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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

November 26, 1996

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

James A. Barron, Ph.D.
Registration Manager
Rhone-Poulenc Ag Company
P.O. Box 12014
2 T.W. Alexander Drive
Research Triangle Park, NC 27709

Subject: Review of Labeling Amendments
Buctril® Herbicide
EPA Reg. No. 264-437
Buctril® Gel Herbicide ✓
EPA Reg. No. 264-531
Your Letters Dated October 4, 1996

Dear Dr. Barron:

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable subject to the comment listed below.

The NET CONTENTS statement is missing from the label. This statement is required on all labels or on the container of the pesticide. The preferred location is the bottom of the front panel immediately above the company name and address, or at the end of the label text. Net contents must be expressed in conventional American units of fluid ounces, pints, quarts, gallons and pounds. The net contents must also be expressed in the largest suitable unit, e.g., "1 pound 10 ounces" rather than "26 ounces". In addition to American units, net contents may be expressed in metric units. [40 CFR 156.10(d)]

A stamped copy is enclosed for your records. Submit one (1) copy of the final printed labeling before you release the product for shipment. If you have any questions, then please contact Terri Stowe of my staff at (703) 305-6117.

Sincerely yours,

Theresa A. Stowe

for

Robert J. Taylor
Product Manager (25)
Fungicide-Herbicide Branch
Registration Division (7505C)

Enclosures



Recycled/Recyclable
Printed with Soy/Canola Ink on paper that
contains at least 50% recycled fiber

BUCTRIL® GEL HERBICIDE

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FOR THE CONTROL OF CERTAIN BROADLEAF WEEDS IN CORN (FIELD AND POP), SORGHUM (GRAIN AND FORAGE), SMALL GRAINS, SEEDLING ALFALFA, FLAX, GARLIC, ONIONS, MINT, GRASSES GROWN FOR SEED AND SOD PRODUCTION, CONSERVATION RESERVE PROGRAM (CRP) AREAS, NON-RESIDENTIAL TURFGRASS, AND NON-CROPLAND/INDUSTRIAL SITES.

ACTIVE INGREDIENT: Octanoic acid ester of bromoxynil* (3,5-dibromo-4-hydroxybenzoxynitrile).....28.7%
Heptanoic acid ester of bromoxynil* (3,5-dibromo-4-hydroxybenzoxynitrile).....27.6%

INERT INGREDIENTS:.....43.7%

*Bromoxynil octanoate and heptanoic equivalent to but not less than 4 pounds of bromoxynil per gallon of product.

E.P.A. Reg. No. 264-531

E.P.A. Est. No. 264-GA-1

KEEP OUT OF REACH OF CHILDREN DANGER PELIGRO

ACCEPTED
with COMMENTS
In EPA Letter Dated
NOV 26 1996

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.)

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.
1-800-334-7577.

For **PRODUCT USE** Information Call 1-800-334-9745.

For **MEDICAL** And **TRANSPORTATION** Emergencies **ONLY** Call 24 Hours A Day

STATEMENT OF PRACTICAL TREATMENT

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IF ON SKIN: Wash with plenty of soap and water. Get medical attention.

IF SWALLOWED: 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.

IF IN EYES: Flush with water for at least 15 minutes. Get medical attention.

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

PRECAUTIONARY STATEMENTS

DANGER HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Harmful if swallowed, or absorbed through skin or inhaled. Avoid contact with skin, eyes or clothing. Avoid breathing spray mist. Corrosive. Causes burns. Causes substantial, but temporary, eye injury.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical resistant to this product are listed below. If you want options, follow the instructions for category F on EPA chemical resistance category selection chart.

Applicators and other handlers must wear coveralls over long-sleeved shirt and long pants, chemical resistant gloves such as barrier laminate, butyl rubber, nitrile rubber, or viton gloves, a chemical resistant apron when cleaning equipment, protective eyewear, chemical resistant headgear for overhead exposure, and chemical resistant footwear plus socks.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240(d)(4-6)), the handler PPE requirements may be reduced or modified as specified in the WPS.

Gel formulations in water-soluble packets, when used correctly, qualify as a closed loading system under the WPS. Handlers handling this product while it is enclosed in intact water-soluble packets are permitted to wear long-sleeved shirt and long pants, shoes and socks, a chemical-resistant apron, and waterproof gloves. Once the water soluble packet is dissolved, broken, punctured, torn, or otherwise allows its contents to escape, it is no longer a closed system and the full PPE specified above for "applicators and other handlers" must be worn. During routine mixing and loading with water-soluble packets, such full PPE must be worn once the packets begin to dissolve in the tank, unless the mix tank and transfer system are closed systems.

When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for "applicators and other handlers" and have such PPE immediately available for use in an emergency, such as a spill or equipment break-down.

Application from a tractor with a completely enclosed cab or aerial application is required whenever this product is applied to 360 or more acres in a day.

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

DURING 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.)

REC'D EPA/OPP/DDD1
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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. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to wildlife and fish. Use with care when applying to areas frequented by wildlife or adjacent to any body of water. For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from target areas. Do not contaminate water when disposing of equipment washwaters.

PHYSICAL AND CHEMICAL HAZARDS

Do not use or store near heat or open flame.

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.

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

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and expectations pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry intervals. 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 12 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 over short-sleeved shirt and long pants, chemical-resistant gloves such as nitrile, viton or barrier laminate, chemical-resistant footwear plus socks, chemical-resistant headgear for overhead exposure and protective eyewear.

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 the equivalent of 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 pop), sorghum (grain and forage), small grains (wheat, barley, oats, rye and triticale), alfalfa (seedling), flax, garlic, mint (established peppermint and spearmint), onions, Conservation Reserve Program (CRP) Areas, grass grown for seed or sod production, non-residential turfgrass, and non-cropland and industrial sites. Optimum weed control is obtained when BUCTRIL® GEL is applied to actively growing weed seedlings. For best performance, BUCTRIL® GEL should only be applied to weeds growing under favorable climate and agronomic conditions. Weeds that are exhibiting clear signs of injury or stress (i.e. wilting, drooping of leaves, stunted growth, loss of leaves, or other symptoms) due to abnormally hot or cool weather, drought, 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 treatment. Generally crops that form a good canopy will help shade subsequent weed flushes. However, certain crops or short-straw varieties, for example Yaccora 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 the activity of BUCTRIL® GEL is not systemic, recovery of the crop is generally rapid with no lasting effect. Frequency and amount of leaf burn may

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be greater when crops are stressed by abrasive winds, cool to cold evening temperatures or mechanical injury, such as that caused by hail, sleet or insect feeding. To reduce the potential for temporary leaf burn, applications should be made to dry foliage in 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 outer 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. Do not use a knife or other sharp object to break the seal. Once the outer protective sleeve is open, the water soluble bag inside can be dropped into the spray tank at the appropriate time without touching it.

BUCTRIL® GEL ALONE: Add enough water to the spray tank to prime the system (About 6-8 inches for most sprayers), and drop the needed number of GEL-PAKS™ into the tank, distributing them across the bottom. After the paks have soaked for 2 minutes, start the agitation and agitate thoroughly for 2 minutes. With the agitation on, continue to fill the spray tank to the desired level. Agitate during spraying. If spraying must be stopped before emptying the sprayer, resume agitation prior to completing application of the load.

BUCTRIL® GEL TANK-MIXTURES: Follow all use directions as listed above under BUCTRIL® GEL ALONE with the following exception: After the GEL-PAKS™ have been thoroughly mixed and after water was added to fill the tank 1/2 full, add the recommended amount of wettable powder, soluble powder, flowable, emulsifiable concentrate, or soluble liquid product, while maintaining agitation. If a spray additive is needed, add a liquid fertilizer, surfactant, or crop oil concentrate to the spray tank. Continue adding water to tank to achieve the desired level, while maintaining agitation.

BUCTRIL® GEL TANK-MIXTURES WITH PRODUCTS IN WATER-SOLUBLE PACKAGING: Follow all use directions as listed above under BUCTRIL® GEL ALONE with the following exception: Add the desired number of other water-soluble bags to the tank (if allowed by their label instructions) at the same time the GEL-PAKS™ are added to the spray tank.

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 PVA bag should not be opened and partial bag not used for a tankmix.
- 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
Dimethoate	Various	Emulsifiable Concentrate
Trichlorfon	Dylox [®]	Soluble Powder
Carbofuran	Furadan [®]	Flowable
Chlorpyrifos	Lorsban [®]	Emulsifiable Concentrate
Malathion	Various	Emulsifiable Concentrate
Oxydemeton-methyl	Metasystox-R [®]	Sprayable Concentrate
Permethrin	Pounce [®]	Emulsifiable Concentrate
Fenvalerate	Pydrin [®]	Emulsifiable Concentrate
Carbaryl	Sevin [®]	Sprayable wettable powder or Flowable
Demeton	Systox [®]	Emulsifiable Concentrate

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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
Corn, (field and pop)	X	X
Sorghum (grain and forage) and Sudangrass	X	X
Small grains	X	X
Alfalfa (Seedling)	X	X
Flax	X	X
Garlic	X	X
Mint	X	-
Onions	X	-
Grass grown for seed or sod production	X	X
Conservation Reserve Program (CRP) areas	X	X
Non-residential turfgrass	X	X
Non-cropland/Industrial sites	X	X

(X) indicates recommended application use

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 spray pressure of 40-60 psi are recommended. Other nozzle types and lower spray pressures that produce coarse spray droplets may not provide adequate coverage of the weeds to ensure optimum control. Raindrop® nozzles and flood nozzles are not recommended as weed control with BUCTRIL® GEL may be reduced.

In general, a spray volume of 10 to 20 gallons per acre (GPA) is recommended for optimum spray coverage. A minimum of 5 GPA with a minimum spray pressure of 50 psi and a maximum ground speed of 10 mph 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 ground speed of 10 mph is suggested if field conditions cause excessive boom movement during application which results in poor spray coverage. Ground applications made when dry, dusty field conditions exist may provide reduced weed control in wheel track areas. Applications using less than 10 gallons per acre may result in reduced weed control.

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. If you are unsure of the infestation level or size of crop, consult your local extension service.

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 discs, 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.

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.

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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	(<i>Sonchus oleraceus</i>)
Black Nightshade	(<i>Solanum nigrum</i>)
Blue Mustard	(<i>Chorispora tenella</i>)
Bristly starbur	(<i>Acanthospermum hispidum</i>)
Coast Fiddleneck	(<i>Amsinckia intermedia</i>)
Common Cocklebur	(<i>Xanthium strumarium</i>)
Common Lambsquarters	(<i>Chenopodium album</i>)
Common Tarweed	(<i>Hemizonia congesta</i>)
Cutleaf Nightshade	(<i>Solanum triflorum</i>)
Eastern Black Nightshade	(<i>Solanum ptycanthum</i>)
Field Pennycress	(<i>Thlaspi arvense</i>)
Green Smartweed	(<i>Polygonum scabrum</i>)
Hairy Nightshade	(<i>Solanum sarachoides</i>)
Jimsonweed	(<i>Datura stramonium</i>)
Ladysthumb	(<i>Polygonum persicaria</i>)
Lanceleaf sage	(<i>Salvia reflexa</i>)
Pennsylvania Smartweed	(<i>Polygonum strumarium</i>)
Pepperweed spp.	(<i>Lepidium spp.</i>)
Shepherdspurse	(<i>Capsella bursa-pastoris</i>)
Silverleaf Nightshade	(<i>Solanum elaeagnifolium</i>)
Tartary Buckwheat	(<i>Fagopyrum tataricum</i>)
¹ Sunflower	(<i>Helianthus annuus</i>)
Wild Buckwheat	(<i>Polygonum convolvulus</i>)

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

SUSCEPTIBLE BROADLEAF WEED SPECIES

Buffalobur	(<i>Solanum rostratum</i>)
Burcucumber	(<i>Sicyos angulatus</i>)
Common Groundsel	(<i>Senecio vulgaris</i>)
Common ragweed	(<i>Ambrosia artemisiifolia</i>)
Com Chamomile	(<i>Anthemis arvensis</i>)
Corn Gromwell	(<i>Lithospermum arvense</i>)
Cow Cockle	(<i>Saponaria vaccaria</i>)
Giant Ragweed	(<i>Ambrosia trifida</i>)
Hemp Sesbania	(<i>Sesbania exaltata</i>)
Ivyleaf morningglory	(<i>Ipomoea hederacea</i>)
Knawel	(<i>Scleranthus annuus</i>)
² Kochia	(<i>Kochia scoparia</i>)
London Rocket	(<i>Sisymbrium irio</i>)
Mayweed	(<i>Anthemis cotula</i>)
Pitted morningglory	(<i>Ipomoea lacunosa</i>)
Prostrate Knotweed	(<i>Polygonum aviculare</i>)
Puncture Vine	(<i>Tribulus terrestris</i>)
² Redroot Pigweed	(<i>Amaranthus retroflexus</i>)
Russian Thistle	(<i>Salsola kali</i>)
² Spiny Pigweed	(<i>Amaranthus spinosus</i>)
Tall Morningglory	(<i>Ipomoea purpurea</i>)
² Tall Waterhemp	(<i>Amaranthus tuberculatus</i>)
Tumble mustard	(<i>Sisymbrium altissimum</i>)
Velvetleaf	(<i>Abutilon theophrasti</i>)
Venice Mallow	(<i>Hibiscus trionum</i>)
Wild Mustard	(<i>Sinapsis arvensis</i>)
Wild Radish	(<i>Raphanus raphanistrum</i>)
Yellow Starthistle	(<i>Centaurea solstitialis</i>)

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.

CALIFORNIA REGISTRATIONS

BUCTRIL® GEL is not currently registered in California

SPECIFIC CROP RECOMMENDATIONS

CEREAL GRAIN CROPS

Corn (Field and Pop) and Sorghum (Grain and Forage) and Sudangrass
Small Grains (Wheat, Barley, Oats, Rye and Triticale)

FORAGE, FIBER AND SPECIALITY CROPS

Alfalfa (Seedling)
Flax
Garlic
Mint (Established Peppermint and Spearmint)
Onions

GRASS CROPS

Conservation Reserve Program (CRP) Areas
Grass Grown for Seed or Sod Production
Non-residential turfgrass

NON CROPLAND

Non-cropland and Industrial sites

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BUCTRIL® GEL RATE RECOMMENDATIONS

BUCTRIL® GEL is a 4.0 lb per gallon bromoxynil formulation packaged in water-soluble bags. When determining how much BUCTRIL® GEL to use, it must be noted that BUCTRIL® GEL is **twice as concentrated as BUCTRIL® Herbicide**. In addition, BUCTRIL® GEL is pre-measured. Each BUCTRIL® GEL water-soluble bag contains 2 1/2 pints of the herbicide. That amount is equivalent to 5 pints of BUCTRIL® Herbicide.

To determine how much BUCTRIL® GEL to use, consult the application rate tables and recommendation charts for the crop to be sprayed. In those charts, the BUCTRIL® GEL use rates are given in pints/acre. Note that for any given recommendation, BUCTRIL® GEL rates are exactly half that of BUCTRIL® Herbicide rates. Once the BUCTRIL® GEL application rate per acre is selected, consult the following tables to determine how many bags to use when mixing the spray.

PLEASE NOTE! BUCTRIL® GEL IS TWICE AS CONCENTRATED AS BUCTRIL® LIQUID.

NUMBER OF BUCTRIL® GEL PAKS TO USE

- Directions:
- 1) Select the desired BUCTRIL® GEL use rate.
 - 2) Select numbers of acres to be treated from the columns below.
 - 3) The number of gel paks needed is listed in the far left hand column.

	BUCTRIL® GEL RATE TO USE PER ACRE			
	3/8 PINT (EQUAL TO 3/4 PINT BUCTRIL® LIQUID)	1/2 PINT (EQUAL TO 1 PINT BUCTRIL® LIQUID)	3/4 PINT (EQUAL TO 1 1/2 PINTS BUCTRIL® LIQUID)	1 PINT (EQUAL TO 2 PINTS BUCTRIL® LIQUID)
NUMBER OF BUCTRIL® GEL PAKS TO USE	ACRES TREATED			
1	6 2/3	5	3 1/3	2 1/2
2	13 1/3	10	6 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

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CEREAL GRAIN CROPS

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

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 and sudangrass between the 3 leaf stage but prior to the preboot stage (growth stage 4).	
	3/4 pint/A	Apply to corn between the 4 leaf stage but prior to tassel emergence. Apply to sorghum and sudangrass between the 4 leaf stage but prior to preboot stage (growth stage 4).	
BUCTRIL® GEL	1 Pint/A	Apply to field corn only between the 4-leaf stage and prior to tassel emergence. WARNING: DO NOT APPLY THE 1 PINT/A RATE OF BUCTRIL® GEL ALONE OR IN TANK-MIXTURES TO SORGHUM	Use the 1 pint/A rate on corn to control susceptible weeds that are growing under less than optimum conditions and where BUCTRIL® + atrazine tankmixtures cannot be used.

CORN AND SORGHUM APPLICATION RATE TABLE - BUCTRIL® GEL

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WEED SPECIES ¹ When determining leaf stage, count all leaves except cotyledonary leaves	1/2 Pint/A		3/4 to 1 Pint/A ⁴	
	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
Burcucumber (<i>Sicyos angulatus</i>)	-	-	4	4
Common Cocklebur (<i>Xanthium strumarium</i>)	6	8	8	10
Common Lambsquarters (<i>Chenopodium album</i>)	-	6	-	8
Common Ragweed (<i>Ambrosia artemisiifolia</i>)	6	4	8	6
Eastern Black Nightshade (<i>Solanum ptycanthum</i>)	6	6	6	6
Giant Ragweed (<i>Ambrosia trifida</i>)	6	4	6	6
Hemp Sesbania (<i>Sesbania exaltata</i>)	-	-	4	4
Ivyleaf 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
Pitted Morningglory (<i>Ipomoea lacunosa</i>)	3	3	4	4
Redroot Pigweed ³ (<i>Amaranthus retroflexus</i>)	-	-	4	2
Spiny Pigweed ³ (<i>Amaranthus spinosus</i>)	-	-	4	2
Sunflower (<i>Helianthus annus</i>)	4	6	6	8
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
Venice Mallow (<i>Hibiscus trionum</i>)	-	-	4	2
Wild Buckwheat (<i>Polygonum convolvulus</i>)	4	6	6	8
Wild Mustard (<i>Sinapis arvensis</i>)	-	-	4	4
WEEDS SUPPRESSED²				
Canada Thistle (<i>Cirsium arvense</i>)		Not Recommended		8 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.
^{4/} Do not apply BUCTRIL® GEL at the 1 pint/A rate to sorghum

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 ai/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.
		Apply to corn after emergence but before corn is 12 inches tall.	
		Apply to sorghum between the 3 leaf stage but prior to the preboot stage (growth stage 4) or 12 inches in height, whichever comes first.	
	3/4 pint/A + 1/2-1 1/5 lb ai/A	Apply to corn between the 4 leaf stage and before corn is 12 inches tall. Apply to sorghum between the 4 leaf stage but prior to the preboot stage (growth stage 4) or 12 inches in height, whichever comes first.	

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

WEED SPECIES ¹		BUCTRIL® GEL AND ATRAZINE RATE (TANK MIX)											
		3/8 Pint/A		3/8 Pint/A		1/2 Pint/A		1/2 Pint/A		3/4 Pint/A		3/4 Pint/A	
		1/2 lb ai/A		1 1/5 lb ai/A		1/2 lb ai/A		1 1/5 lb ai/A		1/2 lb ai/A		1 1/5 lb ai/A	
When determining leaf stage, count all leaves except cotyledonary leaves		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	6	6	6	6	6	6	6	6
Buffalobur	(<i>Solanum rostratum</i>)	4	4	4	4	6	4	6	4	6	4	6	4
Burcucumber	(<i>Sicyos angulatus</i>)	4	4	4	4	6	4	6	4	6	4	6	4
Common Cocklebur	(<i>Xanthium strumarium</i>)	6	8	8	10	8	10	10	12	10	12	10	12
Common Lambsquarters	(<i>Chenopodium album</i>)	-	6	-	10	-	10	-	12	-	12	-	12
Common Ragweed	(<i>Ambrosia artemisiifolia</i>)	6	4	8	6	8	6	8	6	8	6	8	6
Eastern Black Nightshade	(<i>Solanum ptycanthum</i>)	4	4	4	4	6	6	6	6	6	6	6	6
Entireleaf Morningglory	(<i>Ipomoea hederacea</i>)	-	-	4	3	4	3	4	3	4	3	4	3
Giant Ragweed	(<i>Ambrosia trifida</i>)	4	6	6	8	6	8	6	8	8	10	8	10
Hemp Sesbania	(<i>Sesbania exaltata</i>)	4	4	4	4	4	4	4	4	4	4	4	4
Ivyleaf Morningglory	(<i>Ipomoea hederacea</i>)	3	3	4	4	4	4	4	4	4	4	4	4
Jimsonweed	(<i>Datura stramonium</i>)	4	4	4	4	6	6	6	6	6	6	6	6
Kochia	(<i>Kochia scoparia</i>)	-	2	-	2	-	2	-	2	-	4	-	4
Ladysthumb	(<i>Polygonum persicaria</i>)	4	4	4	4	6	6	8	8	8	8	8	8
Marestail	(<i>Coryza canadensis</i>)	-	-	-	3	-	5	-	5	-	5	-	5
Palmettoleaf Morningglory	(<i>Ipomoea wrightii</i>)	-	-	4	3	4	3	4	3	4	3	4	3
Pennsylvania Smartweed	(<i>Polygonum strumarium</i>)	4	4	4	4	6	6	8	8	8	8	8	8
Pitted Morningglory	(<i>Ipomoea lacunosa</i>)	3	3	4	4	4	4	4	4	4	4	4	4
Pokeweed	(<i>Phytolacca americana</i>)	-	-	4	4	6	6	6	6	6	6	6	6
Prickly Sida	(<i>Sida spinosus</i>)	-	-	6	2	4	1	6	2	4	1	6	2
Puncturevine	(<i>Tribulus terrestris</i>)	-	-	-	-	-	-	6	4	6	4	6	4
Purple Morningglory	(<i>Ipomoea muricata</i>)	-	-	2	3	2	3	2	3	2	3	2	3
Redroot Pigweed ³	(<i>Amaranthus retroflexus</i>)	4	2	8	6	6	4	8	6	6	4	8	6
Smallflower Morningglory	(<i>Jacobsonia tamnifolia</i>)	-	-	4	3	4	3	4	3	4	3	4	3
Smooth Pigweed ³	(<i>Amaranthus hybridus</i>)	4	2	6	4	4	2	6	4	6	4	6	4
Spiny Pigweed ³	(<i>Amaranthus spinosus</i>)	4	2	8	6	6	4	8	6	6	4	8	6
Sunflower	(<i>Helianthus annuus</i>)	6	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 tuberculatus</i>)	4	2	8	6	6	4	8	6	6	4	8	6
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	6	5	6	5	8	6	8	6
Venice Mallow	(<i>Hibiscus trionum</i>)	4	2	4	2	4	2	4	2	4	2	4	2
Wild Buckwheat	(<i>Polygonum convolvulus</i>)	6	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 SUPPRESSED²

Canada thistle	(<i>Cirsium arvense</i>)	Not Recommended	Not Recommended	8"-bud	8"-bud	8"-bud	8"-bud
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- ¹ When determining leaf stage, count all leaves except cotyledonary leaves.
- ² Selected rates of BUCTRIL® GEL + atrazine tank mixtures suppress the growth by burning down of top growth. Regrowth may occur.
- ³ If pigweeds (*Amaranthus sp.*) present in the field to be treated have been identified as triazine resistant biotypes, use BUCTRIL® GEL at 3/4 pint/A in a tank mixture with atrazine at 1/2 or 1 1/5 lb ai/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
	1 1/5	2 2/5 Pints
Atrazine 80WP	1/2	5/8 Pound
	1 1/5	1 1/2 Pounds
Aatrex® Nine-O ¹	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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SPECIAL USE DIRECTIONS FOR OTHER WEED PROBLEMS IN CORN AND SORGHUM

Large Common Cocklebur, Common Lambsquarters and Sunflower

For control of common cocklebur and common lambsquarters 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 3/4-1 pint/A or BUCTRIL® GEL + atrazine tank mixture at 1/2 pint/A + 1 1/5 lb ai/A. Make a second application of BUCTRIL® GEL at 1/2 pint/A 7 to 10 days later, but do not exceed a total of 1 pint/A of BUCTRIL® GEL per season on corn (field or pop).

Canada Thistle Management

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

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

If possible follow with cultivation 14-21 days after treatment. In the fall apply 2,4-D (such as Weedone⁹ 638), Banvel®, Clarity® 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 ³ GEL + Banvel ³¹	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 between the 3 leaf stage but prior to the preboot stage (growth stage 4) or 15 inches in height. 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 after the 4 leaf stage but prior to the preboot stage (growth stage 4) or 15 inches in height. Do not apply in the boot stage. Use drop nozzles if crop is taller than 8 inches.	

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ADDITIONAL BUCTRIL® GEL TANK MIXTURE RECOMMENDATIONS (continued)

		APPLICATION TIMING AND SPECIFIC COMMENTS	
PRODUCT	RATE	CROP	WEEDS
BUCTRIL® GEL + atrazine + Banvel® ¹	1/2 pint/A + 1/2-1 1/5 lb ai/A + 1/8-1/4 pint/A	Apply to field corn after emergence but before corn is 12 inches tall. Apply to sorghum between the 3 leaf stage but prior to the preboot stage (growth stage 4) or 12 inches in height, whichever comes first. 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 ai/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 but prior to the preboot stage (growth stage 4) or 12 inches in height, whichever comes first. Do not apply in the boot stage. Use drop nozzles if crop is taller than 8 inches.	

¹Clarity® may be used at the same rates as Banvel®, in a tank mixture on corn. These mixtures must be applied before corn exceeds 8 inches in height. Do not use Clarity® in a tank mixture with BUCTRIL® GEL or BUCTRIL® GEL + atrazine on sorghum.

BUCTRIL® GEL + 2,4-D (such as WEEDONE® and WEEDAR® brand Herbicide)	1/2 pint/A + 1/16-1/4 lb ai/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 between the 3 leaf stage but prior to the preboot stage (growth stage 4) or 15 inches in height, whichever comes first. Use drop nozzles if crop is taller than 8 inches.	All weeds controlled by BUCTRIL® GEL at recommended rates plus improved pigweed and kochia control. For Canada thistle burndown and field bindweed suppression up to the mid-bloom stage, use 1/8 - 1/4 lb ai/A of 2,4-D with BUCTRIL® GEL.
	3/4 pint/A + 1/16-1/4 lb ai/A	Apply to field corn between the 4 leaf stage but prior to tassel emergence. Use drop nozzles if crop is taller than 8 inches. Apply to sorghum between the 4 leaf stage but prior to the preboot stage (growth stage 4) or 15 inches in height, whichever comes first. Use drop nozzles if crop is taller than 8 inches.	

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

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ADDITIONAL BUCTRIL® GEL TANK MIXTURE RECOMMENDATIONS (continued)

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
BUCTRIL® GEL + atrazine + 2,4-D (such as WEEDONE® or WEEDAR® brand Herbicide)	1/2 pint/A + 1/2-1 1/5 lb ai/A + 1/16 -1/4 lb ai/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 between the 3 leaf stage but prior to the preboot stage (growth stage 4) or 12 inches in height, whichever comes first. 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 devils claw control. For Canada thistle burndown and field bindweed suppression, use 1/8 - 1/4 lb ai/A of 2,4-D with BUCTRIL® GEL.
	3/4 pint/A + 1/2-1 1/5 lb ai/A + 1/16-1/4 lb ai/A	Apply to field corn between the 4 leaf stage but 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 but prior to the preboot stage (growth stage 4) or 12 inches in height, whichever comes first. Use drop nozzles if crop is taller than 8 inches.	
BUCTRIL® GEL + Accent® + 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 inches tall. Use drop nozzles when corn is 24 to 36 inches tall. Do not apply this tankmix to sorghum.	All broadleaf weeds controlled by BUCTRIL® GEL at 1/2 or 3/4 pint/A 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 + 2/3 oz/A + 1 qt/100 gal of water (0.25% v/v)	Apply to field corn between the 4 leaf stage up to 36 inches in height. Use drop nozzles when corn is 24 to 36 inches tall. Do not apply this tankmix to sorghum.	
BUCTRIL® GEL + atrazine + Accent® + Non-ionic surfactant	1/2 pint/A + 1/2 - 1 1/5 lb ai/A + 2/3 oz/A + 1 qt/100 gal of water (0.25% v/v)	Apply to field corn preemergence or postemergence but before the corn is 12 inches tall. Do not apply this tankmix to sorghum.	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 ai/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. Do not apply this tankmix to sorghum.	

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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 + Beacon® + 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. Do not apply this tankmix to sorghum.	All broadleaf weeds controlled by BUCTRIL® GEL at 1/2 pint/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 + Exceed® + Non-ionic surfactant	3/8-1/2 pint/A + 0.5- 1.0 oz/A + 1 qt/100 gal of water (0.25% v/v)	Apply to field corn from 4-48 inches in height and before tasseling, whichever comes first. Do not apply this tankmix to sorghum.	Addition of Exceed® at 0.5 ounce/A to BUCTRIL® GEL at 3/8-1/2 pint/A will control all weeds on the BUCTRIL® GEL label at 1/2 pint/A plus improved control of velvetleaf and pigweed species. Addition of Exceed® at 1.0 ounce/A to BUCTRIL® GEL at 3/8-1/2 pint/A will control all weeds on both the BUCTRIL® GEL and Exceed® labels. Follow the weed size guidelines on the BUCTRIL® GEL and Exceed® labels that are least restrictive.
BUCTRIL® GEL + Permit® + Non-ionic surfactant	3/8-1/2 pint/A + 1/3-2/3 oz/A + 1 qt/100 gal of water (0.25% v/v)	Apply to field corn from the 3-leaf stage to layby. Do not apply this tankmix to sorghum.	Addition of Permit® at 1/3 ounce/A to BUCTRIL® GEL at 3/8-1/2 pint/A will control all weeds on the BUCTRIL® GEL label at 1/2 pint/A plus improved control of velvetleaf and pigweed species. Addition of Permit® at 2/3 ounce/A to BUCTRIL® GEL at 3/8-1/2 pint/A will control all weeds on both the BUCTRIL® GEL and Permit® labels. Follow the weed size guidelines on the BUCTRIL® GEL and Permit® labels that are least restrictive.
BUCTRIL® GEL + Stinger®	1/2 pint/A + 1/3-2/3 pint/A	Apply to field corn after emergence up to 24 inches in height. Do not apply this mixture to sorghum.	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. Do not apply this mixture to sorghum.	

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PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
BUCTRIL® GEL + Atrazine + Stinger®	1/2 pint/A + 1/2-1 1/5 lb ai/A + 1/3-2/3 pint/A	Apply to field corn after emergence but before corn is 12 inches tall. Do not apply this mixture to sorghum.	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 ai/A + 1/3 - 2/3 pint/A	Apply to field corn from 4 leaf stage but before corn is 12 inches tall. Do not apply this mixture to sorghum.	
BUCTRIL® GEL + Pursuit® + Nonionic surfactant + UAN Fertilizer solution	3/8-1/2 pint/A + 4 ounces/A + 1 qt/100 gallons + 1-2 quarts/A	Apply this tankmix only on field corn hybrids possessing resistance to Pursuit® herbicide. Contact your seed supplier for further information. Apply this tank mix to corn between the 3 leaf to 8 leaf stage of growth. Do not use crop oil concentrates when applying BUCTRIL® GEL + Pursuit® tank mixtures.	This tank mix will control all broadleaf weeds listed as controlled by BUCTRIL® GEL at 1/2 pint/A plus giant foxtail, redroot pigweed, and other grass and broadleaf weeds listed on the Pursuit® label.
BUCTRIL® GEL + Bladex® 80W or Bladex® 90DF	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® 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.	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 1/2 inches in height.
BUCTRIL® GEL + Extrazine® II DF or Extrazine® 90DF	1/2 pint/A + 1 3/10-2 1/5 lb/A 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®	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 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 within 30 days following BUCTRIL® Gel Herbicide application.
- Do not cut crop for feed, fodder or graze within 30 days of application.
- The total cumulative rate should not exceed 1 pint/A per season.

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- 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®, Clarity® or 2,4-D tank mixtures to avoid off target drift to sensitive crops.
- Tank mixtures with 2,4-D, Banvel®, or Clarity® can cause stalk brittleness to field corn. Tank mixtures with 2,4-D and Banvel® can cause stalk brittleness to 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.
- Do not apply BUCTRIL® GEL at any rate to sorghum after the preboot stage of growth (growth stage 4) as severe crop injury, including loss of crop yield may result.
- Do not apply the 1 pint/A rate of BUCTRIL® GEL to sorghum
- Do not apply the BUCTRIL® GEL + Pursuit® tankmix except to field corn hybrids known to possess resistance to Pursuit®, or severe crop injury may result.

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

BUCTRIL® GEL RECOMMENDATIONS

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
BUCTRIL® GEL	1/2-1 pint/A	Spring seeded wheat, barley, oats, rye and triticale. Use in all states except Idaho, Oregon, Washington, Colorado, Wyoming, and Montana. Apply from emergence up to and prior to the boot stage.	Apply 1/2 pint/A to MOST SUSCEPTIBLE and 3/4-1 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® at 3/4-1 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.
	3/4-1 pint/A	Fall seeded wheat, barley, oats, rye and triticale throughout the United States. Apply from emergence to the boot stage. Spring seeded wheat, barley, oats, rye and triticale in Idaho, Oregon, Washington, Colorado, Wyoming, and Montana. Apply from emergence up to and prior 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. Apply to SUSCEPTIBLE broadleaf weeds up to the 4 leaf stage, 2 inches in height or 1 inch in diameter, 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 trifoliolate leaves. Follow all precautions and restrictions listed under the small grains and alfalfa sections.	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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BUCTRIL® GEL TANK MIXTURE RECOMMENDATIONS

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
BUCTRIL® GEL + 2,4-D (such as WEEDONE® or WEEDAR®)	1/2-1 pint/A + 1/4-1/2 lb ai/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 ai/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 wild buckwheat, redroot pigweed and wild 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 ai/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, 2 inches in height or 1 inch in diameter, whichever comes first.
BUCTRIL® GEL + Banvel®	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® + Non-ionic surfactant	3/8-3/4 pint/A + 1/6-1/3 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, 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 + Ally® + Non-ionic 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® + Non-ionic surfactant	3/8-3/4 pint/A + 1/6-1/3 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® + Non-ionic 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)

		APPLICATION TIMING AND SPECIFIC COMMENTS	
PRODUCT	RATE	CROP	WEEDS
BUCTRIL [®] GEL + Express [®] + Non-ionic surfactant	1/2-3/4 pint/A + 1/6-1/3 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 + 1/6-1/3 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 + Non-ionic surfactant	3/8-3/4 pint/A + 3/10-1/2 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 [®] or Curtail [®] M	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 [®] or Lexone [®])	1/2-5/8 pint/A + 1/8-1/4 lb ai/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 ai/A	Winter wheat and winter barley in Idaho, Oregon and Washington. Use only in areas where annual rainfall exceeds 16 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 gromwell. Apply to weeds before they are 2 inches tall or 2 inches in diameter.
BUCTRIL [®] GEL + Tiller [®]	1/2 pint/A + 1 pint/A	Spring wheat. Apply when crop begins to tiller (3 - 4 leaf stage) up to the 6 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®	1/2-1 pint/A + 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°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.
	1/2-1 pint/A + 2 2/3-3 1/3 pints/A ~	Winter wheat and spring wheat. After emergence but before jointing.	
BUCTRIL® GEL + Hoelon® + Crop Oil Concentrate	1/2-1 pint/A + 2-2 2/3 pints/A + 1-2 pints/A	Winter wheat and spring wheat. After emergence but before jointing. Use a minimum of 10 gallons of spray volume per acre. DO NOT USE ON BARLEY.	
BUCTRIL® GEL + Avenge®	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 6 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 within 30 days following BUCTRIL® Gel Herbicide application.
- The total cumulative rate of BUCTRIL® GEL should not exceed 1 pint per season.

FORAGE, FIBER AND SPECIALITY CROPS

20/31

ALFALFA (SEEDLING)

BUCTRIL® GEL RECOMMENDATIONS

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
BUCTRIL® GEL	1/2-3/4 pint/A	<p>In the states of Washington, Oregon, Idaho, Montana, Wyoming, Colorado, Utah, Nevada, Arizona, New Mexico, and the western halves of North Dakota, South Dakota, Nebraska and Kansas:</p> <p>Apply in the fall or spring to seedling alfalfa when the majority of the field has a minimum of 2 trifoliates. Unacceptable crop injury may occur to alfalfa seedlings less than the 2 trifoliolate stage. BUCTRIL® GEL applications made when temperatures are expected to exceed 80°F at and 3 days following application can result in unacceptable crop injury.</p> <p>In the remaining states, apply in the fall or spring to seedling alfalfa when the majority of the field has a minimum of 4 trifoliolate leaves. When alfalfa stand is uneven and conditions favor leafburn, unacceptable crop injury may occur to alfalfa in the 2 trifoliolate or smaller stage of growth. If you are unsure of growth stage conditions, contact your local extension service. BUCTRIL® GEL applications made when temperatures are expected to exceed 70°F at and 3 days following application can result in unacceptable crop injury.</p> <p>Follow all other use directions listed on the BUCTRIL® GEL label.</p>	<p>Apply 1/2 pint/A to MOST SUSCEPTIBLE broadleaf weeds and 3/4 pint/A for SUSCEPTIBLE broadleaf weeds (See GENERAL WEED LIST) when weeds do not exceed 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first. BUCTRIL® GEL will not adequately control over-wintered pennycress, henbit and mustards.</p>

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BUCTRIL® GEL TANK MIXTURE RECOMMENDATIONS

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
<p>BUCTRIL® GEL + BUTYRAC® 200 (2,4-DB)</p>	<p>1/2 pint/A + 1 quart/A</p>	<p>Apply in the fall or spring to seedling alfalfa when the majority of the field has a minimum of 4 trifoliolate leaves. When alfalfa stand is uneven and conditions favor leafburn, unacceptable crop injury may occur to alfalfa in the 2 trifoliolate or smaller stage of growth. If you are unsure of growth stage, contact your local extension service. In the states of Washington, Oregon, Idaho, Montana, Wyoming, Colorado, Utah, Nevada, Arizona, New Mexico, and the western halves of North Dakota, South Dakota, Nebraska and Kansas, BUCTRIL® GEL application made when temperatures are expected to exceed 80°F at and 3 days following application can result in unacceptable crop injury. In the remaining states BUCTRIL® GEL applications made when temperatures are expected to exceed 70°F at and 3 days following application can result in unacceptable crop injury. Rainfall or overhead irrigation within 7-10 days following a BUTYRAC® 200 application can cause unacceptable crop injury.</p>	<p>This tankmix improves control of pigweed species, kochia, and tansy mustard. Apply when weeds do not exceed the 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first. BUCTRIL® GEL + BUTYRAC 200 tank mixtures will not adequately control over-wintered pennycress, henbit and mustards.</p>
<p>BUCTRIL® GEL + Pursuit® + Non-ionic surfactant</p>	<p>3/8-1/2 pint/A + 3-6 ounces/A + 1 qt/100 gallons</p>	<p>In the states of Washington, Oregon, Idaho, Montana, Wyoming, Colorado, Utah, Nevada, Arizona, New Mexico, and the western halves of North Dakota, South Dakota, Nebraska and Kansas:</p> <p>Apply in the fall or spring to seedling alfalfa when the majority of the field has a minimum of 2 trifoliolate leaves. When alfalfa stand is uneven and conditions favor leafburn, unacceptable crop injury may occur to alfalfa treated prior to the 2nd trifoliolate stage of growth. If you are unsure of growth stage conditions, contact your local extension service. BUCTRIL® GEL + Pursuit® applications made when temperatures are expected to exceed 80°F at and 3 days following application can result in unacceptable crop injury.</p>	<p>This tank mix will control MOST SUSCEPTIBLE broadleaf weeds (See GENERAL WEED LIST) when weeds do not exceed the 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first; and other grass and broadleaf weeds listed on the Pursuit® label. Weeds should be 1-3 inches tall for optimum control.</p>

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BUCTRIL® GEL TANK MIXTURE RECOMMENDATIONS

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
BUCTRIL® GEL + Pursuit® + Non-ionic surfactant	1/4-3/8 pint/A + 3-6 ounces/A + 1 qt/100 gallons	<p>In all states except Washington, Oregon, Idaho, Montana, Wyoming, Colorado, Utah, Nevada, Arizona, New Mexico, and the western halves of North Dakota, South Dakota, Nebraska and Kansas:</p> <p>Apply in the fall or spring to seedling alfalfa when the majority of the field has a minimum of 2 trifoliate leaves. When alfalfa stand is uneven and conditions favor leafburn, unacceptable crop injury may occur to alfalfa treated prior to the 2nd trifoliate stage of growth. If you are unsure of growth stage conditions, contact your local extension service. BUCTRIL® GEL + Pursuit® applications made when temperatures are expected to exceed 70°F at and 3 days following application can result in unacceptable crop injury.</p>	<p>BUCTRIL® GEL at 1/4 pint/A tankmixed with Pursuit® will control common lambsquarters up to 2 inches in height plus weeds listed on the Pursuit® label.</p> <p>BUCTRIL® GEL at 3/8 pint/A + Pursuit® will control the MOST SUSCEPTIBLE annual broadleaf weeds (See GENERAL WEED LIST) when weeds do not exceed the 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first plus weeds listed on the Pursuit® label.</p> <p>Applications should be made when the majority of the weeds are 1-3 inches tall and when common lambsquarters do not exceed 4 inches in height. For low growing weeds (such as mustards), apply before the rosette exceeds 3 inches in diameter.</p> <p>Refer to the Pursuit® label for a list of susceptible weeds at each of the recommended rates.</p>

RESTRICTIONS AND PRECAUTIONS: Alfalfa (Seedling)

- Crop leafburn can occur following BUCTRIL® GEL application. Warm, humid conditions may enhance leaf burn. New crop growth will not be affected. Alfalfa yield should not be reduced although total biomass tonnage may decrease compared to a weedy field due to weed removal.
- Do not apply when 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 unless specified in the use directions because increased alfalfa injury will occur.
- Do not cut for feed or graze spring treated alfalfa within 30 days following treatment.
- Do not cut for feed or graze fall or winter treated alfalfa until spring, at least 60 days following treatment.
- The total cumulative rate of BUCTRIL® GEL should not exceed 1 pint/A per season.
- The use of Eptam® preemergence may enhance crop leaf burn from postemergence application of BUCTRIL® GEL and should be considered prior to using BUCTRIL® GEL.
- Follow all restrictions and precautions on the tank mixture product label when a BUCTRIL® GEL tank mixture is used.
- Tank mixture with 2,4-DB may result in unacceptable crop leaf burn especially under warm, humid weather conditions.
- BUCTRIL® GEL alone can be applied to seedling alfalfa that has been underseeded into small grains that include wheat, barley, oats, rye, and triticale. See application restrictions under the SMALL GRAINS SECTION.
- Rainfall or overhead irrigation within 7-10 days following BUTYRAC® 200 application can cause unacceptable crop injury.

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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 8 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 + Poast® + Crop oil Concentrate or Dash®	1/2 pint/A + 1-1 1/2 pints/A + 2 Pints/A or 2 pints/A	Apply to flax that is 2 to 8 inches in height. Do not apply this tankmix to flax during or after the bud stage, or within 75 days of flax harvest.	This tankmix will control broadleaf weeds plus grassy weeds listed on the Poast label. Apply to MOST SUSCEPTIBLE broadleaf weeds (see list on the BUCTRIL® GEL label) that do not exceed the 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first.

RESTRICTIONS 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.
- Unless otherwise instructed, do not apply BUCTRIL® GEL to flax with crop oil concentrate, surfactants or nitrogen solutions.
- Do not use on ornamental flax.
- Follow all precautions, directions and restrictions on the Poast® label when using this tank mixture with BUCTRIL® GEL.

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.
BUCTRIL® GEL (Only for garlic grown in muck soils in Northeastern United States)*	3/4-1 pint/A	Apply to garlic after emergence but before 12 inches in height. *May be harvested 60 days after treatment.	

PRECAUTIONS AND RESTRICTIONS: Garlic

- Use a minimum of 20 gallons per acre for ground application.
- Do not harvest within 112 days following treatment (except garlic grown in muck soils in Northeastern United States).

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 crops that exhibit good vigor.	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 should not be made within two weeks of a Sinbar⁵ application or unacceptable crop injury may result.
- Do not use in spring on newly established mint. Fall applications 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 pints of BUCTRIL® GEL per acre to mint in a single growing season.

GRASS CROPS

CONSERVATION RESERVE PROGRAM (CRP) AREAS

BUCTRIL® GEL RECOMMENDATIONS

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
BUCTRIL® GEL	1/2-1 pint/A	Apply to grasses after emergence. If alfalfa is planted apply after the 4 trifoliate leaf stage.	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.

BUCTRIL® GEL TANK MIXTURE RECOMMENDATIONS

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
BUCTRIL® GEL + Rhomene® or Rhonox® (MCPA)	1/2-1 pint/A + 1/4 - 1/2 pint/A	Apply to CRP areas after grasses have reached the 3 leaf stage. Do not use this tank mixture in areas where alfalfa or other legumes have been planted.	This tankmix improves control of mustards, pigweed, and kochia. Apply up to the 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first.

RESTRICTIONS AND PRECAUTIONS: CRP AREAS

- Do not allow livestock to graze in treated areas or feed treated grass and forage to livestock.
- Do not add spray adjuvants or fluid fertilizers when applying BUCTRIL® GEL to CRP areas planted with alfalfa or other legumes.
- Do not apply BUCTRIL® GEL to CRP areas planted with alfalfa if temperatures are expected to exceed 80°F or severe crop injury may occur. If legumes other than alfalfa have been planted, severe crop injury may occur at any application temperature.
- Do not apply more than 3/4 pint/A of BUCTRIL® GEL to CRP acres that are underseeded with alfalfa.

GRASSES GROWN FOR SEED OR SOD PRODUCTION

BUCTRIL® GEL RECOMMENDATIONS Seedling and Established Grasses

PRODUCT	RATE	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
	Per ACRE	Per 1000 SQ. FT.	CROP	WEEDS
BUCTRIL® GEL	0.5 to 1.0 Pint	0.188 to 0.375 Fl. Oz.	Apply to established and newly seeded grasses grown for seed or sod production before the boot stage. Established grasses tolerant to BUCTRIL® GEL include bentgrasses, Kentucky Bluegrass, Fescues, Ryegrass, Bermudagrass, St. Augustinegrass and Zoysiagrass. BUCTRIL® GEL may also be used on seedling grasses such as Merion, Park, Delta, or common Kentucky Bluegrasses, Pennlawn, Chewings, Illahee or Alta Fescues, Orchard grass, Highland, Seaside or Astoria Bentgrasses, perennial Ryegrasses, Bahiagrass and Zoysiagrass.	Refer to the GENERAL WEED LIST for a listing of susceptible broadleaf weeds. Optimal control will be attained when weeds are treated in the seedling stage (less than 4 leaf stage, 2 inches in height, or 1 inch in diameter).

RESTRICTIONS AND PRECAUTIONS: Grasses grown for seed or sod production

- Do not allow livestock to graze in treated areas or feed treated grasses to livestock.
- Do not apply BUCTRIL® GEL to grasses grown for seed or sod production with backpack or hand-held application equipment.

ONIONS

BUCTRIL® GEL RECOMMENDATIONS

PRODUCT	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
		CROP	WEEDS
BUCTRIL® GEL	Preemergence 1/2-3/4 pint/A	Preemergence use restricted to onions grown east of the Mississippi River only on muck soils containing greater than 10% organic matter. Apply 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. Preemergence applications can be applied using either ground or aerial equipment.	Apply BUCTRIL® GEL at 1/2 pint/A to control MOST SUSCEPTIBLE weeds and 3/4 pint/A for SUSCEPTIBLE weeds. Weeds should not exceed the 4 leaf stage, 2 inches in height or 1 inch in diameter, whichever comes first.
	Postemergence 1/2-3/4 pint/A	<p>Apply only to onions which have 2 to 5 true leaves.</p> <p>Use at least 50-70 gallons of water per acre and apply by ground equipment only. Water volume is important - CONCENTRATED SPRAYS KILL ONIONS. Thorough and uniform coverage is necessary for good weed control.</p> <p>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.</p>	

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 3 days of crop emergence.
- Do not apply BUCTRIL® GEL preemergence to onions grown West of the Mississippi River.
- 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 sand, insects, or diseases.
- Do not apply postemergence applications of BUCTRIL® GEL to onions with aerial equipment.
- Do not add surfactant.

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NON-RESIDENTIAL TURFGRASS

BUCTRIL® GEL RECOMMENDATIONS Seedling and Established Non-Residential Turfgrass

PRODUCT	RATE	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
	Per ACRE	Per 1000 SQ.FT.	CROP	WEEDS
BUCTRIL® GEL	0.5 to 1.0 Pint	0.188 to 0.375 Fl. Oz.	Apply to established and newly seeded non-residential turfgrass when weeds are small and actively growing. Established turfgrasses that are tolerant to BUCTRIL® GEL include bentgrasses, Kentucky Bluegrass, Fescues, Ryegrass, Bermudagrass, St. Augustinegrass and Zoysiagrass. BUCTRIL® GEL may also be used on seedling grasses such as Merion, Park, Delta, or common Kentucky Bluegrasses, Pennlawn, Chewings, Illahee or Alta Fescues, Orchard grass, Highland, Seaside or Astoria Bentgrasses, perennial Ryegrasses, Bahiagrass and Zoysiagrass.	Refer to the GENERAL WEED LIST for a listing of susceptible broadleaf weeds. Optimal control will be attained when weeds are treated in the seedling stage (less than 4 leaf stage, 2 inches in height, or 1 inch in diameter).

RESTRICTIONS AND PRECAUTIONS: Non-residential turfgrasses

- Do not allow livestock to graze in treated areas or feed treated grasses to livestock.
- Do not apply BUCTRIL® GEL to non-residential turf with backpack or hand-held application equipment.

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BUCTRIL® GEL TANKMIXTURE RECOMMENDATIONS
Established Non-Residential Turfgrass

PRODUCT	RATE	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
	Per ACRE	Per 1000 SQ.FT.	CROP	WEEDS
BUCTRIL® GEL + WEEDONE® DPC Ester	1 Pint + 3 to 4 Pints	0.375 Fl. Oz. + 1.125 to 1.5 Fl. Oz.	Apply to established non-residential turfgrass only. This treatment may cause injury to bentgrasses, St. Augustinegrass, centipedegrass, and carpetgrass.	All weed species previously listed in the GENERAL WEED LIST for BUCTRIL® GEL plus the following species: Dandelion (<i>Taraxacum officinale</i>) Plantains (<i>Plantago spp.</i>) Ground Ivy (<i>Glechoma hederacea</i>) Red Clover (<i>Trifolium pratense</i>) White Clover (<i>Trifolium repens</i>) Hop Clover (<i>Trifolium agrarium</i>) Common Chickweed (<i>Stellaria media</i>) Prostrate Spurge (<i>Euphorbia supina</i>) Oxalis (<i>Oxalis europaea</i>) Knotweed (<i>Polygonum aviculare</i>) Optimal control will be attained when weeds are treated in the seedling stage (less than 4 leaf stage, 2 inches in height, or 1 inch in diameter).
BUCTRIL® GEL + MCP	1 Pint + 1.0 lb ai	0.375 Fl. Oz. + 0.025 lb ai	Apply to established non-residential turfgrass only. This treatment is not recommended for use on St. Augustinegrass or centipedegrass.	All weed species previously listed in the GENERAL WEED LIST for BUCTRIL® GEL plus the following species: Red Clover (<i>Trifolium pratense</i>) White Clover (<i>Trifolium repens</i>) Common Chickweed (<i>Stellaria media</i>) Mouseear Chickweed (<i>Cerastium vulgatum</i>) Ground Ivy (<i>Glechoma hederacea</i>) Stitchwort (<i>Stellaria graminea</i>) Knotweed (<i>Polygonum aviculare</i>) Prostrate Spurge (<i>Euphorbia supina</i>) Optimal control will be attained when weeds are treated in the seedling stage (less than 4 leaf stage, 2 inches in height, or 1 inch in diameter).
BUCTRIL® GEL + dicamba	1 Pint + 0.125 to 0.25 lb ai	0.375 Fl. Oz. + 0.006 to 0.012 lb ai	Apply to established non-residential turfgrass only. This treatment may cause injury to bentgrasses, St. Augustinegrass, centipedegrass, and carpetgrass.	All weed species previously listed in the GENERAL WEED LIST for BUCTRIL® GEL plus the following species: Red Clover (<i>Trifolium pratense</i>) White Clover (<i>Trifolium repens</i>) Common Chickweed (<i>Stellaria media</i>) Mouseear Chickweed (<i>Cerastium vulgatum</i>) Pepperweed (<i>Lepidium spp.</i>) Knotweed (<i>Polygonum aviculare</i>) Optimal control will be attained when weeds are treated in the seedling stage (less than 4 leaf stage, 2 inches in height, or 1 inch in diameter).

ESTABLISHED NON-RESIDENTIAL TURFGRASS

ADDITIONAL BUCTRIL® GEL TANK MIXTURE RECOMMENDATIONS (continued)

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PRODUCT	RATE	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
	Per ACRE	Per 1000 SQ.FT.	CROP	WEEDS
BUCTRIL [®] GEL + MCP + dicamba	1 Pint + 0.5 to 1.0 lb ai + 0.125 to 0.25 lb ai	0.375 Fl. Oz. + 0.0125 to 0.025 lb ai + 0.003 to 0.006 lb ai	Apply to established non-residential turfgrass only. This treatment is not recommended for use on St. Augustinegrass or centipedegrass.	All weed species previously listed in the GENERAL WEED LIST for BUCTRIL [®] GEL and BUCTRIL [®] GEL/Dicamba tankmixtures plus the following species: Dandelion (<i>Taraxacum officinale</i>) Plantains (<i>Plantago spp.</i>) Optimal control will be attained when weeds are treated in the seedling stage (less than 4 leaf stage, 2 inches in height, or 1 inch in diameter).
BUCTRIL [®] GEL + MCP + 2,4-D	1 Pint + 0.5 to 1.0 lb ai + 0.5 to 1.0 lb ai	0.375 Fl. Oz. + 0.0125 to 0.025 lb ai + 0.0125 to 0.025 lb ai	Apply to established non-residential turfgrass only. This treatment is not recommended for use on St. Augustinegrass or centipedegrass.	All weed species previously listed in the GENERAL WEED LIST for BUCTRIL [®] GEL and BUCTRIL [®] GEL/2,4-D tankmixtures plus the following species: Dandelion (<i>Taraxacum officinale</i>) Plantains (<i>Plantago spp.</i>) Red Sorrell (<i>Rumex acetosella</i>) Knotweed (<i>Polygonum aviculare</i>) Optimal control will be attained when weeds are treated in the seedling stage (less than 4 leaf stage, 2 inches in height, or 1 inch in diameter). Optimal control of red sorrell will require the high use rate of 2,4-D or MCP.

RESTRICTIONS AND PRECAUTIONS: Non-residential turfgrasses

- BUCTRIL[®] GEL/WEEDONE[®] DPC tankmixes are not allowed in California.
- Do not allow livestock to graze in treated areas or feed treated grasses to livestock.
- Do not apply BUCTRIL[®] GEL to non-residential turf with backpack or hand-held application equipment.

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NON-CROPLAND

NON-CROPLAND AND INDUSTRIAL SITES

BUCTRIL® GEL RECOMMENDATIONS

PRODUCT	RATE	RATE	APPLICATION TIMING AND SPECIFIC COMMENTS	
	Per ACRE	Per 1000 SQ. FT.	CROP	WEEDS
BUCTRIL® GEL	0.5 to 1.0 Pint	0.188 to 0.375 Fl. Oz.	Apply to non-cropland and industrial sites when weeds have emerged and are actively growing.	Refer to the GENERAL WEED LIST for a listing of susceptible broadleaf weeds. Use adequate spray volumes to ensure thorough coverage. Optimal control will be attained when weeds are treated in the seedling stage (less than 4 leaf stage, 2 inches in height, or 1 inch in diameter).

RESTRICTIONS AND PRECAUTIONS: Non-Cropland and Industrial Sites

- Do not allow livestock to graze in treated areas or feed treated plant material to livestock.
- Addition of surfactant or crop oil concentrate may improve burndown of broadleaf weeds under cool, dry conditions.
- Do not apply BUCTRIL® GEL to non-cropland and industrial sites with backpack or hand-held application equipment.

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LIMITED WARRANTY AND DISCLAIMER

The manufacturer warrants that this product conforms to the chemical description on the label; that this product is reasonably fit for the purposes set forth in the directions for use when it is used in accordance with such directions; that the directions, warnings, and other statements on this label are based upon responsible experts' evaluation of reasonable tests of effectiveness, of toxicity to laboratory animals and to plants, and of residues on food crops, and upon reports of field experience. Tests have not been made on all varieties or in all states or under all conditions. THE MANUFACTURER NEITHER MAKES NOR INTENDS, NOR DOES IT AUTHORIZE ANY AGENT OR REPRESENTATIVE TO MAKE, ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, AND IT EXPRESSLY EXCLUDES AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

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