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U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF PESTICIDES PROGRAMS
REGISTRATION DIVISION (WH-567)
WASHINGTON, D.C. 20460

EPA REGISTRATION NO.

264-531

DATE OF ISSUANCE

FEB 25 1993

TERM OF ISSUANCE

NOTICE OF PESTICIDE: REGISTRATION
 REREGISTRATION

(Under the Federal Insecticide, Fungicide,
and Rodenticide Act, as amended)

NAME OF PESTICIDE PRODUCT

BUCTRIL GEL

NAME AND ADDRESS OF REGISTRANT (Include ZIP code)

RHONE-POULENC AG. CO.
P.O. BOX 12014 T.W. ALEXANDER DR.
RESEARCH TRIANGLE PARK, NC 27709

NOTE: Changes in labeling formula 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 U.S. 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.

A copy of the labeling accepted in connection with this Registration/Reregistration is returned herewith.

Registration is in no way to be construed as an indorsement or approval of this product by this 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 section 3(c)(7)(A) provided that you:

1. Submit/cite all data required for registration/reregistration of your product under FIFRA Section 3(c)(5) and sec. 4 when the Agency requires all registrants of similar products to submit such data.
2. Make the labeling changes listed below before you release the product for shipment:
 - a. Add the phrase "EPA Registration No. 264-531".
3. Your waiver request for the acute inhalation study is hereby granted because an aerosol could not be generated due to the high viscosity of the gel formulation.
4. Submit five (5) copies of your final printed labeling before you release the product for shipment. Refer to the A-79 enclosure for a further description of final printed labeling.

ATTACHMENT IS APPLICABLE

SIGNATURE OF APPROVING OFFICIAL

DATE

2/25/93

20/21

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

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

Sincerely yours,

Robert J. Taylor
Product Manager (25)
Fungicide-Herbicide Branch
Registration Division (H7505C)

Enclosure

RD:RTaylor:eja:2/25/93:3056800

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UCTRIL® GEL HERBICIDE

FOR THE CONTROL OF CERTAIN BROADLEAF WEEDS IN SMALL GRAINS, SEEDLING ALFALFA, SORGHUM, FLAX, GARLIC, ONIONS, MINT AND GRASSES GROWN FOR SEED AND PRODUCTION.

INGREDIENT: Octanoic acid ester of bromoxynil* (3,5-dibromo-4-hydroxybenzotrile).....28.7%
Heptanoic acid ester of bromoxynil* (3,5-dibromo-4-hydroxybenzotrile).....27.6%
INGREDIENTS:.....43.7%
Bromoxynil octanoate and heptanoic equivalent to but not less than 4 pounds of bromoxynil per gallon of product.

Reg. No. 264-LGR

E.P.A. Est. No.

KEEP OUT OF REACH OF CHILDREN DANGER PELIGRO

ADVERTENCIA AL USUARIO: Si usted no lee ingles, no use este producto hasta que le etiqueta haya sido explicado ampliamente.

For PRODUCT USE Information Call 1-800-334-8745.

For MEDICAL AND TRANSPORTATION Emergencies ONLY Call 24 Hours A Day 1-800-334-7577.

STATEMENT OF PRACTICAL TREATMENT

SKIN: Wash with plenty of soap and water. Get medical attention.
ALLOWED: Drink promptly a large quantity of milk, egg whites, gelatin solution, or if these are not available drink large quantities of water. Do not induce vomiting, contains petroleum distillates. Avoid alcohol. Call a physician or Poison Control Center. Do not give anything by mouth to an unconscious person.
EYES: Flush with water for at least 15 minutes. Get medical attention.
ADVISE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

PRECAUTIONARY STATEMENTS

Irritant. Causes burns. Do not get in eyes, on skin, or on clothing. May be fatal if swallowed. Harmful if absorbed through skin. Wear protective clothing and rubber gloves. Wash thoroughly with soap and water after handling, before eating and drinking, and before reuse. Causes substantial, but temporary eye injury. Do not get in eyes. Wear goggles, face shield, or safety glasses.

RESTRICTED AERIAL APPLICATION, human flaggers are prohibited unless in enclosed vehicles. Aerial application is prohibited within 300 feet of residential areas (e.g., homes, schools, hospitals, shopping areas, etc.)

PERSONS HANDLING THE CONCENTRATE MUST OBSERVE THE FOLLOWING REQUIREMENTS.

Clean cotton (or cloth) coveralls that cover all parts of the body except the head, hands, and feet. The coveralls must be worn over a long sleeve shirt and long pants. Wear clean nitrile gloves, a chemical resistant apron, goggles or face shield, and chemical resistant shoes, shoe coverings, or boots.

PERSONS APPLYING THIS PRODUCT, OR REPAIRING OR CLEANING EQUIPMENT USED WITH THIS PRODUCT, MUST OBSERVE THE FOLLOWING REQUIREMENTS.

When applying this product from a tractor (unless the tractor has a completely enclosed cab), or when repairing or cleaning equipment used with the product, you must wear clean nitrile gloves and clean cotton (or cloth) coveralls that cover all parts of the body except the head, hands, and feet. Coveralls must be worn over a long sleeve shirt and long pants.

Tractor operators (except for pilots) and all persons repairing or cleaning equipment used with this product must wear chemical resistant shoes, shoe coverings, or boots.

When applying from a tractor with a completely enclosed cab or aerial application is required whenever this product is applied to 350 or more acres in a day. To avoid contamination, coveralls and gloves worn when handling the concentrate must be removed prior to entering an enclosed cab or cockpit. When applying from a tractor with an enclosed cab, clean coveralls and clean nitrile gloves must be worn inside the cab, and must be worn when exiting the cab to perform in-field maintenance or repair.

To reduce exposure to residues, wash the spray rig, tractor, and all other equipment used to handle or apply this product with water before or after using the equipment for any other purpose.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to wildlife and fish. Use with care when applying to areas frequented by wildlife or adjacent to any body of water. Do not apply directly to water. Do not apply when weather conditions favor drift from target areas. Do not contaminate water when cleaning equipment washwaters.

PHYSICAL AND CHEMICAL HAZARDS

Do not use or store near heat or open flame.

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ACCEPTED
FEB 5 1993
Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 264-531

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read entire label before using this product.

REENTRY STATEMENT

Do not apply this product in such a manner as to directly or through drift expose workers or other persons. The area being treated should be vacated by unprotected persons.

Do not enter treated areas without protective clothing until sprays have dried.

Because certain states may require more restrictive reentry intervals for various crops treated with this product, consult your State Department of Agriculture for further information.

Written or Oral warnings must be given to workers who are expected to be in a treated area or in an area about to be treated with this product. Oral warnings must be given if there is reason to believe that written warnings cannot be understood by workers or if the language customarily understood by the workers. Oral and Written warnings must include the STATEMENT OF PRECAUTIONS, STATEMENT OF TREATMENT and REENTRY STATEMENTS as they appear on the label.

STORAGE AND DISPOSAL

STORAGE

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

Do not store near fertilizers or seeds. Store in a cool, dry place above 32°F. Do not store this product under wet conditions.

PESTICIDE DISPOSAL

Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL

Do not reuse outer bag. Dispose of outer bag in a sanitary landfill, by incineration or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

GENERAL INFORMATION

BUCTRIL® GEL is formulated as gelatinous mixture of octanoic acid and heptanoic acid esters of bromoxynil containing 4.0 pounds of bromoxynil per gallon of formulated product. BUCTRIL® GEL is packaged in 2-1/2 pint water soluble bags. Each water soluble bag contains 1.25 lb of bromoxynil active ingredient.

BUCTRIL® GEL is a selective postemergence herbicide for control of important broadleaf weeds infesting corn (field and popovers), grain and forage), small grains (wheat, barley, oats, rye and triticale), alfalfa (seedling), flax, garlic, mint (established peppermint), onions, Conservation Reserve Program Areas (CRP) and grass grown for seed or sod production. Optimum weed control is obtained when BUCTRIL® GEL is applied to actively growing weed seedlings. For best performance, BUCTRIL® GEL should be applied to weeds growing under favorable climate and agronomic conditions. Weeds that are exhibiting clear signs of injury (i.e. wilting, drooping of leaves, stunted growth, loss of leaves, or other symptoms) due to abnormally hot or cool weather, flooding, plant pathogens, cultivation, insects, other pesticides, fertilizers or other factors may not be controlled by BUCTRIL® GEL. BUCTRIL® GEL is primarily a contact herbicide, therefore thorough coverage of the weed seedlings is essential for optimum control.

BUCTRIL® GEL has little residual activity. Therefore subsequent flushes of weeds will not be controlled by the initial application. Generally crops that form a good canopy will help shade subsequent weed flushes. However, certain crops or short-straw crops, for example Yuccora Rojo wheat, may not develop the crop canopy fast enough to shade the subsequent flushes of weeds.

Occasional transitory leaf burn may occur. The temporary leaf burn is similar to that seen with liquid fertilizer. Because BUCTRIL® GEL is not systemic, recovery of the crop is generally rapid with no lasting effect. Frequency and amount of leaf burn may be greater when crops are stressed by abrasive winds, cool to cold evening temperatures or mechanical injury, such as the hail, sleet or insect feeding. To reduce the potential for temporary leaf burn, applications should be made to dry crops and at the recommended spray volumes per acre when weather conditions are not extreme.

MIXING, LOADING AND HANDLING INSTRUCTIONS

GENERAL HANDLING INSTRUCTIONS: Each BUCTRIL® GEL water soluble bag comes sealed in a clear plastic sleeve. Do not break the seal until the time of use. To use, open the end of the outer sleeve by tearing along the printed solid black line. Use a knife or other sharp object to break the seal. Once the outer protective sleeve is open, the water soluble bag is dropped into the spray tank at the appropriate time without touching it.

BUCTRIL® GEL ALONE: Begin filling the spray tank with clean water. When bottom of spray tank is covered with water to a depth of 6-8 inches, add the recommended number of BUCTRIL® GEL soluble bags. Avoid dropping the soluble bags into the tank in a way that the bags end up covering the recirculation and outlet holes. After adding bags, continue to fill tank with water for 3-4 minutes after dropping bags into the tank for bags to dissolve before starting agitation. Tank should be at least 1/2 full when agitation is started. Continue adding water to tank to achieve the desired level. Maintain sufficient agitation to maintain uniform spray mixture during application.

BUCTRIL® GEL TANK-MIXTURES: Begin filling the spray tank with clean water. When bottom of spray tank is covered with water to a depth of 6-8 inches, add the recommended number of BUCTRIL® GEL soluble bags. After adding bags, continue to fill tank with water. Allow 3-4 minutes after dropping bags into the tank for bags to dissolve before starting agitation. Tank should be at least 1/2 full when agitation is started. Add the recommended amount of wettable powder, soluble powder, EC or soluble liquid product to be tankmixed to the spray tank. Continue adding water to tank to achieve the desired level, maintaining agitation.

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BUCTRIL® GEL TANK-MIXTURES WITH SPRAYABLE LIQUID FERTILIZERS OR SPRAY ADDITIVES: Begin filling the spray tank with clean water. When bottom of spray tank is covered with water to a depth of 6-8 inches, add the recommended number of BUCTRIL® GEL soluble bags. After adding bags, continue to fill tank with water. Allow 3-4 minutes after dropping bags into the tank for bags to dissolve before starting agitation. Tank should be at least 1/2 full when agitation is started. Add the recommended amount of liquid fertilizer, surfactant or crop oil concentrate. Continue adding water to tank to achieve the desired level. If BUCTRIL® GEL is to be tankmixed with another dry or liquid pesticide formulation as well as liquid fertilizer or a spray adjuvant, add the liquid fertilizer or spray adjuvant to the tank last, then fill tank to desired level while maintaining agitation.

HANDLING PRECAUTIONS

- Do not allow the empty outer sleeve or the tear-strip to fall into the spray tank as they are not water soluble and may clog the sprayer.
- Do not handle the inner bag with wet gloves as the bag will begin to dissolve on contact with even a small amount of water.
- Do not open the inner bags or attempt to remove the gel from them. The gel is not designed to be re-measured or subdivided.
- The entire contents of the water soluble bag must be used.

COMPATIBILITY OF INSECTICIDES WITH BUCTRIL® GEL

The following foliar insecticides are compatible with BUCTRIL® GEL Herbicide as tank mixtures.

INSECTICIDE COMMON NAME	TRADE NAME	FORMULATION
Diazinon	Various	Emulsifiable Concentrate
Dimethiate	Various	Emulsifiable Concentrate
Trichlorfon	Dylox ²	Soluble Powder
Carbaryl	Furadan ⁶	Flowable
Chlorpyrifos	Lorsban ⁴	Emulsifiable Concentrate
Malathion	Various	Emulsifiable Concentrate
Oxydemeton-methyl	Metasystox-R ²	Sprayable Concentrate
Permethrin	Pounce ⁶	Emulsifiable Concentrate
Fenvalerate	Pydrin ⁵	Emulsifiable Concentrate
Carbaryl	Sevin ⁶	Sprayable Soluble powder or Flowable
Demeton	Systox ²	Emulsifiable Concentrate

APPLICATION PROCEDURES

BUCTRIL® GEL can be applied to registered use areas by ground or aerial equipment. The following provides recommended methods of application for each crop.

CROP	TYPE OF APPLICATION EQUIPMENT	
	GROUND	AERIAL
Small grains	X	X
Birding alfalfa	X	X
Field and Popcorn	X	X
Sorghum	X	X
Flax	X	X
Garlic	X	X
Onion	X	
Mini	X	
Grass grown for seed or sod production	X	X

(X) Indicates recommended application use

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GROUND APPLICATION

Use a standard herbicide boom sprayer that provides uniform and accurate application. Sprayer should be equipped with screens no finer than 50 mesh in the nozzle tips and in-line strainers.

Select a spray volume and delivery system that will ensure thorough and uniform spray coverage. For optimum spray distribution and thorough coverage use of flat fan nozzles (maximum tip size 8008) with a minimum spray pressure of 30 psi at the nozzle tips are recommended. Other nozzle types that produce coarse spray droplets may not provide adequate coverage of the weeds to ensure optimum control. Raindrop nozzles are not recommended as weed control with BUCTRIL® GEL may be reduced. In general a minimum spray volume of 10 gallons per acre (GPA) is recommended for optimum spray coverage. A minimum of 5 GPA with a minimum spray pressure of 50 psi may be used with higher speed, low volume ground application if ground terrain, crop and weed density allow effective spray distribution. When using higher speed equipment a maximum speed of 10 mph is suggested if field conditions cause excessive boom movement during application and subsequent poor spray coverage. Ground applications made when dry, dusty field conditions exist may provide reduced weed control in wheel track areas.

When weed infestations are heavy, use of higher spray volumes and spray pressure will be helpful in obtaining uniform weed coverage. When corn or grain sorghum are large enough to interfere with the spray pattern, drop nozzles should be used to obtain uniform weed coverage.

Do not apply when winds are gusty or when other conditions favor poor spray coverage and/or off target spray movement.

AERIAL APPLICATION

Use orifice size, cores and nozzle types and arrangements that will provide for optimum spray distribution and maximum coverage. In general a minimum spray volume of 5 GPA and a maximum pressure of 40 psi are recommended. A minimum spray volume of 3 GPA may be used if crop canopy and weed density allow adequate spray coverage at that gallonage.

Do not apply during inversion conditions, when winds are gusty or when other conditions favor poor spray coverage and/or off target spray movement. Off target spray movement can be minimized by increasing the spray volume per acre and not applying when winds exceed 10 mph.

CULTIVATION

When properly utilized, timely cultivations of row crops may aid overall weed control efforts as well as crop growth. However, cultivation BEFORE or DURING BUCTRIL® GEL applications may place target weeds under stress, resulting in erratic weed control. Whenever BUCTRIL® GEL is being utilized in an overall weed control program, plan to postpone any anticipated cultivations until 5-7 days after application to ensure best performance.

GENERAL WEED LIST

Postemergence application of BUCTRIL® GEL Herbicide will control the following weeds when sprayed in the seedling stage. Maximum weed stage of growth is listed under RECOMMENDED USES for each crop.

MOST SUSCEPTIBLE BROADLEAF WEED SPECIES

- Annual Sowthistle (*Sonchus oleraceus*)
- Black Nightshade (*Solanum nigrum*)
- Blue Mustard (*Chorispora tenella*)
- Bristly starbur (*Acanthopappus hispidum*)
- Coast Fiddleneck (*Amsinckia intermedia*)
- Common Cocklebur (*Xanthum strumarium*)
- Common Lambequarters (*Chenopodium album*)
- Common Tarweed (*Hemizonia congesta*)
- Cutleaf Nightshade (*Solanum triflorum*)
- Eastern Black Nightshade (*Solanum ptycanthum*)
- Field Pennygrass (*Thlaspi arvense*)
- Green Smartweed (*Polygonum sobrum*)
- Hairy Nightshade (*Solanum sarachoides*)
- Jimsonweed (*Datura stramonium*)
- Ladythumb (*Polygonum persicaria*)
- Pennsylvania Smartweed (*Polygonum strumarium*)
- Pepperweed spp. (*Lepidium* spp.)
- Shepherdspurse (*Capsella bursa-pastoris*)
- Silverleaf Nightshade (*Solanum elaeagnifolium*)
- Tartary Buckwheat (*Fagopyrum tartaricum*)
- ¹Sunflower (*Helianthus annuus*)
- Wild Buckwheat (*Polygonum convolvulus*)

¹For control of sunflower, delay application until first emerging sunflower seedlings are 4 inches in height.

SUSCEPTIBLE BROADLEAF WEED SPECIES

- Buffalobur (*Solanum rostratum*)
- Common Groundsel (*Senecio vulgaris*)
- Common ragweed (*Ambrosia artemisiifolia*)
- Corn Chamomile (*Anthemis arvensis*)
- Corn Gromwell (*Lithospermum arvense*)
- Cow Cockle (*Saponaria vaccaria*)
- Giant Ragweed (*Ambrosia trifida*)
- Hemp Seebania (*Sesbania exaltata*)
- lyleaf morningglory (*Ipomoea hederacea*)
- Knawel (*Sciranthus annuus*)
- ²Kochia (*Kochia scoparia*)
- London Rocket (*Sisymbrium irio*)
- Mayweed (*Anthemis cotula*)
- Prostrate Knotweed (*Polygonum aviculare*)
- Puncture Vine (*Tribulus terrestris*)
- ²Redroot Pigweed (*Amaranthus retroflexus*)
- Russian Thistle (*Salsola kali*)
- ²Spiry Pigweed (*Amaranthus spinosus*)
- Tall Morningglory (*Ipomoea purpurea*)
- ²Tall Waterhemp (*Amaranthus tuberculatus*)
- Tumble mustard (*Sisymbrium altissimum*)
- Velvetleaf (*Abutilon theophrasti*)
- Venice Mallow (*Hibiscus trinnum*)
- Wild Mustard (*Sinapis arvensis*)
- Wild Radish (*Raphanus raphanistrum*)

²For effective control, these weeds should not exceed the 4 leaf stage or 2 inches in height, whichever comes first.

WEED SUPPRESSION

BUCTRIL® GEL suppresses the growth of Canada thistle (*Cirsium arvense*) by burning down top growth. Regrowth may occur.

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BUCTRIL GEL APPLICATION RATE CHART

- Directions:
- 1) Select intended use rate in pints per acre.
 - 2) Select numbers of acres to be treated from the rate column selected in Step 1.
 - 3) Number of gel bags needed is listed in the first column.

BUCTRIL® GEL RATE	NUMBER OF ACRES TREATED			
	3/8 Pint/Acre	1/2 Pint/Acre	3/4 Pint/Acre	1 Pint/Acre
1	6 2/3	6	9 1/3	2 1/2
2	13 1/3	10	18 2/3	5
3	20	15	10	7 1/2
4	26 2/3	20	13 1/3	10
5	33 1/3	25	16 2/3	12 1/2
6	40	30	20	15
7	46 2/3	35	23 1/3	17 1/2
8	53 1/3	40	26 2/3	20
9	60	45	30	22 1/2
10	66 2/3	50	33 1/3	25
11	73 1/3	55	36 2/3	27 1/2
12	80	60	40	30
13	86 2/3	65	43 1/3	32 1/2
14	93 1/3	70	46 2/3	35
15	100	75	50	37 1/2
16	106 2/3	80	53 1/3	40

NOTE: BUCTRIL® GEL is twice as concentrated as BUCTRIL® Herbicide.

CEREAL GRAIN CROPS

CORN (FIELD AND POP) AND SORGHUM (GRAIN AND FORAGE)

BUCTRIL® GEL RECOMMENDATIONS

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
BUCTRIL® GEL	Preemergence 1/2 - 3/4 pint/A	Apply to corn or sorghum before planting until just prior to crop emergence.	See CORN AND SORGHUM APPLICATION RATE TABLE - BUCTRIL® GEL for list of weeds and corresponding stages of growth that are controlled by BUCTRIL® GEL at recommended rates of application. For control of additional weeds not listed in the rate table see the GENERAL WEED LIST.
	1/2 pint/A	Apply to corn after emergence but prior to tassel emergence. Apply to sorghum after emergence but prior to the preboot stage (growth stage 4).	
	3/4 pint/A	Apply to corn between the 4 leaf stage and prior to tassel emergence. Apply to sorghum between the 4 leaf stage and prior to preboot stage (growth stage 4).	

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CORN AND SORGHUM APPLICATION RATE TABLE - BUCTRIL® GEL

WEED SPECIES¹		1/2 Pint/A		3/4 Pint/A	
When determining leaf stage, count all leaves except cotyledonary leaves		Max. Leaf Stage	Max. Weed Height (inches)	Max. Leaf Stage	Max. Weed Height (inches)
Black Nightshade	(<i>Solanum nigrum</i>)	6	6	6	6
Buffalobur	(<i>Solanum rostratum</i>)	4	2	6	4
Common Cocklebur	(<i>Xanthium strumarium</i>)	6	8	6	10
Common Lambquarters	(<i>Chenopodium album</i>)	-	6	-	8
Common Ragweed	(<i>Ambrosia artemisiifolia</i>)	6	4	6	6
Eastern Black Nightshade	(<i>Solanum pycnanthum</i>)	6	6	6	6
Giant Ragweed	(<i>Ambrosia trifida</i>)	6	4	6	6
Hemp Sesbania	(<i>Sesbania exaltata</i>)	-	-	4	4
Hyacinth Morningglory	(<i>Ipomoea hederacea</i>)	3	3	4	4
Jimsonweed	(<i>Datura stramonium</i>)	4	4	6	6
Kochia	(<i>Kochia scoparia</i>)	-	-	-	2
Ladysthumb	(<i>Polygonum persicaria</i>)	4	4	6	6
Pennsylvania Smartweed	(<i>Polygonum strumarium</i>)	4	4	6	6
Redroot Pigweed ³	(<i>Amaranthus retroflexus</i>)	-	-	4	2
Spike Pigweed ³	(<i>Amaranthus spinosus</i>)	-	-	4	2
Sunflower	(<i>Helianthus annuus</i>)	4	6	6	6
Tall Morningglory	(<i>Ipomoea purpurea</i>)	3	3	4	4
Tall Waterhemp ³	(<i>Amaranthus tuberculatus</i>)	-	-	4	2
Velvetleaf	(<i>Abutilon theophrasti</i>)	4	3	6	5
Vernice Mallow	(<i>Hibiscus trionum</i>)	-	-	4	2
Wild Buckwheat	(<i>Polygonum convolvulus</i>)	4	6	6	6
Wild Mustard	(<i>Sinapis arvensis</i>)	-	-	4	4
WEEDS SUPPRESSED²					
Canada Thistle	(<i>Cirsium arvense</i>)	Not Recommended		6 inch to bud stage	

¹ When determining leaf stage, count all leaves except cotyledonary leaves.

² BUCTRIL® GEL suppresses the growth by burning down of top growth. Regrowth may occur.

³ Control of pigweeds in the high plains areas of Texas and Oklahoma may not be satisfactory with BUCTRIL® GEL Herbicide. Repeat applications may be necessary to achieve satisfactory control.

BUCTRIL® GEL TANK MIXTURE RECOMMENDATIONS

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
BUCTRIL® GEL + atrazine	Preemergence 3/8-3/4 pint/A + 1/2-1 1/5 lb a/A	Apply to corn or sorghum before planting until just prior to crop emergence.	See CORN AND SORGHUM APPLICATION RATE TABLE - BUCTRIL® GEL + ATRAZINE TANK MIXTURES for list of weeds and corresponding stages of growth that are controlled by BUCTRIL® GEL + Atrazine tank mixtures at recommended rates of application. For control of additional weeds not listed in the rate table see the GENERAL WEED LIST.
	3/8-1/2 pint/A + 1/2-1 1/5 lb a/A	Apply to corn after emergence but before corn is 12 inches tall. Apply to sorghum after the 3 leaf stage but before sorghum is 12 inches tall.	
	3/4 pint/A + 1/2-1 1/5 lb a/A	Apply to corn between the 4 leaf stage and before corn is 12 inches tall. Apply to sorghum between the 4 leaf stage and before sorghum is 12 inches tall.	

ATRAZINE TANK MIX RESTRICTIONS

Atrazine is a Restricted Use Herbicide due to ground water concerns, users must read and follow all precautionary statements and instructions on the atrazine label in order to minimize the potential for atrazine to reach ground water.

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CORN (FIELD AND POP) AND BORGHUM (GRAIN AND FORAGE) (continued)

CORN AND BORGHUM APPLICATION RATE TABLE - BUCTRIL® GEL + ATRAZINE TANK MIXTURES

WEED SPECIES ¹	BUCTRIL® GEL AND ATRAZINE RATE (TANK MIX)											
	3/4 pt/A		3/4 pt/A		1/2 pt/A		1/2 pt/A		3/4 pt/A		3/4 pt/A	
	MAX LEAF STAGE	MAX WEED HEIGHT	MAX LEAF STAGE	MAX WEED HEIGHT	MAX LEAF STAGE	MAX WEED HEIGHT	MAX LEAF STAGE	MAX WEED HEIGHT	MAX LEAF STAGE	MAX WEED HEIGHT	MAX LEAF STAGE	MAX WEED HEIGHT
Black Nightshade (<i>Solanum nigrum</i>)	4	4	4	4	8	8	8	8	8	8	8	8
Bullfinch (<i>Solanum elaeagnifolium</i>)	4	4	4	4	8	4	8	4	8	4	8	4
Burweed (<i>Sisymbrium officinalis</i>)	4	4	4	4	4	4	8	8	8	8	8	8
Common Cocklebur (<i>Xanthoxylum</i>)	8	8	8	10	8	10	10	12	10	12	10	12
Common Lambquarters (<i>Chenopodium album</i>)	-	8	-	10	-	10	-	12	-	12	-	12
Common Ragweed (<i>Ambrosia artemisiifolia</i>)	8	4	8	8	8	8	8	8	8	8	8	8
Eastern Black Nightshade (<i>Solanum peltatum</i>)	4	4	4	4	8	8	8	8	8	8	8	8
Entireleaf Morningglory (<i>Ipomoea hederacea</i>)	-	-	4	8	4	3	4	3	4	3	4	3
Glory Beggweed (<i>Ambrosia trifida</i>)	4	8	8	8	8	8	8	8	8	10	8	10
Hemp Bockaria (<i>Boerhaavia caroliniana</i>)	4	4	4	4	4	4	4	4	4	4	4	4
Hybrid Morningglory (<i>Ipomoea hederacea</i>)	3	3	4	4	4	4	4	4	4	4	4	4
Ironweed (<i>Lactuca stramonium</i>)	4	4	4	4	8	8	8	8	8	8	8	8
Kochia (<i>Kochia scoparia</i>)	-	2	-	2	-	2	-	2	-	4	-	4
Ladysthumb (<i>Polygonum persicaria</i>)	4	4	4	4	8	8	8	8	8	8	8	8
Palmleaf Morningglory (<i>Ipomoea wrightii</i>)	-	-	4	3	4	3	4	3	4	3	4	3
Pennsylvania Smartweed (<i>Polygonum acetosarium</i>)	4	4	4	4	8	8	8	8	8	8	8	8
Sticky Side (<i>Sida spinosa</i>)	-	-	8	2	4	1	8	2	4	1	8	2
Puncturevine (<i>Tribulus terrestris</i>)	-	-	-	-	-	-	8	4	8	4	8	4
Purple Morningglory (<i>Ipomoea purpurea</i>)	-	-	2	3	2	3	2	3	2	3	2	3
Redroot Pigweed ³ (<i>Amaranthus retrofractus</i>)	4	2	8	8	8	4	8	8	8	4	8	8
Smallflower Morningglory (<i>Jacquemontia caroliniana</i>)	-	-	4	3	4	3	4	3	4	3	4	3
Smooth Pigweed ³ (<i>Amaranthus hybridus</i>)	4	2	8	4	4	2	3	4	8	4	8	4
Spike Pigweed ³ (<i>Amaranthus spicatus</i>)	4	2	8	8	8	4	8	8	8	4	8	8
Sunflower (<i>Helianthus annuus</i>)	8	8	8	10	8	10	10	12	10	12	10	12
Tall Morningglory (<i>Ipomoea purpurea</i>)	3	3	4	4	4	4	4	4	4	4	4	4
Tall Waterhemp ³ (<i>Amaranthus triflorus</i>)	4	2	8	8	8	4	8	8	8	4	8	8
Toothed Spurge (<i>Euphorbia dentata</i>)	2	2	2	2	4	4	4	4	4	4	4	4
Velvetleaf (<i>Abutilon theophrasti</i>)	4	3	4	3	8	8	8	8	8	8	8	8
Verice Mallow (<i>Fibicus tinnum</i>)	4	2	4	2	4	2	4	2	4	2	4	2
Wild Buckwheat (<i>Polygonum convolvulus</i>)	8	8	8	10	8	10	10	12	10	12	10	12
Wild Mustard (<i>Sinapis arvensis</i>)	4	4	4	4	4	4	4	4	4	4	4	4

WEEDS SUPPRESSED ¹		Not Recommended		Not Recommended		8-bud		8-bud		8-bud		8-bud	
Canada Flea (<i>Clethra ovata</i>)													

- When determining leaf stage, count all leaves except cotyledonary leaves.
- Selected rates of BUCTRIL® GEL + atrazine tank mixtures suppress the growth by burning down of top growth. Regrowth may occur.
- If pigweeds (*Amaranthus* sp.) present in the field to be treated have been identified as atrazine resistant biotypes, use BUCTRIL® GEL at 3/4 pt/A in a tank mixture with atrazine at 1/2 or 1 1/5 lb a/A. Applications should be made when pigweeds do not exceed the 4-leaf stage and 2 inches in height. Control of pigweeds in the high plains areas of Texas and Oklahoma may not be satisfactory with BUCTRIL® GEL + atrazine tank mixtures. Repeat applications may be necessary to achieve satisfactory control.

ATRAZINE CONVERSION TABLE^{1/}

ATRAZINE FORMULATION	ATRAZINE RATE POUNDS OF ACTIVE INGREDIENT PER ACRE	ATRAZINE FORMULATION RATE PER ACRE
Atrazine 4L	1/2	1 Pint
Atrazine 80WP	1 1/5	2 2/5 Pints
	1/2	5/8 Pound
	1 1/5	1 1/2 Pounds
Astrex® Nine-O ¹²	1/2	3/5 Pound
	1 1/5	1 1/3 Pounds

^{1/}Follow all precautions and limitations on the labels of products used in tank mixture with BUCTRIL® GEL.

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CORN (FIELD AND POP) AND SORGHUM (GRAIN AND FORAGE) (continued)

SPECIAL USE DIRECTIONS FOR OTHER WEED PROBLEMS IN CORN AND SORGHUM

Large Common Cocklebur, Common Lambquarters and Sunflower

For control of common cocklebur and common lambquarters up to 14 inches in height and sunflower up to 18 inches in height, use a postemergence application of BUCTRIL® GEL at 1/2 pint/A. Make a second application of BUCTRIL® GEL at the same rate 7 to 10 days later.

Large Velvetleaf

For control of velvetleaf up to 14 inches in height, use postemergence application of BUCTRIL® GEL at 3/4 pint/A or BUCTRIL® GEL + atrazine tank mixture at 1 pint/A + 1 1/5 lb a/A. Make a second application of BUCTRIL® GEL at 1/2 pint/A 7 to 10 days later.

Canada Thistle Management

For effective management of Canada thistle, the following BUCTRIL® GEL treatments should be applied to thistle from 8" to bud stage for in-season burndown of top growth:

- BUCTRIL® GEL at 3/4 pint/A
- BUCTRIL® GEL at 3/4 pint/A + atrazine at 1/2 - 1 1/5 lbs a/A
- BUCTRIL® GEL at 3/4 pint/A + Banvel at 1/4 - 1/2 pint/A
- BUCTRIL® GEL at 3/4 pint/A + atrazine at 1/2 - 1 1/5 lbs a/A + Banvel at 1/8 - 1/4 pint/A
- BUCTRIL® GEL at 3/4 pint/A + 2,4-D at 1/8 - 1/4 lb a/A
- BUCTRIL® GEL at 3/4 pint/A + atrazine at 1/2 - 1 1/5 lbs a/A + 2,4-D at 1/8 - 1/4 lb a/A

If possible follow with cultivation 14-21 days after treatment. In the fall apply 2,4-D (such as Weedone® 638), Banvel® or Roundup® at recommended rates to Canada thistle 4-8 inches tall prior to killing frost. Follow with a similar control program in next years rotational crop.

ADDITIONAL BUCTRIL® GEL TANK MIXTURE RECOMMENDATIONS

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
BUCTRIL® GEL + Banvel®	1/2 pint/A + 1/8-1/2 pint/A	Apply to field corn after emergence but before corn is 36 inches tall or 15 days before tassel emergence, whichever comes first. Apply to sorghum after the 3 leaf stage but before sorghum is 15 inches tall. Do not apply in the boot stage. Use drop nozzles if crop is taller than 8 inches.	All weeds controlled by BUCTRIL® GEL at recommended rates of application plus improved control of pigweed. For Canada thistle burndown and field bindweed suppression up to the mid-bloom stage, use 1/4 - 1/2 pint/A of Banvel with BUCTRIL® GEL.
	3/4 pint/A + 1/8-1/2 pint/A	Apply to field corn between the 4 leaf stage and before corn is 36 inches tall or 15 days before tassel emergence, whichever comes first. Apply to sorghum between the 4 leaf stage and before sorghum is 15 inches tall. Do not apply in the boot stage. Use drop nozzles if crop is taller than 8 inches.	
BUCTRIL® GEL + atrazine + Banvel®	1/2 pint/A + 1/2-1 1/5 lb a/A + 1/8-1/4 pint/A	Apply to field corn after emergence but before corn is 12 inches tall. Apply to sorghum after the 3 leaf stage but before sorghum is 12 inches tall. Do not apply in the boot stage. Use drop nozzles if crop is taller than 8 inches.	All weeds controlled by BUCTRIL® GEL + atrazine tank mixtures at recommended rates of application plus improved control of pigweed. For field bindweed suppression, use 1/4 pint/A of Banvel with BUCTRIL® GEL.
	3/4 pint/A + 1/2-1 1/5 lb a/A + 1/8 1/4 pint/A	Apply to field corn between the 4 leaf stage and before corn is 12 inches tall. Apply to sorghum between the 4 leaf stage and before sorghum is 12 inches tall. Do not apply in the boot stage. Use drop nozzles if crop is taller than 8 inches.	

CORN (FIELD AND POP) AND SORGHUM (GRAIN AND FORAGE)

ADDITIONAL BUCTRIL® GEL TANK MIXTURE RECOMMENDATIONS (continued)

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
BUCTRIL® GEL + 2,4-D (such as WEEDONE® and WEEDAR® Brand)	1/2 pint/A + 1/16-1/4 lb a/A	Apply to field corn after emergence but prior to tassel emergence. Use drop nozzles if crop is taller than 8 inches. Apply to sorghum after emergence but before sorghum is 15 inches tall. Do not apply in the boot stage. Use drop nozzles if crop is taller than 8 inches.	All weeds controlled by BUCTRIL® GEL at recommended rates. Improved pigweed and kochia. For Canada thistle burndown and bindweed suppression up to full bloom stage, use 1/8 - 1/4 lb a/A of 2,4-D with BUCTRIL® GEL.
	3/4 pint/A + 1/16-1/4 lb a/A	Apply to field corn between the 4 leaf stage and prior to tassel emergence. Use drop nozzles if crop is taller than 8 inches. Apply to sorghum between the 4 leaf stage and before sorghum is 15 inches tall. Do not apply in the boot stage. Use drop nozzles if crop is taller than 8 inches.	
BUCTRIL® GEL + atrazine + 2,4-D (such as WEEDONE® and WEEDAR® Brand)	1/2 pint/A + 1/2-1 1/5 lb a/A + 1/16 -1/4 lb a/A	Apply to field corn after emergence but before the corn is 12 inches tall. Use drop nozzles if crop is taller than 8 inches. Apply to sorghum after the 3 leaf stage but before sorghum is 12 inches tall. Do not apply in the boot stage. Use drop nozzles if crop is taller than 8 inches.	All weeds controlled by BUCTRIL® GEL + atrazine tank mixt at recommended rates or apply plus improved devil's claw control. For Canada thistle burndown and bindweed suppression, use 1/8 a/A of 2,4-D with BUCTRIL® GEL.
	3/4 pint/A + 1/2-1 1/5 lb a/A + 1/16-1/4 lb a/A	Apply to field corn between the 4 leaf stage and before the corn is 12 inches tall. Use drop nozzles if crop is taller than 8 inches. Apply to sorghum between the 4 leaf stage and before sorghum is 12 inches tall. Do not apply in the boot stage. Use drop nozzles if crop is taller than 8 inches.	
BUCTRIL® GEL + Accent ⁵ + non-ionic surfactant	1/2 pint/A + 2/3 oz/A + 1 qt/100 gal of water (0.25% v/v)	Apply to field corn preemergence or postemergence up to 36" tall corn. Use drop nozzles only when corn is 24 - 36 inches tall.	All broadleaf weeds controlled by BUCTRIL® GEL at 1/2 or 3/4 pint/A. Grasses and broadleaves controlled by Accent. For optimum weed control, treat when broadleaves and grasses are in the recommended growth stage or size. Follow the weed size and growth stage on the BUCTRIL® GEL or Accent labels that are least restrictive.
	3/4 pint/A + 2/3 oz/A + 1 qt/100 gal of water (0.25% v/v)	Apply to field corn postemergence after the 4 leaf stage up to 36 inches in height. Use drop nozzles only when corn is 24 - 36 inches tall.	

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CORN (FIELD AND POP) AND SORGHUM (GRAIN AND FORAGE)

ADDITIONAL BUCTRIL® GEL TANK MIXTURE RECOMMENDATIONS (continued)

		APPLICATION TIMING AND SPECIFIC COMMENTS	
PRODUCT	RATE	CROP	WEEDS
BUCTRIL® GEL + atrazine + Accent ⁵ + non-ionic surfactant	1/2 pint/A + 1/2 - 1 1/5 lb a/A + 2/3 oz/A + 1 qt/100 gal of water (0.25% v/v)	Apply to field corn preemergence through postemergence but before the corn is 12 inches tall.	All broadleaf weeds controlled by BUCTRIL® GEL + atrazine plus grasses and broadleaves controlled by Accent. For optimum weed control, treat when broadleaves and grasses are in the recommended growth stage or size. Follow the weed size guideline on the BUCTRIL® GEL or Accent labels that are least restrictive.
	3/4 pint/A + 1/2 - 1 1/5 lb a/A + 2/3 oz/A + 1 qt/100 gal of water (0.25% v/v)	Apply to field corn between the 4 leaf stage of crop growth but before the corn is 12 inches tall.	
BUCTRIL® GEL + Beacon ¹² + non-ionic surfactant	1/2 pint/A + 0.38-0.76 oz/A ¹ (1-2 packets/4 acres) + 1 qt/100 gal of water (0.25% v/v)	Apply to field corn from 4 to 20 inches in height. ¹ The 0.38 oz/A (1 packet/4A) rate of Beacon is 1/2 of a split application treatment program. BUCTRIL® GEL tank mixture may be used in either half of the split application.	All broadleaf weeds controlled by BUCTRIL® GEL at 1/2 p/A plus grasses and broadleaves controlled by Beacon. For optimum weed control treat when broadleaves and grasses are in the recommended growth stage or size. Follow the weed size guidelines on the BUCTRIL® GEL or Beacon labels that are least restrictive.
BUCTRIL® GEL + Stinger ⁴	1/2 pint/A + 1/3-2/3 pint/A	Apply to field corn after emergence up to 24 inches in height.	All weeds controlled by BUCTRIL® GEL at recommended rates of application plus Improved Canada thistle burndown. For optimum performance apply to Canada thistle at least 4 inches in diameter or height but before bud stage.
	3/4 pint/A + 1/3 - 2/3 pint/A	Apply to field corn from 4 leaf stage up to 24 inches in height.	
BUCTRIL® GEL + Atrazine + Stinger ⁴	1/2 pint/A + 1/2-1 1/5 lb a/A + 1/3-2/3 pint/A	Apply to field corn after emergence but before corn is 12 inches tall.	All weeds controlled by BUCTRIL® GEL + atrazine tank mixtures at recommended rates of application plus Improved Canada thistle burndown. For optimum performance apply to Canada thistle at least 4 inches in diameter or height but before bud stage.
	3/4 pint/A + 1/2 - 1 1/5 lb a/A + 1/3 - 2/3 pint/A	Apply to field corn from 4 leaf stage but before corn is 12 inches tall.	

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CORN (FIELD AND POP) AND SORGHUM (GRAIN AND FORAGE)

ADDITIONAL BUCTRIL® GEL TANK MIXTURE RECOMMENDATIONS (continued)

APPLICATION TIMING AND SPECIFIC COMMENTS			
PRODUCT	RATE	CROP	WEEDS
BUCTRIL® GEL + Bladex 80W ⁵ or Bladex 90DF ⁵	1/2 pint/A + 1 1/2-2 1/2 lb/A ¹ or 1 3/10-2 1/5 lb/A ¹	Apply to field corn between the 3 leaf stage and before the fifth leaf is visible in the whorl. Tank mixture with Bladex or Extrazine may cause browning, yellowing or stunting of field corn. Do not apply BUCTRIL® GEL in tank mixture with Bladex or Extrazine	All weeds controlled by BUCTRIL® GEL at 3/4 pint/A plus suppression or control of foxtails and other annual grasses that do not exceed 1/2 inches in height.
BUCTRIL® GEL + Extrazine 4 DF ⁵ or Extrazine 90DF ⁵	1/2 pint/A + 1 3/10-2 1/5 lb/A ¹	under cold, wet weather conditions or to weather, storm, disease or insect-stressed field corn. Do not add adjuvants such as surfactants or crop oils or fertilizer solutions as excessive crop injury may occur. Do not apply to popcorn or corn grown for seed.	¹ Determine the Bladex or Extrazine use rate by consulting the tank mixture product use directions for soil texture, organic matter and previous herbicide application to that crop.
BUCTRIL® GEL + Roundup ⁵	Preemergence 1/2-3/4 pint/A + 1/2-3 pints/A	Apply to corn or sorghum before planting time up until just prior to crop emergence.	All weeds controlled by BUCTRIL® GEL at recommended rates of application plus control of certain grass and perennial weeds. Refer to Roundup label for rate to use depending on weeds present at time of application.

RESTRICTIONS AND PRECAUTIONS: Corn (Field and Pop) and Sorghum (Grain and Forage)

- BUCTRIL® GEL does not control grasses. Therefore, it is recommended that a suitable grass control program be used to provide any required grass control.
- Addition of a spray additive or mixture with liquid fertilizers may cause excessive crop leafburn.
- Seed corn producers should consult the respective seed corn company regarding tolerance of certain seed production inbred lines to BUCTRIL® GEL.
- Do not apply BUCTRIL® GEL to postemergence to seed corn inbreds or popcorn prior to the 3 leaf stage of crop growth as excessive crop leaf burn may occur.
- Do not plant rotational crops until the following season.
- Do not cut crop for feed, fodder or graze within 30 days of application.
- The total cumulative rate should not exceed 1 1/2 pints/A per season.
- Postemergence application prior to the 3 leaf growth stage of corn or sorghum may result in increased crop leaf burn.
- Tank mixtures with Accent/nonionic surfactant or Beacon/nonionic surfactant may result in increased initial crop leaf burn. Use of crop oil concentrate, nitrogen fertilizer solution or other adjuvants in BUCTRIL® GEL + Accent or BUCTRIL® GEL + Beacon tank mixtures may result in a further increase in crop leaf burn.
- Special care should be taken when using BUCTRIL® GEL and Banvel or 2,4-D tank mixtures to avoid off target drift to sensitive crops.
- Tank mixtures with 2,4-D or Banvel can cause stalk brittleness to field corn or sorghum. Winds or cultivation may cause breakage while crop is brittle.
- Follow all restrictions and precautions on the label of all products used in tank mixture with BUCTRIL® GEL.

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SMALL GRAINS (WHEAT, BARLEY, OATS, RYE AND TRITICALE)

BUCTRIL® GEL RECOMMENDATIONS

		APPLICATION TIMING AND SPECIFIC COMMENTS	
PRODUCT	RATE	CROP	WEEDS
BUCTRIL® GEL	3/4 pint/A	Fall seeded wheat, barley, rye and triticale throughout the United States and spring seeded wheat, barley and oats in Idaho, Oregon, Washington, Colorado, Wyoming and Montana. Apply to wheat, barley, oats, rye and triticale from emergence to the boot stage.	Apply to MOST SUSCEPTIBLE weeds (see GENERAL WEED LIST) up to the 8 leaf stage or 4 inches in height, whichever comes first. If weed forms rosette apply before weeds exceed 2 inch in diameter.
	1 pint/A	Fall seeded wheat, barley, rye and triticale throughout the United States and spring seeded wheat, barley and oats in Idaho, Oregon, Washington, Colorado, Wyoming and Montana. Apply to wheat, barley, oats, rye and triticale from emergence to the boot stage.	Apply to MOST SUSCEPTIBLE and SUSCEPTIBLE weeds (see GENERAL WEED LIST) up to the 4 leaf stage or 2 inches in height, whichever comes first. If weed forms rosette apply before weeds exceed 1 inch in diameter.
	1/2-3/4 pint/A	Spring seeded wheat, barley and oats except Idaho, Oregon, Washington, Colorado, Wyoming and Montana. Apply to wheat, barley and oats from emergence to the boot stage.	Apply 1/2 pint/A to MOST SUSCEPTIBLE and 3/4 pint/A to SUSCEPTIBLE weeds that do not exceed the 4 leaf stage or 2 inches in height, whichever comes first. If weed forms rosette, apply before weeds exceed 1 inch in diameter. Use BUCTRIL® GEL at 3/4 pint/A for control of kochia that is 2 - 4 inches in height and pigweed that does not exceed the 4 leaf stage or 2 inches in height, whichever comes first.
	Small Grains underseeded with Alfalfa 1/2-3/4 pint/A	Apply to small grains (wheat, barley, oats, rye or triticale) underseeded with alfalfa after small grains emergence up to the boot stage and when underseeded alfalfa has a minimum of 4 trifoliate leaves. Do not apply BUCTRIL® if temperatures are expected to exceed 70° F at or 3 days following application or unacceptable alfalfa injury may occur	Apply 1/2 pint/A to MOST SUSCEPTIBLE and 3/4 pint/A to SUSCEPTIBLE broadleaf weeds that do not exceed the 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first.

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SMALL GRAINS (WHEAT, BARLEY, OATS, RYE AND TRITICALE) (continued)

BUCTRIL® GEL TANK MIXTURE RECOMMENDATIONS

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
BUCTRIL® GEL + 2,4-D (such as WEEDONE® or WEEDAR® brand)	1/2-1 pint/A + 1/4-1/2 lb a/A	Apply to wheat, barley, oats and rye from the fully tillered but before jointing stage.	This tankmix improves control of mustards and pigweed. Apply to weeds up to the 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first.
	3/8-1/2 pint/A + 1/4-1/2 lb a/A	Apply to wheat and barley in Minnesota, North and South Dakota from the fully tillered but before jointing stage.	This tankmix improves control of buckwheat, redroot pigweed and mustard. Apply to weeds up to the 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first.
BUCTRIL® GEL + MCPA (such as RHONOX® or RHOMENE®)	1/2-1 pint/A + 1/4-1/2 lb a/A	Apply to wheat, barley, oats and rye from the 4 leaf stage but before jointing.	This tankmix improves control of mustards, pigweed and Kochia. Apply to weeds up to the 4 leaf stage, 4 inches in height or 1 inch in diameter, whichever comes first.
BUCTRIL® GEL + Banvel ¹⁰	1/2-3/4 pint/A + 1/8-1/4 pint/A	Fall seeded wheat apply prior to the jointing stage. Spring seeded wheat apply up to the 5 leaf stage.	This tankmix improves control of broadleaves such as prostrate knotweed. Apply to weeds up to the 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first.
BUCTRIL® GEL + Glean ⁵ + nonionic surfactant	3/8-3/4 pint/A + 1/8-1/3 oz/A + 1 qt/100 gal of water	Apply to wheat and barley from the 2 leaf stage but before boot stage. Refer to Glean label for crop rotation and other restrictions.	This tankmix improves control of broadleaves such as henbit, mustard and pigweed. Apply to weeds up to the 4 leaf stage, 4 inches in height or 2 inches in diameter, whichever comes first.
BUCTRIL® GEL + Ally ⁵ + nonionic surfactant	3/8-3/4 pint/A + 1/10 oz/A + 1 qt/100 gal of water	Apply to wheat and barley from the 2 leaf stage but before the boot stage. Refer to Ally label for crop rotation and other restrictions.	This tankmix improves control of broadleaves such as tansy mustard and pigweed. Apply to weeds up to the 4 leaf stage, 4 inches in height or 2 inches in diameter, whichever comes first.
BUCTRIL® GEL + Finesse ⁵ + nonionic surfactant	3/8-3/4 pint/A + 1/8-1/3 oz/A + 1 qt/100 gal of water	Apply to wheat and barley from the 2 leaf stage but before the boot stage. Refer to Finesse label for crop rotation and other restrictions.	This tankmix improves control of broadleaves such as tansy mustard, henbit, chickweed and pigweed. Apply to weeds up to the 4 leaf stage, 4 inches in height or 2 inches in diameter, whichever comes first.
BUCTRIL® GEL + Amber ¹² + nonionic surfactant	3/8-3/4 pint/A + 0.28 - 0.56 oz/A + 0.25 - 0.5% v/v	Apply to wheat and barley after the 3 leaf stage but before the flagleaf is visible. Refer to the Amber label for crop rotation and other restrictions.	This tankmix improves control of broadleaves such as tansy mustard, henbit, and pigweed. Apply to weeds up to the 4 leaf stage, 4 inches in height or 2 inches in diameter, whichever comes first.

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SMALL GRAINS (WHEAT, BARLEY, OATS, RYE AND TRITICALE)

BUCTRIL® GEL TANK MIXTURE RECOMMENDATIONS (continued)

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
BUCTRIL® GEL + Express ⁸ + nonionic surfactant	1/2-3/4 pint/A + 1/8-1/3 oz/A + 1 qt/100 gal of water	Winter wheat. Apply after crop is in the 2 leaf stage but before the flag leaf is visible. Refer to Express label for crop rotation and other restrictions.	This tankmix improves control of broadleaf weeds such as redroot pigweed, tansy mustard and suppression of Canada thistle. Apply to annual weeds up to the 4 leaf stage, 4 inches tall or across and up to Canada thistle 4 to 8 inches tall with 2 to 6 inches of new growth.
	3/8-3/4 pint/A + 1/8-1/3 oz/A + 1 qt/100 gal of water	Spring wheat and barley. Apply after crop is in the 2 leaf stage but before the flag leaf is visible. Refer to Express label for crop rotation and other restrictions.	
BUCTRIL® GEL + Harmony Extra ⁵ + nonionic surfactant	3/8-3/4 pint/A + 3/10 oz/A + 1 qt/100 gal of water	Winter wheat. Apply after the 2 leaf stage but before the 3rd node is detectable. Refer to the Harmony Extra label for crop rotation and other restrictions.	This tankmix improves control of broadleaf weeds such as henbit, chickweed and redroot pigweed. Apply to weeds up to the 4 leaf stage, 4 inches in height or across, whichever comes first.
		Spring wheat and barley. Apply after the 2 leaf stage but before the 1st node is detectable. Refer to the Harmony Extra label for crop rotation and other restrictions.	
BUCTRIL® GEL + Curtail ⁴ or Curtail M ⁴	1/2-3/4 pint/A + 2 pints/A	Apply to wheat and barley after the crop begins to tiller up to the 1st node detectable.	This tankmix improves control of kochia, wild buckwheat and Canada thistle. Apply to annual broadleaf weeds up to the 8 leaf stage up to 4 inches in height or 2 inches in diameter and Canada thistle in the rosette to prebud stage.
BUCTRIL® GEL + metribuzin (Sencor ² or Laxone ⁵)	1/2-5/8 pint/A + 1/8-1/4 lb a/A	Winter wheat in Idaho, Montana, Oregon and Washington. Apply in spring after growth has started and secondary roots with a minimum of 3 to 4 tillers have been established but before boot stage. Avoid application when crop has experienced winter kill, frost damage, disease or drought.	This tankmix improves control of broadleaves such as chickweed, filaree, henbit and dogfennel. Apply to weeds that do not exceed 2 inches tall or rosettes of 2 inches in diameter. The higher use rates of both products should be used only in emergency weed situations and if some minor crop injury is acceptable. A recognized authority should be consulted concerning the use of this mixture in your area.
BUCTRIL® GEL + diuron	1/2 pint/A + 4/10 lb a/A	Winter wheat and winter barley in Idaho, Oregon and Washington. Use only in areas where annual rainfall exceeds 18 inches. One fall application after emergence but before soil freezes or in spring as soon as soil thaws.	This tankmix improves control of broadleaves such as henbit and growwell. Apply to weeds before they are 2 inches tall or 2 inches in diameter.
BUCTRIL® GEL + Tiller ⁷	1/2 pint/A + 1 pint/A	Spring wheat. Apply when crop begins to tiller (3 - 4 leaf stage) up to the 8 leaf stage. Refer to the Tiller label for complete use directions and restrictions.	In addition to broadleaf weeds controlled by BUCTRIL GEL, this tankmix will control green foxtail from the 2-leaf to 2-tiller stage of growth.

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SMALL GRAINS (WHEAT, BARLEY, OATS, RYE AND TRITICALE)

BUCTRIL® GEL TANK MIXTURE RECOMMENDATIONS (continued)

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
BUCTRIL® GEL + Hoelon ⁷	1/2-3/4 pint/A + 2 - 2 2/3 pints/A	Spring Barley. After emergence but before jointing. Avoid using this tank mixture on barley exposed to cold (lower than 40 degrees F) and/or prolonged wet weather conditions as crop injury may result.	This tankmix will provide wild oat, green foxtail and annual ryegrass control in addition to broadleaves. Apply to grasses 1-3 leaf stage and broadleaves no larger than 4 leaf stage or rosettes of 1.5 inches in diameter.
		Winter wheat and spring wheat. After emergence but before jointing.	This tankmix will provide wild oat, green foxtail and annual ryegrass control in addition to broadleaves. Apply to grassed 1-4 leaf stage and broadleaves no larger than 4 leaf stage or rosettes of 1.5 inches in diameter.
BUCTRIL® GEL + Avenge ¹	1/2-1 pint/A + 2 1/2-4 pints/A	Winter Wheat. Four leaf to tillering stage. Refer to Avenge label for varietal and other restrictions.	This tankmix will provide wild oat control in addition to broadleaves. Apply to wild oats in the 3-5 leaf stage and broadleaves that do not exceed the 4 leaf stage or rosettes of 1.5 inches in diameter. Avenge use rates per acre are 2.5 pints (1-10 oats per sq. ft.), 3 pints (11-25 oats per sq. ft.) or 4 pints (more than 25 oats per sq. ft.).
		Spring Wheat. Five to 8 leaf stage. Refer to Avenge label for varietal and other restrictions.	
		Barley. Two to 7 leaf stage.	

RESTRICTIONS AND PRECAUTIONS: Small Grains (Wheat, Barley, Oats, Rye and Triticale)

- Do not graze treated fields within 30 days following treatment.
- Do not apply when crops are under moisture stress.
- Do not apply when crop canopy covers the weeds as poor weed control will result.
- Do not apply when underseeded alfalfa is under moisture, temperature, insect or disease stress or has been stressed by other pesticide carryover or application.
- Do not add a surfactant or crop oil when applying to underseeded alfalfa or increased injury will occur.
- Do not cut for feed or graze spring treated underseeded alfalfa within 30 days following treatment.
- Do not cut for feed or graze fall or winter treated underseeded alfalfa until spring, at least 60 days following treatment.
- Reduced weed control may occur when weeds are stressed from lack of moisture or cold temperatures.
- Refer to labels of products used in tank mixture of additional restrictions and precautions.
- Do not plant rotational crops until the following season.

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FORAGE, FIBER AND SPECIALITY CROPS

ALFALFA (SEEDLING)

BUCTRL® GEL RECOMMENDATIONS

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
BUCTRL® GEL	1/2-3/4 pint/A	<p>Apply in the fall or spring to seedling alfalfa when the majority of the field has a minimum of 4 trifoliate leaves. When alfalfa stand is uneven and conditions favor leafburn, unacceptable crop injury may occur to alfalfa in the 2 trifoliate or smaller stage of growth. In the states of California, Washington, Oregon, Idaho, Montana, Wyoming, Colorado, Utah, Nevada, Arizona, New Mexico, and the western halves of North Dakota, South Dakota, Nebraska and Kansas, BUCTRL® GEL application made when temperatures are expected to exceed 60°F at and 3 days following application can result in unacceptable crop injury. In the remaining states BUCTRL® GEL application made when temperatures are expected to exceed 70°F at and 3 days following application can result in unacceptable crop injury.</p>	<p>Apply 1/2 pint/A SUSCEPTIBLE broadleaf weeds (See list) when weeds do not exceed 2 inches in height, whichever diameter, whichever BUCTRL® GEL will control over-wintered henbit and mustards.</p>

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FLAX (*Linum usitatissimum* only)**BUCTRIL® GEL RECOMMENDATIONS**

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
BUCTRIL® GEL	1/2 pint/A	Apply to flax that is 2 to 3 inches in height. Do not apply BUCTRIL® GEL to flax during or after the bud stage.	Apply to MOST SUSCEPTIBLE weeds that do not exceed the 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first.

BUCTRIL® GEL TANK MIXTURE RECOMMENDATIONS

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
BUCTRIL® GEL + selon	1/2 pint/A + 2-2 2/3 pints/A	Apply to flax that is 2 to 3 inches in height. Do not apply BUCTRIL® GEL to flax during or after the bud stage.	This tankmix will control broadleaf weeds plus wild oats, green foxtail and annual ryegrass. Apply to grasses in the 1-3 leaf stage and broadleaves no larger than 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first.

INSTRUCTIONS AND PRECAUTIONS: Flax (*Linum usitatissimum* only)

- Do not apply if temperatures are expected to exceed 85° F at or 3 days following application or crop injury may occur.
- Unacceptable crop injury may occur following BUCTRIL® GEL application to flax grown on high organic, peat type soils.
- Application under high humidity conditions can injure flax.
- Do not apply BUCTRIL® GEL with crop oil concentrate, surfactants or nitrogen solutions.
- Follow all precautions, directions and restrictions on the Holon label when using in tank mixture with BUCTRIL® GEL.
- Do not use on ornamental flax.

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GARLIC**BUCTRIL® GEL RECOMMENDATIONS**

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
BUCTRIL® GEL	3/4-1 pint/A	Apply to garlic after emergence but before 12 inches in height.	Apply to MOST SUSCEPTIBLE and SUSCEPTIBLE broadleaf weeds up to the 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first.

PRECAUTIONS AND RESTRICTIONS: Garlic

- Use a minimum of 20 gallons per acre for ground application.
- BUCTRIL® GEL can be applied through automated sprinkler irrigation application.
- Do not harvest within 112 days following treatment.

MINT**ESTABLISHED PEPPERMINT AND SPEARMINT ONLY****BUCTRIL® GEL RECOMMENDATIONS**

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
BUCTRIL® GEL	1/2-3/4 pint/A	Apply to dormant or actively growing established peppermint or spearmint which has been harvested for at least one year prior to treatment.	Apply to MOST SUSCEPTIBLE and SUSCEPTIBLE weeds that do not exceed the 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first.

RESTRICTIONS AND PRECAUTIONS: Mint

- Application made to mint when temperatures are expected to exceed 70°F at or 5 days following application may result in unacceptable crop injury. This injury is more likely to occur following BUCTRIL® GEL application in the spring.
- Do not apply to mint growing under adverse conditions including diseases, insects, nematodes, high salt content soil, drought, excessive moisture, winter damage or other environmental stress.
- Application of BUCTRIL® GEL to mint that has been previously treated with Sinbar® Herbicide within two weeks may result in unacceptable crop injury.
- Do not use in spring on newly established mint. Fall application to spring planted mint should be acceptable if the crop is well established.
- BUCTRIL® GEL can cause temporary stunting and discoloration of the mint particularly from the spring application. However the injury symptoms are only temporary and have not caused yield reduction.
- Use of BUCTRIL® GEL in combination with other products may increase temporary stunting and discoloration.
- Do not harvest within 70 days following treatment.
- Do not apply more than 3.0 pints of BUCTRIL® GEL total product per acre to mint in a single growing season.

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ONIONS

BUCTRIL® GEL RECOMMENDATIONS

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
BUCTRIL® GEL	Preplant/Preemergence 1/2-3/4 pint/A	Apply to onions at least 3 to 4 days prior to emergence. Rainfall or irrigation within 2 days following preemergence applications or 3 days prior to crop emergence may result in unacceptable crop injury.	Apply BUCTRIL® GEL at 1/2 pint control MOST SUSCEPTIBLE weeds and 3/4 pint/A for SUSCEPTIBLE weeds. Weeds should not exceed 4 leaf stage, 2 inches in height, 1/2 inch in diameter, whichever is first.
	Postemergence 1/2-3/4 pint/A	Apply only to onions which have 2 to 5 true leaves. Use at least 50-70 gallons of water per acre and apply by ground equipment or chemigation only. Water volume is important - CONCENTRATED SPRAYS KILL ONIONS. Thorough and uniform coverage is necessary for good weed control. In onion-producing areas, certain environmental conditions reduce development of waxy coating on the onion leaves, thus increasing the possibility of injury. Dry soil, dry onion foliage, high light intensity, low humidity, and high temperatures tend to increase the waxy coating on onion leaves and thus reducing chances for injury. It is essential that the soil and onion foliage be dry at the time of application. Humidity should be low and dew should be off the plants.	

RESTRICTIONS AND PRECAUTIONS: Onions

- The sensitivity of onions to BUCTRIL® GEL varies with the variety and environmental conditions. Therefore, even if all the label directions are followed, BUCTRIL® GEL application still may cause injury to onions under certain circumstances.
- Do not irrigate onions that have received a preemergence application of BUCTRIL® GEL for 2 days following application or within 2 days of the next irrigation.
- Do not use BUCTRIL® GEL on onions grown under low light intensity, in areas such as Oregon, west of the Cascades.
- Do not treat onions damaged by wind, insects, or diseases.

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