

PRODUCT NUMBER
2070

BUCTRIL[®]

HERBICIDE



PROPOSED LABEL

Annual Cereals, Grass, Edible Oil Beans

ACCEPTED

JAN-6 1985

Isorethum

in small grains, corn, flax, garlic,

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

STORAGE:

Do not store near fertilizers or seeds. Store at temperatures above 3°F. If allowed to freeze remix before using.

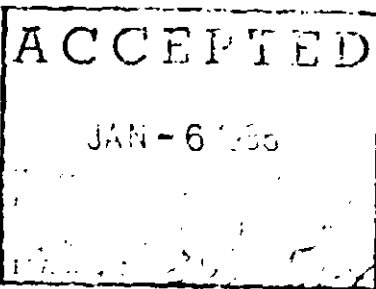
PESTICIDE DISPOSAL:

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

CONTAINER DISPOSAL:

Metal: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Plastic: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or if allowed by state and local authorities, by burning. If burned, stay downwind of smoke.



GENERAL INFORMATION

Buctril is a selective postemergence herbicide for control of important broad-leaf weeds infesting small grains (wheat, barley, oats, rye and triticale) field corn, popcorn, grain sorghum, flax, garlic, turf and noncrop areas. Optimum weed control is obtained when Buctril is applied to actively growing weed seedlings. Buctril is primarily a contact herbicide, therefore thorough coverage of the weed seedlings is essential for optimum control.

Buctril is formulated as an emulsifiable concentrate of octanoic acid ester of bromoxynil containing the equivalent of 2 pounds of bromoxynil per gallon. To broaden the spectrum of control in wheat and barley, Buctril may be tankmixed with Glean®, Avenge®, MCPA, 2,4-D or Hoelon®. In oats and rye, Buctril may be tankmixed with MCPA or 2,4-D. In field corn and popcorn, Buctril can be tankmixed with atrazine, Banvel or 2,4-D. Buctril may also be tankmixed with atrazine in grain sorghum. On turf, Buctril can be tankmixed with MCPP, Banvel, MCPP + Banvel, or 2,4-D + MCPP. See individual crop recommendations for proper chemical rates to be used. To ensure maximum crop safety and weed control, follow all cautions and limitations on this label and the labels of products used in the tank mixture with Buctril.

MIXING INSTRUCTIONS

Buctril Alone: Fill the spray tank 1/2 to 3/4 full with clean water. Begin agitation and add the recommended amount of Buctril. Add water to the spray tank to the desired level. Maintain sufficient agitation to ensure a uniform spray mixture during application.

Tank Mixtures: Fill the spray tank 1/2 to 3/4 full with clean water and begin agitation. If tankmixing with either Glean or atrazine, add the recommended amount of Glean or atrazine first. After the herbicide is thoroughly mixed with water add the recommended amount of Buctril and add water to the spray tank to the desired level.

If tankmixing with Avenge, MCPA, 2,4-D, Hoelon, MCPP, or Banvel add the recommended amount of Buctril first. After Buctril is thoroughly mixed with water, add the recommended amount of the other herbicide(s) to the spray tank and add water to the spray tank to the desired level.

Maintain sufficient agitation while mixing and during application to ensure a uniform spray mixture. If spray mixture is allowed to remain without agitation for short periods of time, be sure to agitate until uniformly mixed before application.

APPLICATION PROCEDURES

Buctril alone and in a tank mixture with Glean, Avenge, MCPA, 2,4-D, Hoelon and atrazine can be applied by both ground and aerial equipment. In addition, Buctril alone can be applied by automated sprinkler irrigation systems. The following provides recommended methods of application for each crop.

CROP	TYPE OF APPLICATION EQUIPMENT		
	GROUND	AERIAL	AUTOMATED SPRINKLER IRRIGATION
SMALL GRAINS	X	X	X
FIELD AND POPCORN	X	X	X
GRAIN SORGHUM	X	X	X
FLAX	X	X	
GARLIC	X	X	
ANNUAL CANARYGRASS	X		
MINT	X		
TURF	X		
NONCROP AREAS	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. Specific application instructions are described under each crop heading.

AERIAL APPLICATION

Use a minimum of 5 gallons of spray volume per acre using diaphragm-type nozzles that produce cone or fan spray patterns with a maximum spray pressure of 40 psi at the nozzle tips. Nozzles should be located no farther than $\frac{3}{4}$ the distance from the center of the aircraft to the end of the wing or rotor. Nozzles should be oriented at an angle between straight down and straight back.

The aircraft should discharge the spray a maximum of 10 feet above the crop. To minimize drift, do not apply during periods of gusty winds or when wind exceeds 5 mph.

AUTOMATED SPRINKLER IRRIGATION SYSTEMS

Buctril may be applied through automated sprinkler irrigation systems to small grains, field corn, popcorn and grain sorghum. Use a properly engineered chemical injection system which includes antisiphon and check valves to prevent water source contamination and overflow of the mix tank. The system should also include interlocking controls between the metering device and the water pump to ensure simultaneous shutoff. The sprinkler system should provide uniform coverage and should have no leaks. The chemical injection tank should be cleaned before application to remove all fertilizer, pesticide and other foreign matter. Add Buctril or a Buctril-water mixture to the injector tank. A solution of Buctril diluted with water can be used only where agitation is present in the mix tank to achieve higher volumes needed in some irrigation systems. Carefully calibrate the system before and during application. Allow sufficient time for Buctril to be flushed through the system before turning off the irrigation water.

GENERAL WEED LIST

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

SUSCEPTIBLE BROADLEAF WEED SPECIES:

Annual sowthistle (Sonchus oleraceus)
Black nightshade (Solanum nigrum)
Blue mustard (Chorispora tenella)
Coast Fiddleneck (Amsinckia intermedia)
Common cocklebur (Xanthium pensylvanicum)
Common lambsquarters (Chenopodium album)
Common tarweed (Hemizonia congesta)
Eastern black nightshade (Solanum ptycanthum)
Field pennycress (Thlaspi arvense)
Green Smartweed (Polygonum scabrum)
Hairy nightshade (Solanum sarachoides)
Jimsonweed (Datura stramonium)
Ladysthumb (Polygonum persicaria)
Pennsylvania smartweed (Polygonum pensylvanicum)
Pepperweed spp. (annual) (Lepidium spp.)
Shepherdspurse (Capsella bursa-pastoris)
Silverleaf nightshade (Solanum elaeagnifolium)
Tartary buckwheat (Fagopyrum tataricum)
1/Sunflower (Helianthus annuus)
Wild buckwheat (Polygonum convolvulus)

1/For 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)
Common chamomile (Anthemis arvensis)
Corn Gromwell (Lithospermum arvense)
Cow cockle (Saponaria vaccaria)
Giant ragweed (Ambrosia trifida)
Hemp Sesbania (Sesbania exaltata)
Ivyleaf morningglory (Ipomoea hederacea)
Knapweed (Sceleranthus annuus)
2/Kochia (Kochia scoparia)
London Rocket (Sisymbrium irio)
Mareweed (Anthemis cotula)
Prostrate knotweed (Polygonum aviculare)
2/Redroot pigweed (Amaranthus retroflexus)
Russian thistle (Salsola kali)
2/Spiny pigweed (Amaranthus spinosus)
Tall morningglory (Ipomoea purpurea)
2/Tall waterhemp (Amaranthus tuberculatus)
Tumble mustard (Sisymbrium altissimum)
Velvetleaf (Abutilon theophrasti)
Venice mallow (Hibiscus trionum)
Wild mustard (Sinapis arvensis)
Wild radish (Raphanus raphanistrum)

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

WEED SUPPRESSION:

Buctril suppresses the growth of Canada thistle (Cirsium arvense) by burning down of top growth. Regrowth may occur.

COMPATIBILITY OF INSECTICIDES WITH BUCTRIL

The following foliar insecticides are compatible with Buctril as tank mixtures.

INSECTICIDE

<u>Common Name</u>	<u>Trade Name</u>	<u>Formulation</u>
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
Demeton	Systox	Emulsifiable Concentrate

When mixing an insecticide with Buctril, fill the spray tank 1/2 to 3/4 full with clean water and begin agitation. If tank mixing with either Dylox, Furadan or Sevin, add the recommended amount of insecticide first. After the insecticide is thoroughly mixed with water add the recommended amount of Buctril and add water to the spray tank to the desired level.

If tank mixing with the other insecticides listed above, add the recommended amount of Buctril first. After Buctril is thoroughly mixed with water, add the recommended amount of insecticide to the spray tank and add water to the spray tank to the desired level.

Maintain sufficient agitation while mixing and during application to ensure a uniform spray mixture. If spray mixture is allowed to remain without agitation for short periods of time, be sure to agitate until uniformly mixed before application.

FOLLOW ALL CAUTIONS AND LIMITATIONS ON THE LABELS OF PRODUCTS USED IN TANK MIXTURES WITH BUCTRIL.

Dylox^R, Metasystox^R and Systox^R are Registered Trademarks of the Parent Company of Farbenfabriken Bayer GmbH, Leverkusen.

Furadan^R is a Registered Trademark of FMC Corporation.

Lorsban^R is a Trademark of The Dow Chemical Company.

Pounce^R is a Registered Trademark of FMC Corporation.

Pydrin^R is a Registered Trademark of Shell Chemical Company.

Sevin^R is a Registered Trademark of Union Carbide Corporation.

WHEAT, BARLEY, OATS, RYE AND TRITICALE

Buctril can be applied to small grains from emergence up to the boot stage. Applications should be made to weeds soon after emergence for best weed control and to prevent competition to the crop. Reduced weed control may occur when weeds are stressed from lack of moisture or cold temperatures. Avoid spray drift to nontarget areas. Do not graze treated fields for 30 days following application.

Buctril can be applied to wheat and barley alone or in a tank mixture with Glean, Avenge, MCPA, 2,4-D, or Hoelon to broaden the spectrum of weed control. Buctril can also be applied to oats and rye alone or in a tank mixture with MCPA or 2,4-D. To ensure maximum crop safety and weed control, follow all cautions and limitations on this label and the labels of products used in tank mixtures with Buctril.

APPLICATION PROCEDURES

GROUND APPLICATION

Buctril used alone and in tank mixtures can be applied by ground equipment using a minimum spray volume of 10 gallons per acre. Use flat fan nozzles spaced a maximum of 20 inches apart with a minimum spray pressure of 30 psi at the nozzle tips. Other nozzle types may not provide adequate coverage of the weeds to ensure optimum weed control.

AERIAL APPLICATION

Buctril and tank mixtures with Buctril can be applied by aerial equipment using a minimum spray volume of 5 gallons per acre with a maximum spray pressure of 40 psi at the nozzle tips. Refer to AERIAL APPLICATION under the GENERAL INFORMATION section for complete use directions.

AUTOMATED SPRINKLER IRRIGATION SYSTEMS

Apply Butril by automated sprinkler irrigation systems using 1/4 to 1/2 acre-inch of water per acre. Refer to GENERAL INFORMATION section for complete use directions and precautions.

SPRAYABLE LIQUID FERTILIZERS

Butril can be applied to small grains using sprayable liquid fertilizer as the carrier. Predetermine the compatibility with the liquid fertilizer by mixing small proportional quantities in advance. Agitation must be maintained during filling and application operations to ensure that Butril is evenly mixed with the fertilizer. Leaf burn may occur when Butril is applied with liquid fertilizer, but new leaves are not adversely affected.

RECOMMENDED USES

The recommended rate of Butril used alone or in a tank mixture with another herbicide is determined by the crop (winter or spring seeded), geographic area, application equipment (ground, aerial, or automated sprinkler irrigation systems), weed species and stage of growth of weeds at time of application.

Recommendations are as follows:

WHEAT AND BARLEY

BUCTRIL RECOMMENDATIONS

			-----TIMING OF APPLICATION-----	
PRODUCT	CROP/GEOGRAPHICAL AREA	RATE	CROP	
Buctril	Fall seeded wheat and barley throughout the United States and spring seeded wheat and barley in Idaho, Oregon and Washington.	1 1/2 Pints/A	Apply to wheat and barley from emergence to the boot stage.	<u>MOST SUSCEPTIBLE BROADLEAF WEEDS</u> Apply to weeds up to 12 inches in height whichever rosette, apply before diameter.
		2 Pints/A		<u>SUSCEPTIBLE BROADLEAF WEEDS</u> Apply to weeds up to 12 inches in height whichever rosette, apply before diameter.
	Spring seeded wheat and barley except Idaho, Oregon and Washington.	1 Pint/A	Apply to wheat and barley from emergence to the boot stage.	<u>MOST SUSCEPTIBLE AND GRASSES</u> Apply Buctril at 1 pint per acre. Do not exceed the 4 leaf stage whichever comes first apply before weeds emerge.
		1 1/2 Pints/A		Use Buctril at 1 1/2 pints per acre on Kochia that is 2-4 inches high (Amaranthus spp.) the 4 leaf stage or 2 inches in height whichever comes first.

BUCTRIL TANK MIXTURE RECOMMENDATIONS

BUCTRIL AND GLEAN

			-----TIMING OF APPLICATION-----	
PRODUCT	CROP/GEOGRAPHICAL AREA	RATE	CROP	WEED
Buctril + GLEAN (Tankmix)	Fall seeded wheat and barley throughout the United States and spring seeded wheat and barley in Idaho, Oregon, and Washington	3/4 Pint/A + 1/6-1/3 ounce/A	Apply to wheat and barley in the fall or spring any time after the crop is in the 2 to 3 leaf stage, but before the boot stage.	<u>MOST SUSCEPTIBLE BROADLEAF WEEDS</u> Apply to weeds up to the 8 leaf stage or 4 1/2 in height whichever comes first. If weed forms rosette, apply before weeds exceed 2 inches diameter.
		1 Pint/A + 1/6-1/3 ounce/A		<u>SUSCEPTIBLE BROADLEAF WEEDS</u> Apply to weeds up to the 4 leaf stage or 2 1/2 in height whichever comes first. If weed forms rosette, apply before weeds exceed 1 inch in diameter.
	Spring seeded wheat and barley except Idaho, Oregon, and Washington.	3/4 Pint/A + 1/6-1/3 ounce/A		<u>MOST SUSCEPTIBLE AND SUSCEPTIBLE BROADLEAF WEEDS</u> Apply Buctril + Glean at 3/4 pint/A + 1/6-1/3 ounce/A to 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.
		1 1/2 Pints/A + 1/6-1/3 ounce/A		Use Buctril + Glean at 1 1/2 pints/A + 1/6-1/3 ounce/A for control of kochia that is 2-4 inches in height and pigweed (<i>Amaranthus</i> spp.) that does not exceed the 4 leaf stage or 2 inches height, whichever comes first.

A TANKMIX APPLICATION OF BUCTRIL AND GLEAN BROADENS THE SPECTRUM OF WEED CONTROL. SEE GLEAN LABEL FOR LISTING OF ADDITIONAL SUSCEPTIBLE WEED SPECIES AND CROP ROTATION INSTRUCTIONS. GLEAN IS A REGISTERED TRADEMARK OF E. I. DUPONT DE NEMOURS & CO., INC.

A tank mixture of Buctril + Avenge can be used to control wild oats in addition to the broadleaf weeds controlled by Buctril. The rate and application timing for broadleaf weed control with Buctril in the tank mixture is the same as when Buctril is used alone. See BUCTRIL RECOMMENDATIONS.

Apply Buctril + Avenge tank mixtures when the majority of the wild oats are in the 3 to 5 leaf stage of growth. This frequently coincides with barley in the 2 to 7 leaf stage, spring seeded wheat in the 5 to 6 leaf stage, and fall seeded wheat in the 4 leaf to tillered stage of growth. See Avenge label for varietal restrictions and recommended Avenge rates as related to wild oat density. Avenge is a trademark of American Cyanamid Company.

BUCTRIL AND MCPA OR 2,4-D

A tank mixture of Buctril at the recommended rate and MCPA or 2,4-D at 1/4 to 1/2 pound of active ingredient per acre is used to broaden the spectrum of broadleaf weed control. The tank mixture will control the weeds listed on the MCPA or 2,4-D labels in addition to the weeds listed on the Buctril label. The rate of Buctril in the tank mixture is the same as when Buctril is used alone. See BUCTRIL RECOMMENDATIONS.

Buctril + MCPA tank mixtures can be applied after the 3 leaf stage but before the crop reaches the boot stage. Buctril + 2,4-D tank mixtures can be applied after the crop has tillered but before the forming of joints in the stem.

BUCTRIL AND HOELON

A tank mixture of Buctril + Hoelon can be used to control annual grasses in addition to the broadleaf weeds controlled by Buctril. The rate and application timing for broadleaf weed control with Buctril in the tank mixture is the same as when Buctril is used alone. See BUCTRIL RECOMMENDATIONS.

Buctril + Hoelon tank mixtures can be applied to fall seeded wheat and spring seeded wheat and barley up to the jointing stage of growth. Annual grasses should be in the 1 to 3 leaf stage of growth; up to the 4 leaf stage in wheat. See Hoelon label to determine recommended Hoelon rate in relation to the annual grassy weed stage of growth. Hoelon is a trademark of Hoechst AG.

OATS, RYE AND TRITICALE

Buctril used alone or in a tank mixture with MCPA or 2,4-D can be applied to oats and rye. Buctril should be used alone when applied to triticale. Use the same rates and application timing as recommended for wheat and barley. Refer to previous section for WHEAT AND BARLEY.

WHEAT, BARLEY, OATS, AND TRITICALE

(Automated Sprinkler Irrigation Application)

Buctril can be applied through automated sprinkler irrigation systems to fall and spring seeded wheat, barley, oats, rye and triticale from emergence to the boot stage. Apply Buctril at 2 pints/A in 1/4 to 1/2 acre-inch of water. See GENERAL INFORMATION section for complete use directions and precautions. Refer to GENERAL WEED LIST in GENERAL INFORMATION section for list of MOST SUSCEPTIBLE BROADLEAF WEEDS and SUSCEPTIBLE BROADLEAF WEEDS to postemergence applications of Buctril.

MOST SUSCEPTIBLE BROADLEAF WEEDS

Apply to weeds up to the 8 leaf stage or 4 inches in height whichever comes first. If weed forms rosette apply before weeds exceed 2 inches in diameter.

SUSCEPTIBLE BROADLEAF WEEDS

Apply to weeds 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.

WEED SIZE IS CRITICAL WHEN BUCTRIL IS APPLIED THROUGH AUTOMATED SPRINKLER IRRIGATION SYSTEMS. WEEDS SHOULD NOT EXCEED THE MAXIMUM INDICATED STAGE OF GROWTH.

Do not apply Buctril through automated sprinkler irrigation systems in California.

FIELD CORN, POPCORN and GRAIN SORGHUM

Buctril is applied as a broadcast application in field corn, popcorn or grain sorghum grown for grains, seed or silage under conventional, minimum tillage, ridge tillage or no-till systems. For optimum control, spray seedling weeds that are actively growing and not stressed from lack of moisture or low temperatures. Avoid spray drift to non-target areas.

A tank mixture of Buctril + atrazine may be used in field corn, popcorn or grain sorghum to broaden the spectrum of control and provide residual control of germinating seedlings. In field corn, Buctril may also be used in a tank mixture with Banvel or 2,4-D.

When environmental conditions are quite cool and cloudy or hot and humid, some leaf burn may occur on the corn or grain sorghum foliage. The crop rapidly outgrows this condition and new growth is unaffected. To ensure maximum crop safety and weed control, follow all cautions and limitations on this label and the labels of products used in tank mixtures with Buctril.

APPLICATION PROCEDURES

Ground Equipment

Buctril used alone and in tank mixtures with atrazine or 2,4-D can be applied with ground equipment using a minimum of 10 gallons of spray volume per acre. Use flat fan nozzles spaced a maximum of 20 inches apart with a minimum spray pressure of 30 psi at the nozzle tips. Other nozzle types may not provide adequate coverage of the weeds to ensure optimum control. When weed infestations are heavy, use of a higher spray volume and spray pressure will be helpful to ensure uniform weed coverage. When corn or grain sorghum is large enough to interfere with the spray pattern, drop nozzles should be used to obtain uniform coverage of the weeds.

When Buctril is used in a tank mixture with Banvel, use a minimum of 20 gallons of spray volume per acre. Use flat fan nozzles spaced a maximum of 20 inches apart with a spray pressure less than 20 psi at the nozzle tips. DO NOT APPLY TANK MIXTURES OF BUCTRIL & 2,4-D OR BUCTRIL & BANVEL WITH AERIAL EQUIPMENT.

Aerial Equipment

Buctril used alone or in tank mixtures with atrazine can be applied by aerial equipment. Use a minimum of 5 gallons of spray volume per acre with a maximum spray pressure of 40 psi at the nozzle tips. Refer to AERIAL APPLICATION under GENERAL INFORMATION section for complete use directions.

AUTOMATED SPRINKLER IRRIGATION SYSTEMS

Refer to GENERAL INFORMATION section for complete use directions and precautions.

BUCTRIL RECOMMENDATIONS

Postemergence applications of Buctril can be applied to field corn, popcorn and grain sorghum at 1 and 1-1/2 pints/A. A second application is recommended if a new flush of weeds occurs following the first application. The total cumulative rate should not exceed 3 pints/A per season. Application can be made to corn up to tassel emergence, but do not apply within 30 days of ensilage. Application may be made to grain sorghum up to the boot stage but do not apply within 30 days of ensilage. Refer to APPLICATION RATE TABLE for weeds controlled.

APPLICATION RATE TABLE FOR BUCTRIL

WEED SPECIES		1 Pint/A		1-1/2 Pints/A	
		Maximum Leaf Stage	Maximum Weed Height (inches)	Maximum Leaf Stage	Maximum Weed Height (inches)
When determining leaf stage, count all leaves except cotyledonary leaves					
Black Nightshade	<u>Solanum nigrum</u>	6	6	6	6
Buffalobur	<u>Solanum rostratum</u>	4	2	6	4
Common Cocklebur	<u>Xanthium pensylvanicum</u>	6	8	8	10
Common Lambsquarters	<u>Chenopodium album</u>	-	6	-	8
Common Ragweed	<u>Ambrosia artemisiifolia</u>	6	4	8	6
Eastern Black Nightshade	<u>Solanum ptycanthum</u>	6	6	6	6
Giant Ragweed	<u>Ambrosia trifida</u>	6	4	6	6
Hemp Sesbania	<u>Sesbania exaltata</u>	-	-	4	4
Ivyleaf Morningglory	<u>Ipomoea hederacea</u>	3	3	4	4
Jimsonweed	<u>Datura stramonium</u>	4	4	6	6
Ladysthumb	<u>Polygonum persicaria</u>	4	4	6	6
Pennsylvania Smartweed	<u>Polygonum pensylvanicum</u>	4	4	6	6
Redroot Pigweed	<u>Amaranthus retroflexus</u>	-	-	4	2
Spiny Pigweed	<u>Amaranthus spinosus</u>	-	-	4	2
Sunflower	<u>Helianthus annuus</u>	4	6	6	8
Tall Morningglory	<u>Ipomoea purpurea</u>	3	3	4	4
Tall Waterhemp	<u>Amaranthus tuberculatus</u>	-	-	4	2
Velvetleaf	<u>Abutilon theophrasti</u>	4	3	6	5
Venice Mallow	<u>Hibiscus trionum</u>	-	-	4	2
Wild Buckwheat	<u>Polygonum convolvulus</u>	4	6	6	8
Wild Mustard	<u>Sinapis arvensis</u>	-	-	4	.

WEEDS SUPPRESSED

Canada Thistle	<u>Cirsium arvense</u>	not recom-	8 inch to
Buctril suppresses the growth by burning down of top growth. Regrowth may occur.		mended	bud stage

BUCTRIL TANK MIXTURE RECOMMENDATIONS

BUCTRIL AND ATRAZINE : Postemergence applications of Buctril at 3/4, 1 and 1-1/2 pints/A in a tank mixture with atrazine at 1/2 and 1-1/5 lbai/A can be applied to field corn, popcorn and grain sorghum using the following use directions. Refer to APPLICATION RATE TABLE for weeds controlled.

APPLICATION RATE TABLE FOR BUCTRIL & ATRAZINE TANK MIXTURES

WEED SPECIES		Buctril and Atrazine (Tank mix)									
		3/4 Pint/A		3/4 Pints/A		1 Pint/A		1 Pint/A		1-1/2 Pint/A	
		+ 1/2 lbai/A		+ 1-1/5 lbai/A		+ 1/2 lbai/A		+ 1-1/5 lbai/A		+ 1/2 lbai/A	
		Maximum Leaf Stage	Maximum Weed Height (inches)	Maximum Leaf Stage	Maximum Weed Height (inches)	Maximum Leaf Stage	Maximum Weed Height (inches)	Maximum Leaf Stage	Maximum Weed Height (inches)	Maximum Leaf Stage	Maximum Weed Height (inches)
When determining leaf stage, count all leaves except cotyledonary leaves											
Black Nightshade	<u>Solanum nigrum</u>	4	4	4	4	6	6	6	6	6	6
Buffalobur	<u>Solanum rostratum</u>	4	4	4	4	6	4	6	4	6	6
Common Cocklebur	<u>Xanthium pensylvanicum</u>	6	8	8	10	8	10	10	12	10	10
Common Lambsquarters	<u>Chenopodium album</u>	-	6	-	10	-	10	-	12	-	-
Common Ragweed	<u>Ambrosia artemisiifolia</u>	6	4	8	6	8	6	8	6	8	8
Eastern Black Nightshade	<u>Solanum ptycanthum</u>	4	4	4	4	6	6	6	6	6	6
Giant Ragweed	<u>Ambrosia trifida</u>	1	4	4	4	6	6	6	6	6	6
Hemp Sesbania	<u>Sesbania exaltata</u>	4	4	4	4	4	4	4	4	4	4
Ivyleaf Morningglory	<u>Ipomoea hederacea</u>	3	3	4	4	4	4	4	4	4	4
Jimsonweed	<u>Datura stramonium</u>	4	4	4	4	6	6	6	6	6	6
Ladysthumb	<u>Polygonum persicaria</u>	4	4	4	4	6	6	8	8	8	8
Pennsylvania Smartweed	<u>Polygonum pensylvanicum</u>	4	4	4	4	6	6	8	8	8	8
Prickly Sida	<u>Sida spinosa</u>	-	-	6	2	4	1	6	2	4	4
Puncturevine	<u>Tribulus terrestris</u>	-	-	-	-	-	-	6	4	6	6
Redroot Pigweed	<u>Amaranthus retroflexus</u>	4	2	8	6	6	4	8	6	6	6
Smooth Pigweed	<u>Amaranthus hybridus</u>	4	2	6	4	4	2	6	4	6	6

Spiny Pigweed ¹	<u>Amaranthus spinosus</u>	4	2	6	6	6	4	8	6	6	4	8	6
Sunflower	<u>Helianthus annuus</u>	6	8	8	10	8	10	10	12	10	12	10	12
Tall Morningglory	<u>Ipomoea purpurea</u>	3	3	4	4	4	4	4	4	4	4	4	4
Tall Waterhemp ¹	<u>Amaranthus tuberculatus</u>	4	2	8	6	6	4	8	6	6	4	8	6
Velvetleaf	<u>Abutilon theophrasti</u>	4	3	4	3	6	5	6	5	8	6	8	6
Venice Mallow	<u>Hibiscus trionum</u>	4	2	4	2	4	2	4	2	4	2	4	2
Wild Buckwheat	<u>Polygonum convolvulus</u>	6	8	8	10	8	10	10	12	10	12	10	12
Wild Mustard	<u>Sinapis arvensis</u>	4	4	4	4	4	4	4	4	4	4	4	4

Canada thistle	<u>Cirsium arvense</u>	Not Recommended	WEEDS SUPPRESSED			8" - bud	8" - bud	8" - bud
			Not Recommended	Not Recommended	Not Recommended			

Selected rates of Buctril + Atrazine tank mixtures suppress the growth by burning down of top growth. Regrowth may occur

1/If pigweeds (*Amaranthus* sp.) present in the field to be treated have been identified as triazine resistant biotypes, use Buctril at 1-1/2 pints/A in a tank mixture with atrazine at 1/2 or 1-1/5 lbai/A. Applications should be made when pigweeds do not exceed the 4-leaf stage and 2 inches in height.

the 3-leaf stage and prior to tassel emergence. Use a maximum of 2 applications per season.

1-1/2Pints/A Apply to corn between the 4-leaf stage and prior to tassel emergence. Use a maximum of 2 applications per season.

1/For control of additional weeds not listed in the APPLICATION RATE TABLE for field corn, popcorn and grain sorghum, see GENERAL WEED LIST: Use Buctril at 1 pint/A for control of MOST SUSCEPTIBLE WEEDS and 1-1/2 pints/A for control of SUSCEPTIBLE WEEDS. Apply Buctril to weeds that do not exceed the 4-leaf stage or 2 inches in height, whichever comes first. If weed forms rosette, apply before weed exceeds 1 inch in diameter.

FIELD CORN and POPCORN

BUCTRIL TANKMIX RECOMMENDATIONS

PRODUCT	RATE	CROP	TIMING OF APPLICATION	
			WEED	
Buctril 3/4 to 1 Pint/A + 1/2 to 1-1/5 Atrazine ^{1,2/} 1bai/A (Tankmix)		Apply to corn between the 3-leaf stage and before corn is 30 inches tall. Make up to 2 applications per season.	See APPLICATION RATE TABLE for list of weeds and corresponding stage of growth that are controlled by Buctril & Atrazine tank mixtures at recommended rates of application. These tank mixtures also provide some residual control of germinating weed seedlings.	
1-1/2 Pints/A + 1/2 to 1 1/5 1bai/A		Apply to corn between the 4-leaf stage and before corn is 30 inches tall. Make up to 2 applications per season.		

ATRAZINE CONVERSION TABLE^{1/}

Atrazine Formulation	Atrazine Rate Pounds of active Ingredient per acre	Atrazine Formulation Rate per acre
Atrazine 4L	1/2 1-1/5	1 Pint 2-2/5 Pints
Atrazine 80 WP	1/2 1-1/5	5/8 Pound 1-1/2 Pounds
Aatrex ^R Nine-O	1/2 1-1/5	3/5 Pound 1-1/3 Pounds

2/Follow all cautions and limitations on the labels of products used in tank mixtures with Buctril.

FIELD CORN (Ground Application Only)

BUCTRIL TANKMIX RECOMMENDATIONS

PRODUCT	RATE	CROP	TIMING OF APPLICATION
			WEED
Buctril + Banvel ^{1/} (Tankmix)	1 Pint/A + 1/4 lbai/A	Apply to corn between the 3-leaf stage and before corn is 36 inches tall or 15 days before tassel emergence, whichever comes first.	All weeds controlled by Buctril at recommended rates of application plus Canada thistle when applied from the 8-inch to bud stage and field bindweed up to the mid-bloom stage.
	1-1/2 Pints/A + 1/4 lbai/A	Apply to corn between the 4-leaf stage and before corn is 36 inches tall or 15 days before tassel emergence, whichever comes first.	

1/SPECIAL PRECAUTIONS FOR BUCTRIL & BANVEL TANK MIXTURES: Buctril & Banvel tank mixtures should be applied in a minimum of 20 gallons of spray volume per acre with a spray pressure below 20 psi at the nozzle tips.

DO NOT USE A TANK MIXTURE OF BUCTRIL & BANVEL UNLESS ALL CAUTIONS AND LIMITATIONS ON THE BANVEL LABEL ARE FOLLOWED.

FIELD CORN
(Ground Application Only)

BUCTRIL TANKMIX RECOMMENDATIONS

PRODUCT	RATE	CROP	TIMING OF APPLICATION	
			WEED	
Buctril + 2,4-D ^{1/} (Tankmix)	1 Pint/A + 1/4 lbai/A	Apply to corn between the 3-leaf stage and prior to tassel emergence. When corn exceeds 8 inches in height, drop nozzles must be used to apply Buctril & 2,4-D tank mixtures as a directed spray.	All weeds controlled by Buctril at recommended rates of application plus control of wild mustard that is larger than the 4-leaf stage or 4 inches in height, whichever comes first.	
	1-1/2 Pints/A + 1/4 lbai/A	Apply to corn between the 4-leaf stage and prior to tassel emergence. When corn exceeds 8 inches in height, drop nozzles must be used to apply Buctril & 2,4-D tank mixtures as a directed spray.		

2,4-D CONVERSION TABLE^{1/}

Atrazine Formulation	2,4-D Rate Pounds of active Ingredient per acre	2,4-D Formulation Rate per acre
2,4-D 4 lb/gallon	1/4	1/2 Pint
2,4-D 6 lb/gallon	1/4	1/3 Pint

SPECIAL PRECAUTIONS FOR BUCTRIL + 2,4-D TANK MIXTURES: Postemergence applications of 2,4-D causes brittleness to corn. Winds or cultivations may cause breakage while corn is brittle. Follow all cautions and limitations on the labels of products used in tank mixtures with Buctril.

FIELD CORN AND POPCORN

(Automated Sprinkler Irrigation Application)

Buctril can be applied through automated sprinkler irrigation systems to field corn and popcorn between the 3-leaf stage and prior to tassel emergence. Apply Buctril at 2 pints/A in 1/4 to 1/2 acre-inch of water. See GENERAL INFORMATION section for complete use directions and precautions. Refer to GENERAL WEED LIST in the GENERAL INFORMATION section for list of MOST SUSCEPTIBLE BROADLEAF WEEDS and SUSCEPTIBLE BROADLEAF WEEDS.

MOST SUSCEPTIBLE BROADLEAF WEEDS

Apply to weeds up to the 8 leaf stage or 4 inches in height whichever comes first. If weed forms rosette apply before weeds exceed 2 inches in diameter.

SUSCEPTIBLE BROADLEAF WEEDS

Apply to weeds 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.

WEED SIZE IS CRITICAL WHEN BUCTRIL IS APPLIED THROUGH AUTOMATED SPRINKLER IRRIGATION SYSTEMS. WEEDS SHOULD NOT EXCEED THE MAXIMUM INDICATED STAGE OF GROWTH.

Do not apply Buctril through automated sprinkler irrigation systems in California.

GRAIN SORGHUM

BUCTRIL RECOMMENDATIONS

PRODUCT	RATE	CROP	TIMING OF APPLICATION
			WEED
Buctril	1 Pint/A	Apply to grain sorghum between the 3-leaf stage up to the boot stage. Use a maximum of 2 applications per season.	See APPLICATION RATE TABLE for list of weeds and corresponding stage of growth that are controlled by Buctril at recommended rates of application.
	1-1/2Pints/A	Apply to grain sorghum between the 4-leaf stage up to the boot stage. Use a maximum of 2 applications per season.	

GRAIN SORGHUM

BUCTRIL TANKMIX RECOMMENDATIONS

PRODUCT	RATE	CROP	TIMING OF APPLICATION	
			WEED	
Buctril +	3/4 to 1 Pint/A +	Apply to grain sorghum between the 3-leaf stage up to the boot stage. Use a maximum of 2 applications per season.	See APPLICATION RATE TABLE for list of weeds and corresponding stages of growth that are controlled by Buctril & Atrazine tank mixtures at recommended rates of application. These tank mixtures also provide some residual control of germinating weed seedlings.	
Atrazine ^{1,2} (Tankmix)	1/2 to 1-1/5 lbai/A			
	1-1/2 Pints/A +	Apply to grain sorghum between the 4-leaf stage up to the boot stage. Use a maximum of 2 applications per season.		
	1/2 to 1-1/5 lbai/A			

1/Refer to ATRAZINE CONVERSION TABLE under the corn section for conversion of active ingredient rates of atrazine to formulation rates.

2/Follow all cautions and limitations on the labels of products used in tank mixtures with Euctril.

GRAIN SORGHUM

(Automated Sprinkler Irrigation Application)

Buctril can be applied through automated sprinkler irrigation systems to grain sorghum between the 3-leaf up to the boot stage. Apply Buctril at 2 pints/A in 1/4 to 1/2 acre-inch of water. See GENERAL INFORMATION section for complete use directions and precautions. Refer to GENERAL WEED LIST in the GENERAL INFORMATION section for list of MOST SUSCEPTIBLE BROADLEAF WEEDS and SUSCEPTIBLE BROADLEAF WEEDS.

MOST SUSCEPTIBLE BROADLEAF WEEDS

Apply to weeds up to the 8 leaf stage or 4 inches in height whichever comes first. If weed forms rosette apply before weeds exceed 2 inches in diameter.

SUSCEPTIBLE BROADLEAF WEEDS

Apply to weeds 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.

WEED SIZE IS CRITICAL WHEN BUCTRIL IS APPLIED THROUGH AUTOMATED SPRINKLER IRRIGATION SYSTEMS. WEEDS SHOULD NOT EXCEED THE MAXIMUM INDICATED STAGE OF GROWTH.

Do not apply Buctril through automated sprinkler irrigation systems in California.

SPECIAL USE DIRECTIONS FOR CONTROL OF LARGE BROADLEAF WEEDS.

Sequential applications of Buctril or Buctril tank mixtures may be necessary for control of broadleaf weeds that exceed the maximum stage of growth recommended with a single application of Buctril or Buctril tank mixture. Thorough coverage of the weeds is essential to obtain optimum weed control.

COMMON COCKLEBUR
COMMON LAMBSQUARTERS
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 at 1 pint/A. Make a second application of Buctril at the same rate 7 to 10 days later.

VELVETLEAF

For control of velvetleaf up to 14 inches in height, use a postemergence application of Buctril at 1-1/2 pints/A or Buctril + atrazine tank mixture at 1 pint/A + 1-1/5 lbai/A. Make a second application of Buctril at 1 pint/A 7 to 10 days later.

RESTRICTIONS AND LIMITATIONS

Buctril does not control grasses. Therefore, it is recommended that a suitable grass control program be used to provide any required grass control.

Do not add a spray additive, or mix with liquid fertilizers, because excessive crop injury may occur.

Do not apply Buctril if heavy rainfall is expected within 1 hour of application.

Seed corn producers should consult the respective seed corn company regarding tolerance of certain seed production inbred lines to Buctril.

Do not plant rotational crops until the following use season.

Do not apply within 30 days of ensilage.

The total cumulative rate should not exceed 3 pints/A per season.

FLAX

Apply Buctril when weed seedlings are actively growing. For optimum control apply Buctril in sufficient spray volume to ensure good coverage of the weeds. Do not apply to flax under humid conditions and when air temperature is above 85°F as injury may occur. Do not add a spray additive with Buctril.

BUCTRIL RECOMMENDATIONS

Buctril at 1 pint/A should be applied postemergence to flax that is 2 to 8 inches in height. Do not apply Buctril to flax during or after the bud stage.

Buctril at 1 pint/A will control the MOST SUSCEPTIBLE AND SUSCEPTIBLE BROADLEAF WEEDS (See GENERAL WEED LIST) when applied at the recommended weed stage of growth. Weeds should 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.

For ground application, use a minimum of 10 gallons of spray volume per acre. Use flat fan nozzles spaced a maximum of 20 inches apart with a minimum spray pressure of 30 psi at the nozzle tips. Other nozzle types may not provide adequate coverage of the weeds to ensure optimum weed control. For aerial application, use a minimum of 5 gallons of spray volume per acre with a maximum spray pressure of 40 psi at the nozzle tips. Refer to AERIAL APPLICATION under GENERAL INFORMATION section for complete use directions.

GARLIC

Apply Buctril when weed seedlings are actively growing. For optimum control apply Buctril in sufficient spray volume to ensure good coverage of the weeds.

BUCTRIL RECOMMENDATIONS

Buctril can be applied after the crop emerges but before garlic is 12 inches in height.

For control of MOST SUSCEPTIBLE BROADLEAF WEEDS (See GENERAL WEED LIST) apply Buctril at 2 pints/A to weeds up to the 8 leaf stage or 4 inches in height, whichever comes first. If weed forms rosette, apply before weeds exceed 2 inches in diameter.

For control of SUSCEPTIBLE BROADLEAF WEEDS, apply Buctril at 4 pints/A to weeds 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.

For ground application, use a minimum of 20 gallons of spray volume per acre. Use flat fan nozzles spaced a maximum of 20 inches apart with a minimum spray pressure of 30 psi at the nozzle tips. Other nozzle types may not provide adequate coverage of the weeds to ensure optimum weed control. For aerial application, use a minimum of 5 gallons of spray volume per acre with a maximum spray pressure of 40 psi at the nozzle tips. Refer to AERIAL APPLICATION under GENERAL INFORMATION section for complete use directions. Do not apply Buctril within 112 days of anticipated harvest.

ANNUAL CANARYGRASS

Apply Buctril and MCPA tank mixtures when weed seedlings are actively growing. For optimum control applications should be made in a sufficient spray volume to ensure good coverage of the weeds.

BUCTRIL RECOMMENDATIONS

Buctril at 1 to 2 pints/A tankmixed with MCPA at 1/4 to 1/2 pound active ingredient per acre should be applied to annual canarygrass with a minimum of 3 leaves. Buctril and MCPA tank mixtures will control the MOST SUSCEPTIBLE AND SUSCEPTIBLE BROADLEAF WEEDS (SEE GENERAL WEED LIST) when applied at the recommended stage of growth. Weeds should 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.

Applications should be made in a minimum of 10 gallons of spray volume per acre. Use flat fan nozzles spaced a maximum of 20 inches apart with a minimum spray pressure of 30 psi at the nozzle tips. Other nozzle types may not provide adequate coverage of the weeds to ensure optimum weed control.

PRECAUTIONS

Do not apply when annual canarygrass is under stress from lack of water, or when the crop forms a canopy over the weeds. Do not graze livestock in treated annual canarygrass fields. Do not harvest within 75 days after application.

PEPPERMINT AND SPEARMINT (ESTABLISHED ONLY)

BUCTRIL RECOMMENDATIONS

Buctril should be applied only on established peppermint and spearmint which has been harvested for at least one year prior to treatment. Buctril should be applied after emergence of the broadleaf weeds but before they have more than 4 to 6 leaves. See GENERAL WEED LIST for weeds controlled by Buctril. When mint is dormant, Buctril should be applied at the rate of 2 to 4 pints/A depending upon weed species present. Applications made when mint is growing should be at the rate of 1 to 1-1/2 pints/A. Application should be made when air temperatures exceed or are expected to exceed 70°F within 5 days after application. A second application may be made if needed, but the cumulative rate of Buctril should not exceed 6 pints/A during a single growing season. Do not apply within 70 days of harvest.

All applications of Buctril to mint should be in a minimum of 10 gallons of spray volume per acre. Use flat fan nozzles spaced a maximum of 20 inches apart with a minimum spray pressure of 30 psi at the nozzle tips. Other nozzle types may not provide adequate coverage of the weeds to ensure optimum weed control.

PRECAUTIONS: Buctril may cause temporary stunting and leaf chlorosis when applied to growing mint. Do not apply to mint growing under adverse conditions such as insect, nematode and disease infestations, high soil salt content, drought, excessive moisture or mint suffering from winter injury.

ONIONS

Buctril at 1 to 1-1/2 pints/A can be applied to onions in the 2 to 5 true leaf stage using a minimum of 50 gallons of spray volume per acre. Lower spray volumes may cause excessive injury to the crop. Thorough coverage of the weeds is essential to obtain optimum control. See GENERAL WEED LIST for weeds controlled by Buctril. Use Buctril at 1 pint/A for control of MOST SUSCEPTIBLE WEEDS and 1-1/2 pints/A for control of SUSCEPTIBLE WEEDS. Applications should be made when weeds 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.

RESTRICTIONS:

Do not apply Buctril to onions that have been damaged from insects or blowing sand.

Do not add any surfactant to Buctril or excessive injury to the crop may occur.

Do not apply Buctril to onions until the dew has completely dried.

ESTABLISHED TURFGRASSES AND NEWLY PLANTED GRASSES FOR SOD OR SEED PRODUCTION

Postemergence applications of Butril controls many seedling broadleaf weeds commonly found in turfgrasses. Established grasses tolerant to Butril include bentgrasses, Kentucky Bluegrass, Fescues, Ryegrass, Bermudagrass, St. Augustinegrass and Zoysiagrass. Butril 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 newly sprigged Zoysiagrass planted for seed or sod production, or forage grasses planted for seed production only.

APPLICATION PROCEDURES

Butril used alone and in tank mixtures should be applied in 10 to 100 gallons of spray volume per acre. When using a spray volume from 10 to 40 GPA, use flat fan nozzles spaced a maximum of 20 inches apart with a minimum spray pressure of 30 psi at the nozzle tips. When using higher spray volumes, flood jet nozzles may be used with a minimum spray pressure of 30 psi at the nozzle tips.

BUCTRIL¹ RECOMMENDATIONS

SEEDLING AND ESTABLISHED TURF:

PRODUCT	RATE PER ACRE	RATE PER 1000 FT. ²	WEED SPECIES
Buctril	1 1/2 - 2 Pints	0.6-0.75 fl.oz.	See GENERAL WEED LIST

ESTABLISHED TURF ONLY; EXCLUDING BENTGRASS PUTTING GREENS:

Buctril	4 Pints	1.5 fl. oz.	As previously listed for Buctril plus the following: Spurweed (<u>Soliva</u> spp.) Yellow Woodsorrel (<u>Oxalis</u> spp.) ²
	8 Pints	3.0 fl. oz.	As previously listed for Buctril plus the following: Prostrate Spurge (<u>Euphorbia supina</u>)

BUCTRIL TANK MIXTURE RECOMMENDATIONS

BUCTRIL TANK MIXTURES ESTABLISHED TURF ONLY: EXCLUDING BENTGRASSES

Buctril + MCPP	2-4 Pints + 1.0 LBAI	0.75-1.5 fl. oz. + 0.025 LBAI	As previously listed for Buctril plus the following: Common Chickweed (<u>Stellaria media</u>) Mouseear Chickweed (<u>Cerastium vulgatum</u>) Red Clover (<u>Trifolium pratense</u>) White Clover (<u>Trifolium repens</u>) Ground Ivy (<u>Glechoma hederacea</u>) Stitchwort (<u>Stellaria graminea</u>) Knotweed (<u>Polygonum aviculare</u>) Prostrate Spurge (<u>Euphorbia supina</u>)
Buctril + dicamba	2 Pints + 0.25-0.5 LBAI	0.75 fl. oz. + 0.006-0.012 LBAI	As previously listed for Buctril plus the following: Common Chickweed (<u>Stellaria media</u>) Mouseear Chickweed (<u>Cerastium vulgatum</u>) Red Clover (<u>Trifolium pratense</u>) White Clover (<u>Trifolium repens</u>) Knotweed (<u>Polygonum aviculare</u>) Red Sorrel (<u>Rumex acetosella</u>) Pepperweed (<u>Lepidium</u> spp.)
	4 Pints + 0.25-0.5 LBAI	1.5 fl. oz. + 0.006-0.012 LBAI	As previously listed for Buctril and Buctril + dicamba plus the following: Prostrate Spurge (<u>Euphorbia supina</u>) Yellow Woodsorrel (<u>Oxalis</u> spp.) ² Spurweed (<u>Soliva</u> spp.)

BUCTRIL TANK MIXTURES ESTABLISHED TURF ONLY: EXCLUDING BENTGRASSES (continued)

PRODUCT	RATE PER ACRE	RATE PER 1000 FT. ²	WEED SPECIES
Buctril +	2 Pints +	0.75 fl. oz. +	As previously listed for Buctril combinations plus the following:
MCPP +	0.5-1.0 LBAI +	0.0125-0.025 LBAI +	Plaintains (<u>Plantago</u> spp.)
dicamba	0.125-0.25 LBAI	0.003-0.006 LBAI	Dandelion (<u>Taraxacum officinale</u>)
	4 Pints +	1.5 fl. oz. +	Prostrate Spurge (<u>Euphorbia supina</u>)
	0.5-1.0 LBAI +	0.0125-0.025 LBAI +	Spurweed (<u>Soliva</u> spp.)
	0.125-0.25 LBAI	0.003-0.006 LBAI	
Buctril +	2 Pints +	0.75 fl. oz. +	As previously listed for Buctril tank mixtures plus the following:
2,4-D +	0.5-1.0 LBAI +	0.0125-0.025 LBAI +	Plaintains (<u>Plantago</u> spp.)
MCPP ⁴	0.5-1.0 LBAI	0.0125-0.025 LBAI	Knotweed (<u>Polygonum aviculare</u>)
			Dandelion (<u>Taraxacum officinale</u>)
			Red Sorrel (<u>Rumex acetosella</u>) ^{3/}

1/Buctril use rates are expressed as pints/A and fl. oz/1000 ft.² and the tankmix herbicides (dicamba, MCPP, and 2,4-D) use rates are given in pounds of active ingredient per acre (LBAI/A) and pounds of active ingredient per 1000 ft.² (LBAI/1000 ft.²) due to the various formulations commercially available. Make the necessary calculations to liquid measure based on the formulation used.

2/Except in California.

3/Use high rate of MCPP or 2,4-D.

4/Including prepackaged mixtures such as Chipco Turf Kleen.

A second application of Buctril alone 2 weeks after the initial treatment may be needed to get complete control of established Prostrate Spurge or Yellow Woodsorrel.

In order to ensure maximum safety and weed control follow all cautions and limitations on this label and the labels of products used in tank mixtures with Buctril.

INDUSTRIAL SITES AND NONCROP AREAS

FOR BROADCAST TREATMENT OF SMALL WEEDS:

Apply 2 quarts of Bucril with either 2 quarts of surfactant or 2 gallons of diesel oil in 150 gallons of water for each acre sprayed. Thorough coverage is important. Make sure spray boom is high enough to contact tops of all plants. Use adequate spray pressure to contact all leaf surfaces.

FOR SPOT TREATMENT OF SCATTERED INFESTATIONS OR LARGE WEEDS ALONG FENCEROWS IN VACANT LOTS AND ON INDUSTRIAL SITES:

Mix 1 quart of Bucril with either 1 quart of surfactant or 1 gallon of diesel oil per 100 gallons of spray solution. Cover all the weed foliage thoroughly. Use at least 200 gallons of spray solution for each acre sprayed. When using oil, add Bucril to oil-then add water to this mixture while agitating vigorously.

CONTROLS THESE WEEDS IN THE SEEDLING STAGE:

In the Southwestern United States, Bucril effectively controls Russian thistle (Salsola kali), Saltbush (Atriplex Spp.) Maretail (Conyza canadensis), Puncturevine (Tribulus terrestris), Prostrate spurge (Euphorbia supina) and Bassia (Bassia spp.).

Bucril should be applied in early summer when Russian thistle is immature and growing vigorously. Best results are obtained when temperatures are 80° F or higher.

Local conditions may affect the use of this chemical. Consult State Agricultural Extension or Experiment Station weed specialists for specific recommendations for local weed problems.

CONDITIONS OF SALE, WARRANTY, LIMITATION OF LIABILITY

This product conforms to the chemical description of the label thereof and is reasonably fit for the purpose stated on such label only when used in accordance with directions under normal use conditions. Follow directions carefully. Timing and method of application, weather and crop conditions, mixture with other chemicals not specifically recommended and other influencing factors in the use of this product are beyond the control of Rhone-Poulenc or the seller. Buyer assumes all risks of use, storage, or handling of this material, not in strict accordance with directions given herewith. In no case shall Rhone-Poulenc or the seller be liable for consequential, special, or indirect damages such as loss of profits or values resulting from the use or handling of this product.

PRODUCT NUMBER
2070

SPECIMEN LABEL

BUCTRIL[®] HERBICIDE



in small grains, corn, sorghum,
encrop areas.

Buctril alone and in a tank mixture with Glean, Avenge, MCPA, 2,4-D, isopropyl and atrazine can be applied by both ground and aerial equipment. In addition, Buctril alone can be applied by automated sprinkler-irrigation systems. The following provides recommended methods of application for each crop.

CROP	TYPE OF APPLICATION EQUIPMENT		
	GROUND	AERIAL	AUTOMATED SPRINKLER IRRIGATION
SMALL GRAINS	X	X	X
FIELD AND POPCORN	X	X	X
GRAIN SORGHUM	X	X	X
FLAX	X	X	
GARLIC	X	X	
ANNUAL CANARYGRASS	X		
MINT	X		
TURF	X		
NONCROP AREAS	X		

Use a standard hand-held or spray-on form, designed for accurate application. Spray-on should be applied with evenness, with no more than 5% more in the center of the target than the sides. Spray-on application instructions are designed for the application of the product.

Uniformity of 5 patterns of spray, and the materials used as trigger nozzles that produce conical spray patterns with a maximum pressure of 40 ps at the nozzle tip. These should be substantially larger than the distance from the center of the spray to the end of the wing, so that the wings stay in the spread area and between straight down and straight back.

AUTOMATED SPRINKLER IRRIGATION SYSTEMS

[illegible]

1. The purpose of this document is to provide information on the proposed project and to solicit comments from interested parties. The project is a proposed development of a new residential subdivision in the City of Los Angeles, California. The project is located in the City of Los Angeles, California, and is proposed to be developed by the City of Los Angeles. The project is a proposed development of a new residential subdivision in the City of Los Angeles, California. The project is located in the City of Los Angeles, California, and is proposed to be developed by the City of Los Angeles. The project is a proposed development of a new residential subdivision in the City of Los Angeles, California. The project is located in the City of Los Angeles, California, and is proposed to be developed by the City of Los Angeles.

[illegible][illegible]

1. The first step is to identify the problem or issue that needs to be addressed. This involves gathering information and understanding the context of the problem.

1. In addition to the above, the following are also included in the list of persons who are not to be considered as "persons of interest" for the purpose of the investigation:

COMPATIBILITY OF INSECTICIDES WITH BUCTRIL

The following foliar insecticides are compatible with Buctril 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
Demeton	Systox	Emulsifiable Concentrate

When mixing an insecticide with Buctril, fill the spray tank $\frac{1}{2}$ to $\frac{3}{4}$ full with clean water and begin agitation. If tank mixing with either Dylox, Furadan or Sevin, add the recommended amount of insecticide first. After the insecticide is thoroughly mixed with water add the recommended amount of Buctril and add water to the spray tank to the desired level.

If tank mixing with the other insecticides listed above, add the recommended amount of Buctril first. After Buctril is thoroughly mixed with water, add the recommended amount of insecticide to the spray tank and add water to the spray tank to the desired level.

Maintain sufficient agitation while mixing and during application to ensure a uniform spray mixture. If spray mixture is allowed to remain without agitation for short periods of time, be sure to agitate until uniformly mixed before application.

FOLLOW ALL CAUTIONS AND LIMITATIONS ON THE LABELS OF PRODUCTS USED IN TANK MIXTURES WITH BUCTRIL.

Dylox[®], Metasystox[®] and Systox[®] are Registered Trademarks of the Parent Company of Farbentabriken Bayer GmbH, Leverkusen.

Furadan[®] is a Registered Trademark of FMC Corporation.

Lorsban[®] is a Trademark of the Dow Chemical Company.

Pounce[®] is a Registered Trademark of FMC Corporation.

Pydrin[®] is a Registered Trademark of Shell Chemical Company.

Sevin[®] is a Registered Trademark of Union Carbide Corporation.

WHEAT, BARLEY, OATS, RYE and TRITICALE

Buctril can be applied to small grains from emergence up to the boot stage. Applications should be made to weeds soon after emergence for best weed control, and to prevent competition to the crop. Reduced weed control may occur when weeds are stressed from lack of moisture or cold temperatures. Avoid spray drift to nontarget areas. Do not graze treated fields for 30 days following application.

Buctril can be applied to wheat and barley alone or in a tank mixture with Glean, Avenge, MCPA, 2,4-D, or Hoeion to broaden the spectrum of weed control. Buctril can also be applied to oats and rye alone or in a tank mixture with MCPA or 2,4-D. To ensure maximum crop safety and weed control, follow all cautions and limitations on this label and the labels of products used in tank mixtures with Buctril.

APPLICATION PROCEDURES

GROUND APPLICATION

Buctril, used alone and in tank mixtures, can be applied by ground equipment using a minimum spray volume of 10 gal./acre. Use flat fan nozzles spaced a maximum of 20 inches apart with a minimum spray pressure of 30 psi at the nozzle tips. Other nozzle types may not provide adequate coverage of the weeds to ensure optimum weed control.

AERIAL APPLICATION

Buctril and tank mixtures with Buctril can be applied by aerial equipment using a minimum spray volume of 5 gal./acre with a maximum spray pressure of 40 psi at the nozzle tips. Refer to AERIAL APPLICATION under the GENERAL INFORMATION section for complete instructions.

AUTOMATED SPRINKLER IRRIGATION SYSTEMS

Apply Buctril by automated sprinkler irrigation systems using a fully adjustable water pressure. Refer to GENERAL INFORMATION section for complete instructions and precautions.

SPRAYABLE LIQUID FERTILIZERS

Buctril can be applied to small grains using sprayable liquid fertilizers as the carrier. Proportion the fertilizer with the Buctril spray by mixing equal parts of each in a tank. Agitation must be maintained during full tank application. Do not apply Buctril spray mixed with the fertilizer to leafy or mature crops. Fertilizer should be applied with the Buctril spray. New leaves are not affected.

RECOMMENDED USES

The recommended rate of Buctril use alone or in a tank mixture with another herbicide is determined by the crop, a later crop seeded, geographic area, and other factors.

WHEAT and BARLEY

BUCTRIL RECOMMENDATIONS

TIMING OF APPLICATION				
PRODUCT	CROP/GEOGRAPHICAL AREA	RATE	CROP	WEED
Buctril	Fall seeded wheat and barley throughout the United States and spring seeded wheat and barley in Idaho, Oregon and Washington	1 1/2 Pints/A	Apply to wheat and barley from emergence to the boot stage	Most Susceptible Broadleaf Weeds Apply to weeds up to the 8 leaf stage or 4 inches in height which ever comes first. If weed forms rosette, apply before weeds exceed 2 inches in diameter
		2 Pints/A		Susceptible Broadleaf Weeds Apply to weeds up to the 4 leaf stage or 2 inches in height which ever comes first. If weed forms rosette, apply before weeds exceed 1 inch in diameter
	Spring seeded wheat and barley except Idaho, Oregon and Washington	1 Pint/A	Apply to wheat and barley from emergence to the boot stage	Most Susceptible and Susceptible Broadleaf Weeds Apply Buctril at 1 pint/A to 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
		1 1/2 Pints/A		Use Buctril at 1 1/2 pints A for control of kochia that is 2-4 inches in height and pigweed (<i>Amaranthus</i> spp.) that does not exceed the 4 leaf stage or 2 inches in height, whichever comes first

BUCTRIL TANK MIXTURE RECOMMENDATIONS

TIMING OF APPLICATION				
PRODUCT	CROP/GEOGRAPHICAL AREA	RATE	CROP	WEED
Buctril + GLEAN (Tankmix)	Fall seeded wheat and barley throughout the United States and spring seeded wheat and barley in Idaho, Oregon and Washington	3/4 Pint/A + 1/2 ounce A	Apply to wheat and barley in the fall or spring at any time after the crop is in the 2 to 3 leaf stage, but before the boot stage	Most Susceptible Broadleaf Weeds Apply to weeds up to the 8 leaf stage or 4 inches in height which ever comes first. If weed forms rosette, apply before weeds exceed 2 inches in diameter
		1 Pint A + 1/2 ounce A		Susceptible Broadleaf Weeds Apply to weeds up to the 4 leaf stage or 2 inches in height which ever comes first. If weed forms rosette, apply before weeds exceed 1 inch in diameter
	Spring seeded wheat and barley except Idaho, Oregon and Washington	3/4 Pint A + 1/2 ounce A		Most Susceptible and Susceptible Broadleaf Weeds Apply Buctril + Glean at 3/4 pint A + 1/2 ounce A to 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
		1 1/2 Pints A + 1/2 ounce A		Use Buctril + Glean at 1 1/2 pints A + 1/2 ounce A for control of kochia that is 2-4 inches in height and pigweed (<i>Amaranthus</i> spp.) that does not exceed the 4 leaf stage or 2 inches in height, whichever comes first

A tankmix application of Buctril and Glean broadens the spectrum of weed control. See Glean label for listing of additional susceptible weed species and application instructions.

Glean is a registered trademark of E. I. DuPont de Nemours & Co., Inc.

BUCTRIL and AVENGE

A tank mixture of Buctril + Avenge can be used to control wild oats in addition to the broadleaf weeds controlled by Buctril. The rate and application timing for broadleaf weed control with Buctril in the tank mixture is the same as when Buctril is used alone. See BUCTRIL

BUCTRIL and MCPA or 2,4-D

A tank mixture of Buctril at the recommended rate and MCPA or 2,4-D at $\frac{1}{4}$ to $\frac{1}{2}$ pound of active ingredient per acre is used to broaden the spectrum of broadleaf weed control. The tank mixture will control the weeds listed on the MCPA or 2,4-D labels in addition to the weeds listed on the Buctril label. The rate of Buctril in the tank mixture is the same as when Buctril is used alone. See BUCTRIL RECOMMENDATIONS.

Buctril + MCPA tank mixtures can be applied after the 3 leaf stage but before the crop reaches the boot stage. Buctril + 2,4-D tank mixtures can be applied after the crop has tillered but before the forming of joints in the stem.

BUCTRIL and HOELON

A tank mixture of Buctril + Hoelon can be used to control annual grasses in addition to the broadleaf weeds controlled by Buctril. The rate and application timing for broadleaf weed control with Buctril in the tank mixture is the same as when Buctril is used alone. See BUCTRIL RECOMMENDATIONS.

Buctril + Hoelon tank mixtures can be applied to fall seeded wheat and spring seeded wheat and barley up to the jointing stage of growth. Annual grasses should be in the 1 to 3 leaf stage of growth up to the 4 leaf stage in wheat. See Hoelon label to determine recommended Hoelon rate in relation to the annual grassy weed stage of growth. Hoelon is a trademark of Hoechst AG.

OATS, RYE and TRITICALE

Buctril used alone or in a tank mixture with MCPA or 2,4-D can be applied to oats and rye. Buctril should be used alone when applied to triticale. Use the same rates and application timing as recommended for wheat and barley. Refer to previous section for WHEAT AND BARLEY.

WHEAT, BARLEY, OATS, RYE and TRITICALE

(Automated Sprinkler Irrigation Application)

Buctril can be applied through automated sprinkler irrigation systems to fall and spring seeded wheat, barley, oats, rye and triticale from emergence to the boot stage. Apply Buctril at 2 pints/A in $\frac{1}{4}$ to $\frac{1}{2}$ acre inch of water. See GENERAL INFORMATION section for complete use directions and precautions. Refer to GENERAL WEED LIST in GENERAL INFORMATION section for list of MOST SUSCEPTIBLE BROADLEAF WEEDS and SUSCEPTIBLE BROADLEAF WEEDS to postemergence applications of Buctril.

MOST SUSCEPTIBLE BROADLEAF WEEDS

Apply to weeds up to the 6 leaf stage or 4 inches in height whichever comes first. If weed forms rosette apply before weeds exceed 3 inches in diameter.

SUSCEPTIBLE BROADLEAF WEEDS

Apply to weeds 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.

WEED SIZE IS CRITICAL WHEN BUCTRIL IS APPLIED THROUGH AUTOMATED SPRINKLER IRRIGATION SYSTEMS. WEEDS SHOULD NOT EXCEED THE MAXIMUM INDICATED STAGE OF GROWTH.

Do not apply Buctril through automated sprinkler irrigation systems in California.

FIELD CORN, POPCORN and GRAIN SORGHUM

Buctril is applied as a broadcast application in field corn, popcorn or grain sorghum grown for grain, seed or silage under conventional minimum tillage ridge tillage or no till systems. For optimum control, spray seedling weeds that are actively growing and not stressed from lack of moisture or low temperatures. Avoid spray drift to non-target areas.

A tank mixture of Buctril + atrazine may be used in field corn, popcorn or grain sorghum to broaden the spectrum of control and provide residual control of germinating seedlings. In field corn, Buctril may also be used in a tank mixture with Banvel or 2,4-D.

Under evening or late afternoon conditions are quite cool and dry but hot and humid, some leaf burn may occur on the corn or grain sorghum. Silage. The crop rapidly recovers with this condition and new growth is unaffected. To ensure maximum crop safety and weed control, read all precautions and limitations on this label and the labels of products used in tank mixtures with Buctril.

APPLICATION PROCEDURES

GROUND EQUIPMENT

Buctril used alone and in tank mixtures with atrazine or 2,4-D can be applied with ground equipment using a minimum of 10 gallons of spray volume per acre. Use flat fan nozzles spaced a maximum of 20 inches apart with a minimum spray pressure of 30 psi at the nozzle tips. Other nozzle types may not provide adequate coverage of the weeds to ensure optimum control. When weed infestations are heavy, use of a higher spray volume and spray pressure will be helpful to ensure uniform weed coverage. When corn or grain sorghum is large enough to interfere with the spray pattern, drop nozzles should be used to obtain uniform coverage of the weeds.

When Buctril is used in a tank mixture with Banvel, use a minimum of 20 gallons of spray volume per acre. Use flat fan nozzles spaced a maximum of 20 inches apart with a spray pressure less than 20 psi at the nozzle tips. DO NOT APPLY TANK MIXTURES OF BUCTRIL &

AUTOMATED SPRINKLER IRRIGATION SYSTEMS

Refer to GENERAL INFORMATION section for complete use directions and precautions

BUCTRIL RECOMMENDATIONS

Postemergence applications of Buctril can be applied to field corn, popcorn and grain sorghum at 1 and 1½ pints/A. A second application is recommended if a new flush of weeds occurs following the first application. The total cumulative rate should not exceed 3 pints/A per season. Application can be made to corn up to tassel emergence, but do not apply within 30 days of ensilage. Application may be made to grain sorghum up to the boot stage but do not apply within 30 days of ensilage. Refer to APPLICATION RATE TABLE for weeds controlled.

APPLICATION RATE TABLE FOR CORN AND GRAIN SORGHUM

WEED SPECIES When determining leaf stage, count all leaves except cotyledonary leaves		1 Pint/A		1½ Pints/A	
		Maximum Leaf Stage	Maximum Weed Height (inches)	Maximum Leaf Stage	Maximum 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 pennsylvanicum</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
Ladysthumb	<i>Polygonum persicaria</i>	4	4	6	6
Pennsylvania Smartweed	<i>Polygonum pennsylvanicum</i>	4	4	6	6
Redroot Pigweed	<i>Amaranthus retroflexus</i>	—	—	4	2
Spiny Pigweed	<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	<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	8
Wild Mustard	<i>Brassica kaber</i>	—	—	4	4
WEEDS SUPPRESSED					
Canada Thistle	<i>Cirsium arvense</i>	not recommended		8 inch to bud stage	
Buctril suppresses the growth by burning down of top growth. Regrowth may occur.					

BUCTRIL TANK MIXTURE RECOMMENDATIONS

BUCTRIL and ATRAZINE: Postemergence applications of Buctril at 1 and 1½ pints/A in a tank mixture with atrazine at 1½ and 1 lb/A can be applied to field corn, popcorn and grain sorghum using the following use directions. Refer to APPLICATION RATE TABLE for weeds controlled.

APPLICATION RATE TABLE FOR BUCTRIL & ATRAZINE TANK MIXTURES

WEED SPECIES

When determining leaf stage count all leaves except cotyledonary leaves

BUCTRIL AND ATRAZINE RATE (TANK MIX)

		$\frac{1}{2}$ Pint/A + $\frac{1}{2}$ lbai/A		$\frac{1}{2}$ Pints/A + 1 $\frac{1}{2}$ lbai/A		1 Pint/A + $\frac{1}{2}$ lbai/A		1 Pint/A + 1 $\frac{1}{2}$ lbai/A		1 $\frac{1}{2}$ lbai/A
		MAXIMUM LEAF STAGE	MAXIMUM WEED HEIGHT (inches)	MAXIMUM LEAF STAGE	MAXIMUM WEED HEIGHT (inches)	MAXIMUM LEAF STAGE	MAXIMUM WEED HEIGHT (inches)	MAXIMUM LEAF STAGE	MAXIMUM WEED HEIGHT (inches)	MAXIMUM LEAF STAGE
Black Nightshade	<i>Solanum nigrum</i>	4	4	4	4	6	6	6	6	6
Buffalobur	<i>Solanum rostratum</i>	4	4	4	4	6	4	6	4	6
Common Cocklebur	<i>Xanthium pensylvanicum</i>	6	8	8	10	8	10	10	12	10
Common Lambsquarters	<i>Chenopodium album</i>	--	6	--	10		10		12	--
Common Ragweed	<i>Ambrosia artemisiifolia</i>	6	4	8	6	8	6	8	6	8
Eastern Black Nightshade	<i>Solanum ptycanthum</i>	4	4	4	4	6	6	6	6	6
Giant Ragweed	<i>Ambrosia trifida</i>	4	4	4	4	6	6	6	6	6
Hemp Sesbania	<i>Sesbania exaltata</i>	4	4	4	4	4	4	4	4	4
Ivyleaf Morningglory	<i>Ipomoea hederacea</i>	3	3	4	4	4	4	4	4	4
Jimsonweed	<i>Datura stramonium</i>	4	4	4	4	6	6	6	6	6
Ladysthumb	<i>Polygonum persicaria</i>	4	4	4	4	6	6	8	8	8
Pennsylvania Smartweed	<i>Polygonum pensylvanicum</i>	4	4	4	4	6	6	8	8	8
Prickly Sida	<i>Sida spinosa</i>	-	-	6	2	4	1	6	2	4
Puncturevine	<i>Tribulus terrestris</i>	-	-	-	-	-	-	6	4	6
Redroot Pigweed ¹	<i>Amaranthus retroflexus</i>	4	2	8	6	6	4	8	6	6
Smooth Pigweed ¹	<i>Amaranthus hybridus</i>	4	2	6	4	4	2	6	4	6
Spiny Pigweed ¹	<i>Amaranthus spinosus</i>	4	2	8	6	6	4	8	6	6
Sunflower	<i>Helianthus annuus</i>	6	8	8	10	8	10	10	12	10
Tall Morningglory	<i>Ipomoea purpurea</i>	3	3	4	4	4	4	4	4	4
Tall Waterhemp ¹	<i>Amaranthus tuberosus</i>	4	2	8	6	6	4	8	6	6
Velvetleaf	<i>Abutilon theophrasti</i>	4	3	4	3	6	5	6	5	8
Venice Mallow	<i>Hibiscus trionum</i>	4	2	4	2	4	2	4	2	4
Wild Buckwheat	<i>Polygonum convolvulus</i>	6	8	8	10	8	10	10	12	10
Wild Mustard	<i>Sinapis arvensis</i>	4	4	4	4	4	4	4	4	4
		WEEDS SUPPRESSED								
Canada thistle	<i>Cirsium arvense</i>	Not		Not		Not		8 bud		8
Selected rates of Buctril + Atrazine tank mixtures suppress the growth by burning down the top growth. Regrowth may occur.		Recommended		Recommended		Recommended				

¹ If pigweed (*Amaranthus* spp.) present in the field to be treated have been identified as atrazine resistant biotypes, use Buctril at 1 pint/A and atrazine at 1.5 lbai/A. Application should be made when pigweeds do not exceed the 4 leaf stage or 2 inches in height.

1 1/2 Pints A

3 leaf stage and prior to
tassel emergence. Use a maximum
of 2 applications per season
Apply to corn between the
4 leaf stage and prior to
tassel emergence. Use a maximum
of 2 applications per season

of weeds and corresponding stage of growth
that are controlled by Buctril at
recommended rates of application

1/ For control of additional weeds not listed in the APPLICATION RATE TABLE for field corn, popcorn and grain sorghum, see GENERAL WEED LIST. Use Buctril at 1 pint A for control of MOST SUSCEPTIBLE WEEDS and 1 1/2 pints A for control of SUSCEPTIBLE WEEDS. Apply Buctril to weeds that do not exceed the 4 leaf stage or 2 inches in height, whichever comes first. If weed forms rosette, apply before weed exceeds 1 inch in diameter.

FIELD CORN and POPCORN

BUCTRIL TANKMIX RECOMMENDATIONS

TIMING OF APPLICATION			
PRODUCT	RATE	CROP	WEED
Buctril	1 Pint A	Apply to corn between the 3 leaf stage and before corn is 30 inches tall. Make up to 2 applications per season.	See APPLICATION RATE TABLE for list of weeds and corresponding stage of growth that are controlled by Buctril & Atrazine tank mixtures at recommended rates of application.
Atrazine ¹ 2 (Tankmix)	1/2 1 1/2 lbs. A		
	1 1/2 Pints A	Apply to corn between the 4 leaf stage and before corn is 30 inches tall. Make up to 2 applications per season.	These tank mixtures also provide some residual control of germinating weed seedlings.
	1/2 1 1/2 lbs. A		

ATRAZINE CONVERSION TABLE

Atrazine Formulation	Atrazine Rate Pounds of active ingredient per acre	Atrazine Formulation Rate per acre
Atrazine 4L	1/2	1 Pint
Atrazine 80 WP	1/2	2 1/2 Pints
Aatrex [®] Nine 0	1 1/2	1 1/2 Pounds
	1 1/2	1 1/2 Pounds
	1 1/2	1 1/2 Pounds

2 Follow all cautions and limitations on the labels of products
used in tank mixtures with Buctril.

FIELD CORN
(Ground Application Only)
BUCTRIL TANKMIX RECOMMENDATIONS

TIMING OF APPLICATION			
PRODUCT	RATE	CROP	WEED
Buctril + Banvel ¹ (Tankmix)	1 Pint/A + 1/4 lbai/A	Apply to corn between the 3-leaf stage and before corn is 36 inches tall or 15 days before tassel emergence, whichever comes first	All weeds controlled by Buctril at recommended rates of application plus Canada thistle when applied from the 8 inch to bud stage and field bindweed up to the mid-bloom stage
	1 1/2 Pints A + 1/4 lbai A	Apply to corn between the 4 leaf stage and before corn is 36 inches tall or 15 days before tassel emergence, whichever comes first	

¹/SPECIAL PRECAUTIONS FOR BUCTRIL & BANVEL TANK MIXTURES: Buctril & Banvel tank mixtures should be applied in a minimum of 20 gallons of spray volume per acre with a spray pressure below 20 psi at the nozzle tips.

DO NOT USE A TANK MIXTURE OF BUCTRIL & BANVEL UNLESS ALL CAUTIONS AND LIMITATIONS ON THE BANVEL LABEL ARE FOLLOWED.

FIELD CORN
(Ground Application Only)
BUCTRIL TANKMIX RECOMMENDATIONS

TIMING OF APPLICATION			
PRODUCT	RATE	CROP	WEED
Buctril + 2,4 D ¹ (Tankmix)	1 Pint A + 1/4 lbai A	Apply to corn between the 3 leaf stage and prior to tassel emergence. When corn exceeds 8 inches in height, drop nozzles must be used to apply Buctril & 2,4 D tank mixtures as a directed spray.	All weeds controlled by Bu at recommended rates of a plus control of wild mustard larger than the 4 leaf stage 4 inches in height, whichever comes first.
	1 1/2 Pints A + 1/4 lbai A	Apply to corn between the 4 leaf stage and prior to tassel emergence. When corn exceeds 8 inches in height, drop nozzles must be used to apply Buctril & 2,4 D tank mixtures as a directed spray.	

2,4-D CONVERSION TABLE ¹

2,4-D Formulation	2,4-D Rate Pounds of active ingredient per acre	2,4 D Formulation Rate per acre
2,4 D 4 lb/gallon	4	1/2 Pint
2,4 D 6 lb/gallon	6	3/4 Pint

SPECIAL PRECAUTIONS FOR BUCTRIL + 2,4 D TANK MIXTURE: Postemergence applications of 2,4-D causes brittleness to corn. Use of 2,4-D in early stages cause breakage when corn is brittle. Follow all cautions and limitations in the labels of products used in tank mixtures with Buctril.

FIELD CORN and POPCORN (Automated Sprinkler Irrigation Application)

Buctril can be applied through automated sprinkler irrigation systems to field and popcorn between the 3 leaf stage and prior to tassel emergence. Apply Buctril at 2 pints/A in $\frac{1}{4}$ to $\frac{1}{2}$ acre inch of water. See GENERAL INFORMATION section for complete use directions and precautions. Refer to GENERAL WEED LIST in the GENERAL INFORMATION section for list of MOST SUSCEPTIBLE BROADLEAF WEEDS and SUSCEPTIBLE BROADLEAF WEEDS to postemergence applications of Buctril.

MOST SUSCEPTIBLE BROADLEAF WEEDS

Apply to weeds up to the 8 leaf stage or 4 inches in height whichever comes first. If weed forms rosette apply before weeds exceed 2 inches in diameter.

SUSCEPTIBLE BROADLEAF WEEDS

Apply to weeds 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.

WEED SIZE IS CRITICAL WHEN BUCTRIL IS APPLIED THROUGH AUTOMATED SPRINKLER IRRIGATION SYSTEMS. WEEDS SHOULD NOT EXCEED THE MAXIMUM INDICATED STAGE OF GROWTH.

Do not apply Buctril through automated sprinkler irrigation systems in California.

GRAIN SORGHUM

BUCTRIL RECOMMENDATIONS

TIMING OF APPLICATION			
PRODUCT	RATE	CROP	WEED 1/
Buctril	1 Pint/A	Apply to grain sorghum between the 3 leaf stage up to the boot stage. Use a maximum of 2 applications per season.	See APPLICATION RATE TABLE for list of weeds and corresponding stage of growth that are controlled by Buctril at recommended rates of application.
	1.5 Pints/A	Apply to grain sorghum between the 4 leaf stage up to the boot stage. Use a maximum of 2 applications per season.	

1. For control of a particular weed, consult the APPLICATION RATE TABLE for list of weeds and grain sorghum. See GENERAL WEED LIST. Use Buctril at 1.5 Pints/A for MOST SUSCEPTIBLE WEEDS and 1 Pint/A for SUSCEPTIBLE WEEDS. Apply Buctril to weeds that are in the 4 leaf stage or 2 inches in height whichever comes first. If weed forms rosette apply before weed exceeds 1 inch in diameter.

GRAIN SORGHUM

BUCTRIL TANKMIX RECOMMENDATIONS

TIMING OF APPLICATION			
PRODUCT	RATE	CROP	WEED
Buctril	1 Pint/A	Apply to grain sorghum between the 3 leaf stage up to the boot stage. Use a maximum of 2 applications per season.	See APPLICATION RATE TABLE for list of weeds and corresponding stage of growth that are controlled by Buctril A. Apply Buctril A tank mixtures at recommended rates of application. These tank mixtures can be used to control weeds up to the 4 leaf stage or 2 inches in height whichever comes first.
Atrazine	1.5 Pints/A	Apply to grain sorghum between the 4 leaf stage up to the boot stage. Use a maximum of 2 applications per season.	
Tankmix	1.5 Pints/A	Apply to grain sorghum between the 4 leaf stage up to the boot stage. Use a maximum of 2 applications per season.	

1. Refer to ATRAZINE GENERAL RECOMMENDATION TABLE under the Atrazine section for a full description of the weeds controlled by Atrazine. For more information, see the Atrazine section.

2. For Atrazine tank mixtures, use the rates indicated in the Atrazine section. Use tank mixtures with Buctril.

GRAIN SORGHUM

(Automated Sprinkler Irrigation Application)

Buctril can be applied through automated sprinkler irrigation systems to grain sorghum from the 3-leaf up to the boot stage. Apply Buctril at 2 pints/A in $\frac{1}{4}$ to $\frac{1}{2}$ acre inch of water. See GENERAL INFORMATION section for complete use directions and precautions. Refer to GENERAL WEED LIST in the GENERAL INFORMATION section for list of MOST SUSCEPTIBLE BROADLEAF WEEDS and SUSCEPTIBLE BROADLEAF WEEDS.

MOST SUSCEPTIBLE BROADLEAF WEEDS

Apply to weeds up to the 8 leaf stage or 4 inches in height whichever comes first. If weed forms rosette apply before weeds exceed 2 inches in diameter.

SUSCEPTIBLE BROADLEAF WEEDS

Apply to weeds 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.

WEED SIZE IS CRITICAL WHEN BUCTRIL IS APPLIED THROUGH AUTOMATED SPRINKLER IRRIGATION SYSTEMS. WEEDS SHOULD NOT EXCEED THE MAXIMUM INDICATED STAGE OF GROWTH.

Do not apply Buctril through automated sprinkler irrigation systems in California.

SPECIAL USE DIRECTIONS FOR CONTROL OF LARGE BROADLEAF WEEDS

Sequential applications of Buctril or Buctril tank mixtures may be necessary for control of broadleaf weeds that exceed the maximum stage of growth recommended with a single application of Buctril or Buctril tank mixture. Thorough coverage of the weeds is essential to obtain optimum weed control.

COMMON COCKLEBUR, COMMON LAMBSQUARTERS, 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 at 1 pint/A. Make a second application of Buctril at the same rate 7 to 10 days later.

VELVETLEAF

For control of velvetleaf up to 14 inches in height use a postemergence application of Buctril at 1 pint/A or Buctril + atrazine tank mixture at 1 pint A + 1 pint atrazine/A. Make a second application of Buctril at 1 pint/A 7 to 10 days later.

RESTRICTIONS AND LIMITATIONS

Buctril does not control grasses. Therefore, it is not recommended that a suitable grass control program be used in conjunction with Buctril control.

Do not add a spray additive to mix with the liquid formulation because herbicidal activity may be reduced.

Do not apply Buctril if heavy rainfall is expected within 2 hours of application.

Seed corn producers should consult the respective seed company for information regarding the use of Buctril in conjunction with their seed corn production program.

Do not plant rotational crops until the field has been seeded.

Do not apply within 30 days of harvest.

The total cumulative rate should not exceed 2 pints/A per season.

FLAX

Apply Buctril when flax seedlings are actively growing. For optimum control apply Buctril at 1 pint/A in conjunction with a spray additive. If the flax is in the boot stage, apply Buctril at 1 pint/A in conjunction with a spray additive. If the flax is in the boot stage, apply Buctril at 1 pint/A in conjunction with a spray additive.

BUCTRIL RECOMMENDATIONS

Buctril at 2 pints/A is the recommended rate for control of broadleaf weeds in grain sorghum from the 3-leaf up to the boot stage.

Buctril at 1 pint/A is the recommended rate for control of broadleaf weeds in grain sorghum from the 3-leaf up to the boot stage. If the flax is in the boot stage, apply Buctril at 1 pint/A in conjunction with a spray additive.

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 at 1 pint/A. Make a second application of Buctril at the same rate 7 to 10 days later.

GARLIC

Apply Buctril when weed seedlings are actively growing. For optimum control apply Buctril in sufficient spray volume to ensure good coverage of the weeds.

BUCTRIL RECOMMENDATIONS

Buctril can be applied after the crop emerges but before garlic is 12 inches in height.

For control of MOST SUSCEPTIBLE BROADLEAF WEEDS (See GENERAL WEED LIST) apply Buctril at 2 pints A to weeds up to the 8 leaf stage or 4 inches in height, whichever comes first. If weed forms rosette, apply before weeds exceed 2 inches in diameter.

For control of SUSCEPTIBLE BROADLEAF WEEDS, apply Buctril at 4 pints A to weeds 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.

For ground application use a minimum of 20 gallons of spray volume per acre. Use flat fan nozzles spaced a maximum of 20 inches apart with a minimum spray pressure of 30 psi at the nozzle tips. Other nozzle types may not provide adequate coverage of the weeds to ensure optimum weed control. For aerial application use a minimum of 5 gallons of spray volume per acre with a maximum spray pressure of 40 psi at the nozzle tips. Refer to AERIAL APPLICATION under GENERAL INFORMATION section for complete use directions. Do not apply Buctril within 142 days of anticipated harvest.

ANNUAL CANARYGRASS

Apply Buctril and MCPA tank mixtures when weed seedlings are actively growing. For optimum control applications should be made in a sufficient spray volume to ensure good coverage of the weeds.

BUCTRIL RECOMMENDATIONS

Buctril at 1 to 2 pints A tank mixed with MCPA at a ratio of 1 part active ingredient to 10 parts Buctril should be applied to annual canarygrass with a minimum of 3 leaves. Buctril and MCPA tank mixtures will control the MOST SUSCEPTIBLE AND SUSCEPTIBLE BROADLEAF WEEDS (SEE GENERAL WEED LIST) when applied at the recommended stage of growth. Weeds should 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.

Applications should be made in a minimum of 10 gallons of spray volume per acre. Use flat fan nozzles spaced a maximum of 20 inches apart with a minimum spray pressure of 30 psi at the nozzle tips. Other nozzle types may not provide adequate coverage of the weeds to ensure optimum weed control.

PRECAUTIONS

Do not apply when annual canarygrass is under stress from lack of water or when the crop forms a hard crust with the weeds. Do not graze livestock in treated annual canarygrass fields. Do not harvest within 75 days after application.

PEPPERMINT AND SPEARMINT (ESTABLISHED ONLY)

BUCTRIL RECOMMENDATIONS

Buctril should be applied to established peppermint and spearmint within 3 weeks after establishment. Buctril should be applied after emergence of the first leaf weeds but before they have more than 4 true leaves. (See GENERAL WEED LIST) for weeds controlled by Buctril. When more than 4 true leaves are present Buctril should be applied at the rate of 2.4 pints A per acre to 4 true leaves. A second application may be made if weeds are present.

Applications made when mint is growing should be at the rate of 1 to 1.5 pints A. Application should be made when a temperature of 70°F or are expected to exceed 70°F within 5 days after application. A second application may be made if needed. The maximum rate of Buctril should not exceed 6 pints A during a single growing season. Do not apply within 75 days of harvest.

A application of Buctril may also be used in a minimum of 10 gallons of spray volume per acre. Use flat fan nozzles spaced a maximum of 20 inches apart with a minimum spray pressure of 30 psi at the nozzle tips. Other nozzle types may not provide adequate coverage of the weeds to ensure optimum weed control.

PRECAUTIONS

Buctril may cause temporary wilting and leaf drop in sensitive plants. Do not apply to growing mint in areas where mint is growing in combination with plants such as rose hollyhock, marigold, chrysanthemum, gladiolus, carnation, petunia, geranium, verbena, and other sensitive plants.

ESTABLISHED TURFGRASSES AND NEWLY PLANTED GRASSES FOR SOD OR SEED PRODUCTION

Post-emergence applications of Buctril control many seedling broadleaf weeds commonly found in turfgrasses. Buctril may be used on established Buctril-tolerant turfgrasses such as Kentucky Bluegrass, Fescue, Ryegrass, Bermudagrass, and Zoysia. Buctril may also be used on seedling grasses such as Marsh Fescue, Ryegrass, Kentucky Bluegrass, Fescue, and Zoysia. Buctril may also be used on established grasses such as Kentucky Bluegrass, Fescue, Ryegrass, Bermudagrass, and Zoysia. Buctril may also be used on seedling grasses such as Marsh Fescue, Ryegrass, Kentucky Bluegrass, Fescue, and Zoysia. Buctril may also be used on established grasses such as Kentucky Bluegrass, Fescue, Ryegrass, Bermudagrass, and Zoysia. Buctril may also be used on seedling grasses such as Marsh Fescue, Ryegrass, Kentucky Bluegrass, Fescue, and Zoysia.

APPLICATION PROCEDURES

Buctril is used alone and in tank mixtures at the application rate of 1 to 1.5 gallons of spray volume per acre. When using a spray volume of 10 to 40 GPA use flat fan nozzles spaced a maximum of 20 inches apart with a minimum spray pressure of 30 psi at the nozzle tips. When using higher spray volumes, flat fan nozzles may be used with a minimum spray pressure of 30 psi at the nozzle tips.

SEEDLING AND ESTABLISHED TURF

BUCTRIL TANK MIXTURE RECOMMENDATIONS

[illegible]

$\Delta \ln \left(\frac{1}{\rho} \right) = \frac{1}{\rho} \left(\frac{\partial \ln \rho}{\partial \ln T} \right) \Delta T = \frac{1}{\rho} \left(\frac{\partial \ln \rho}{\partial \ln T} \right) \frac{\Delta T}{T}$

INDUSTRIAL SITES AND NONCROP AREAS

FOR BROADCAST TREATMENT OF SMALL WEEDS:

Apply 2 quarts of Butrol with either 2 quarts of surfactant or 2 gallons of diesel oil in 150 gallons of water for each acre sprayed. Thorough coverage is important. Make sure spray boom is high enough to contact tops of all plants. Use adequate spray pressure to contact all leaf surfaces.

FOR SPOT TREATMENT OF SCATTERED INFESTATIONS OR LARGE WEEDS ALONG FENCEROWS IN VACANT LOTS AND ON INDUSTRIAL SITES:

Mix 1 quart of Butrol with either 1 quart of surfactant or 1 gallon of diesel oil per 100 gallons of spray solution. Cover all the weed foliage thoroughly. Use at least 200 gallons of spray solution for each acre sprayed.

When using oil, add Butrol to oil, then add water to this mixture while agitating vigorously.

CONTROLS THESE WEEDS IN THE SEEDLING STAGE

In the Southwestern United States, Butrol effectively controls Russian thistle (*Salsola kali*), Saltmarsh (*Atriplex* spp.), Marshmallow (*Conium maculatum*), *Puncturevine*, *Tribulus terrestris*, Prostrate Spurge (*Euphorbia supina*), and Bassia (*Bassia* spp.).

Butrol should be applied in early summer when Russian Thistle is immature and growing vigorously. Butrol is most effective when temperatures are 65° F. or higher.

Butrol is not a pre-emergent herbicide. Consult State Agricultural Extension or Experiment Station weed specialists for specific recommendations for local weed problems.

CONDITIONS OF SALE, WARRANTY, LIMITATION OF LIABILITY

Butrol is sold as a general purpose herbicide. It is not intended for use on food crops, ornamentals, or other plants which may be damaged by its use. It is not intended for use on lawns, golf courses, or other areas where it may be applied to the ground. It is not intended for use on any other plants or areas where it may be applied to the ground. It is not intended for use on any other plants or areas where it may be applied to the ground.

