

PM 25 524-436  
United States Environmental Protection Agency  
Washington, D.C. 20460

Page 1718  
File

OCT 13 1993

Office of  
Prevention, Pesticides and  
Toxic Substances

Dr Russell P Schneider  
MONSANTO CO  
AGENT FOR: MONSANTO AGRICULTURAL CO  
700 14TH ST, N.W. SUITE 1100  
WASHINGTON DC 20005

Subject: Label Amendment Submission of 06/14/93  
in Compliance with WPS Labeling Requirements  
EPA Reg No. 524-436  
ROUNDUP DRY PAK HERBICIDE WATER SOLUBLE GRANULE

Dear Registrant:

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

Based on your certification, the Agency has accepted only those changes to your labeling which are necessary to comply with PR Notices 93-7 and 93-11, which reflect the WPS labeling requirements of 40 CFR part 156, subpart K. Any other labeling changes submitted in connection with this amendment application and not directly related to compliance with PR Notice 93-7 or 93-11 have neither been reviewed nor accepted by the Agency. If you wish to make any such changes, you must submit a separate amendment application proposing them. If your product registration is currently suspended, acceptance of this labeling amendment does not affect the suspension in any way.

A copy of your proposed labeling stamped "Accepted with comments" is attached. Make any required changes described in the attached and send three copies of final labeling as soon as it is available to:

2 9 18

Document Processing Desk (FIN-LABEL)  
Office of Pesticide Programs (H-7504C)  
U.S. Environmental Protection Agency  
401 M Street SW  
Washington, DC 20460-0001

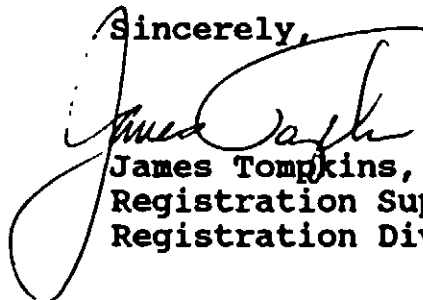
Hand or courier deliveries of final labels may be made to:

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

Please correct the typographical errors circled on the draft before printing final labeling.

In your final labeling the "Agricultural Use Requirements" text" must be contained in a clearly separate box. This box may be set apart by a line, by another graphical device, by a different color background, or in any other way that clearly distinguishes it from surrounding text.

Sincerely,



James Tompkins, Deputy Chief  
Registration Support Branch  
Registration Division (H7505W)

MONSANTO CO  
ROUNDUP DRY PAK HERBICIDE WATER SOLUBLE GRANULE  
524-436 06/14/93  
Original Submission

There is a typographical error(s) in the Agricultural Use Requirements box.  
There is a typographical error(s) in the User Safety Recommendations section.

4 7 18

**Roundup® Drypak Herbicide**

**EPA Reg. No. 524-436**

**Labeling to comply with Worker Protection Standard**

ACCEPTED  
with COMMENTS  
in EPA Letter Dated

OCT 13 1993

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

524-436

**Monsanto Company**  
**1993**

**ROUNDUP® DRY PAK****Herbicide by Monsanto**

A non-selective postemergent herbicide for weed control on commercial, industrial and residential sites.

- Each 1 ounce packet makes 1 gallon of spray solution
- Suitable for use in pump-up, backpack and similar sprayers
- Controls or partially controls labeled broadleaf and grass weeds and woody brush and trees, roots and all

**Complete Directions for Use**

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

®Roundup is a registered trademark of Monsanto Company.

EPA Reg. No. 524-436

---

1992-2

A-000.01/53

---

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.

**PRECAUTIONARY STATEMENTS**

---

Hazards to  
Humans and Domestic Animals

---

Keep out of reach of children.

**CAUTION!**

**BEST AVAILABLE COPY**

**HARMFUL IF SWALLOWED OR INHALED.  
MAY CAUSE EYE IRRITATION.**

**Avoid contact with skin, eyes or clothing.  
Avoid breathing dust.  
~~Wash thoroughly with soap and water after handling.~~**

[REDACTED]

[REDACTED]

**FIRST AID: IF IN EYES, immediately flush with plenty of water. Get medical attention.**

**IF ON SKIN, immediately flush with plenty of water. Remove material from skin and clothing.**

**IF INHALED, remove individual to fresh air. Seek medical attention if breathing difficulty develops.**

**IF SWALLOWED, remove visible particles from mouth and rinse mouth thoroughly with water. Drink water to dilute. Get medical attention. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.**

**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 to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.**

**Physical or Chemical Hazards**

Spray solutions of this product should be mixed, stored and applied using only stainless steel, aluminum, fiberglass, plastic or 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 monoammonium salt.....93.96%

INERT INGREDIENTS:.....6.04%  
100.00%

\* Equivalent to 85% 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.

[REDACTED]

[REDACTED]

[REDACTED]

**BEST AVAILABLE COPY**

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

**Storage and Disposal**

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

**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 destroyed. Do not reuse container.

Completely empty packet into application equipment. Dispose of packet in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke. Dispose of box in same manner.

**General Information**

This product, a water soluble granule, mixes readily with water to be applied as a foliar spray for the control of most herbaceous and woody plants. It may be applied through most standard pumpup, backpack or similar sprayers after dilution and thorough mixing with water in accordance with label instructions.

**BEST AVAILABLE COPY**



This product moves through the plant from the point of foliar 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 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.

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.

This product does not provide residual weed control. For extended weed control, either reapply this product when weeds reemerge, or use a tank mixture of this product with a residual herbicide (See the "Tank Mixtures" section of this label), or apply an approved residual herbicide in a separate application. 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.

This product is recommended for commercial, industrial and residential weed control in areas such as airports, golf courses, highways and roadsides, industrial plant sites, institutional sites, municipalities, lawns, turfgrass renovation, around ornamental plantings and trees, dry ditchbanks, dry canals, lumberyards, nurseries, greenhouses, shadehouses, parking areas, parks, playgrounds, petroleum tank farms, farmsteads, fencerows, pipeline, power and telephone and utility rights-of-way, railroads, schools, storage areas, Christmas tree plantations, woodland areas and similar sites.

This product controls many weeds around buildings, signposts, trees, fences, sidewalks, driveways and patios; in vacant lots, storage and recreational areas; and prior to planting turfgrasses, shrubs, trees and flower beds.

~~Keep people and pets off treated areas until spray solution has dried.~~

DO NOT APPLY THROUGH ANY TYPE OF IRRIGATION SYSTEM.

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.**

**THIS PRODUCT CAN INJURE OR DESTROY ALL VEGETATION CONTACTED. AVOID SPRAY CONTACT WITH THE FOLIAGE OF DESIRABLE TURF, ORNAMENTALS, SHRUBS OR TREES. DO NOT SPRAY GREEN BARK OR EXPOSED NONWOODY ROOTS OF DESIRABLE TREES AND SHRUBS. IF SPRAY CONTACTS THESE PARTS OF DESIRABLE PLANTS, THEY SHOULD BE RINSED IMMEDIATELY WITH WATER.**

Do not allow the herbicide solution to mist, drip, drift, or splash onto desirable vegetation since this product 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 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 or crops, or other unintended consequences. Keep container closed to prevent spills and contamination.**

---

**Mixing and Spraying**

---

**Add 1 packet of this product to 1 gallon of clean water:**

- Step 1: Add the contents of 1 packet per gallon of water to the spray tank.**
- Step 2: Fill the spray tank with the desired amount of water.**
- Step 3: Thoroughly agitate the mixture until all of the product has dissolved and is well mixed.**

**NOTE: IF USING A LABELED TANK MIXTURE, ADD THE TANK MIX PRODUCT TO THE TANK FIRST ACCORDING TO LABELED DIRECTIONS, THEN ADD THIS**

**PRODUCT.**

This product is premeasured to give the correct concentration for general weed control.

Agriculturally approved colorants or marking dyes may be added to this product. Use colorants or dyes according to the manufacturer's recommendations.

Nonionic surfactants may be used with this product. Use according to the surfactant manufacturer's directions.

Applications should be made on a spray-to-wet basis. Spray coverage should be uniform and complete. Do not spray to the point of runoff.

**Cleaning of Equipment**

Triple-rinse sprayer and flush all sprayer components with water to remove residues of this product. After thorough cleaning, equipment may be used to apply other products.

---

**Tank Mixtures**

---

When applied as a tank mixture, this product provides control of emerged weeds listed in this label and preemergence control of the weeds listed in the individual product labels.

**PENNANT™**

**RONSTAR™ 50WP**

**SURFLAN™ AS**

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

<sup>™</sup>Pennantis is a trademark of Ciba-Geigy Corporation.

<sup>™</sup>Ronstar is a trademark of Rhone-Poulenc, Inc.

<sup>™</sup>Surflan is a trademark of Elanco Products Company.

---

**Trim and Edge Treatments**

This product can be used to control weeds for trimming and edging around many structures, including buildings, sidewalks, roads, patios, fences, and gravel and bark mulch beds. It can also be

used to remove weeds around obstacles to mowing such as park benches, golf course markers, trees, light poles, sign posts, fence posts, etc.

### Site Preparation

This product does not provide residual weed control.

After an area has been treated with this product, any ornamental species, bedding plant, turfgrass, and tree species (including Christmas trees) can be planted.

Delay mowing, clipping or tilling treated areas for 7 days to allow time for the product to move within the treated vegetation for most effective results. Where the treated vegetation will not be disturbed, planting may be done 1 day following treatment.

### Post-Directed Applications

This product can be used for spot-spraying weeds found in shrub beds, ornamental plantings, ground covers, nurseries, Christmas tree plantings, forestry and similar sites.

Avoid spray contact with desirable plants. To avoid injury on desirable plants, prevent spray or drift contact with foliage, stems, bark or exposed nonwoody roots. Do not spray into, or over the top of, desirable plants, trees or shrubs.

### Turfgrass Renovation

Seedbed preparation and seeding, sodding or sprigging of turfgrass species may be done 7 days following treatment of weeds or undesirable turf grasses. Where the treated vegetation will not be disturbed by seedbed preparation (tillage, aeration, power raking, etc.), seeding may be done 1 day following treatment. Ensure adequate seed/soil contact and follow a thorough watering schedule.

### Greenhouse/Shadehouse

This product may be used to control weeds listed on this label which are growing in greenhouses and shadehouses. Desirable vegetation must not be present during application and air circulation fans must be turned off.

### WEEDS CONTROLLED

#### Annual Weeds

Apply to actively growing annual grass and broadleaf weeds.

Allow at least 3 days after application before disturbing treated vegetation. After this period, the weeds may be mowed, tilled or burned.

When applied as directed under the conditions described, this product will control the following annual weeds :

Balsamapple  
 Barley: little, wild  
 Barnyardgrass  
 Bassia, fivehook  
 Bedstraw, catchweed  
 Bluegrass, annual  
 Bluegrass, bulbous  
 Bromes  
 Buttercup  
 Cheat  
 Chervil  
 Chickweed: jagged, mouseear  
 Clovers  
 Cocklebur  
 Crabgrass  
 Dwarfdandelion  
 Falseflax, smallseed  
 Fiddleneck  
 Flaxleaf fleabane  
 Fleabane  
 Foxtail  
 Foxtail, Carolina  
 Geranium, Carolina  
 Goosegrass  
 Groundsel, common  
 Henbit  
 Horseweed/Marestail  
 Kochia  
 Lambsquarters, common  
 Lettuce, prickly  
 Morningglory  
 Mustards  
 Oats  
 Panicum  
 Pennycress, field  
 Pigweeds  
 Ragweed, common  
 Ragweed, giant  
 Rocket, London  
 Rye  
 Ryegrass, Italian  
 Sandbur, field  
 Shattercane

Shepherdspurse  
 Signalgrass, broadleaf  
 Smartweed, Pennsylvania  
 Sowthistle, annual  
 Spanishneedles  
 Speedwell, corn  
 Stinkgrass  
 Sunflower  
 Thistle, Russian  
 Spurry, umbrella  
 Velvetleaf  
 Wheat  
 Witchgrass

#### Perennial Weeds

Apply to actively growing perennial weeds.

Allow at least 7 days after application before disturbing treated vegetation. After this period, the weeds may be mowed, tilled or burned.

Repeat treatments may be necessary to control weeds regenerating from underground parts or seeds.

When applied as directed under the conditions described, this product will control the following perennial weeds:

Alfalfa  
 Alligatorweed  
 Artichoke, Jerusalem  
 Bahiagrass  
 Bermudagrass  
 Bindweed, field  
 Bluegrass, Kentucky  
 Blueweed, Texas  
 Brackenfern  
 Bromegrass, smooth  
 Broomsedge  
 Canarygrass, reed  
 Cattail  
 Clovers  
 Cogongrass  
 Cutgrass, giant  
 Dallisgrass  
 Dandelion  
 Dock, curly  
 Dogbane, hemp  
 Fescues  
 Guineagrass  
 Horsenettle

- Horseradish
- Johnsongrass
- Kikuyugrass
- Knapweed
- Lantana
- Locsestrife, purple
- Lotus, American
- Maidencane
- Milkweed
- Muhly, wirestem
- Mullein, common
- Napierglass
- Nightshade, silverleaf
- Nutsedge: purple, yellow
- Orchardgrass
- Pampasgrass
- Paragrass
- Phragmites
- Quackgrass
- Reed, giant
- Ryegrass, perennial
- Smartweed, swamp
- Sweet Potato, wild
- Thistle, Canada
- Timothy
- Torpedograss
- Tules, common
- Vaseygrass
- Waterprimrose
- Wheatgrass, western

**Woody Brush and Trees**

When applied as recommended under the conditions described, this product CONTROLS or PARTIALLY CONTROLS the following woody brush, plants and trees:

- Alder
- Ash
- Aspen, quaking
- Bearmat (Bearclover)
- Birch
- Blackberry
- Broom: French, scotch
- Buckwheat, California\*
- Cascara\*
- Catsclaw\*
- Ceanothus\*
- Chamise
- Cherry: bitter, black, pin
- Coyote brush
- Creeper, Virginia\*

- Dewberry
- Elderberry
- Elm\*
- Eucalyptus, bluegum
- Hasardia\*
- Hawthorn
- Hazel
- Honeysuckle
- Kudzu
- Locust, black\*
- Madrone
- Manzanita
- Maple: red, sugar, vine
- Monkey Flower\*
- Oak
- Persimmon\*
- Poison ivy
- Poison oak
- Poplar, yellow\*
- Raspberry
- Rose, multiflora
- Russian-olive\*\*
- Sage, black
- Sagebrush, California
- Salmonberry
- Saltbush, Sea myrtle
- Sassafras
- Sourwood
- Sumac
- Sweetgum
- Swordfern\*
- Tallowtree, Chinese
- Tan oak
- Thimbleberry
- Tobacco, tree\*
- Trumpet creeper
- Waxmyrtle, southern
- Willow

\* Partial control

\*\* This product is not registered in California for use on Russian-olive.

Apply this product when plants are actively growing and, unless otherwise directed, after full leaf expansion. Best results are obtained when application is made in late summer or fall after fruit formation.

In arid areas, best results are obtained when application is made in the spring to early summer when brush species are at a high moisture content.



Symptoms may not appear prior to frost or senescence with fall treatments.

Allow 7 or more days after application before tillage, mowing or removal. Repeat treatments may be necessary to control plants regenerating from underground parts or seed. Applications to undesirable deciduous species containing some autumn color development is acceptable provided no major leaf drop has occurred. Reduced performance may result if fall treatments are made following a killing frost.

**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.

18 9 18

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.

Product protected by  
U.S. Pat. No 4,405,531  
Other patents pending.  
No license granted under any  
non-U.S. patent(s).

EPA Reg. No. 524-436

A-000.01/53

---

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

---

©MONSANTO COMPANY 1992  
MONSANTO COMPANY  
AGRICULTURAL PRODUCTS  
ST. LOUIS, MISSOURI 63167