or Fallow Master Herbicide to give improved control of kochia, wild buckwheat, prickly lettuce, field bindweed and Canada thistle. Use 1/4-1/2 pint of BANVEL plus 22-54 fluid ounces of Landmaster BW or Fallow Master Herbicide for annual weed control or 1/4-1/2 pint BANVEL plus 22-54 fluid ounces of Landmaster BW or Fallow Master Herbicide for perennial weed suppression.

**CROPPING RESTRICTIONS**

The following recommendations are based on BANVEL use rates up to 4 pints per treated acre.

**CORN, SORGHUM and SOYBEANS** may be planted in the spring following applications made during the previous year. If less than 1 inch of rainfall occurs between application and first killing frost, treated areas should be cultivated to allow herbicide to come in contact with moist soil. Cultivation may take place before or immediately after ground thaw.

Soybean injury may occur if the interval between application and planting is less than specified. In areas with greater than 30 inches of rainfall, delay planting for 30 days per pint of BANVEL per treated acre. In areas with less than 30 inches of rainfall, delay planting for 45 days per pint of BANVEL per treated acre. Exclude days when ground is frozen.

**WHEAT** may be planted in the fall or spring following applications. Also, spot applications may be made any time prior to crop emergence if crop injury can be tolerated in treated areas. Wheat injury may occur if the interval between application and planting is less than specified.

East of the Mississippi River, the interval is 20 days per pint of BANVEL per treated acre or 1.25 days per 1 ounce. Moisture is essential for BANVEL degradation. Exclude days when ground is frozen.

West of the Mississippi River, the interval is 45 days per pint of BANVEL per treated acre or 3 days per ounce. Moisture is essential for BANVEL degradation. Exclude days when ground is frozen.

Following a normal harvest of barley, oats, or wheat, any rotational crop may be planted. If the interval before harvest is shortened, such as when cover crops will be plowed under, do not follow up with the planting of a sensitive crop.

**CONTROL OF PERENNIAL BROADLEAF WEEDS IN CROPLAND (SPOT APPLICATION ONLY)**

**FOR USE ONLY IN THE STATES OF IDAHO, MONTANA, NEVADA, OREGON, UTAH, AND WASHINGTON.**

**IMPORTANT**

Observe all PRECAUTIONS. Read and follow MIXING AND APPLICATION instructions.

Do not treat subirrigated cropland or areas where the soil remains saturated with water throughout the year.

Make only one application of BANVEL<sup>®</sup> herbicide per year.

**WEEDS CONTROLLED**

BANVEL, when applied at recommended rates, will control many broadleaf weeds including:

- |                              |                   |
|------------------------------|-------------------|
| Bindweed, Field              | Knapweed, Russian |
| Dock, Broadleaf (Bitterdock) | Ragwort, Tansy    |
| Dock, Curly                  | Spurge, Leafy     |
| Knapweed, Black              | Thistle, Canada   |

**RATES AND TIMINGS**

BANVEL may be applied at any time following a crop harvest to stubble fallow or other cropland. Application should be made when weeds are actively growing and prior to a killing frost.

Apply 2 quarts (2 lbs. a.i.) of BANVEL per treated acre. Application may be made up to one month prior to the planting of wheat.

**NOTE:** Do not use unless injury to wheat or rotated barley will be acceptable.

Barley, oats, corn, sorghum (milo), annual or perennial grass crops may be planted into treated areas one year after application. Crops grown for seed (other than perennial grass seed) should not be planted into treated areas until three years after application. Do not plant broadleaf crops such as alfalfa, beans, peas, potatoes, or sugar beets into treated areas until two years after application.

In most cases, treatments will not kill perennial weed seedlings which germinate from seed one or two years after treatment. Once the effect of the chemical has been lost, a follow-up program for seedling control or other cultural practices should be instituted.

**WIPER APPLICATION USES**

**IMPORTANT**

Observe all PRECAUTIONS.

BANVEL may be applied through wiper application equipment to control or suppress actively growing broadleaf weeds, brush and vines. Use a solution containing 1 part BANVEL to 1 part water. Do not contact desirable vegetation with herbicide solution. Wiper application should only be made to crops (including PASTURES) and NON-CROPLAND AREAS described in this label with the exception of GRAIN SORGHUM (MILO).

**STORAGE AND DISPOSAL**

**PROHIBITIONS**

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

**STORAGE**

Store in original container in a well-ventilated area separately from fertilizer, feed and foodstuffs. Avoid cross-contamination with other pesticides. Spillage or leakage should be contained and absorbed with clay granules, sawdust, or equivalent material for disposal.

**PESTICIDE DISPOSAL**

Triple rinse pesticide from containers and use rinsates in the pesticide application. Wastes which cannot be used according to label instructions may be disposed of on site or at an approved waste disposal facility.

**CONTAINER DISPOSAL**

Plastic or Metal: After triple rinsing (or equivalent), offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities, such as burning of plastic containers. If burned, stay out of smoke.

**BULK STORAGE AND DISPOSAL**

**AGITATE BEFORE USE**

**PROHIBITIONS**

Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited. This product may not be mixed, loaded, or used within 50 feet of all wells including abandoned wells, drainage wells, and sinkholes.

**STORAGE**

Groundwater contamination may be reduced by diking and flooring of permanent liquid bulk storage sites with an impermeable material.

**PESTICIDE DISPOSAL**

Pesticide spray mixture or rinsate that cannot be used according to label instructions must be disposed of according to Federal and local procedures under Subtitle C of the Resource Conservation and Recovery Act.

**BULK TANK MAINTENANCE**

Follow clean-out directions in the Dealer Bulk Handling Guide for BANVEL listed under Bulk Storage Tank Requirements.

**GENERAL**

Consult Federal, state, or local disposal authorities for approved alternative procedures, such as limited burning.

**WARRANTY**

Seller warrants that the product conforms to its chemical description and is reasonably fit for the purpose stated on the label when used in accordance with directions under normal conditions of use, but neither this warranty nor any other warranty of merchantability or fitness for a particular purpose, expressed or implied, extends to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to seller, and buyer and the limit of liability of any such use. The exclusive remedy of user or buyer and the limit of liability of Riverdale Chemical Company is the purchase price paid for the quantity of product involved.

**ACCEPTED  
with COMMENTS  
in EPA Letter Dated**

**NOV 16 2000**

**Under the Federal Insecticide,  
Fungicide, and Rodenticide Act  
as amended, for the pesticide  
registered under EPA Reg. No.  
228-379**

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