

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Reg # 55947-39

PM 25

1927

James S. Fickle, Ph.D.
Manager, Herbicide Registration
Sandoz Crop Protection Corporation
Corporate Headquarters
1300 East Touhy Avenue
Des Plaines, Illinois 60016

JUN - 4 1990

Dear Dr. Fickle:

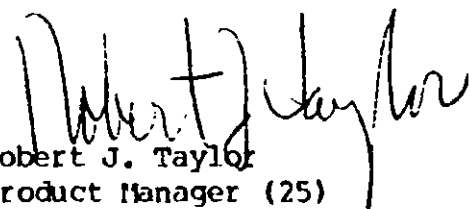
Subject: Marksman Herbicide
EPA Reg. No. 55947-39
Re: Atrazine Voluntary Exposure Reduction Measures
Your Amendment Submissions Dated May 30, 1990

The labeling referred to above, submitted in connection with the Federal Insecticide, Fungicide, and Rodenticide Act, as amended is acceptable with the following comments:

1. When referring to the 5th leaf stage in corn, and the 4th to 5th leaf stage in sorghum, please add in parentheses the following: (but before corn/sorghum reaches 12 inches in height).

A stamped approved copy of your label is attached. Please submit five (5) copies your final printed label incorporating this amendment and above mentioned comment before you release the product for shipment. All technical and end-use products released for shipment must have amended labels after September 1, 1990.

Sincerely yours,


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

CONCURRENCES							
SYMBOL	H7505C						
SURNAME	Morgan						
DATE	6/1/90						

EPA Form 1320-1 (12-70)

OFFICIAL FILE COPY

JUN-4 1970

(front cover of removable booklet)

**RESTRICTED USE PESTICIDE
(GROUND WATER CONCERNS)**

Under the Federal Insecticide,
Fungicide, and Herbicide Act
as amended, for the pesticide
registered under EPA Reg. No.

55947-39

FOR RETAIL SALE TO AND USE ONLY BY CERTIFIED APPLICATORS OR
PERSONS UNDER THEIR DIRECT SUPERVISION, AND ONLY FOR THOSE USES
COVERED BY THE CERTIFIED APPLICATOR'S CERTIFICATION.

THIS PRODUCT IS A RESTRICTED USE HERBICIDE DUE TO GROUND WATER
CONCERNS. USERS MUST READ AND FOLLOW ALL PRECAUTIONARY STATE-
MENTS AND INSTRUCTIONS FOR USE IN ORDER TO MINIMIZE POTENTIAL
FOR ATRAZINE TO REACH GROUND WATER.

MARKSMAN® HERBICIDE

For weed control in corn, grain sorghum and fallow systems.

SHAKE BEFORE USING.

Active Ingredients:

<u>Potassium salt of dicamba</u>	
<u>(3,6-dichloro-o-anisic acid)*</u>	<u>13.42%</u>
<u>Potassium salts of related acids</u>	<u>3.35%</u>
<u>Atrazine**</u>	<u>22.23%</u>
<u>Inert Ingredients:</u>	<u>61.00%</u>
<u>TOTAL</u>	<u>100.00%</u>

* Equivalent to 11.45% 3,6-dichloro-o-anisic acid (dicamba) or 1.1
pounds/gallons.

** Equivalent to 22.23% 2-chloro-4-ethylamino-6-isopropyl/amino-s-
triazine (atrazine) or 2.1 pounds/gallons.

EPA Reg. No. 55947-39

EPA Est. No. 11773-7A-1

NET CONTENTS: 2 1/2 GALLONS

SANDOZ CROP PROTECTION CORPORATION

KEEP OUT OF REACH OF CHILDREN

CAUTION

See additional precautionary statements at end of label booklet.

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DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

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

GENERAL INFORMATION

MARKSMAN® Herbicide is intended for control and suppression of annual broadleaf and perennial weeds. MARKSMAN may be applied preplant through early post-emergence on field, seed, and silage corn and early post-emergence on grain sorghum. Applications in post-harvest fallow (wheat/fallow/wheat) and crofallow (wheat/corn or sorghum/fallow) rotations are also recommended.

Ground Water Advisory:

MARKSMAN® Herbicide contains the active ingredient atrazine. Atrazine can leach through soil and has been found to result in contamination of water supplies by way of ground water. Therefore growers are advised to avoid use of MARKSMAN® Herbicide in well-drained loamy-sand to sand soils, particularly in areas having high ground-water tables. Consult with your state or county extension agent for alternative recommendations such as Banvel Herbicide alone or in combination with a non-triazine herbicide.

Check valves or antisiphoning devices must be used on all mixing equipment to prevent back-siphoning into wells or bulk storage tanks. See the storage and disposal section at the end of this label regarding proper disposal of excess pesticide, spray mixtures and rinsates.

Do not apply this product through any type of irrigation system. Do not contaminate irrigation ditches or water used for domestic purposes.

Mixing and Application:

MARKSMAN® Herbicide is a water-dispersible formulation that can be applied in water on corn, sorghum, or fallow. Sprayable fluid fertilizer may be used for preemergence application on corn. Fluid fertilizer may damage corn if applied after corn emergence. If a fluid fertilizer will be used, a compatibility test (see Compatibility Test) should be made prior to tankmixing.

Ground or aerial application equipment which will give good spray coverage of weed foliage should be used. Do not use aerial applications if broadleaf crops (see Sensitive Crops) are growing

in the vicinity of the area to be treated.

Apply 10 to 50 gallons of diluted spray per treated acre when using ground application equipment or 3 to 10 gallons of diluted spray per treated acre when using aerial application equipment. Use the higher spray volumes when treating dense or tall vegetation. Use nozzles designed to produce large spray droplets such as Delavan Raindrops, Spraying Systems XR flat fans or large capacity flood nozzles such as Delavan D-10, Spraying Systems TK-10 - or greater capacity. Use a spray pressure of 30 psi or less.

Tank Mixes:

To ensure a uniform mixture when MARKSMAN® Herbicide is tankmixed with one or more other products, follow this procedure: Fill the spray tank approximately one-third full with water and with the agitator operating, add the recommended amount of ingredients using the following order: dry formulations (e.g. wettable powders, dry flowables) first, and liquid suspensions (e.g. flowables) next. Mix thoroughly and fill the tank to one-half full with continuous agitation. Add Emulsifiable Concentrate formulations last while maintaining agitation and then complete filling the spray tank with water. If a surfactant is to be used, add it last. If a drift control agent is to be used, follow the directions for mixing on the specific product label.

Band Treatments:

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

$\frac{\text{Band width in inches}}{\text{Row width in inches}}$	X	Broadcast RATE per treated acre	=	Band RATE per treated acre
$\frac{\text{Band width in inches}}{\text{Row width in inches}}$	X	Broadcast VOLUME per treated acre	=	Band VOLUME per treated acre

Compatibility Test:

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

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**Amount of Component to Add to One Pint
of Spray Carrier
(Assuming Volume is 25 Gallons Per Acre)**

<u>COMPONENT FORMULATIONS</u>	<u>RATE PER ACRE</u>	<u>LEVEL TEASPOONS</u>
Dry	1 lb.	1 1/2
Liquid	1 pt.	1/2

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

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

Sensitive Crop Precautions:

MARKSMAN® Herbicide may cause injury to desirable broadleaf plants or trees when contacting their roots, stems or foliage. To avoid potential off-target herbicide movement:

Do not apply MARKSMAN® Herbicide in the general vicinity of tobacco, tomatoes, or other highly sensitive plants.

Do not make applications when high winds are moving toward sensitive crops, inversions are present, or high temperatures (above 85° F) are expected on the day of application.

Consult your state and local authorities for possible other application restrictions and advice.

Procedure for Cleaning Spray Equipment:

Before making application, be sure all equipment is clean to prevent uneven applications, clogged nozzles or crop injury. Thoroughly clean equipment following applications of MARKSMAN® Herbicide. Any tankmix with a water dispersible formulation will require the use of a water/detergent rinse.

The steps listed below are suggested for thorough cleaning of spray equipment following applications of MARKSMAN® Herbicide or tank mixes of MARKSMAN® Herbicide.

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

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

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

FIELD, SEED AND SILAGE CORN

Important:

MARKSMAN® Herbicide is not registered for use on sweet corn (or) popcorn. Do not apply MARKSMAN® Herbicide to seed corn without first verifying with your local seed corn company (supplier) the selectivity of MARKSMAN on your inbred line. This precaution will help avoid potential injury of sensitive varieties. Also follow this precaution before application to any specialty type corn.

BANVEL Herbicide can be applied to corn before, after, or with a MARKSMAN treatment. The combined total of the BANVEL active ingredient (dicamba) - regardless if applied as BANVEL or MARKSMAN - must not exceed a total equivalent of 0.75 lbs. per treated acre per crop year. A gallon of MARKSMAN contains 1.1 lbs. of dicamba (.14 lbs./pt.), and a gallon of BANVEL contains 4.0 lbs. of dicamba (0.5 lb./pt.). A gallon of MARKSMAN also contains 2.1 lbs. of atrazine as an active ingredient (.26 lbs./pt.) - consider this when reading the section on rotational crops.

A maximum of two applications of MARKSMAN® Herbicide may be made up to the 5th true leaf stage of corn. Do not exceed a total of 5 1/4 pints of MARKSMAN® Herbicide per treated acre per crop year.

The maximum atrazine application rate for corn and sorghum is 3 lb. a.i. per acre per calendar year. Postemergence application to corn and sorghum must be made before corn and sorghum reaches 12 inches in height. Consult rates and timing section and do not exceed rates of application for any given time of application.

Prior to the ensilage (milk) stage of the crop, do not harvest or graze corn for dairy or beef feed.

Corn growing under stress - including but not limited to moisture, low temperatures, drought, hail and poor fertility can exhibit various injury symptoms that may be more pronounced if herbicides are applied. Consult your local or state authorities for possible application restrictions and advice concerning these and other special local use situations.

Surfactants (nonionic) added to a spray mixture may improve control of drought stressed weeds but do not apply any adjuvant which contains penetrants such as petroleum and crop oils after corn emergence, or crop injury could result.

Weeds Controlled:

MARKSMAN® Herbicide, when applied at recommended rates, will control many ANNUAL broadleaf weeds and give growth suppression of many PERENNIAL broadleaf weeds commonly found in corn.

Buckwheat, Wild	Nightshade, Black
Burcucumber	Pigweed, Prostrate
Chickweed, Common	Pigweed, Redroot
Clover, (Annual)	(Carelessweed)
Cocklebur, Common	Pigweed, Smooth
Cucumber, Wild	Pigweed, Rough
Jimsonweed	Pigweed (Triazine Resistant)
Kochia	Pigweed, Tumble
Kochia (Triazine Resistant)	Puncturevine
Ladysthumb	Purslane, Common
Lambsquarter, Common	Ragweed, Giant
Lambsquarter, (Triazine Resistant)	(Buffaloweed)
Mallow, Common	Sicklepod
Mallow, Venice	Sida, Prickly (Teaweed)
Morningglory, Ivy leaf	Smartweed, green
Morningglory, Tall	Smartweed, Pennsylvania
Mustard, Wild	Spanishneedles
Mustard, (Yellowtops)	Spurge, Prostrate
Sunflower, Common (Wild)	Tansymustard
Velvetleaf	Thistle, Russian
Sunflower, Volunteer	

Perennials

Alfalfa	Dock, Curly
Artichoke, Jerusalem	Dogbane, Hemp
Bindweed, Field	Horsenettle, Carolina
Bindweed, Hedge	Lespedeza
Canada thistle	Milkweed, Common
Clovers, (Perennials)	Smartweed, Swamp
Dandelion, Common	Vetch
Dock, Broadleaf (Bitterdock)	

Rotational Crops:

MARKSMAN contains some atrazine (.26 lbs./pint) so follow these directions: (1) If treated crop is destroyed due to weather conditions such as hail, flooding, etc., only corn or sorghum can be planted as a replacement until the following year. If corn is replanted, do not apply MARKSMAN or BANVEL until after emergence. Consult label of each product for application directions and do not exceed the maximum yearly use rate for MARKSMAN or BANVEL. If sorghum is the replanted crop either BANVEL or MARKSMAN can be used as a postemergence application - follow each label's directions; do not exceed the maximum yearly use rate. (2) If applied after June 10, do not rotate with crops other than corn or sorghum the next

year, or injury to the rotated crop may occur. (3) In the High Plains and inter-mountain areas of the West, where rainfall is sparse and erratic or where irrigation is required, use only when corn or sorghum is to follow corn, or when a crop of untreated corn or sorghum is to precede other rotational crops. (4) Plant only corn, sorghum, soybeans or peanuts the year following treatment. For soils containing a calcareous surface layer such as those found in eastern parts of the Dakotas, KS, western MN, NE, and other areas injury may occur to soybeans planted the year following application. (5) Small grains may be planted 10 months following treatment. All other crops not previously designated to follow a treated corn crop may be planted 18 months after application. On soils containing a calcareous surface layer, small grain injury could occur.

Rates and Timings:

- Preplant/Preemergence In No Tillage Corn

Applications of MARKSMAN may be made before, during, or after planting for control of emerged and actively growing broadleaf weeds.

See Application Table below for use directions.

Application Table

<u>Soil Texture</u>	<u>Organic Matter</u>	<u>MARKSMAN Rate</u>
Medium or Fine(a) (including soil above 8%)		2% or above 3 1/2 pints
Medium or Fine	Below 2%	(c)
Coarse (b)	2% or above	2 pints
Coarse	Below 2%	(c)

- (a) Fine texture - silty clay, silty clay loam, clay.
Medium texture - loam, silt loam, silt, sandy clay and sandy clay loam.
- (b) Coarse texture - sand, sandy loam and loamy sand.
- (c) Delay application until after corn emergence - see EARLY POSTEMERGENCE SECTION for instructions.

The addition of an agriculturally approved surfactant, crop oil, or petroleum oil to the spray mixture may improve weed control - oil or other such penetrants are not to be applied after corn emergence.

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

**- Preemergence in Conventional
Or Reduced Tillage Corn**

MARKSMAN® Herbicide may be applied after planting and prior to corn emergence. Application of 3 1/2 pints per treated acre should be made to medium or fine textured soils which contain 2% or greater organic matter. DO NOT apply to coarse soils or any soil with less than 2% organic matter. MARKSMAN is registered for control of a wide range of broadleaf weeds. For grass control MARKSMAN must be tank mixed with an appropriate herbicide registered to control the spectrum of grasses present. (See TANKMIX TREATMENTS).

Make applications of MARKSMAN to corn covered with at least 1 1/2 inches of soil that is free of soil clods, and under conditions that favor normal seed emergence. During unfavorable growing conditions (cold, wet soil), direct herbicide contact with seed or other improper crop management practices could impair seed development and result in reduced corn population. Avoidance of these stresses will allow for normal plant development.

Do not incorporate preemergence applications of MARKSMAN. In dry weather a rotary hoe can be used to break soil crust but do not disturb the soil more than one-half inch deep. Avoid tillage equipment (e.g., drags, harrows) which concentrate treated soil over seed furrow, as seed damage could result.

SEE TANK MIX SECTION FOR GRASS AND ADDITIONAL BROADLEAF WEED CONTROL.

**Early Post Emergence
(All Tillage Systems)
(Emergence to 5th true leaf stage)**

MARKSMAN® Herbicide at 3 1/2 pints per treated acre may be applied during the period from corn emergence through the 5th leaf stage. For corn growing on coarse textured soils (sand, sandy loam, loamy sand), reduce the rate to 2 pints per treated acre.

For drought stressed weeds the addition of an agriculturally approved nonionic surfactant to the spray mixture may improve weed control. However, do not use adjuvants containing penetrants such as petroleum and crop oils after crop emergence - injury may result.

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**Overlay
(Sequential Treatments)**

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

Herbicide	Maximum Rate Per Treated Acre (Lbs. a.i.)
Alachlor (Lasso®)	4
Alachlor + glyphosate premix (Bronco®)	5
Atrazine (see Important Section -Rotational Crops)	3
Butylate (Sutan®)	6
Cyanazine (Bladex®)	4
EPTC® (Eradicane®)	6
Glyphosate (Roundup®)	5
Metolachlor (Dual®)	3
Paraquat	1
Pendimethalin (Prowl®)	2
Propachlor (Bexton®, Ramrod®)	6

Read and follow the label of each of the above products for precautionary statements, directions for use and other restrictions.

Marksman Plus Banvel

Overlay Application: One-half pint BANVEL Herbicide (0.25 lb dicamba) per acre may be applied as an early postemergence treatment (through the fifth true-leaf stage of corn growth) when MARKSMAN® Herbicide has been applied at or after planting but before corn emerges (a preemergence treatment). Do not exceed a total of 0.75 lb a.i./A of Dicamba applied in a growing season. Refer to the MARKSMAN Rates And Timing section of this label for soil and organic matter restrictions.

Tank Mix Treatments

MARKSMAN® Herbicide will control emerged and actively growing broadleaf weeds when applied prior to, during, or after planting but before the corn exceeds the 5 leaf stage. MARKSMAN® Herbicide may be tank mixed with one or more of the following herbicides for control of grasses or additional broadleaf weeds. When tankmixing MARKSMAN with other products, read the label of each tankmix partner for precautionary statements, directions for use and other restrictions. Also, read the MARKSMAN label.

Marksman Plus Bladex

Application may be made before grasses are 1 1/2 inches tall and the corn is not beyond the four true leaf stage. Use 1.25-4.0 lbs. a.i. Bladex per treated acre for preemergence and 1.25-2.0 lbs. a.i. for postemergence treatments. AFTER CORN EMERGENCE, USE ONLY THE BLADEX 90DF or 80W FORMULATIONS.

MARKSMAN Plus Dual

Application may be made at or after planting and until grasses reach the two-leaf stage and before corn is greater than 3 inches tall. Applications prior to crop emergence should only be applied on medium to fine textured soils containing 2.5% or more organic matter. Use 1.5-2.5 lbs. a.i. Dual per treated acre.

MARKSMAN Plus Lasso

Application may be made after planting and until grasses reach the two-leaf stage and before corn is greater than 3 inches tall. Applications prior to crop emergence should only be made to fine textured soils containing more than 2.5% organic matter. Apply 2.5 lbs. a.i. Lasso per treated acre.

MARKSMAN Plus Paraquat

Application may be made to emerged weeds, but before corn emerges. Use 0.25-1.0 lb. a.i. paraquat per treated acre.

MARKSMAN Plus Prowl

Application may be made at or after planting, or after corn emergence but no later than when corn is in the two-leaf stage of growth, and when weeds are no more than one inch tall. The Prowl rate is 0.75 to 1.5 lb a.i. per treated acre depending on soil texture and organic matter content. Refer to the Prowl label for specific rates and recommendations. Do not apply this tankmixture preemergence to coarse-textured soils or any soils with less than 2.5% organic matter.

MARKSMAN Plus Roundup

Application may be made to emerged weeds, but before corn emerges. Use 1.0-3.0 lbs. a.i. Roundup per treated acre.

MARKSMAN Plus Atrazine

For additional broadleaf weed control apply after planting, but before the corn exceeds the 5 leaf stage. See RATES AND TIMINGS section for soil type and organic matter restrictions, plus the IMPORTANT section for rotational restrictions and maximum allowable atrazine rates.

Refer to table below for rates.

<u>Soil Texture</u>	<u>MARKSMAN Rate</u>	<u>Maximum Atrazine Rate Per Treated Acre</u>
Medium	3 1/2 pts.	1.5 lbs. a.i.
Fine	3 1/2 pts.	2.0 lbs. a.i.

Peat, muck, and high organic clay soils - Do not apply preemergence.

GRAIN SORGHUM IMPORTANT

Applications of MARKSMAN® Herbicide to sorghum during periods of rapid growth may result in temporary leaning of plants or rolling of leaves. These effects are usually outgrown within 10-14 days.

On coarse soils, injury to sorghum may occur if heavy rain immediately follows application.

Rainfall or irrigation occurring within 6 hours after application may reduce the effectiveness of MARKSMAN® Herbicide.

Do not apply to furrow planted sorghum until level (plowed in).

Make no more than one application of MARKSMAN® Herbicide per growing season.

The maximum atrazine application rate for corn and sorghum is 3 lb a.i. per acre per calendar year. Postemergence application to corn and sorghum must be made before corn and sorghum reaches 12 inches in height. Consult rates and timing section and do not exceed rates of application for any given time of application.

Delay harvest until 30 days after treatment.

Do not apply MARKSMAN® Herbicide to sorghum grown for seed production.

Do not graze or feed treated sorghum forage or silage prior to mature grain stage.

WEEDS CONTROLLED

MARKSMAN® Herbicide, when applied at the recommended rates and timings for grain sorghum, will control many ANNUAL broadleaf weeds (e.g. pigweed) and will reduce the competition from established PERENNIAL broadleaf weeds as well as control their seedlings. Consult WEEDS CONTROLLED section under corn for complete list.

For best performance, make application when weeds are small (less than 3 inches tall) and actively growing.

Rates and Timings

MARKSMAN® Herbicide application in grain sorghum (milo) should be made between the 3-5 leaf stage of the sorghum.

BROADCAST RATE PER TREATED ACRE:

1 1/2 to 2 pints.

Use 1 1/2 pints MARKSMAN® Herbicide for control of pigweed spp. that are less than 3 inches tall and are actively growing. Use 2 pints of MARKSMAN® Herbicide for control of all other listed broadleaf weeds.

Do not add surfactant or crop oil.

Overlay (Sequential) Treatments

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

<u>Herbicide</u>	<u>Maximum rate per treated acre (lbs a.i.)</u>
alachlor (Lasso®)	4
(Screen®-treated seed)	
atrazine	2.25
metolachlor (Dual®)	2.50
(Concep®-treated seed)	
propachlor (Ramrod®)	5

Tank Mix Treatments

MARKSMAN® Herbicide may be tank mixed with the following herbicide for added residual or for grass control in sorghum. Read and follow the label of each product used for precautionary statements, directions for use, rates and timings, and other restrictions.

MARKSMAN Plus Atrazine

For use only on fine or medium soils. Add 0.50 lb. a.i. atrazine per treated acre for added residual broadleaf weed control. Add 1.50-2.25 lbs. a.i. atrazine per treated acre for control of emerged grasses less than 1 1/2 inches tall. No crop oil or surfactant is to be added to this combination - crop damage could result. Atrazine carryover may injure small grains and broadleaf crops if the total rate of atrazine exceeds the rate recommended for that specific geographic area or crop rotation.

Post-Harvest On Fallow Ground

IMPORTANT

MARKSMAN may be applied post-harvest to fallow ground in wheat/fallow/wheat and wheat/corn or sorghum/fallow rotations. Refer to the Rates and Timings sections following for specific directions applicable to each rotation fallow system.

This product contains atrazine (0.26 lbs. a.i./pint) and dicamba (0.138 lbs. a.i./pint) - therefore some rotational crop restrictions and sensitive crop precautions may apply - refer to pages (), General Information Section of this label for restrictions or precautions that may be applicable for use on fallow ground in the systems described below.

Read and follow General Information directions for mixing and application (page), determining component compatibility (page), and procedure for cleaning spray equipment (page).

To avoid illegal residues, do not graze or feed forage from treated area to livestock. To avoid illegal residues and crop injury, do not plant any crop other than those listed on this label within 18 months following treatment.

Weeds Controlled

MARKSMAN® Herbicide, when applied at recommended rates, will control many ANNUAL broadleaf weeds and give growth suppression of many PERENNIAL broadleaf weeds commonly found in corn.

Annuals Preemergence

Cheatgrass
Kochia
Lambsquarters, Common
Mustard
Thistle, Russian
Wild Lettuce

Downy Brome
Jointed Goatgrass
Rye
Volunteer Barley
Volunteer Wheat
Wild Oats

Annuals Postemergence

Buckwheat, Wild	Pigweed, Redroot,
Burcucumber	Rough, Smooth
Chickweed, Common	Puncturevine
Clovers (Annual)	Purslane, Common
Cucumber, Wild	Ragweed, Common
Jimsonweed	Sicklepod
Kochia	Sida, Prickly
Lambsquarters, Common	Smartweed, Green &
Mallow, Common & Venice	Pennsylvania
Morningglory, Tall Ivyleaf	Spanish Needles
Mustard, Wild, Yellowtops & Tansy	Spurge, Prostrate
Nightshade, Black	Thistle, Russian
	Velvetleaf

MARKSMAN will provide suppression or burndown of perennial or biennial broadleaf species.

Triazine resistant species are also controlled.

Rotational Crops

The application rates and timings in this label pertain only to a cropping system of WHEAT/FALLOW/WHEAT or WHEAT/CORN or SORGHUM/FALLOW. If any other crop is to be substituted for wheat, corn, sorghum or the fallow period, the crop rotation restrictions on the MARKSMAN-CORN section of this label must be adhered to.

Precautions

To avoid crop injury:

- 1) Do not use on sand soils
- 2) Do not treat erodible hillsides, caliche, and rocky outcroppings, or exposed calcareous subsoil.
- 3) Do not treat soils of the Rosebud and Canyon series in Western NE and adjoining counties in CO and WY.
- 4) Do not treat soils with calcareous surface layers.
- 5) Avoid overlap.
- 6) Use only on silt loam or finer-textured soils, or crop injury may result.
- 7) Wheat/corn or sorghum/fallow cropping sequence must be followed; 3) Do not apply following sorghum harvest.

Wheat/Fallow/Wheat

MARKSMAN USE IN: CO, KS, NE, OK, SD, TX, & WY

Rates and Timings:

For preemergence or postemergence control or suppression of the weed species listed in this label, apply MARKSMAN as a broadcast treatment alone or tankmixed with appropriate herbicides on all soils except those listed under the "Precautions" section of this label. A split application of MARKSMAN can be made after wheat harvest, but only in the summer to fall timeframe - the maximum labeled rate of 3.5 pints/Acre should not be exceeded. A split treatment should not be made in the spring, and all appropriate crop rotation restrictions must be followed.

Preemergence

Apply MARKSMAN as a broadcast preemergence treatment following wheat harvest from summer through fall (June-November) at 2.0 - 3.5 pints/Acre. For best results, MARKSMAN should be applied within 10 days following wheat harvest and prior to weed emergence.

If actively growing weeds are present at the time of application, refer to the "Postemergence" section below for additional directions.

Postemergence

MARKSMAN can be applied in either the Summer or Fall following wheat harvest to emerged actively growing weeds. For best performance, an agriculturally approved spray additive, such as a surfactant, crop oil concentrate, or fluid fertilizer is recommended to enhance spray coverage and herbicide penetration of the weed foliage. For best performance, apply MARKSMAN to ANNUAL weeds that are less than four inches tall, and at least 6 hours prior to anticipated precipitation.

For control of PERENNIAL or BIENNIAL weed species on fallow ground, MARKSMAN® Herbicide can be tankmixed with BANVEL Herbicide. Refer to the BANVEL Herbicide label under "Between Cropping Applications" (BCA) use directions.

Wheat/Corn or Sorghum/Fallow

MARKSMAN USE IN: CO, KS, NE, OK & TX

Rates and Timings

Preemergence or Postemergence

For control of annual broadleaf or grass weeds following wheat harvest and in the following corn or sorghum crop when grown under

11757

minimum tillage, apply 2 to 11 pints/Acre of MARKSMAN as a broadcast treatment to wheat stubble immediately following wheat harvest. For best results, apply MARKSMAN within 10 days following wheat harvest and at least 6 hours prior to anticipated precipitation.

Plant corn or sorghum the following spring with minimum soil disturbance. Use a surface planter or a planter leaving a shallow furrow. If weeds are present at planting, remove them with a sweep plow or other suitable implement before planting.

An additional 1 pint of BANVEL Herbicide can be tankmixed with MARKSMAN for suppression of broadleaf perennial species if present at the time of application. Refer to the "Tankmix" section of this label for other herbicides that may be used in combination with MARKSMAN for control of grasses or additional broadleaf weeds. When tankmixing MARKSMAN with other products, read the label and follow the directions of each tankmix partner.

A split application of MARKSMAN may be made after wheat harvest, but only during the summer to fall timeframe - the maximum labeled rate of 11 pints/Acre should not be exceeded, a split treatment should not be made in the spring, and all appropriate crop rotation restrictions must be followed.

Tankmix Treatments

Post Harvest - Fallow

Wheat/Fallow/Wheat or

Wheat/Corn-Sorghum/Fallow

2,4-D

Apply 0.125 to 1.0 lb. a.i./A as a tank mixture to MARKSMAN for improved postemergence burndown of annual or perennial broadleaf weeds. Burndown activity will particularly be enhanced on weeds growing under drought conditions or weeds that have been "topped" during the harvest operation.

Roundup or Roundup RT

Apply as a tank mixture to MARKSMAN for postemergence control of additional grass weeds or broadleaf weeds at a maximum rate of 16 ozs. Refer to the Roundup label for use directions, precautions, and limitations.

Atrazine

In areas where a higher ratio of atrazine to dicamba is needed (i.e. a 4 parts atrazine to 1 part dicamba ratio in OK & TX), atrazine can be tankmixed with MARKSMAN. Do not exceed the 11 pints/Acre rate of MARKSMAN or the equivalent 6 pints/Acre rate of atrazine 4L, and read the precautions concerning soil textures, split applications, and cropping sequence.

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Example: Six (6) pints/A of MARKSMAN applied delivers 0.825 lbs. a.i./A of Dicamba plus 1.56 lbs. a.i./A of atrazine. Tankmixing an additional 2 3/4 pints/Acre of atrazine 4L (equal to 1.5 lbs. a.i./A) to the 6 pints/A of MARKSMAN will provide approximately a 4.1 ratio of atrazine to dicamba (3.0 lbs. a.i./A of atrazine plus 0.825 lbs. a.i./A of dicamba).

Landmaster BF

Apply as a tank mixture for postemergence control of certain broadleaf and grass weeds at a rate of 27 to 54 ozs/Acre. Refer to the Landmaster label for use directions, precautions, weeds controlled, and limitations.

Landmaster II

Apply as a tank mixture for postemergence control of certain broadleaf and grass weeds at a rate of 27 to 54 ozs/Acre. Refer to the Landmaster II label for use directions, precautions, weeds controlled, and limitations.

Fallow Master

Apply as a tank mixture for postemergence control of certain broadleaf and grass weeds at 32 to 44 ozs/acre. Refer to the Fallow Master label for use directions, precautions, and limitations.

Gramoxone, Cyclone, Paraquat

Use as a tank mixture for additional postemergence control of certain broadleaf and grass weeds at 0.38 to 0.5 lb. a.i./A. Refer to the Gramoxone label for use directions, precautions, and limitations.

Glean

Apply as a tankmix for additional preemergence or postemergence control of certain broadleaf weeds at 1/6 to 1/2 oz of product/A. Refer to the Glean label for use directions, precautions, and limitations.

Ally

Apply as a tankmix for additional preemergence or postemergence control of certain broadleaf weeds at 1/10 oz product/A. Refer to the Ally label for use directions, precautions, and limitations.

Command

Apply as a tankmix for additional preemergence control of certain broadleaf and grass weeds at 0.5 to 1.0 lbs. a.i./A. Refer to the Command label for use directions, precautions, and limitations.

STORAGE AND DISPOSAL

PROHIBITIONS:

Do not contaminate water, food or feed by storage or disposal. Open dumping is prohibited.

This product may not be mixed, loaded, or used within 50 feet of all wells including abandoned wells, drainage wells, and sinkholes.

STORAGE:

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

PESTICIDE DISPOSAL:

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

CONTAINER DISPOSAL:

For Plastic Containers: Triple rinse (or equivalent) and add rinsate to spray tank. Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS:

Caution: Harmful if swallowed. Avoid breathing spray mist. Avoid contact with skin, eyes, or clothing. Wash thoroughly after handling. In case of contact, wash skin with soap and water; for eyes, flush with water for 15 minutes and get medical attention.

Users are required to wear long sleeve shirts and long pants or equivalent, chemical resistant gloves, and boots (waterproofed). In addition, persons involved in mixing/loading operations are required to use chemical resistant rubber or neoprene gloves and a face shield or goggles.

ENVIRONMENTAL HAZARDS:

Keep out of lakes, streams or ponds. This pesticide is toxic to aquatic invertebrates. Do not apply directly to water or wetlands. Run-off and drift from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water by cleaning of equipment or disposal of wastes.

REGISTERED TRADEMARKS:

Ally®, Bladex® and Glean® are registered trademarks of E. I. DuPont de Nemours & Company (inc.)

Bexton® is a registered trademark of Dow Chemical Company.

Bronco®, Landmaster BW®, Landmaster II®, Lasso®, Ramrod®, Roundup® and Roundup RT® are registered trademarks of Monsanto Agricultural Products Company.

Command® is a registered trademark of FMC Corporation.

Dual® is a registered trademark of Ciba-Geigy Corporation, Agricultural Division.

Eradicane® and Sutan +® are registered trademarks of I.C.I. Chemical Company.

Fallow Master® is a registered trademark of Sandoz, Ltd. and used under license by Monsanto Ag. Products Co.

Gramoxone® is a registered trademark of ICI Agrichemicals, Inc.

Prowl® is a registered trademark of American Cyanamid Company.

MARKSMAN® is a registered trademark of SANDOZ LTD.

U. S. Patent No.

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Limited Warranty And Liability

NOTICE: Read this Limited Warranty and Liability before buying or using this product. If terms are not acceptable, return it at once, unopened.

It is critical that this product be used and mixed only as specified on the label. The laws of a State may make some or all of this paragraph inapplicable or may give you rights in addition to your rights hereunder. Except to the extent prohibited by applicable law, the exclusive remedy of the user or buyer and the limit of liability of this Company or any other Seller for any and all losses, personal injuries or damages resulting from the use of this product, shall be the purchase price paid by the user or buyer for the quantity of product involved. Except to the extent prohibited by State Law, there is no warranty, and this Company and other Sellers disclaim all liability for losses, personal injury or damages: (i) arising from any use of this product in a manner or for a purpose not recommended in its label directions or from mixing this product before use with any substance except as recommended by the product's label; (ii) arising from handling or storage in violation of label instructions; (iii) for all indirect, special or consequential damages; and (iv) when not reported to this Company within one year of discovery.

**THERE ARE NO IMPLIED WARRANTIES AND NO WARRANTIES OF
MERCHANTABILITY OR FITNESS.**

(container label)

(RESTRICTED USE PESTICIDE
(GROUND WATER CONCERNS)

FOR RETAIL SALE TO AND USE ONLY BY CERTIFIED APPLICATORS OR PERSONS UNDER THEIR DIRECT SUPERVISION, AND ONLY FOR THOSE USES COVERED BY THE CERTIFIED APPLICATOR'S CERTIFICATION.

THIS PRODUCT IS A RESTRICTED USE HERBICIDE DUE TO GROUND WATER CONCERNS. USERS MUST READ AND FOLLOW ALL PRECAUTIONARY STATEMENTS AND INSTRUCTIONS FOR USE IN ORDER TO MINIMIZE POTENTIAL FOR ATRAZINE TO REACH GROUND WATER.

MARKSMAN® HERBICIDE

For weed control in corn, grain sorghum and fallow systems.

SHAKE BEFORE USING.

Active Ingredients:

<u>Potassium salt of dicamba</u>	
<u>(3,6-dichloro-o-anisic acid)*</u>	<u>13.42%</u>
<u>Potassium salts of related acids</u>	<u>3.35%</u>
<u>Atrazine**</u>	<u>22.23%</u>
<u>Inert Ingredients:</u>	<u>61.00%</u>
<u>TOTAL</u>	<u>100.00%</u>

- * Equivalent to 11.45% 3,6-dichloro-o-anisic acid (dicamba) or 1.1 pounds/gallons.
- ** Equivalent to 22.23% 2-chloro-4-ethylamino-6-isopropyl/amino-s-triazine (atrazine) or 2.1 pounds/gallons.

EPA Reg. No. 55947-39

EPA Est. No. 11773-IA-1

NET CONTENTS: 2 1/2 GALLONS

SANDOZ CROP PROTECTION CORPORATION

KEEP OUT OF REACH OF CHILDREN

CAUTION

See side panel for additional precautionary statements.

ACCEPTED
with COMMENTS
in EPA Letter Dated:

JUN - 4 1989

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, this pesticide
registered under EPA Reg. No.

55947-39

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DIRECTIONS FOR USE:

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

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

Refer to the Directions for Use Booklet attached to this container for proper use directions and additional precautionary statements.

PROHIBITIONS:

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THERE ARE NO IMPLIED WARRANTIES AND NO WARRANTIES OF MERCHANTABILITY OR FITNESS.