

ROUNDUP® D-PAK

For control of annual and perennial weeds in ~~reduced tillage systems~~ in Arkansas, Louisiana and Mississippi.

USE WITH A NONIONIC SURFACTANT

Complete Directions for Use

EPA Reg. No. 524-333

AVOID CONTACT WITH FOLIAGE, GREEN STEMS, OR FRUIT OF CROPS, DESIRABLE PLANTS AND TREES, SINCE SEVERE INJURY OR DESTRUCTION MAY RESULT.

Roundup® is a registered trademark of Monsanto Company.

~~1989-1-897.15-100.01/531991-1~~ 897.15-100.08/53

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.

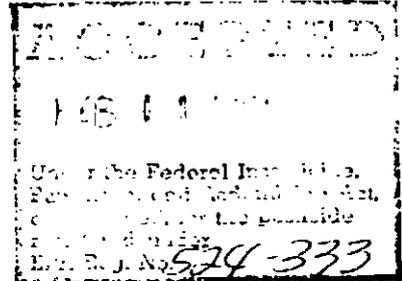
REFORMULATION OR REPACKAGING IS PROHIBITED.

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 OR 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, application to or contact with desirable vegetation, 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.

(INDEX PAGES)

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

Keep out of reach of children.

CAUTION!

CAUSES EYE IRRITATION.

Avoid contact with eyes.

Wash thoroughly with soap and water after handling.

FIRST AID: IF IN EYES, immediately flush with plenty of water for at least 15 minutes. Get medical attention. Remove material from skin and clothing.

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

Environmental Hazards

Do not apply directly to water or wetland (swamps, bogs, marshes or potholes). Do not contaminate water ~~by cleaning of equipment or disposal of wastes~~ when disposing of equipment washwaters.

Physical or Chemical Hazards

Spray solutions of this product should be mixed, stored and applied only in stainless steel, aluminum, fiberglass, plastic and plastic-lined steel containers.

DO NOT MIX, STORE OR APPLY THIS PRODUCT OR SPRAY SOLUTIONS OF THIS PRODUCT IN GALVANIZED STEEL OR UNLINED STEEL (EXCEPT STAINLESS STEEL) CONTAINERS OR SPRAY TANKS. This product or spray solutions of this product react with such containers and tanks to produce hydrogen gas which may form a highly combustible gas mixture. This gas mixture could flash or explode, causing serious personal injury, if ignited by open flame, spark, welder's torch, lighted cigarette or other ignition source.

ACTIVE INGREDIENT:

*Glyphosate, N-(phosphonomethyl)glycine, in the form of its isopropylamine salt 62.0%

INERT INGREDIENTS: 38.0%
100.0%

* Contains 769 grams per litre or 6.42 pounds per U.S. gallon of the active ingredient glyphosate, in the form of its isopropylamine salt. Equivalent to 570 grams per litre or 4.75 pounds per U.S. gallon of the acid, glyphosate.

DIRECTIONS FOR USE

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

Storage and Disposal

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

STORAGE:

STORE ABOVE 59°F (15°C) TO KEEP FROM CRYSTALLIZING. Crystals will settle to the bottom. If allowed to crystallize, place in a warm room 77°F (25°C) for several days and roll container frequently ~~or~~ recirculate to redissolve before using.

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.

Emptied container retains vapor and product residue. Observe all labeled safeguards until container is cleaned, reconditioned or destroyed.

Do not reuse container. Return emptied container per the Monsanto container return program. If not returned, triple rinse container, then 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.

GENERAL INFORMATION

DO NOT APPLY THIS PRODUCT USING AERIAL SPRAY EQUIPMENT EXCEPT UNDER CONDITIONS AS SPECIFIED WITHIN THIS LABEL.

This product, a water soluble liquid, mixes readily with water to be applied as a foliar spray for the control or destruction of most herbaceous plants. It may be applied through most standard industrial or field-type sprayers after dilution and thorough mixing with water in accordance with label instructions.

~~This product moves through the plant from the point of foliage contact to and into the root system. Visible effects on most annual weeds occur within 2 to 4 days but on most perennial weeds may not occur for 7 days or more. Extremely cool or cloudy weather following treatment may slow down activity of this product and delay visual effects of control. Visible effects are a gradual wilting and yellowing of the plant which advances to complete browning of aboveground growth and deterioration of underground plant parts.~~

This product moves through the plant from the point of foliage contact and into the root system. Visible effects on most weeds occur within 7 days. Extremely cool or cloudy weather may slow activity and delay visible effects which are a gradual wilting and yellowing of the plant which advances to complete browning.

Unless otherwise specified on this label, delay application until vegetation has emerged and reached the stages described for control of such vegetation under the "WEEDS CONTROLLED" section of this label. Unemerged plants arising from unattached underground rhizomes or root stocks of perennials will not be affected by the spray herbicide and will continue to grow. For this reason, best control of most perennial weeds is obtained when treatment is made at late growth stages approaching maturity.

Spraying early to control young annual weeds before tall and dense stands develop will result in the best control at the lowest use rate.

Always use the higher rate of this product per acre within the recommended range when (1) weed growth is heavy or dense, or (2) weeds are growing in an undisturbed (noncultivated) untilled area.

PRECAUTIONS

Do not treat weeds under poor growing conditions such as drought stress, disease or insect damage, as reduced weed control may result. Reduced results may also occur when treating weeds heavily covered with dust.

This product is recommended for control of emerged weeds prior to establishment of labeled crops. Large amounts of green or decaying vegetation left standing or incorporated into the seedbed may enhance the development of disease in newly planted crops. This may result in poor emergence and/or stands, especially under cool and/or wet conditions.

~~Spraying early to control young weeds before dense stands develop or light cultivation to assist weed decay will favor preparation of suitable seedbeds.~~

In reduced tillage and no-till systems, ensure good seed to soil contact and proper seeding depth.

Reduced control may ~~result~~ occur when applications are made to annual or perennial weeds that have been mowed, grazed, or cut, and have not been allowed to regrow to the recommended stage for treatment.

Rainfall or irrigation occurring within 6 hours after application may reduce effectiveness. Heavy rainfall or irrigation within 2 hours after application may wash the chemical off the foliage and a repeat treatment may be required.

Applications to saturated soils or to fields under standing water will result in reduced control.

This product does not provide residual weed control. For subsequent residual weed control, follow a label-approved herbicide program. Read and carefully observe the cautionary statements and all other information appearing on the labels of all herbicides used.

Buyer and all users are responsible for all loss or damage in connection with the use or handling of mixtures of this product with herbicides or other materials that are not expressly recommended in this labeling. Mixing this product with herbicides or other materials not recommended on this label may result in reduced performance.

For best results, spray coverage should be uniform and complete. Do not spray weed foliage to the point of runoff.

Keep people and pets off treated areas until spray solution has dried to prevent transfer of this product onto desirable vegetation.

DOMESTIC ANIMALS: This product is considered to be relatively nontoxic to dogs and other domestic animals; however, ingestion of this product or large amounts of freshly sprayed vegetation may result in temporary gastrointestinal irritation (vomiting, diarrhea, colic, etc.) If such symptoms are observed, provide the animal with plenty of fluids to prevent dehydration. Call a veterinarian if symptoms persist for more than 24 hours.

ATTENTION: AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURY TO DESIRABLE PLANTS AND CROPS.

Do not allow the herbicide solution to mist, drip, drift, or splash onto desirable vegetation since minute quantities of this herbicide can cause severe damage or destruction to the crop, plants, or other areas on which treatment was not intended. The likelihood of injury occurring from the use of this product is greatest when winds are gusty or in excess of 5 miles per hour or when other conditions, including lesser wind velocities, will allow cause spray drift to occur. When spraying, avoid combinations of pressure and nozzle type that will result in splatter or fine particles (mist) which are likely to drift. AVOID APPLYING AT EXCESSIVE SPEED OR PRESSURE.

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

MIXING, ADDITIVES AND APPLICATION INSTRUCTIONS

APPLY THESE SPRAY SOLUTIONS IN PROPERLY MAINTAINED AND CALIBRATED EQUIPMENT CAPABLE OF DELIVERING DESIRED VOLUMES. DO NOT APPLY UNDER WHEN WIND OR OTHER CONDITIONS WHICH ALLOW FAVOR DRIFT TO OCCUR. HAND GUN APPLICATIONS SHOULD BE PROPERLY DIRECTED TO AVOID SPRAYING DESIRABLE PLANTS. NOTE: REDUCED RESULTS MAY OCCUR IF WATER CONTAINING SOIL IS USED, ~~such as~~ SUCH AS WATER FROM PONDS AND UNLINED DITCHES.

MIXING

SURFACTANT REQUIREMENT

This product requires use with at least an 80 percent active nonionic surfactant. When using this product, mix 4 quarts (1 percent solution) of a nonionic surfactant per 100 gallons of spray solution. Read and carefully observe surfactant cautionary statements and other information appearing on the surfactant label.

This product mixes readily with water. Mix spray solutions of this product as follows: Fill the mixing or spray tank with the required amount of water. Add the proper recommended amount of this product

~~(see "DIRECTIONS FOR USE" and "WEEDS CONTROLLED" sections of this label)~~ near the end of the filling process and mix well. Remove hose from tank immediately after filling to avoid siphoning back into the carrier source. During mixing and application, foaming of the spray solution may occur. To prevent or minimize foam, ~~avoid the use of mechanical agitators,~~ add the surfactant at the end of the filling cycle, place the filling hose below the surface of the spray solution, terminate by-pass and return lines at the bottom of the tank and, if needed, use an approved anti-foam or defoaming agent.

TANK MIXTURES

Always predetermine the compatibility of labeled tank mixtures of this herbicide with water carrier by mixing small proportional quantities in advance.

Mix labeled tank mixtures of this product with water 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 water and start agitation.
3. If a wettable powder is used, make a slurry with the water carrier, and add it SLOWLY through the screen into the tank. Continue agitation.
4. If a flowable formulation is used, premix one part flowable with one part water. Add diluted mixture SLOWLY through the screen into the tank. Continue agitation.
5. If an emulsifiable concentrate formulation is used, premix one part emulsifiable concentrate with two parts water. Add diluted mixture slowly through the screen into the tank. Continue agitation.
6. Continue filling the sprayer tank with water and add the required amount of this product near the end of the filling process.
7. Add nonionic surfactant to the spray tank ~~before completing~~ near the end of the filling process.
8. Add individual formulations to the spray tank ~~as follows in this order:~~ wettable powder, flowable, emulsifiable concentrate, drift control additive, water soluble liquid followed by surfactant.

Maintain good agitation at all times until the contents of the tank are sprayed. If the spray mixture is allowed to settle, thorough agitation is required to resuspend the mixture before spraying is resumed.

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 with conventional ground application equipment, use flat fan nozzles.

Clean sprayer and parts immediately after using this product by thoroughly flushing with water.

ADDITIVES

AMMONIUM SULFATE

The addition of 1 to 2 percent dry ammonium sulfate by weight or 8.5 to 17 pounds per 100 gallons of water may increase the performance of this product on annual weeds. ~~The improvement in performance may be apparent where environmental growing under stress conditions and when this product is applied in labeled tank mixtures. is a concern.~~ Low-quality ammonium sulfate may contain material that will not readily dissolve which could result in nozzle-tip plugging. To determine quality, perform a jar test by adding 1/3 cup of ammonium sulfate to 1 gallon of water and agitate for 1 minute. If undissolved sediment is observed, predissolve the dry additive in water and filter prior to addition to the spray tank. If ammonium sulfate is added directly to the spray tank, add slowly with agitation. Adding too quickly may clog outlet lines. Ensure that ammonium sulfate is completely dissolved in the spray tank before adding herbicides. Thoroughly rinse the spray system with clean water after use to reduce corrosion.

NOTE: The use of ammonium sulfate as an additive does not preclude the need for additional surfactant. Do not use herbicide rates lower than recommended in this label.

APPLICATION EQUIPMENT AND TECHNIQUES

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

This product may be applied using either ground or aerial spray equipment. Use extreme care to avoid misting or drifting of herbicide solution onto foliage, green stems or fruit of desirable crops, trees, or plants during both growing and dormant periods, since even very small quantities of spray can cause severe plant injury.

BROADCAST EQUIPMENT

~~GROUND APPLICATION: Apply recommended rates of this product in 3 to 40 gallons of water per acre as a broadcast spray. Mix and apply the 10 to 20 fluid ounces per acre rates of this product in 3 to~~

10 gallons of water per acre. When using rates greater than 20 fluid ounces per acre, spray volumes of up to 20 gallons per acre may be used. For optimum spray distribution and coverage, use flat fan or low-volume nozzles. When using flood nozzles, space them no more than 40 inches apart and ensure double overlap of spray pattern. Refer to the manufacturer's recommendations for correct pressure and nozzle height above the target canopy. Avoid pressure and nozzles which produce fine droplets or mist.

Use appropriate marking devices to ensure uniform spray coverage and best results from the herbicide.

■ AERIAL EQUIPMENT ■

AERIAL APPLICATION: Aerial applications of this product may be made in annual cropping conventional tillage systems, fallow and reduced tillage systems, and preharvest to cotton. Apply the recommended rates of this product in 3 to 5 gallons of water per acre as a broadcast spray. DO NOT APPLY DURING INVERSION CONDITIONS, WHEN WINDS ARE GUSTY, OR UNDER ANY OTHER CONDITION WHICH WILL ALLOW FAVORS DRIFT. DRIFT MAY CAUSE DAMAGE TO ANY VEGETATION CONTACTED TO WHICH TREATMENT WAS NOT INTENDED. TO PREVENT INJURY TO ADJACENT DESIRABLE VEGETATION, APPROPRIATE BUFFER ZONES MUST BE MAINTAINED.

Coarse sprays are less likely to drift; therefore, do not use nozzles or nozzle configurations which dispense spray as fine spray droplets. Do not angle nozzles forward into the airstream and do not increase spray volume by increasing nozzle pressure.

Drift control additives may be used. When a drift control additive is used, read and carefully observe the cautionary statements and all other information appearing on the additive label.

Ensure uniform application - To avoid streaked, uneven or overlapped application, use appropriate marking devices.

Thoroughly wash aircraft, especially landing gear, after each day of spraying to remove residues of this product accumulated during spraying or from spills. PROLONGED EXPOSURE OF THIS PRODUCT TO UNCOATED STEEL SURFACES MAY RESULT IN CORROSION AND POSSIBLE FAILURE OF THE PART. LANDING GEAR ARE MOST SUSCEPTIBLE. The maintenance of an organic coating (paint) which meets aerospace specification MIL-C-38413 may prevent corrosion.

■ HAND-HELD and HIGH-VOLUME EQUIPMENT ■

Use coarse sprays only.

Mix this product in clean water and apply to foliage of vegetation to be controlled. For applications made on a spray-to-wet basis, spray coverage should be uniform and complete. Do not spray to the point of runoff.

For control of annual weeds listed on this label, apply a 1/3 percent solution of this product plus nonionic surfactant to weeds less than 6 inches in height or runner length. Apply prior to seedhead formation in grass or bud formation in broadleaf weeds. Allow three or more days before tillage or mowing.

For annual weeds over 6 inches tall or unless otherwise specified, use a 2/3 percent solution. For best results, use a 1 1/3 percent solution on harder-to-control perennials, such as bermudagrass, dock, field bindweed, hemp dogbane, milkweed and Canada thistle.

Less than complete coverage of weeds may result from the use of spray equipment designed for motorized spot treatments. Where less than complete coverage of annual weeds occurs, use 3 1/2 percent solution.

Prepare the desired volume of spray solution by mixing the amount of this product in water as shown in the following table:

Spray Solution

DESIRED VOLUME	AMOUNT OF ROUNDUP® D-PAK			
	1/3%	2/3%	1 1/3%	3 1/2%
1 gallon	1/2 oz	1 oz	1-3/4 oz	4-1/2 oz
25 gallons	10-2/3 oz	21 oz	1-1/3 qt	3-1/2 qt
100 gallons	1-1/3 qt	2-2/3 qt	1-1/3 gal	3-1/2 gal

2 tablespoons = 1 fluid ounce

For use in knapsack sprayers, it is suggested that the proper amount of this product be mixed with water in a larger container. Fill sprayer with the mixed solution.

SELECTIVE EQUIPMENT

~~This product may be applied through a recirculating spray system, a shielded applicator, or a wiper applicator after dilution and thorough mixing with water to listed weeds growing in any nonrep site specified on this label and only when specifically recommended in cropping systems, in crops specifically listed in this label.~~

~~A recirculating spray system directs the spray solution onto weeds growing above desirable vegetation, while spray solution not intercepted by weeds is collected and returned to the spray tank for reuse.~~

A shielded applicator directs the herbicide solution onto weeds while shielding desirable vegetation from the herbicide.

A wiper applicator applies the herbicide solution onto weeds by rubbing the weed with an absorbent material containing the herbicide solution.

AVOID CONTACT WITH DESIRABLE VEGETATION.

Contact of the herbicide solution with the desirable vegetation may result in damage or destruction. Applicators used above desired vegetation should be adjusted so that the lowest spray stream or wiper contact point is at least two inches above the desirable vegetation. Droplets, mist, foam, or splatter of the herbicide solution settling on desirable vegetation may result in discoloration, stunting, or destruction. Contact of the herbicide solution with the crop may result in damage. Wiper equipment must be operated so the herbicide solution does not wipe on to the crop.

~~Applications made above the crops should be made when the Wiper~~
applications made above crops should be made when upright growing weeds are a minimum of 6 inches above the desirable vegetation. Better results may be obtained when more of the weed is exposed to the herbicide solution. Weeds not contacted by the herbicide solution will not be affected. This may occur in dense clumps, severe infestations, or when the height of the weeds varies so that not all weeds are contacted. In these instances, repeat treatment may be necessary.

See the "Weeds Controlled" section of this label for recommended stage of growth for specific weeds.

NOTE

- Variation in equipment design may affect weed control. With wiper applicators, the wiping material and its orientation must allow delivery of sufficient quantities of the recommended herbicide solution directly to the weed.
- Maintain equipment in good operating condition. Avoid leakage or dripping onto desirable vegetation.
- Adjust height of applicator to insure adequate contact with weeds and to prevent contact with crops.
- Keep ~~nozzle tips and~~ wiping surfaces clean.
- ~~Keep spray patterns aligned into recovery chamber of the recirculating sprayer.~~
- Keep shields on shielded applicators adjusted to protect desirable vegetation.
- ~~Maintain recommended roller RPM on roller applicators while in use.~~
- Keep wiper material at proper degree of saturation with herbicide solution.

- DO NOT use wiper equipment when weeds are wet.
- DO NOT operate equipment at ground speeds greater than 5 mph. Weed control may be affected by speed of application equipment. As weed density increases, reduce equipment ground speed to ensure good coverage of weeds.
- Be aware that, on sloping ground, the herbicide solution may migrate, causing dripping on the lower end and drying on the upper end of a wiper applicator.
- Variation in equipment design may affect weed control. With wiper applicators, the wiping material and its orientation must allow delivery of sufficient quantities of the recommended herbicide solution directly to the weed.
- Care must be taken with all types of wipers to ensure that the absorbent material does not become oversaturated, causing the herbicide to drip on desirable vegetation.
- Mix only the amount of solution to be used during a one-day period, as reduced activity may result from use of leftover solutions. With all equipment, drain and clean sprayer and wiper parts immediately after using this product by thoroughly flushing with water.

~~RF' REGULATING SPRAYERS~~

~~Recirculating sprayer calibration is made on the basis of ground speed and delivery volume. Two procedures can be used to calibrate: (1) determine the discharge being delivered per minute, then operate at the designated ground speed, or (2) select the desired ground speed and then adjust the sprayer to deliver the recommended volume per minute (this may require nozzle changes). Use the appropriate table below.~~

~~Do not operate at nozzle pressure above 20 PSI.~~

~~Table 1. Use this table when calibrating box or row type recirculating sprayers. Box or row type sprayer calibration is based on the total discharge collected per row. Use only straight stream or 15' fan type nozzles.~~

~~*VOLUME PER MINUTE PER ROW~~

MPH	Ounces
2	26 to 35
3	38 to 51
4	51 to 68
5	65 to 86

* ~~NOTE: Be certain the amount collected is for all spray streams treating one row.~~

~~Table 2. Use this table when calibrating broadcast type recirculating sprayers. Broadcast recirculating sprayer calibration is based on the discharge collected per minute from one nozzle on a 20 inch spacing.~~

~~VOLUME PER MINUTE PER NOZZLE~~

MPH	Ounces
2	7 to 9
3	10 to 13
4	13 to 18
5	16 to 22

~~When applied as recommended under the conditions described for recirculating sprayers, this product will control the following weeds growing a minimum of 6 inches above desirable vegetation.~~

~~Perennial Broadleaf Weeds To SUPPRESS the following weeds, mix in a ratio of 2.5 quarts of this product in 20 gallons of water and apply as directed.~~

~~Dogbane, hemp Milkweed~~
~~Apocynum cannabinum Asclepias syriaca~~

~~Perennial Grasses and Annual Broadleaf Weeds To control the following weeds, mix in a ratio of 2 quarts of this product in 20 gallons of water and apply as directed:~~

~~Cocklebur Pigweed, redroot~~
~~Xanthium Amaranthus~~
~~strumarium retroflexus~~

~~Johnsongrass Sunflower~~
~~Sorghum halepense Helianthus annuus~~

~~Annual Grasses To control the following weeds, mix in a ratio of 1 1/2 quarts of this product in 20 gallons of water and apply as directed:~~

~~Corn Shattercane~~
~~Zea mays Sorghum bicolor~~

SHIELDED APPLICATORS

When applied as directed under conditions described for shielded applicators, this product will control those weeds listed in the 'Weeds Controlled' section of this label.

Shielded applicators which apply the herbicide solution as a spray band should be calibrated on a broadcast equivalent rate and volume basis. To determine these:

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

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

Use nozzles that provide uniform coverage within the treated area. EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT WITH DESIRABLE VEGETATION.

For specific rates of application and instructions for control of various annual and perennial weeds, see the 'Weeds Controlled' section of this label.

WIPER APPLICATORS

Wiper applicators include ~~either roller or~~ wick devices which physically wipe appropriate concentrations or amounts of this product directly onto the weed. Equipment must be designed, maintained, and operated to prevent the herbicide solution from contacting desirable vegetation. Operate this equipment at ground speeds no greater than 5 mph. Performance may be improved by reducing speed in areas of heavy weed infestations to ensure adequate wiper saturation. Better results may be obtained if two applications are made in opposite directions.

~~Do not add surfactant to the herbicide solution.~~

~~For Roller Applicators Mix 2 1/2 quarts of this product in enough water to prepare 10 gallons of herbicide solution. Apply this solution to perennial weeds or annual broadleaf weeds listed in this 'Wiper Applicators' section.~~

~~Mix 2 1/2 quarts of this product in enough water to provide 20 gallons of herbicide solution. Apply this solution to annual grasses listed in this 'Wiper Applicators' section.~~

~~Roller speed should be maintained at 40 to 60 RPM.~~

For Wick or Wiper Applicators—Mix 2-1/2 quarts of this product in plus 2 gallons of clean water plus one quart nonionic surfactant. Apply this solution to weeds listed in this 'Wiper Applicators' section.

Do not add a vegetable or crop oil concentrate to the mixture. Such use would block the flow of the mixture through the wiper.

In severe infestations, ~~reduce equipment ground speed to ensure that adequate amounts of this product are wiped on the weeds.~~ A second treatment application in the opposite direction may be beneficial.

Do not permit herbicide solution to contact desirable vegetation.

When applied as recommended under the conditions described for 'Wiper Applicators', this product CONTROLS the following weeds:

ANNUAL GRASSES

Corn

Zea mays

Panicum, Texas

Panicum texanum

Rye, common

Secale cereale

Shattercane

Sorghum bicolor

ANNUAL BROADLEAVES

Sicklepod

Cassia obtusifolia

Spanishneedles

Bidens bipinnata

Starbur, bristly

Acanthospermum hispidum

When applied as recommended under the conditions described for 'Wiper Applicators', this product SUPPRESSES the following weeds:

ANNUAL BROADLEAVES

Beggarweed, Florida

Desmodium tortuosum

Dogfennel

Eupatorium capilliflorum

Pigweed, redroot

Amaranthus retroflexus

Ragweed, common

Ambrosia artemisiifolia

Ragweed, giant
Ambrosia trifida

Sunflower
Helianthus annuus

Thistle, musk
Carduus nutans

Velvetleaf
Abutilon theophrasti

PERENNIAL GRASSES

~~Bermudagrass~~ ~~Gnutgrass~~
~~*Gynodon daetylon*~~ ~~*Sporobolus poiretii*~~

~~Guineagrass~~ ~~Vaseygrass~~
~~*Panicum maximum*~~ ~~*Paspalum urvillei*~~

Johnsongrass
Sorghum halepense

PERENNIAL BROADLEAVES

Dogbane, hemp
Apocynum cannabinum

Milkweed
Asclepias syriaca

Nightshade, silverleaf
Solanum elaeagnifolium

Thistle, Canada
Cirsium arvense

SPRAYER CLEANUP

CLEAN THE ENTIRE SPRAYER AFTER APPLICATION OF THIS PRODUCT. Failure to clean the sprayer thoroughly may result in injury to desirable crops which are subsequently sprayed. Add clean water to the tank and thoroughly rinse the entire sprayer system.

Application or use of other agricultural chemicals with the equipment used for this product may result in injury to desirable vegetation.

Thoroughly wash aircraft, especially landing gear, after each day of spraying to remove residues of this product accumulated during spraying or from spills. PROLONGED EXPOSURE OF THIS PRODUCT TO UNCOATED STEEL SURFACES MAY RESULT IN CORROSION AND POSSIBLE FAILURE OF THE PART. LANDING GEAR ARE MOST SUSCEPTIBLE. The

maintenance of an organic coating (paint) which meets aerospace specification MIL-C-38413 may prevent corrosion.

WEEDS CONTROLLED

This herbicide controls many annual and perennial grasses and broadleaf weeds.

ANNUAL WEEDS

- Apply to actively growing grass and broadleaf weeds.
- Allow at least 3 days after treatment before tillage.
- For maximum agronomic benefit, apply when weeds are 6 inches or less in height and in spray volumes of 3 to 10 gallons per acre unless otherwise specified.
- To prevent seed production, applications should be made prior to seedhead formation.
- ~~This product does not provide residual control; therefore, delay application until maximum weed emergence. Repeat treatments may be necessary to control later germinating weeds.~~

LOW-VOLUME BROADCAST APPLICATION (LOW-RATE TECHNOLOGY)

When applied as directed under the conditions described, this product will control the weeds listed below when:

Water carrier volumes are of 3 to 10 gallons per acre for ground applications and 3 to 5 gallons per acre for aerial applications are recommended. ~~(See the "Aerial Application" section of this label for approved sites.)~~

NOTE

- ~~The addition of 2 percent dry ammonium sulfate by weight or 17 pounds per 100 gallons of water may increase the performance of this product on annual weeds. The improvement in performance may be apparent where environmental stress is a concern. Refer to the "Mixing, Additives and Application Instructions" section of this label.~~
- Do not tank-mix with soil residual herbicides when using these rates unless otherwise specified.
- For weeds that have been mowed, grazed, or cut, allow regrowth to occur prior to treatment.

- Refer to the "Tank Mixtures" portion of this section for control of additional broadleaf weeds and correct use rates in tank mixture.

(FOLLOWING TABLE WILL BE REPLACED WITH ATTACHMENT "A")

WEED SPECIES	MAXIMUM HEIGHT/LENGTH	RATE PER ACRE**
Barnyardgrass — Echinochloa crus-galli	0 to 4"	10 oz.
Morningglory — Ipomea spp.	2"	
Sicklepod — Cassia obtusifolia		
Bluegrass, annual — Poa annua	6"	
Bluegrass, bulbous — Poa bulbosa		
Brome, downy* — Bromus tectorum		
Oheat — Bromus secalinus		
Chickweed, mouseear — Cerastium vulgatum		
Corn — Zea mays		
Groundsel, common — Senecio vulgaris		
Horseweed/Marestail — Conyza canadensis		
Lambsquarters, common — Chenopodium album		
Mustard, blue — Chorispora tenella		
Mustard, tansy — Descurainia pinnata		

~~Mustard, tumble~~

~~—*Sisymbrium altissimum*~~

~~Mustard, wild~~

~~—*Sinapis arvensis*~~

~~Pennyress, field~~

~~—Fanweed~~

~~—*Thlaspi arvense*~~

~~Rocket, London~~

~~—*Sisymbrium irio*~~

~~Ryegrass, Italian~~

~~—*Lolium multiflorum*~~

~~Shepherdspurse~~

~~—*Capsella bursa-pastoris*~~

~~Spurry, umbrella~~

~~—*Holosteum umbellatum*~~

~~Barley~~

12"

~~—*Hordeum vulgare*~~

~~Buttercup~~

~~—*Ranunculus* spp.~~

~~Cocklebur~~

~~—*Xanthium strumarium*~~

~~Crabgrass~~

~~—*Digitaria* spp.~~

~~Dwarf dandelion~~

~~—*Krigia cespitosa*~~

~~False flax, smallseed~~

~~—*Camelina microcarpa*~~

~~Foxtail~~

~~—*Setaria* spp.~~

~~Foxtail, Carolina~~

~~—*Alopecurus carolinianus*~~

~~Johnson grass, seedling~~

~~—*Sorghum halepense*~~

~~Oats, wild~~

~~—*Avena fatua*~~

~~Panicum, fall~~

~~—*Panicum dichotomiflorum*~~

Panicum, Texas
~~Panicum texanum~~

Pigweed, redroot
~~Amaranthus retroflexus~~

Pigweed, smooth
~~Amaranthus hybridus~~

Rye
~~Secale cereale~~

Sandbur, field
~~Cenchrus spp.~~

Shattercane
~~Sorghum bicolor~~

Stinkgrass
~~Eragrostis cilianensis~~

Witchgrass
~~Panicum capillare~~

Wheat _____ 18"
~~Triticum aestivum~~

Sicklepod _____ 3 to 4" _____ 15 oz
~~Cassia obtusifolia~~

Signalgrass, broadleaf
~~Brachiaria platyphylla~~ _____ 4"

Barnyardgrass _____ 4 to 6"
~~Echinochloa crus-galli~~

Horseweed/Marestail _____ 7 to 12"
~~Conyza canadensis~~

Lambsquarters, common
~~Chenopodium album~~

Teaweed _____ 4" _____ 20 oz.
~~Sida spinosa~~

Rice, red ~~6"~~
~~Oryza sativa~~

Sicklepod ~~5 to 8"~~
~~Cassia obtusifolia~~

Geranium, Carolina ~~12"~~
~~Geranium carolinianum~~

Goosegrass
~~Eleusine indica~~

Pusley, Florida
~~Richardia scabra~~

Spanishneedles
~~Bidens bipinnata~~

* For control in no till systems, use 16 fluid ounces per acre.

WEED SPECIES	RATE** (FLUID OUNCES PER ACRE)					
	10	15	20	25	30	40
	MAX. HEIGHT/LENGTH					
Amaranth, palmer <i>Amaranthus palmeri</i>	12"	18"	20"	•	•	•
Amaranth, spiny <i>Amaranthus spinosus</i>	12"	18"	20"	•	•	•
Barley, little <i>Hordeum pusillum</i>	20"	•	•	•	•	•
Barnyardgrass* <i>Echinochloa crus-galli</i>	3"	5"	8"	10"	12"	20"
Bittercress <i>Cardamine, spp.</i>	12"	20"	•	•	•	•
Bluegrass, annual <i>Poa annua</i>	10"	•	•	•	•	•
Bluets	12"	•	•	•	•	•

<i>Hedyotis longiflora</i>						
Brome, downy <i>Bromus tectorum</i>	6"	20"				
Brome, Japanese <i>Bromus japonicus</i>	6"	20"	•	•	•	•
Buttercup <i>Ranunculus spp.</i>	12"	20"	•	•	•	•
Carpetweed <i>Mollugo verticillata</i>	12"		•	•	•	•
Cheat <i>Bromus secalinus</i>	6"	20"				
Chervil, hairyfruit <i>Chaerophyllum tainturieri</i>	20"		•	•	•	•
Chickweed, common <i>Stellaria media</i>	20"		•	•	•	•
Chickweed, mouseear <i>Cerastium vulgatum</i>	20"		•	•	•	•
Cocklebur <i>Xanthium strumarium</i>	12"	18"	20"	•	•	•
Corn <i>Zea Mays</i>	12"	20"	•	•	•	•
Cornsalad <i>Valerianella, spp.</i>	20"		•	•	•	•
Cotton <i>Gossypium hirsutum</i>	•	2"	4"	•	8"	•
Crabgrass <i>Digitaria, spp.</i>	12"	20"	•	•	•	•
Dock, curly (seedling) <i>Rumex crispus</i>	•	4"	6"	•	•	•
Dwarf dandelion <i>Krigia cespitosa</i>	20"		•	•	•	•
Eclipta <i>Eclipta spp.</i>	4"	8"	12"	•	•	•
Eveningprimrose, cutleaf <i>Oenothera laciniata</i>	•	•	•	•	•	20"
Eveningprimrose, common <i>Oenothera biennis</i>	•	•	6"	•	8"	20"

Falsedandelion, Carolina <i>Pyrrophappus carolinianus</i>	20"	•	•	•	•	•
Fleabane, annual <i>Erigeron annuus</i>	6"	20"	•	•	•	•
Foxtail <i>Setaria spp.</i>	8"	12"	20"	•	•	•
Foxtail, Carolina <i>Alopecurus carolinianus</i>	20"	•	•	•	•	•
Geranium, Carolina <i>Geranium carolinianum</i>	•	•	4"	•	20"	•
Goosegrass <i>Eleusine indica</i>	4"	8"	12"	•	20"	•
Groundcherry, cutleaf <i>Physalis angulata</i>	5"	12"	18"	•	•	•
Henbit <i>Lamium amplexicaule</i>	•	•	6"	•	20"	•
Horseweed, Marestalk <i>Conyza canadensis</i>	•	6"	30"	•	•	•
Johnsongrass, seedling <i>Sorghum halepense</i>	12"	20"	•	•	•	•
Junglerice* <i>Echinochloa colonum</i>	2"	5"	8"	10"	12"	20"
Knotweed <i>Polygonum aviculare</i>	3"	8"	12"	•	20"	•
Ladysthumb <i>Polygonum persicaria</i>	4"	6"	8"	•	12"	20"
Lambsquarters <i>Chenopodium album</i>	6"	8"	12"	•	20"	•
Lettuce, prickly <i>Lactuca serriola</i>	6"	12"	20"	•	•	•
Morningglory, entireleaf <i>Ipomea hederacea</i>	•	3"	6"	•	8"	20"
Morningglory, ivyleaf <i>Ipomea hederacea</i>	•	3"	6"	•	8"	20"
Morningglory, pitted <i>Ipomea lacunosa</i>	•	3"	6"	•	8"	20"

Morningglory, tall <i>Ipomea purpurea</i>	•	3"	6"	•	8"	20"
Mustard, tansy <i>Descurainia pinnata</i>	12"	20"	•	•	•	•
Oats <i>Avena sativa</i>	6"	18"	20"	•	•	•
Panicum, fall <i>Panicum dichotomiflorum</i>	8"	12"	18"	•	20"	•
Panicum, Texas <i>Panicum texanum</i>	4"	8"	18"	•	24"	•
Panicum, browntop <i>Panicum fasciculatum</i>	4"	8"	18"	•	24"	•
Pepperweed, Virginia <i>Lepidium Virginicum</i>	18"	•	•	•	•	•
Pigweed, redroot <i>Amaranthus retroflexus</i>	12"	18"	20"	•	•	•
Pigweed, smooth <i>Amaranthus hybridus</i>	12"	18"	20"	•	•	•
Ragweed, common <i>Ambrosia artemisiifolia</i>	•	6"	8"	•	12"	20"
Ragweed, giant <i>Ambrosia trifida</i>	•	6"	8"	•	12"	•
Ammannia, purple/Redstem <i>Ammannia coccinea</i>	12"	20"	•	•	•	•
Rice, red <i>Oryza sativa</i>	•	•	4"	8"	12"	20"
Rocket, yellow <i>Barbarea vulgaris</i>	•	12"	20"	•	•	•
Rye <i>Secale cereale</i>	12"	17"	60"	•	•	•
Ryegrass, annual <i>Lolium multiflorum</i>	6"	12"	20"	•	•	•
Sesbania, hemp <i>Sesbania exaltata</i>	•	3"	6"	•	8"	20"
Shepherdspurse <i>Capsella bursa-pastoris</i>	20"	•	•	•	•	•
Sicklepod	•	2"	4"	•	6"	12"

<i>Cassia obtusifolia</i>						
Signalgrass, broadleaf* <i>Brachiaria platyphylla</i>	3"	6"	8"	10"	18"	•
Smartweed, Pennsylvania <i>Polygonum pensylvanicum</i>	4"	6"	8"	•	12"	20"
Sorghum, grain (milo) <i>Sorghum bicolor</i>	12"	18"	20"	•	•	•
Spanishneedles <i>Bidens bipinnata</i>	•	•	8"	•	18"	•
Speedwell, corn <i>Veronica arvensis</i>	12"	•	•	•	•	•
Speedwell, purselane <i>Veronica perigrana</i>	12"	•	•	•	•	•
Sprangletop <i>Leptochloa, spp.</i>	6"	12"	20"	•	•	•
Spurge, prostrate <i>Euphorbia humistrata</i>	6"	12"	20"	•	•	•
Spurge, spotted <i>Euphorbia maculata</i>	6"	12"	20"	•	•	•
Teaweed <i>Sida spinosa</i>	1"	2"	4"	6"	8"	20"
Venuslookingglass <i>Triodans perfoliata</i>	20"	•	•	•	•	•
Wheat <i>Triticum aestivum</i>	12"	18"	20"	•	•	•
Witchgrass <i>Panicum capillare</i>	8"	12"	18"	•	20"	•

*For barnyardgrass, broadleaf signalgrass or junglerice, 10 fluid ounces of this product per acre will provide control until the plant has tillered.

** For those rates less than 20 fluid ounces per acre, this product at rates up to 20 fluid ounces per acre may be used where heavy weed densities exist.

~~HIGH-VOLUME BROADCAST APPLICATIONS~~

~~When applied as directed under the conditions described, this product will control the weeds listed below when water carrier volumes are 10 to 40 gallons per acre for ground applications.~~

~~Use 20 ounces of this product per acre if weeds are less than 6 inches tall. If weeds are over 6 inches tall, use 30 ounces of this product per acre. If weeds have been mowed, grazed, or cut, allow adequate time for new growth to recommended stages prior to treatment. These rates will also provide control of weeds listed in the "Low Volume Broadcast Application" section.~~

~~WEED SPECIES~~

Balsamapple	Panicum
Momordica charantia	Panicum spp.
Bassia, fivehook	Ragweed, common
Bassia hyssopifolia	Ambrosia artemisiifolia
Brome	Ragweed, giant
Bromus spp.	Ambrosia trifida
Fiddleneck	Smartweed, Pennsylvania
Amsinckia spp.	Polygonum pennsylvanicum
Flaxleaf Fleabane	Sowthistle, annual
Coryza bonariensis	Sonchus oleraceus
Fleabane	Sunflower
Erigeron spp.	Helianthus annuus
Koehia	Thistle, Russian
Koehia scoparia	Salsola kali
Lettuce, prickly	Velvetleaf
Lactuca serriola	Abutilon theophrasti

~~*Apply with hand held equipment only.~~

~~PERENNIAL WEEDS~~

~~Apply this product as follows to control or destroy most perennial weeds:~~

~~NOTE: If weeds have been mowed or tilled, do not treat until plants have resumed active growth and are at have reached the recommended stages of growth.~~

~~Repeat treatments may be necessary to control weeds regenerating from underground parts or seed. Repeat treatments must be made prior to crop emergence.~~

~~The addition of 2 percent dry ammonium sulfate by weight or 17 pounds per 100 gallons of water may increase the performance of this product on perennial weeds. The improvement in performance may be apparent where environmental stress is a concern. Refer to the~~

~~"Mixing, Additives and Application Instructions"~~ section of this label.

When applied as recommended under the conditions described, this product WILL CONTROL the following PERENNIAL WEEDS:

Alligatorweed*

*Alternanthera
philoxeroides*

Bahiagrass

Paspalum notatum

Bermudagrass

Cynodon dactylon

Bermudagrass, water (knotgrass)

Paspalum distichum

Bindweed, field

Convolvulus arvensis

Bluegrass, Kentucky

Poa spp.

Clover, red

Trifolium pratense

Clover, white

Trifolium repens

Dallisgrass

Paspalum dilatatum

Dandelion

Taraxacum officinale

Dock, curly

Rumex crispus

Dogbane, hemp

Apocynum cannabinum

Fescues

Festuca spp.

Fescue, tall

Festuca arundinacea

Guineagrass

Panicum maximum

Johnsongrass

Sorghum halepense

Milkweed

Asclepias spp.

Muhly, wirestem

Muhlenbergia frondosa

Nutsedge, purple, yellow

Cyperus rotundus

Cyperus esculentus

Orchardgrass

Dactylis glomerata

Redvine*

Brunnichia ovata

Ryegrass, perennial

Lolium perenne

Sweet potato, wild*

Ipomoea pandurata

Thistle, Canada

Cirsium arvense

Timothy

Phleum pratense

Trumpet creeper

Campsis radicans

Vaseygrass

Paspalum urvillei

*Partial Control

Alligatorweed—Apply 2.5 quarts of this product per acre or apply a 1 percent solution with hand-held equipment to provide partial control. Apply when most of the plants are in bloom. Repeat applications will be required to maintain such control.

Bermudagrass—For control, apply 3 quarts of this product per acre and, for partial control, apply 2 quarts per acre. Treat when bermudagrass is actively growing and seedheads are present. Retreatment may be necessary to maintain control. Allow 7 or more days after application before tillage.

Bermudagrass, water (knotgrass)—Apply 30 fluid ounces of this product in 5 to 10 gallons of water per acre. Apply when water bermudagrass is actively growing and 12 to 18 inches in length. Allow 7 or more days before tilling, flushing or flooding the field.

Fall applications only - Apply 20 fluid ounces of this product in 5 to 10 gallons of water per acre. Fallow fields should be tilled

prior to application. Apply prior to frost on water bermudagrass that is actively growing and 12 to 18 inches in length. Allow 7 or more days before tillage.

Bindweed, field—Apply 2.5 to 3 quarts of this product per acre west of the Mississippi River and 2 to 2.5 quarts per acre east of the Mississippi River. Apply when weed is actively growing and is at or beyond full bloom. Do not treat when weed is under drought stress as good soil moisture is necessary for active growth. New leaf development indicates active growth. For best results, apply in late summer or fall. Fall treatments must be applied before a killing frost. Allow 7 or more days after application before tillage.

~~Bluegrass, Kentucky / Orchardgrass Apply 1.25 quarts of this product in 5 to 20 gallons of water per acre when the grasses are actively growing and most plants have reached boot to early seedhead stage of development. Apply to actively growing plants when most have reached 4 to 12 inches in height. For best results, apply in late summer or fall. Allow 7 or more days after application before tillage.~~

Dogbane, hemp—Apply 2.5 quarts of this product per acre. Apply when actively growing and when most weeds have reached the late bud to flower stage of growth. Following crop harvest or mowing, allow weeds to regrow to a mature stage prior to treatment. For best results, apply in late summer or fall. Allow 7 or more days after application before tillage.

Fescue, tall—Apply 2 quarts of this product in ~~10 to 40~~ 3 to 20 gallons of water per acre to actively growing plants when most have reached boot-to-early seedhead stage of development in the spring.

Fall applications only.—Apply 20 fluid ounces of this product plus ~~0.5 to 1~~ percent nonionic surfactant by total spray volume in 3 to 10 gallons of water per acre. Apply to fescue in the fall when actively growing and plants have 6 to 12 inches of new growth. Allow 7 or more days after application before tillage or renovation. A sequential application approximately 14 days later of 10 ounces per acre of this product plus nonionic surfactant will improve long-term control.

~~Guineagrass Apply 2 quarts of this product per acre or use a 1 percent solution with hand-held equipment. Apply to actively growing guineagrass when most has reached at least the 7-leaf stage of growth. Ensure thorough coverage when using hand-held equipment. Allow 7 or more days after application before tillage.~~

Johnsongrass—Apply ~~20 to 64~~ ounces of this product per acre. In annual cropping systems apply ~~20 to 40~~ ounces of this product per acre. Apply 20 ounces of this product in 3 to 10 gallons of water per acre. Use 1.25 quarts of this product when applying ~~15 to 40~~ gallons of water per acre. In noncrop or areas where annual tillage (no-till), is not performed, apply 1.25 to 2 quarts of this product in ~~10 to 40~~ gallons of water per acre. In annual cropping systems

apply 20 to 30 ounces of this product in 3 to 10 gallons of water per acre. In non-crop areas where annual tillage is not performed, apply 40 ounces of this product in 3 to 10 gallons of water per acre. For best results, apply to actively growing plants when most have reached the late boot ~~to head~~ to full flower stages of growth. Use 30 fluid ounces per acre when used prior to these stages and on fallow sugarcane land. Allow 7 or more days after application before tillage. Do not tank-mix with residual herbicides when using the 20 fluid ounces per acre rate.

For burndown of Johnsongrass, apply 10 fluid ounces per acre in 3 to 10 gallons of water per acre before the plants reach a height of 10 inches. For this use, allow at least 3 days after treatment before tillage.

Spot Treatment—Apply a 1 percent solution of this product. Coverage should be uniform and complete.

Milkweed, common—Apply 2.5 quarts of this product per acre. Apply when actively growing and most of the milkweed has reached the late bud to flower stage of growth. Following small grain harvest or mowing, allow milkweed to regrow to a mature stage prior to treatment. Allow 7 or more days after application before tillage.

Nutsedge: purple, yellow—Apply 2 quarts of this product per acre as a broadcast spray, or apply a 1 percent solution to control purple nutsedge, or a 1.5 percent solution to control yellow nutsedge from hand-held equipment to control existing nutsedge plants and immature nutlets attached to treated plants. Treat when plants are in flower or when new nutlets can be found at rhizome tips. Nutlets which have not germinated will not be controlled and may germinate following treatment. Repeat treatments will be required for long-term control. Wait 7 days after treatment before tillage. Tillage will stimulate nutlet germination.

Redvine—For suppression, apply 15 fluid ounces of this product per acre at each of two applications 7 to 14 days apart or a single application of 40 ounces per acre. Apply recommended rates in 5 to 10 gallons of water per acre. Apply to actively growing plants in late September or October, which are at least 18 inches tall and have been growing 45 to 60 days since the last tillage operation. Make applications at least 1 week before a killing frost.

Ryegrass, perennial—Apply 20 fluid ounces of this product per acre in 3 to 10 gallons of water after full head emergence. Applications prior to full head emergence requires 40 ounces per acre.

Sweet Potato, wild—Apply this product as a 1.5 percent solution using hand-held equipment. Apply to actively growing weeds that are at or beyond the bloom stage of growth. Repeat applications will be required. Allow the plant to reach the recommended stage of growth before retreatment. Allow 7 or more days before tillage.

~~Thistle, Canada—Apply 1.25 to 2 quarts of this product per acre. Apply to actively growing thistles when most are at or beyond~~

~~the bud stage of growth. After harvest, mowing or tillage in the late summer or fall, allow at least 4 weeks for initiation of active growth and rosette development prior to the application of this product. Fall treatments must be applied before a killing frost. Allow 3 or more days after application before tillage.~~

~~For suppression of Canada thistle, apply 20 ounces per acre of this product plus 0.5 to 1 percent nonionic surfactant by total spray volume in 3 to 10 gallons of water per acre in the late summer or fall after harvest, mowing or tillage. Allow rosette regrowth to a minimum of 6 inches in diameter before treating. Applications can be made as long as leaves are still green and plants are actively growing at the time of application. Allow 3 or more days after application before tillage.~~

Trumpet creeper--For control, apply 40 fluid ounces of this product per acre in 5 to 10 gallons of water per acre. Apply to actively growing plants in late September or October, which are at least 18 inches tall and have been growing 45 to 60 days since the last tillage operation. Make applications at least 1 week before a killing frost.

Other perennials listed on this label--Apply 2 to 3 quarts of this product per acre. Apply when actively growing and most have reached early head or early bud stage of growth. Allow 7 or more days after application before tillage.

CROPPING SYSTEMS

This product controls annual and perennial weeds listed on this label, prior to the emergence of the crops listed below.

See "General Information" and "Mixing, Additives and Application Instructions" sections of this label for essential product performance information.

Repeat treatments may be necessary to control weeds regenerating from underground parts or seed. Except as otherwise specified on this label, repeat treatments must be made before the crop emerges in accordance with the instructions of this label.

Except as otherwise specified in a crop section of this label, the combined total of all treatments must not exceed 5 quarts per acre of this product per year.

Do not plant subsequent crops other than those on the label for 30 days following application.

~~For other cropping systems, except following spot treatment in forage grasses and legumes, do not harvest or feed treated crop vegetation for 8 weeks after application.~~

~~This product controls annual and perennial weeds listed on this label, prior to the emergence of these crops.~~

CORN (All)*
COTTON*
RICE**

SORGHUM (Milo)*
SOYBEANS*
SUGARCANE
WHEAT

* Spot treatments may also be applied in these crops.

** Do not treat rice fields or levees when fields contain flood water.

Spot Treatment (Only those crops with "*" can be spot treated.)—Applications in growing crops must be made prior to heading of small grains and milo, initial pod set in soybeans, silking of corn, or boll opening on cotton.

For dilution and rates of application using boom or hand-held equipment, see "Mixing, Additives and Application Instructions" and "Weeds Controlled" sections of this label.

Selective Equipment--This product may be applied through shielded applicators or wiper applicators in cotton and soybeans. Wiper applicators may be used in grain sorghum (milo).

See the "Selective Equipment" part of the "Application Equipment and Techniques" section of this label for information on proper use and calibration of this equipment.

Allow at least the following time intervals between application and harvest:

Cotton, Soybeans	7 days
Sorghum (milo)*	40 days

*Do not use roller applicators. Do not feed or graze treated milo fodder. Do not ensile treated vegetation.

■ **MINIMUM TILLAGE SYSTEMS** ■

Tank Mixtures
~~CORN AND SOYBEANS~~

When applied as recommended under the conditions described, these tank mixtures control many emerged weeds, and give preemergence control of many annual weeds when corn or soybeans, rice or cotton will be planted directly into a cover crop, established sod, or in previous crop residues or a stale seedbed.

Refer to specific product labels for crop rotation restrictions and cautionary statements of all products used in these tank mixtures. For mixing instructions, see the "Mixing, Additives and Application Instructions" section of this label.

The addition of dry ammonium sulfate is suggested when tank mixtures are used with the following labeled products and annual grasses or volunteer cereal grains are present. Ammonium sulfate will be necessary for the best control with these tank mixtures when barnyardgrass, broadleaf, signalgrass and red rice are present.

CORN

- ROUNDUP® D-PAK plus LASSO®
- ROUNDUP D-PAK plus LASSO plus ATRAZINE
- ROUNDUP D-PAK plus LARIAT®
- ROUNDUP D-PAK plus BICEP™
- ROUNDUP D-PAK plus LASSO plus BLADEX™
- ROUNDUP D-PAK plus LASSO plus SIMAZINE
- ROUNDUP D-PAK plus ATRAZINE
plus SIMAZINE

For improved burndown, this product may be tank-mixed with 2,4-D. Applications of 2,4-D must be made at least 7 days prior to planting corn.

SOYBEANS

- ROUNDUP® D-PAK plus LASSO®
- ROUNDUP D-PAK plus LASSO plus LINURON
- ROUNDUP D-PAK plus LASSO plus LEXONE™
- ROUNDUP D-PAK plus LASSO plus SENCOR™
- ROUNDUP D-PAK plus DUAL™
- ROUNDUP D-PAK plus PROWL™
- ROUNDUP D-PAK plus SQUADRON™
- ROUNDUP D-PAK plus COMMAND™
- ROUNDUP D-PAK plus CANOPY™
- ROUNDUP D-PAK plus SCEPTER™

For improved burndown, this product may be tank-mixed with 2,4-DB or 2,4-D. Use 2,4-DB at a rate of 1/16 to 1/8 pound per acre on an acid equivalent basis. (For Butyrac™ 200, use 4 to 8 fluid ounces

per acre.) Applications of 2,4-D must be made at least 30 days prior to planting soybeans.

COTTON

■ **ROUNDUP D-PAK plus COTORAN™** ■

RICE

■ **ROUNDUP D-PAK plus BOLERO™** ■

Apply these tank mixtures in 10 to 40 gallons of water per acre after planting or during planting in such manner that the planter does not disturb the treated soil. Do not apply these mixtures after crop emergence.

REDUCED CONTROL MAY RESULT IF THIS PRODUCT IS USED IN TANK MIXTURES CONTAINING FLUID FERTILIZERS.

CONTROL OF EMERGED WEEDS

~~Annual Weeds~~ Apply to actively growing annual grasses and broadleaf weeds up to 2 inches tall. Use 10 ounces of this product per acre in these tank mixtures if weeds are less than 6 inches tall in the early spring. Use 20 ounces per acre in these mixtures for barnyardgrass and broadleaf signalgrass less than 2 inches tall, and all other grasses 2 to 6 inches tall. If weeds are over 6 inches tall, apply 30 ounces of this product per acre. For emerged annual weeds controlled, see the 'Weeds Controlled' section of this label.

Annual Weeds--For barnyardgrass, broadleaf signalgrass and red rice, use 20 fluid ounces per acre of this product when weeds are less than 2 inches tall, and 30 fluid ounces per acre when weeds are up to 6 inches tall. For other labeled grass weeds, use 10 fluid ounces per acre when weeds are less than 2 inches tall, and 20 fluid ounces per acre when weeds are up to 6 inches tall.

Perennial Weeds--At normal application rates in minimum tillage systems, perennial weeds may not be at the proper stage of growth for control. See the 'General Information' section of this label for the proper stage of growth for perennial weeds.

Use of 1.25 to 2.5 quarts of Roundup D-PAK herbicide this product per acre in these tank mixtures, under these conditions provides top kill and reduces competition from many emerged perennial grass and broadleaf weeds. For emerged perennial weeds controlled, see the 'Weeds Controlled' section of this label.

To obtain the desired stage of growth, it may be necessary to apply Roundup D-PAK this product alone in the late summer or fall and then follow with a label-approved, seedling weed control program at planting.

NOTE: When using these tank mixtures, do not exceed 2.5 quarts of Roundup-D-PAK this product herbicide per acre.

~~USE OF THESE TANK MIXTURES FOR BERMUDAGRASS OR JOHNSONGRASS CONTROL IN MINIMUM TILLAGE SYSTEMS IS NOT RECOMMENDED. For bermudagrass control, follow the instructions under "Control of Perennial Weeds" section of this label and then use a label approved, seedling weed control program in a minimum tillage or conventional tillage system. For Johnsongrass control, follow the instructions under "Control of Perennial Weeds" section of the label, and then use a label approved seedling weed control program with conventional tillage.~~

Read and carefully observe the label claims, cautionary statements, rates and all other information on the labels of all products to be used in tank mixtures with this product. Use according to the most restrictive label directions for each product in the mixture.

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*Butyrac is a trademark of Rhone-Poulenc.

SUGARCANE

~~When applied as directed for "Cropping Systems", under the conditions described, this product controls those emerged annual and perennial weeds listed on this label growing This product may be used in or around sugarcane or in fields to be planted to sugarcane. This product will also control undesirable sugarcane.~~

NOTE: Where repeat treatments are necessary, do not exceed a total of 6.7 quarts of this product per acre per year. Do not apply to vegetation in or around ditches, canals or ponds containing water to be used for irrigation.

Broadcast Treatment—Apply this product in ~~10 to 40~~ 3 to 20 gallons of water per acre on emerged weeds growing in fields to be planted to sugarcane.

For specific rates of application and instructions for control of various annual and perennial weeds, see the "Weeds Controlled" section of this label.

For removal of last stubble or ratoon cane, apply 2.5 to 3 quarts of this product in ~~10 to 40~~ 3 to 20 gallons of water per acre to new growth having at least 7 or more new leaves. Allow 7 or more days after application before tillage.

Spot Treatment in or Around Sugarcane Fields—For dilution and rates of application using hand-held equipment, see ~~"Mixing, Additives and Application Instructions"~~ and ~~"Weeds Controlled"~~ sections "Application Equipment and Techniques" section of this label.

For control of volunteer or diseased sugarcane, make a 1 percent solution of this product in water and spray to wet the foliage of vegetation to be controlled.

NOTE: When spraying volunteer or diseased sugarcane, the plants should have at least 7 new leaves.

Avoid spray contact with healthy cane plants since severe damage or destruction may result.

Do not feed or graze treated sugarcane forage following application.

PREHARVEST APPLICATIONS

COTTON

When applied as directed under the conditions described, this product controls annual and perennial weeds listed on this label prior to the harvest of COTTON.

Weed Control—For specific rates of application and instructions for control of various annual and perennial weeds, see the "Weeds Controlled" section of this label.

To control Johnsongrass, apply 20 fluid ounces of this product plus ~~0.5 to 1 percent nonionic surfactant by total spray volume~~ in ~~10~~ 3 to 20 gallons of water per acre. Ensure complete coverage.

~~**Broadcast Applications** This product may be applied using either aerial or ground spray equipment. For ground applications with broadcast equipment, apply this product in 10 to 20 gallons of water per acre. For aerial applications, apply this product in 3 to 15 gallons of water per acre.~~

When applied as recommended under the conditions described, this product may be tank-mixed with Def or Folex when used for weed control. For application guidelines, precautions, and defoliant rates, and spray volumes refer to the Def[™], and Folex[™] labels.

Timing of Application—Apply this product or these tank mixtures for preharvest weed control after 60 percent of the cotton bolls have opened.

NOTE: DO NOT APPLY TO CROPS GROWN FOR SEED. Allow a minimum of 7 days between application and harvest.

Do not feed or graze treated cottonseed forage or hay following preharvest applications.

*Def is a trademark of Mobay Chemical Corporation.

*Folex is a trademark of Rhone-Poulenc, Inc.

POSTHARVEST APPLICATIONS

This product will provide control of existing weeds following harvest. Weeds should be allowed to regrow after damage incurred during harvest operations, and to recover from environmental stress before application of this product. ~~Weeds should be treated prior to the heading stage of annual grasses and before broadleaf weeds exceed 24 inches in height. Nonionic surfactant should be added at 0.5 to 1 percent by total spray volume. Use of ammonium sulfate may improve performance under conditions of environmental stress.~~ This is the optimum time for the best control of many perennial species, providing regrowth after harvest is adequate. Applications may be made up until 2 days before a killing frost or as long as most weed foliage is green

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(DPAK91-1)

37

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38

(1/3/91)