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File



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

APR 15 1994

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

Stephen J. Wratten  
MONSANTO CO.  
Agent for: MONSANTO AGRICULTURAL CO.  
700 14th St., N.W. - Suite 1100  
Washington, DC 20005

Subject: Label Amendment Submission of 07/16/93 in Response to PR Notice 93-7  
EPA Reg. No. 524-331  
RAMROD FLOWABLE HERBICIDE

Dear Registrant:

The labeling cited above and submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is accepted subject to the comments reflected on the enclosed sheet. A copy of your proposed labeling stamped "ACCEPTED WITH COMMENTS" is enclosed.

WHAT THIS ACCEPTANCE MEANS:

Based on your certification, the Agency has accepted the labeling changes that are necessary to comply with the Worker Protection Standard (WPS) labeling requirements of 40 CFR part 156, subpart K, described in PR Notices 93-7 and 93-11. Any other labeling changes submitted in connection with this amendment application but not directly related to compliance with the WPS have not been reviewed or accepted by the Agency. If you wish to make such changes, you must submit a separate amendment application proposing them. If your product is currently suspended, the acceptance of this labeling amendment does not affect the suspension in any way.

WHAT YOU NEED TO DO NEXT:

By the next label printing, make all the specified changes to your labeling. Send to EPA one (1) copy of the final printed labeling:

- BEFORE selling or distributing any product bearing the final printed labeling
- AND
- WITHIN one year from date of this acceptance.



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

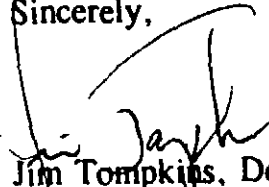
Submit the final printed labeling via the U.S. Postal Service to:

Document Processing Desk (FIN-LABEL)  
Office of Pesticide Programs (7505C)  
U.S. Environmental Protection Agency  
401 M Street, SW  
Washington, D.C. 20460-0001

Hand or courier deliveries of final printed labeling may be made to:

Document Processing Desk (FIN-LABEL)  
Office of Pesticide Programs  
Room 266A, Crystal Mall 2  
1921 Jefferson Davis Highway  
Arlington, VA 22202

Sincerely,



Jim Tompkins, Deputy Chief  
Registration Support Branch  
Registration Division (7505W)

Attachment

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Office of Pesticide Programs  
Registration Division

Stephen J Wratten  
MONSANTO CO  
AGENT FOR: MONSANTO AGRICULTURAL CO  
700 14TH ST, N.W. SUITE 1100  
WASHINGTON DC 20005

Comment for: EPA Reg Nr.524-331  
RAMROD FLOWABLE HERBICIDE

The following specific comments pertain to your WPS  
labeling submission concerning the product  
cited above:

User Safety Recommendations must either be placed in a box  
or printed on the label in a contrasting color from  
surrounding text.

The Agricultural Use Requirements section must be located in  
a clearly separate box on the product labeling -- with lines  
or other graphic indicators (such as contrasting color) to  
separate the section from the surrounding text.

**RAMROD®**  
Flowable Herbicide by Monsanto

Selective herbicide for preemergence weed control in field corn, hybrid seed corn, silage corn, and grain sorghum (milo).

- Ramrod is a registered trademark of Monsanto Company

**Complete Directions for Use**  
**SHAKE WELL BEFORE USING**

EPA Reg. No. 524-331

~~1992-1~~

~~648.21-000.20/53~~

**PRECAUTIONARY STATEMENTS**

**GENERAL INFORMATION**

**MIXING, SPRAYING  
INSTRUCTIONS**

**FLUID FERTILIZER  
COMPATIBILITY TEST**

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**CULTIVATION INFORMATION**

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**CROPS**

ACCEPTED  
with COMMENTS  
In EPA Letter Dated

APR 15 1994  
Under the Federal Insecticide,  
Fungicide, and Rodenticide Act  
as amended, for the pesticide  
registered under EPA Reg. No.  
524-331

Read the entire label before using this product.

Use only according to label instructions.

Read 'LIMIT OF WARRANTY AND LIABILITY' before buying or using. If terms are not acceptable, return at once unopened.

REFORMULATION OR REPACKAGING IS PROHIBITED.

#### **LIMIT OF WARRANTY AND LIABILITY**

This Company warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes set forth in the Complete Directions for Use label booklet ('Directions') when used in accordance with those Directions under the conditions described therein. NO OTHER EXPRESS WARRANTY OR IMPLIED WARRANTY OF FITNESS FOR PARTICULAR PURPOSE OF MERCHANTABILITY IS MADE. This warranty is also subject to the conditions and limitations stated herein.

Buyer and all users shall promptly notify this Company of any claims whether based in contract, negligence, strict liability, other tort or otherwise.

Buyer and all users are responsible for all loss or damage from use or handling which results from conditions beyond the control of this Company, including, but not limited to, incompatibility with products other than those set forth in the Directions, unusual weather, weather conditions which are outside the range considered normal at the application site and for the time period when the product is applied, as well as weather conditions which are outside the application ranges set forth in the Directions, application in any manner not explicitly set forth in the Directions, moisture conditions outside the moisture range specified in the Directions, or the presence of products other than those set forth in the Directions in or on the soil, crop or treated vegetation.

THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE LIMIT OF THE LIABILITY OF THIS COMPANY OR ANY OTHER SELLER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT (INCLUDING CLAIMS BASED IN CONTRACT, NEGLIGENCE, STRICT LIABILITY, OTHER TORT OR OTHERWISE) SHALL BE THE PURCHASE PRICE PAID BY THE USER OR BUYER FOR THE QUANTITY OF THIS PRODUCT INVOLVED, OR, AT THE ELECTION OF THIS COMPANY OR ANY OTHER SELLER, THE REPLACEMENT OF SUCH QUANTITY, OR, IF NOT ACQUIRED BY PURCHASE, REPLACEMENT OF SUCH QUANTITY. IN NO EVENT SHALL THIS COMPANY OR ANY OTHER SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES.

Buyer and all users are deemed to have accepted the terms of this LIMIT OF WARRANTY AND LIABILITY which may not be varied by any verbal or written agreement.

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**PRECAUTIONARY STATEMENTS**  
**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

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Keep out of reach of children.

**DANGER!** [REDACTED]

[REDACTED]

**CORROSIVE. CAUSES SKIN BURNS.**  
**CAUSES SUBSTANTIAL BUT TEMPORARY EYE INJURY.**  
**HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN.**  
**CAUSES NOSE AND THROAT IRRITATION.**  
**MAY CAUSE ALLERGIC SKIN REACTION.**

Do not get in eyes, on skin or on clothing.

~~Wear goggles or a face shield along with protective clothing and chemical resistant gloves while handling.~~

Avoid breathing vapor or spray mist.

Keep container closed.

**BEST AVAILABLE COPY**

~~Wash thoroughly with soap and water after handling.~~

~~Remove contaminated clothing and wash before reuse.~~

**FIRST AID:** IF ON SKIN, immediately flush with plenty of water. ~~while removing contaminated clothing. As soon as soap is available, wash skin thoroughly with soap and water. Wash clothing before reuse.~~ Get medical attention. Sensitized persons should avoid further contact and reuse of [REDACTED] contaminated clothing.

**IF IN EYES:** immediately flush with plenty of water for at least 15 minutes. Get medical attention.

**IF INHALED:** remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.

**IF SWALLOWED,** do NOT induce vomiting. Give large quantities of water. Get medical attention. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

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[REDACTED]

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[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

In case of emergency involving this product, Call Collect, day or night, (314) 694-4000.

**ENVIRONMENTAL HAZARDS**

This product is toxic to fish. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply where runoff is likely to occur. Do not apply when weather conditions are likely to cause drift from treated areas. Runoff and drift from treated areas may be hazardous to aquatic organisms. Do not contaminate water when disposing of equipment washwaters.

**PHYSICAL OR CHEMICAL HAZARDS**

In case of:

SPILL OR LEAK, soak up, remove and keep away from humans and domestic animals.

**BEST AVAILABLE COPY**

**ACTIVE INGREDIENT:**

\*Propachlor, (2-chloro-N-isopropylacetanilide)..... 42.0%

INERT INGREDIENTS:..... 58.0%  
100.0%

Contains petroleum distillates.

\* Contains 480 grams/litre or 4 pounds/gallon of propachlor.

**DIRECTIONS FOR USE**

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

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

For more product information call toll-free, 1(800)323-1421.

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**Storage and Disposal**

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Do not contaminate water, foodstuffs, seed or feed by storage or disposal.

**STORAGE;**  
STORE ABOVE 20°F. AND BELOW 100°F. TO KEEP PRODUCT IN SUSPENSION.

Below 20°F. the product may freeze. If frozen, mix well to resuspend when temperature is above 40°F.

Above 100°F. the product may become thick and unsprayable.

**DISPOSAL:**  
Wastes resulting from the use of this product that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticide disposal or in accordance with applicable Federal, state or local procedures.

(See the individual container label for disposal information.)

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**GENERAL INFORMATION**

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**BEST AVAILABLE COPY**



This product is recommended for control of many annual grasses and certain broadleaf weeds. For best results it should be applied to the soil surface before crop or weeds emerge. The seedbed should be fine, firm and free of clods and trash; application should be made within 5 days after the last tillage for weed control. Do not apply when conditions favor drift. Moisture, either as rain or irrigation, is required after application to activate this product. On coarse soils one-third inch of rainfall, and on medium and fine textured and/or high organic soils one-third to three-fourths inch of rainfall is required depending upon original soil moisture. Better results are obtained when moisture occurs within 10 days after application. Generally lower amounts of rainfall are required when soil moisture is high at time of planting.

**NOTE:** Use of this product in any manner not consistent with this label may result in injury to persons, animals or crops, or other unintended consequences. Keep container closed to prevent spills and contamination.

Flush sprayer with clean water after use.

Do not use this product or any of its labeled tank mixtures in fields where flood irrigation is to be practiced.

**DO NOT** apply in sprayable fluid fertilizer after crop emergence since crop injury may result.

Do not graze or feed sorghum (milo) forage, silage or fodder (stubble) from treated fields to dairy animals.

Read and carefully observe the cautionary statements and all other information appearing on labeling of all products used in mixtures.

#### **SOIL TEXTURE**

Applicators should evaluate soil and weed conditions carefully to assure that the lowest effective label rate is chosen.

The recommended use rates of this product and the other herbicides labeled for use in tank mixtures with this product generally vary with soil texture. Unless soil texture is specifically named, rate tables throughout this label refer to only three soil textural groups: coarse, medium and fine. The following is a complete listing of soil textures included in each of these three soil textural groups.

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#### **SOIL TEXTURAL GROUP**

#### **SOIL TEXTURE**

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<b>COARSE:</b>	sand, loamy sand, sandy loam
<b>MEDIUM:</b>	loam, silt loam, silt, sandy clay loam

**FINE:**

**silty clay loam, clay loam, sandy  
clay, silty clay, clay**

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Refer to the above table to determine the corresponding soil textural group for the soil to be treated.

### **MIXING AND SPRAYING INSTRUCTIONS**

Always predetermine the compatibility of this product or its labeled tank mix with water carrier or sprayable fluid fertilizer carrier by mixing small proportional quantities in advance. See the "Standard Sprayable Fluid Fertilizer Compatibility Test" section in this label.

Mix this product or its labeled tank mix with the appropriate carrier as follows:

1. Place a 20 to 35 mesh screen or wetting basket over filling port.
2. Through the screen, fill the sprayer tank one-half full with the appropriate carrier.
3. If a compatibility agent is necessary to improve mixing or to prevent the formation of undesirable and unsprayable gels or precipitates, while agitating add it to the carrier already in the tank. Use only compatibility agents, cleared by Federal Food and Drug Administration for this use. Read and follow all directions for use, cautionary statements and all other information appearing on the selected compatibility agent. Check for adequate agitation.
4. Add the required amount of this product. Continue agitation.
5. If a labeled tank mix is being prepared, premix the other product in water. If a wettable powder is used, make a slurry. If flowable atrazine is used, premix one part flowable with one part water. Add to tank and continue agitation.
6. Complete filling the sprayer tank with carrier. Remove hose from tank immediately after filling to avoid siphoning back into the carrier source. NOTE: Maintain good agitation at all times until the contents of the tank are sprayed, otherwise, settling which can lead to clogging may occur. Close tank valves and drain all lines when spraying is delayed.

Keep by-pass line on or near bottom of tank to minimize foaming. Screen size in nozzle or line strainers should be no finer than 50 mesh. Carefully select proper nozzle to avoid spraying a fine mist. For best results, use flat fan or flood jet nozzle. Check for even distribution of spray droplets. To reduce loss of the chemical due to drift of a fine mist, apply at nozzle pressures below 40 psi.

**STANDARD SPRAYABLE FLUID  
FERTILISER COMPATIBILITY TEST**

Herbicides may not always mix evenly throughout a sprayable fluid fertilizer or the components may separate too quickly to make their combined use of practical value. This may be due to certain characteristics of the different fluid fertilizers. A simple test using small quantities of the components is suggested to provide compatibility potential.

**A. Materials Required For A Compatibility Test**

1. Two one-quart jars with lid or stopper (marked ''with'' and ''without'').
2. TEAspoons (for a more exacting test, a five to ten milliliter (ml) pipette or graduated cylinder is desirable).
3. A minimum of one quart of the sprayable fluid fertilizer to be tested.
4. The herbicide(s) to be mixed.
5. A compatibility agent (the purpose of the adjuvant is to help keep the fertilizer and herbicide(s) in suspension, if this assistance is needed).

**B. Procedure**

1. Add one pint of the sprayable fluid fertilizer that will be used or other herbicide carrier to each jar marked ''with'' and ''without''.

Add One Pint Liquid Fertilizer  
To Two Quart Jars.

WITH

WITHOUT

2. To the jar marked ''with'', add 1/4 TEAspoon or 1.2 milliliters of a suitable compatibility agent; shake gently for five to ten seconds to mix (1/4 TEAspoon is the equivalent of two pints per 100 gallons of liquid fertilizer.

To Jar Marked ''With''  
Add Compatibility Agent  
And Shake to Mix.

WITH

WITHOUT

3. To each jar add the appropriate amount of herbicide(s). If more than one is used, add them separately with the wetttable powders added first, flowables second and liquid last. Shake gently five to ten seconds after each addition.

Add Herbicide(s) To Both Jars  
And Shake to Mix.

WITH

WITHOUT

**Amount to Be  
Added Per Pint Of  
Sprayable Fluid Fertilizer  
(Assuming Volume is 25 gal/A)**

<b>HERBICIDE</b>	<b>RATE/A</b>	<b>Level TEASpoons</b>	<b>Milliliters</b>
<b>This Product</b>	2.5 qts	=	2.4 or 11.8
	3 qts	=	2.9 or 14.2
	3.5 qts	=	3.4 or 16.6
	4 qts	=	3.8 or 19
	4.5 qts	=	4.3 or 21.4
	5 qts	=	4.8 or 23.8
	5.5 qts	=	5.3 or 26.2
	6 qts	=	5.8 or 29.6

This compatibility test is designed for 25 gallons of spray per acre with the maximum labeled rate of herbicide. For changes in spray volume or herbicide concentration, make appropriate changes in the ingredients of the test. Regardless of spray volume, the amount of compatibility agent should be equal to two or three pints (two pints = 1/4 TEASpoon or 1.2 milliliters, three pints = 3/8 TEASpoon or 1.8 milliliters per pint of sprayable fluid fertilizer) per 100 gallons of liquid fertilizer.

**C. Observations and Decisions**

1. If the herbicide(s) and the sprayable fluid fertilizer are compatible.
2. If a compatibility agent is necessary.

Five minutes after the final addition and mixing, observe both jars for the formation of large flakes, sludge, gels or other precipitates. Observe if the herbicide(s) cannot be physically mixed with the liquid fertilizer but remains as small oily particles in the solution.

If incompatibility in any form described above occurs in the jar "with" the compatibility agent added, the liquid fertilizer and the herbicide(s) should not be used together in the same spray tank.

If incompatibility as described above occurs in the jar "without" the adjuvant but not in the jar "with" adjuvant, the use of a compatibility adjuvant is recommended.

Both jars should be allowed to stand and be observed periodically for one-half hour. If the separate layers of liquid fertilizer and additives can be resuspended by shaking, commercial application is possible. Wettable powders will either settle to

the bottom of the tank or jar, or float to the top, depending upon the density of the fertilizers.

If the herbicide(s) is compatible with fluid fertilizer in the foregoing test without having to use a compatibility agent, fluid fertilizer may be used for the premixing. If it is not compatible the herbicide(s) should be premixed with water before adding to the spray tank.

## APPLICATION INFORMATION

### APPLICATION SYSTEMS

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

**Ground Broadcast Treatment** - Apply this product and the labeled tank mixtures in 10 or more gallons of solution per acre using broadcast boom equipment. The carrier may be either water or sprayable fluid fertilizer as specified for the crop to be treated in the "DIRECTIONS FOR USE" section of this label. Do not apply during periods of gusty winds, when winds are in excess of 15 mph or when other conditions favoring drift exist.

**Band Treatment** - Apply a broadcast equivalent rate and volume per acre. To determine these:

$$\begin{array}{r} \text{Band width} \\ \text{in inches} \\ \hline \text{Row width} \\ \text{in inches} \end{array} \times \begin{array}{r} \text{Broadcast} \\ \text{RATE} \\ \text{per acre} \end{array} = \begin{array}{r} \text{Band RATE} \\ \text{per acre} \end{array}$$

$$\begin{array}{r} \text{Band width} \\ \text{in inches} \\ \hline \text{Row width} \\ \text{in inches} \end{array} \times \begin{array}{r} \text{Broadcast} \\ \text{VOLUME} \\ \text{per acre} \end{array} = \begin{array}{r} \text{Band VOLUME} \\ \text{per acre} \end{array}$$

Mount spray equipment on the planter with nozzles behind press wheel and apply this product at planting time.

**NOTE:** For band application nozzle placement, refer to the nozzle manufacturer's specification as a guide for determining proper nozzle height.

### APPLICATION TIMING AND METHODS

**Preemergence Surface Application** - This product and all labeled tank mixtures may be applied to the soil surface after planting and prior to either crop or weed emergence, apply within 5 days of last preplant tillage. If weeds emerge after last preplant tillage, rotary hoe or shallowly cultivate immediately to improve performance. Precipitation or overhead sprinkler irrigation is required after application to move the herbicide treatment into the weed germination zone. The amount of precipitation or overhead sprinkler irrigation required depends on existing soil moisture, soil type and percent organic matter content, but 1/3 to

3/4 inch is normally adequate. Performance is improved when moisture is received with 7 days after application and prior to weed emergence. High intensity or excessive rainfall or excessive irrigation after application may reduce control.

**Cultivation Information** - Delay cultivation after application for as long as possible unless weeds or grasses emerge. Shallowly cultivate or rotary hoe immediately if weeds or grasses emerge. If cultivation is necessary because of soil crusting or compaction, set equipment shallow and minimize lateral soil movement to avoid dilution or displacement of their herbicide treatment. If a band application is used and weeds have emerged in the treated band, set cultivator to throw soil into the row covering the band.

#### WEEDS CONTROLLED

Applicators should evaluate soil and weed conditions carefully to assure that they choose the lowest effective label rate.

When applied as directed, under the conditions described, this product **CONTROLS** the following weeds.

**Barnyardgrass**

*Echinochloa crus-galli*

**Carpetweed**

*Mollugo verticillata*

**Crabgrass**

*Digitaria spp.*

**Foxtail, giant**

*Setaria faberi*

**Foxtail, green**

*Setaria viridis*

**Foxtail, yellow**

*Setaria lutescens*

**Goosegrass**

*Eleusine indica*

**Panicum, fall**

*Panicum*

*dichotomiflorum*

**Figweed**

*Amaranthus spp.*

**Purslane**

*Portulaca oleracea*

**Pusley, Florida**

*Richardia scabra*

**Ryegrass, annual**

*Lolium spp.*

When applied immediately after planting, under the conditions described, this product at a rate of 5 to 6 quarts per acre on a broadcast basis **REDUCES COMPETITION** from the following hard-to-control weeds:

**Buckwheat, wild**

*Polygonum convolvulus*

**Groundsel**

*Senecio vulgaris*

**Lambsquarters**

*Chenopodium album*

**Ragweed, common**

*Ambrosia artemisiifolia*

**Signalgrass, broadleaf**

*Brachiaria platyphylla*

**Smartweed, Ladysthumb**

*Polygonum persicaria*

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#### RAMROD FLOWABLE

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Field Corn, Hybrid Seed Corn and

## Silage Corn

Apply this product in water or sprayable fluid fertilizer solutions for control of annual grasses and broadleaf weeds listed in the "WEEDS CONTROLLED" section of this label.

### APPROVED APPLICATION SYSTEMS

Ground - Broadcast boom; banded

**Reference:** The "APPLICATION SYSTEMS" section of this label provides detailed information on the application of this product using the system selected.

### APPROVED APPLICATION METHODS

**Preemergence Surface** - Apply this product after planting, before crop and weed emergence and within 5 days after last preplant tillage operation. See the following table for recommended broadcast rate per acre for preemergence surface applications.

**Reference:** The "APPLICATION TIMING AND METHODS" section of this label provides detailed information and procedures for the application timing and method selected.

### Preemergence Surface Application Rates

#### BROADCAST RATE PER ACRE (QUARTS)\*\*

SOIL TEXTURAL GROUP*	Less than 3% organic matter	3% or more organic matter
Coarse	4 to 4.5	4.5 to 5
Medium	4.5 to 5	5.25 to 5.5
Fine	5.25 to 5.5	5.5 to 6

\*Refer to the "SOIL TEXTURE" section of this label to determine corresponding soil textural group for the soil to be treated.

\*\*Use the higher rates in the recommended ranges in areas of heavy weed infestation.

**For Lister or Deep Furrow Planted Corn** - Apply this product at the broadcast rate of 5.25 to 6 quarts per acre in 10 or more gallons of water. If heavy rains follow application, the treatment on the top and sides of the furrow may not provide as good weed control as that obtained in the bottom of the furrow.

### GRAIN SORGHUM (MILO)

**Preemergence Surface Treatment** - For control of listed annual grasses and broadleaf weeds apply 4 to 5 quarts of this product

in 10 or more gallons of water or sprayable fluid fertilizer solutions per acre any time from immediately after planting and before the crop or weeds emerge. The higher rate should be used on high organic matter soils (greater than 3%) or in areas of heavy grass and broadleaf weed infestations or when listed hard-to-control weeds are present.

For Lister or Deep Furrow Planted Milo - Apply this product at the broadcast rate of 5 quarts per acre in 10 or more gallons of water. If heavy rains follow application, the treatment on the top and sides of the furrow may not provide as good weed and grass control as that obtained in the bottom of the furrow.

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**RAMROD FLOWABLE  
PLUS ATRAZINE  
(Tank mixture)**

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DO NOT graze treated area or feed treated forage to livestock for 21 days following application of this tank mixture.

**Field Corn, Hybrid Seed Corn, Silage Corn,  
and Grain Sorghum**

**NOTE FOR GRAIN SORGHUM:**

IN TEXAS USE ONLY ON THE FINE TEXTURE SOILS OF THE GULF COAST.

When applied as directed under the conditions described, this tank mixture **CONTROLS** these additional annual broadleaf weeds.

<b>Kochia</b> <i>Kochia scoparia</i>	<b>Nightshade, hairy</b> <i>Solanum sarrachoides</i>
<b>Mustard</b> <i>Brassica spp.</i>	<b>Smartweed, Pennsylvania</b> <i>Polygonum</i>
<b>Nightshade, black</b> <i>Solanum nigrum</i>	<i>pensylvanicum</i>

When applied as directed under the conditions described, this tank mixture **REDUCES COMPETITION** from these additional hard-to-control weeds.

<b>Cocklebur</b> <i>Xanthium</i> <i>strumarium</i>	<b>Morningglory, annual</b> <i>Ipomoea purpurea</i>
<b>Jimsonweed</b> <i>Datura stramonium</i>	<b>Signalgrass, broadleaf</b> <i>Brachiaria platyphylla</i>
	<b>Velvetleaf, Buttonweed</b> <i>Abutilon theophrasti</i>

Apply this product in water or sprayable fluid fertilizer solutions for control of annual grasses and broadleaf weeds listed in the "WEEDS CONTROLLED" section of this label.

**APPROVED APPLICATION SYSTEMS**



Ground - Broadcast boom; banded

Reference: The "APPLICATION TIMING AND METHODS" section of this label provides detailed information on the procedures for the application timing and method selected.

#### APPROVED APPLICATION METHOD

**Preemergence Surface** - Apply this tank mixture after planting, before crop and weed emergence and within 5 days after last preplant tillage operation. See the following table for recommended broadcast rates per acre for preemergence surface applications.

Reference: The "APPLICATION TIMING AND METHODS" section of this label provides detailed information and procedures for the application timing and method selected.

#### Preemergence Surface Application Rates

SOIL TEXTURAL GROUP*	BROADCAST RATE PER ACRE (QUARTS)**			
	Less than 3% organic matter		3% or more organic matter	
	Ramrod® Flowable (Quarts)	+ atrazine 4L (Quarts)	Ramrod Flowable (Quarts)	+ atrazine**** 4L (Quarts)
Coarse***	2.5	1	3	1.2
Medium	3	1.2	3.4	1.4
Fine	3	1.2 to 1.4	3.4 to 4	1.4 to 1.6

\*Refer to the "SOIL TEXTURE" section of this label to determine corresponding soil textural group for the soil to be treated.

\*\*Use the higher rates in the recommended ranges in areas of heavy weed infestation.

\*\*\*Do not use on grain sorghum on coarse texture soils with less than 3% organic matter.

\*\*\*\*Use rates listed in this label when using atrazine 4L. Use equivalent rates when using atrazine 80W or 90% dry flowable formulations. One quart of atrazine 4L equals 1.25 pounds of atrazine 80W or 1.1 pounds of atrazine 90% flowable.

CAN BE PLANTED THE YEAR FOLLOWING THE USE OF THIS TANK MIXTURE. IF SOYBEANS OR OTHER NON LABELED CROPS ARE TO BE PLANTED, THERE IS A POSSIBILITY OF CROP INJURY DUE TO CARRYOVER OF ATRAZINE.

Do not plant soybeans in areas where furrow irrigation is practiced. Applications made on alkali soils or where cuts, fills or erosion have exposed calcareous or alkali subsoils may result in crop injury to milo.

**Emerged Weed Control - For Corn Only - This tank mixture can be applied until weeds reach the 2-leaf stage, but prior to corn emergence. Applications beyond the 2-leaf stage will not provide satisfactory results.**

**Better results will be obtained if rainfall occurs within 5 to 7 days after application. If rainfall does not occur, use shallow cultivation to remove emerged weeds. Avoid cultivation methods which will displace the treated soil layer.**

**See the "Preemergence Surface Application" rate table of this label for the recommended rate for the soil texture and organic matter content to be treated.**

**For lister or Deep Furrow Planted Corn - Apply this tank mixture at the higher broadcast rate listed in the rate table in the preemergence section of this label for the soil texture and organic matter content to be treated.**

**If heavy rains follow application, the treatment on the top and sides of the furrow may not provide as good weed control as that obtained in the bottom of the furrow.**

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**EPA Reg. No. 524-331**

**In case of an emergency involving this product,  
Call Collect, day or night, (314) 694-4000.**

**©MONSANTO COMPANY 1992-1**

**848.21-000.20/53**

**MONSANTO COMPANY  
AGRICULTURAL PRODUCTS  
ST. LOUIS, MISSOURI, 63167 U.S.A.**