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# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OFFICE OF PREVENTION, PESTICIDES AND TOXIC SUBSTANCES

SEP 14 1998

Becky Rhodes Zeneca Agricultural Products P.O. Box 15458 Wilmington, DE 19850-5458

Subject:

TOUCHDOWN Herbicide

Registration Number 10182-324

Your submissions dated August 13 and 31, 1998

Dear Ms. Rhodes:

The label amendment referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable, provided that you adhere to the following requirements:

- 1. A developmental neurotoxicity study in rats (guideline no. 83-6) must be submitted within 3 years of the date of this letter. At one and two years after the date of this letter, a brief report on the progress of the study, which reports the phases of the project have been completed and informs the Agency of any delays encountered must be submitted.
- 2. You must make the following change to your proposed label:

In the GENERAL INFORMATION section (p.7), in the bullet beginning "nonbearing groves...", change "up to 1 year of harvest" to "up to 1 year prior to harvest".

3. Submit one copy of your final printed labeling before you release the product for shipment.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product bearing the amended labeling constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.



If you have any questions about this letter, please contact Tobi Colvin-Snyder of my staff at 703-305-7801.

Sincerely,

Jim Tompkins Product Manager (25)

Herbicide Branch

Registration Division (7505C)

#### TOUCHDOWN® Herbicide

#### NONSELECTIVE FOLIAR SYSTEMIC HERBICIDE FOR WEED CONTROL

#### COMPLETE DIRECTIONS FOR USE

# CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product should be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of ZENECA or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold ZENECA and Seller harmless for any claims relating to such factors.

ZENECA warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or ZENECA, and Buyer and User assume the risk of any such use. ZENECA MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

In no event shall ZENECA or Seller be liable for any incidental, consequential or special damages resulting from the use or handling of this product. THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF ZENECA AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF ZENECA OR SELLER, THE REPLACEMENT OF THE PRODUCT.

ZENECA and Seller offer this product, and Buyer and User accept it, subject to the foregoing conditions of sale and limitations of warranty and of liability, which may not be modified except by written agreement signed by a duly authorized representative of ZENECA.

Made in U.S.A.
ZENECA Ag Products
ZENECA Inc.
Wilmington, DE 19850-5458

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# KEEP OUT OF REACH OF CHILDREN

#### CAUTION

ACTIVE INGREDIENT:	
Sulfonium, trimethyl-salt with N-(phosphonomethyl)glycine (1	l:1)*
INERT INGREDIENTS:	<u>42.4%</u>
Total	ACCEPTED . 100.0%
*Sulfosate	In EPA Letter Dated
Contains 6 pounds active ingredient per gallon.	SEP 14 1998
EPA Reg. No. 10182-324	Under the Federal Insecticide, Fundicide, and Researcide Act as amended, for the pesticide registered under EPA Reg. No. [0]82-321

#### STATEMENT OF PRACTICAL TREATMENT

If a known exposure occurs or is suspected, immediately initiate the recommended procedures below. If further treatment is required, contact a POISON CONTROL CENTER, a physician, or the nearest hospital.

IF-SWALLOWED: Immediately give several glasses of water and induce vaniting by gagging the victim with a finger placed on the back of the victim's tangue. Give fluids until vanitus is clear. Do not induce vaniting or give anything by mouth if victim is unconscious or convulsing:

IF ON SKIN: -Flush with plenty of water for at least 15 minutes. Get medical attention if skin imitation occurs.--

IF IN EYES: Hold eyelids apart and flush eyes with large amounts of running water for at least 15 minutes. Get medical attention if irritation persists.

IF INHALED: Remove to fresh air. Seek medical attention if respiratory in attention occurs or if breathing becomes difficult.

IF SWALLOWED: Call a physician or Polson Control Center. Drink 1 or 2 glasses of water and induce yomiting by touching back of throat with finger. If person is unconscious; do not give anything by mouth and do not induce yomiting.

IF ON SKIN: Wash with plenty of soup and water. Get medical attention of mitation persists.

IF IN EYES: Flush eyes with plenty of water. Call a physician if imitation persists.

FOR 24-HOUR EMERGENCY MEDICAL ASSISTANCE, CALL 1-800-F-A-S-T-M-E-D (327-8633).

FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident call CHEMTREC 1-800-424-9300.



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# . PRECAUTIONARY STATEMENTS

#### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

#### CAUTION

Harmful if swallowed, absorbed through the skin, or inhaled. Prolonged contact may cause skin initiation. May cause allergic skin reactions. Avoid contact with skin, eyes, or clothing. Avoid breathing spray mist.

Harmful if swallowed or absorbed through skin. Causes moderate eye imitation. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling.

#### PERSONAL PROTECTIVE EQUIPMENT

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants.
- Waterproof gloves.
- Shoes plus socks.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

When handlers use closed systems, or enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

#### **User Safety Recommendations**

#### Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

#### **ENVIRONMENTAL HAZARDS**

Keep out of lakes, ponds and streams. 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.

In case of spill, ISOLATE the spill. Absorb spill with inert absorbent material such as clay or Fuller's earth. Sweep up used absorbent and place in an appropriate chemical waste container. Flush spill area with water. Observe all local, State and Federal laws and regulations regarding disposal, spill, cleanup, removal or discharge.

#### OTHER PRECAUTIONS

Caution must be taken when applying TOUCHDOWN nonselective foliar systemic herbicide to avoid drift or contact with nontarget plant species. Such contact may result in plant injury.

Stainless steel, plastic-lined steel, plastic or fiberglass containers are acceptable for mixing and storing TOUCHDOWN. TOUCHDOWN should not be mixed or stored in galvanized steel or unlined steel containers. TOUCHDOWN is not compatible with carbon steel and neoprene or butyl rubber.

#### **DIRECTIONS FOR USE**

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

- Apply this product only as specified on the label.
- Do not apply this product through any type of irrigation system.
- Do not exceed a total of 51/2 pints of TOUCHDOWN per acre per year.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

#### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls.
- Waterproof gloves.
- Shoes plus socks.



#### STORAGE AND DISPOSAL

PROHIBITIONS: Do not contaminate water, food, or feed by storage or disposal.

STORAGE: Keep container tightly closed when not in use.

PESTICIDE DISPOSAL: Rinse spray equipment. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

#### **CONTAINER DISPOSAL:**

Plastic - Triple rinse (or equivalent). Offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

#### FOR RECYCLABLE/REFILLABLE CONTAINERS

**CONTAINER DISPOSAL:** Reseal container and offer for reconditioning, or triple rinse (or equivalent) and offer for recycling or reconditioning, or clean in accordance with manufacturer's instructions.

CONTAINER PRECAUTIONS: Before refilling, inspect thoroughly for damage such as cracks, punctures, bulges, dents, abrasions, and damaged or worn threads on closure devices.

After filling and before transporting, check for leaks.

Do not refill or transport damaged or leaking container.

CONTAINER IS NOT SAFE FOR FOOD, FEED, OR DRINKING WATER!

#### **GENERAL INFORMATION**

TOUCHDOWN is a nonselective foliar systemic herbicide used to control a broad spectrum of emerged grass and broadleaf weeds, both annual and perennial, in:

- conservation compliance:
- chemical fallow-ecofallow systems;
- · com:
- soybeans;
- bearing orange, grapefruit, lemon, lime, citron, kumquat, tangelo, and tangerine;
- any variety of bearing table, wine or raisin grapes:
- bearing almond, beechnut, Brazil nut, butternut, cashew, chestnut, chinquapin, filbert, hickory nut, macadamia nut, pecan, and walnut groves;
- bearing apricot, cherry, nectarine, peach, plum, plumcot, and prune;
- nonbearing groves, orchards, or vineyards up to 1 year of harvest; and
- certain noncrop areas around the farm

TOUCHDOWN is formulated as a liquid concentrate which contains 6 pounds active ingredient per gallon.





Rainfall or irrigation within 4 hours after application may reduce effectiveness. Heavy rainfall or irrigation within 2 hours may require retreatment.

#### **APPLICATION DIRECTIONS**

See CHEMICAL FALLOW-ECOFALLOW SYSTEMS Section for Use Directions specific for this use.

#### Timing

TOUCHDOWN should be applied to actively growing emerged weeds. Annual weeds of 6 inches or less in height are typically the easiest to control. Generally, perennial weeds should be treated at the flowering or seedhead stage.

When annual weeds have been mowed or grazed, wait for 3-4 inches of new growth to appear prior to application. When perennial weeds have been mowed or grazed, allow new growth to reach recommended stage prior to application.

#### Rates

Follow recommended rates for TOUCHDOWN listed in the WEEDS CONTROLLED section. Use the higher label rates when weeds are dense or large. Use higher application volumes and pressures when weed vegetation is dense.

# Tankmixes with Residual Herbicides

Refer to crop sections for recommended tankmixes. It is recommended that the compatibility of any tankmix combination be tested on a small scale such as a jar test before actual tank mixing. Tankmixes of TOUCHDOWN with other pesticides, fertilizers, or any other additives except as specified on this label or other approved ZENECA supplemental labeling may result in tankmix incompatibility or unsatisfactory performance.

For Control of Annual Weeds with a Tankmix: Apply TOUCHDOWN at 1½ pints for the control of annual weeds that are less than 12 inches tall and actively growing. When annual weeds are taller than 12 inches or under stress, use 2 pints of TOUCHDOWN herbicide.

For Control of Perennial Weeds with a Tankmix: Apply TOUCHDOWN at 2 to 5½ pints for the control or suppression of perennial weeds. Refer to the WEEDS CONTROLLED section for application rates and timing for specific perennial weeds. Perennial weeds may require multiple applications for control. If multiple applications are required, then no more than 5½ pints of TOUCHDOWN should be applied per year.

Add an agriculturally approved nonionic surfactant/wetting agent when tank mixing TOUCHDOWN with residual herbicides. See the SPRAY ADDITIVES section of this label for recommendations.

In general, TOUCHDOWN, should be tank mixed as follows:

- 1. Fill spray tank 1/2 full with clean water.
- 2. Begin tank agitation and continue throughout mixing and spraying.
- 3. Add dry formulations (WP, DF, etc.) to tank.
- 4. Add liquid formulations (SC, EC, L, etc.) to tank.
- 5. Add TOUCHDOWN and nonionic surfactant/wetting agent to tank.
- 6. Fill remainder of spray tank.





Always refer to labels of other pesticide products for mixing directions and precautions which may differ from those outlined here. Use in accordance with the most restrictive of label limitations and precautions. No label dosage rates should be exceeded. This product cannot be mixed with any product containing a label prohibition against such mixing.

#### SPRAY ADDITIVES

# Surfactants/Wetting Agents

A nonionic surfactant or wetting agent (approved for use on growing crops) IS REQUIRED with TOUCHDOWN to improve coverage of weed foliage. All nonionic surfactants or wetting agents should contain at least 50% active ingredient unless otherwise indicated. (See Chemical Fallow-Ecofallow section for spray additive information specific for this use). The concentration of active ingredient in a particular surfactant/wetting agent will determine how much should be added to the tank. Refer to table below for specific recommendations:

Surfactant/Wetting	Rate of	Rate of Surfactant/Wetting
Agent	Surfactant/Wetting Agent	Agent
% Active Ingredient	Per 1 Gallon of Water	Per 100 Gallons of Water
75% or greater	3/8 - 3/4 fl oz	1 - 2 quarts*
50-74%	3/4 - 1-1/2 fl oz	2 - 4 quarts
Less than 50%	DO NOT USE	DO NOT USE

<sup>\*2</sup> quarts = 0.5% V/V

#### Ammonium Sulfate (Not for use in California)

Control of annual and perennial weeds with TOUCHDOWN may be improved by adding dry ammonium sulfate 1 - 2% by weight or 8.5 - 17 pounds per 100 gallons water in addition to nonionic surfactant/wetting agent. Use ammonium sulfate in conservation compliance programs, in chemical fallow- ecofallow systems, in noncrop areas, in nonbearing crops, in citrus, and for preplant/preemergence applications. DO NOT reduce use rates of TOUCHDOWN or nonionic surfactant/wetting agent when using ammonium sulfate.

# **APPLICATION EQUIPMENT & TECHNIQUES**

# **Broadcast Applications**

#### Ground

Apply TOUCHDOWN to actively growing weeds at the broadcast rates indicated in the WEEDS CONTROLLED section. Applications should be made in 10 to 30 gallons of water per acre with conventional spray equipment, or in 3 to 10 gallons per acre with low volume equipment and in chemical fallow-ecofallow systems. Increase volumes if weed foliage is dense.

Flat-fan nozzles will result in the most effective application of TOUCHDOWN. Flat fans should be used at 30 to 50 psi. Flood nozzles may result in reduced weed control due to inadequate coverage.

#### <u>Air</u>

Apply TOUCHDOWN plus surfactant/wetting agent to actively growing weeds by air equipment in a minimum of 3 gallons of water per acre. Refer to the WEEDS CONTROLLED Section for rates and timing of application.

All aerial equipment must be properly maintained and washed to remove product residues after use.

Spray should be released at the lowest height consistent with weed control and flight safety. Applications more than 10 feet above the canopy should be avoided.

Use the largest droplet size consistent with good weed control. Formation of very small droplets may be minimized by appropriate nozzle selection, by orienting nozzles away from the air stream as much as possible, and by avoiding excessive spray boom pressure.

Drift control additives may be used with TOUCHDOWN. Read and follow the manufacturer's directions for use.

Do not make aerial applications during temperature inversions. Inversions are characterized by stable air and increasing temperatures with height above the ground. The applicator may detect the presence of an inversion by producing smoke and observing a smoke layer near the ground surface.

Do not apply when winds exceed 15 MPH or there are wind gusts as this could cause drift to adjacent nontarget vegetation.

#### **Spot Treatments**

For annual weeds less than 6 inches, use a 0.5% solution (TOUCHDOWN plus nonionic surfactant/wetting agent in water). For annual weeds over 6 inches, use a 1% solution. Use a 2% solution for most perennials except as noted in the SPOT TREATMENT OF HARD TO CONTROL WEEDS table. When using motorized spot spray equipment (rider bar), use a 3% solution. Spray the solution on actively growing weeds until uniformly wet but not to the point of runoff. Retreat 14-21 days later if regrowth occurs.



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# SPOT TREATMENT OF HARD TO CONTROL WEEDS

WEED SPECIES	SCIENTIFIC NAMES	HANDGUN % SOLUTION	APPLICATION TIMING AND REMARKS
Basamapple*	Momordica charantia	1%	Actively growing
Guineagrass*	Panicum maximum	1%	Actively growing, 7-leaf stage
Lartane-largeleaf*	Lantana camara	1%	Actively growing, at bloom
Paragrass*	Brachiarla mutica	1%	Actively growing, seedhead
Pampasgrass*	Erianthus rayennae	2%	Actively growing, at or beyond boot
Sweet Potato, Wild*	Ipomoea pandurata	2%	Actively growing, at or beyond bloom
Torpedograss*	Panicum repens	1%	Actively growing at or beyond seedhead
Vasaygrass*	Paspalum urvillei	1%	Actively growing, at seedhead

<sup>\*</sup> Repeat treatment may be required to provide control.

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

# TOUCHDOWN Herbicide Spot Spray Dilution Table\*

		]	o Make This V	olume	
Salution Strength	1 gallon	2 gallons	10 gallons	25 gallons	100 gailons
©.5% 1%	% fl cz 1% fl cz	1% fl oz 2% fl oz	674 fl oz	1 pint	4 pints
2% 3%	2% floz 4 floz	5% fl oz 8 fl oz	12½ fl oz 1½ pints 2½ pints	2 pints 4 pints 8-6 pints	1 gallon 2 gallons 3 gallons

\*See SPRAY ADDITIVES directions for surfactants/wetting agents and amounts which can be used.

1/3 ft. cz = 2 tezspoons

8 fl. oz. or 1/2 pint = 1 cup

1/2 fl. tz. = 1 tablespoon

16 fl. oz. = 1 pint

1 fll. oz. = 2 tablespoons

1 gallon = 8 pints

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Wiper Applications

TOUCHDOWN may be applied using a wiper or "wick" applicator for selective control or suppression of annual and perennial weeds which become taller than the crop or desirable vegetation. Mix 1 quart of TOUCHDOWN in 1 gallon of water. Add nonionic surfactant/ wetting agent at 1% v/v. Precautions should be taken to avoid contact with crops or desirable vegetation. Equipment should be operated at speeds of 5 mph or less. Use slower speeds where weeds are dense. For improved control, make two applications in opposite directions. Do not use wiper applications in corn or in bearing grape vineyards.

#### **GENERAL USE PRECAUTIONS**

- TOUCHDOWN requires actively growing green plant tissue to function. Application to droughtstressed weeds or weeds with little green foliage (i.e., mowed or cut weeds), may result in reduced weed control.
- Do not till or mow within 3 days following application.
- DO NOT spray if conditions of thermal inversion exist, or if wind direction and speed may cause spray to drift onto adjacent areas. Drift minimization is the responsibility of the applicator. Consult with local and State agricultural authorities for information regarding avoiding or minimizing spray drift.

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- It is recommended that the spray system be thoroughly cleaned with water and a commercial tank cleaner after each use.
- Rotational crops may be planted back into TOUCHDOWN treated areas 35 days after application.
- Do not exceed a total of 5½ pints of TOUCHDOWN per acre per year.
- Do not graze or harvest treated cover crops for feed.

#### CONSERVATION COMPLIANCE

(For use in compliance with the Federal Conservation Compliance Programs)

- Apply to annual and perennial grass and broadleaf weeds according to the WEEDS CONTROLLED section of this label.
- TOUCHDOWN may be tank mixed with other herbicides registered for this use.

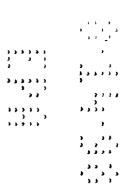
#### FALLOWLAND AND POST HARVEST USE

TOUCHDOWN may be applied to fallowland and to fields following harvest to control annual and perennial weeds. Refer to WEEDS CONTROLLED Section for use rates. Repeat applications may be necessary to control weeds emerging after application. Use the higher rate on heavy or sodded infestations. Allow sufficient time for regrowth to occur after harvest prior to application. Avoid application after plants have been exposed to severe frost. Rotational crops may be planted back into TOUCHDOWN treated areas 35 days after application.

#### CHEMICAL FALLOW - ECOFALLOW SYSTEMS

#### **GENERAL INFORMATION**

TOUCHDOWN applied at 6 to 16 ounces per acre may be used in chemical fallow and ecofallow systems for control of grasses and broadleaf weeds. Apply to actively growing weeds only after maximum germination period. Weeds emerging after application will not be controlled. Repeat treatments may be necessary to control late germinating weeds. Reduced control may result from applications made to drought stressed or dust covered plants. Allow a minimum of 3 days after application before tillage.



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# APPLICATION DIRECTIONS FOR CHEMICAL FALLOW - ECOFALLOW SYSTEMS RATES AND WEEDS CONTROLLED

Weed S	pecies	Maximum Plant Height	TOUCHDOWN Rate (ounces/acre)
Foxtail, Green Foxtail, Yellow	Setaria viridis Setaria lutescens	12" 12"	6 oz
Barley Barnyardgrass Bluegrass, Annual Bluegrass, Bulbous Brome, Downy Chickweed Rye Ryegrass, Italian Wheat Witchgrass	Hordeum vulgare Echinochloa crus-galli Poa annua Poa bulbosa Bromus tectorum Stellaria media Secale cereale Lolium multilforum Triticum aestivum Panicum capillare	12" 6" 6" 6" 6" 12" 12" 18"	8 to 12 oz
Crabgrass Kochia Lambsquarters, Common Oats, Wild Mustard Shepherdspurse	Digitaria spp. Kochia scoparia Chenopodium album Avena fatua Brassica spp. Capsella bursa-pastori	12" 6" 6" 12" 6" 6"	12 to 16 oz
Kochia Lambsquarters, Common Lettuce, Prickly Pigweed, Redroot Thistle, Russian	Kochia scoparia Chenopodium album Lactuca serriola Amaranthus retroflexus Salsola kali	6" 6" 6" 6" 6"	8 oz + 2,4-D or Banvel
Barnyardgrass Brome, Downy Foxtail, Green Kochia Lambsquaters, Common Lettuce, Prickly Mustard, Tansy Pigweed, Redroot Sandbur, Field Stinkgrass Thistle, Russian Wheat Witchgrass	Echinochloa crus-galli Bromus tectorum Setaria viridis Kochia scoparia Chenopodium album Lactuca serriola Descurainia pinnata Amaranthus retroflexus Cenchrus spp. Eragrostis cilianensis Salsola kali Triticum aestivum Panicum capillare	6" 12" 6" 6" 6" 6" 12" 12" 6" 18"	8 to 12 oz + Atrazine or Bladex



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#### GENERAL USE PRECAUTIONS FOR CHEMICAL FALLOW - ECOFALLOW SYSTEMS

- Do not apply more than 5½ pints of TOUCHDOWN per acre per year.
- Make application at least 35 days prior to seeding.

# Winter Wheat or Winter Wheat-Row Crop Rotations

# Post-Harvest Application; 2 to 3 Month Recropping Interval

Apply TOUCHDOWN at 8 to 16 ounces per acre post-harvest to wheat stubble (June to September) for control of actively growing emerged weeds. Weeds should be allowed to regrow after harvest. Best control will occur when grasses are treated before the heading stage and broadleaf weeds do not exceed 24 inches in height. Tankmixes with Banvel or 2,4-D are recommended for enhanced broadleaf weed control (see Tankmix section).

# Post-Harvest Application; 12 to 14 Month Recropping Interval

Apply TOUCHDOWN at 8 to 16 ounces per acre post-harvest to wheat stubble (June to September) for control of actively growing emerged weeds and volunteer wheat. Weeds should be allow to regrow after harvest. Repeat applications may be necessary for fall germinating Downy brome, winter wheat and winter annual broadleaf weeds. Tankmixes with atrazine or Bladex are recommended for residual control of many weeds (see Tankmix section).

#### Spring Application

Apply TOUCHDOWN at 8 to 12 ounces per acre to actively growing Downy brome and volunteer wheat prior to seedhead formation. Early applications will improve moisture conservation. Tank mix with Banvel or 2,4-D to improve control of winter annual and spring germinating broadleaf weeds (see Tankmix section). Repeat applications may be necessary throughout the summer months to control newly germinating weeds prior to crop seeding.

#### Spring Grain (Wheat or Barley) Rotations and Spring Grain-Row Crop Rotations

#### Post-Harvest Application

Apply TOUCHDOWN at 8 to 12 ounces per acre to actively growing grasses and volunteer grain. Tankmix with Banvel or 2,4-D to improve control of large kochia, redroot pigweed, Russian thistle and lambsquarters (see Tankmix section).

# **Alternate Year Application**

Apply TOUCHDOWN at 6 to 12 ounces per acre in the spring of the fallow year after germination of foxtail species and volunteer grain. Tankmixes of Banvel or 2,4-D will improve control of spring and winter annual broadleaf weeds (see Tankmix section), Repeat applications may be necessary as new weeds germinate.

# TANK MIXTURES FOR CHEMICAL FALLOW - ECOFALLOW SYSTEMS

Tankmixes of TOUCHDOWN with other herbicides may improve control of some emerged weeds. Tankmixes with some residual herbicides provide preemergence control of weeds listed on the individual product labels. The following herbicides may be tankmixed with TOUCHDOWN at rates indicated.

Product	Rate/Acre
Banvel	0.25 lb ai
2,4-D	0.5 lb ai
Atrazine	1 to 3 lb ai
Bladex	2.4 to 4 lb ai

Refer to individual product labels for precautionary statements, restrictions, recropping intervals and a list of weeds controlled.

#### SPRAY ADDITIVES FOR CHEMICAL FALLOW - ECOFALLOW SYSTEMS

#### **Surfactants**

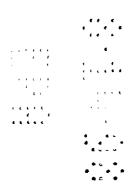
A nonionic surfactant (NIS) of 70% or higher active ingredient IS REQUIRED to improve coverage of weed foliage. Use NIS concentration of 1 to 2 percent of total spray volume (4 to 8 quarts per 100 gallons of spray solution).

#### **Ammonium Sulfate**

Control of weeds with TOUCHDOWN may be improved by adding ammonium sulfate to the spray solution. See Spray Additives Section for rates and other information.

# APPLICATION VOLUMES FOR BROADCAST APPLICATION FOR CHEMFALLOW - ECOFALLOW SYSTEMS

Apply TOUCHDOWN to actively growing weeds at the broadcast rates indicated in the APPLICATION DIRECTIONS for CHEMICAL FALLOW - ECOFALLOW SYSTEMS SECTION. Application should be made in 3 to 10 gallons of water per acre with conventional ground spray equipment. Increase volumes if weed foliage is dense.



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# CORN (Field Corn, Popcorn, and Seed Corn)

#### MINIMUM OR NO-TILLAGE SYSTEMS

TOUCHDOWN is a nonselective systemic herbicide for use as a broadcast spray to control emerged annual and perennial weeds in fields planted to minimum or no-till corn. Apply as a broadcast application before, during, or after planting, but before crop emergence. TOUCHDOWN can also be applied to corn as a spot spray.

Follow the directions listed in the APPLICATION DIRECTIONS, SPRAY ADDITIVES, and APPLICATION EQUIPMENT & TECHNIQUES sections. Refer to the WEEDS CONTROLLED section for rates.

#### GENERAL USE PRECAUTIONS FOR CORN

- Do not apply within 90 days of harvest of corn grain or corn fodder.
- Do not use on sweet corn.
- Do not apply more than 5½ pints per acre per year. as a combination of broadcast sprays prior to crop emergence and as spot spray applications:

#### TANK MIXTURES FOR CORN

TOUCHDOWN can be tank mixed with the following pesticides. Several of the herbicides listed provide preemergence control or suppression of annual weeds. WARRIOR® is an insecticide which can be tank mixed with TOUCHDOWN for control of labeled pests.

# TOUCHDOWN plus:

Atrazine	Lariat®
Banvel®	Lasso®
Bicep®	Linex®
Bicep II®	Lorox®
Bladex®	Marksman®
Broadstrike®	Micro-Tech®
Bullet®	Prowl®
Dual®	Simazine
Dual II®	SURPASS® EC
Extrazine®	SURPASS 100
Frontier®	TOPNOTCH™
Guardsman®	WARRIOR
Harness®	2,4D
Harness Xtra	

Refer to individual product labels for precautionary statements, restrictions, rates, and a list of weeds controlled. Refer to the WEEDS CONTROLLED section for rates of TOUCHDOWN to the use in a tankmix.

#### SOYBEANS

#### MINIMUM OR NO-TILLAGE SYSTEMS

TOUCHDOWN is a nonselective systemic herbicide for use as a broadcast spray to control emerged annual and perennial weeds in minimum or no-till planted soybeans. Apply as a broadcast application before, during or after planting, but before crop emergence. TOUCHDOWN can be applied to soybeans as a spot spray and by wiper or wick. Follow directions listed in the APPLICATION DIRECTIONS, SPRAY ADDITIVES, AND APPLICATION EQUIPMENT & TECHNIQUES sections. Refer to WEEDS CONTROLLED section for rates.

#### GENERAL USE PRECAUTIONS FOR SOYBEANS

- Spot application must be made at least 8 weeks before harvest.
- Wiper or wick application must be made at least 7 days before harvest.
- Avoid contact with soybean foliage.
- Do not apply more than 5½ pints per acre per year as a combination of broadcast sprays prior to crop emergence and as spot spray and wiper applications.

#### TANK MIXTURES FOR SOYBEANS

TOUCHDOWN can be tank mixed with the following pesticides. Several of the herbicides listed provide preemergence control or suppression of annual weeds. WARRIOR™ is an insecticide which can be tank mixed with TOUCHDOWN for control of labeled pests.

# TOUCHDOWN plus:

2,4-D	Lorox®
Canopy®	Lorox Plus
Command®	Partner®
Dual®	Preview®
Dual II	Prowl®
Frontier®	Pursuit® Plus
Fusion®	Scepter®
Gemini®	Sencor®
Lasso®	Squadron®
Lexone®	Turbo®
Linex®	WARRIOR

Refer to individual product labels for precautionary statements, restrictions, rates, and a list of weeds controlled. Refer to the WEEDS CONTROLLED tables for rates of TOUCHDOWN to use in a tankmix.

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# **BEARING AND NONBEARING CROPS**

TOUCHDOWN can be used to control annual and perennial weeds in the following bearing crops:

# **BEARING CROPS**

Almonds Apricot Beech Nuts

**Brazil Nuts** 

**Butternuts** Cashews Cherry, Sweet

Cherry, (Sour, Tart) Chestnuts

Chinquapins Citron

Filberts (Hazelnuts) Grapefruit Grapes, (All) **Hickory Nuts** Kumquat

Lemon

Lime

Macadamia Nuts

Nectarine Orange Peach Pecans

Plum (Prunus domestica, Prunum spp.)

Plum, Chickasaw Plum, Damson Plum, Japanese

Plumcot Prune (Fresh) Tangelo Tangerine

Walnuts, Black and English

#### NONBEARING CROPS

TOUCHDOWN can be used to control annual and perennial weeds 1 year or more prior to harvest in the following nonbearing groves, orchards, or vineyards:

Jojoba

Acerola (West Indian Cherry) Almonds Apple Apricots **Artichokes** Asparagus Avocados Bananas Blackberry Blueberry Boysenberry Cherries Coffee Crabapple Cranberry Dates Dewberry Elderberry Figs **Filberts** 

Kiwi Lemons Limes Loganberry Macadamia Mango **Nectarines** Olives Oranges Papayas Passion Fruit Peaches Pears Pecans **Persimmons Pistachios Plantains** Plums

Pomegranates
Prunes
Raspberry
Tangelos
Tangerines
Walnuts

Huckleberry

Gooseberry Grapes

Grapefruit

Guava

Ginseng

APPLICATION DIRECTIONS FOR BEARING CITRUS, GRAPES, NUTS, STONE FRUIT AND NONBEARING CROPS

Applications may be made with boom equipment, shielded sprayers, hand-held and high-volume wands, lances, orchard sprayers, or with wiper application equipment. Follow directions listed in the APPLICATION DIRECTIONS, SPRAY ADDITIVES, and APPLICATION EQUIPMENT & TECHNIQUES sections of this label. Refer to the WEEDS CONTROLLED section for application rates and timing. For hard to control weeds, refer to SPOT TREATMENT section.

Multiple applications may be necessary to control certain perennial weeds, and weeds originating from underground parts (rhizomes, stolons, tubers) that are initially untreated, but do not apply more than 5½ pints of TOUCHDOWN per acre per year as a combination of broadcast, split, and wiper applications. TOUCHDOWN does not provide residual weed control, and as such, weeds emerging after application will not be controlled. For residual weed control, tank mix TOUCHDOWN with residual herbicides as prescribed in the TANK MIXTURES FOR BEARING CITRUS, GRAPES, NUTS, STONE FRUIT AND NONBEARING CROPS section, or make multiple applications.

<sup>\*</sup> TOUCHDOWN can be used during site preparation prior to planting and up to 1-year of harvest.

If annual weeds have been mowed or grazed, allow 3-4 inches of new growth to appear prior to application. If perennial weeds have been mowed or grazed, allow new growth to reach recommended stage prior to application.

TANK MIXTURES WITH RESIDUAL HERBICIDES FOR BEARING CITRUS, GRAPES, NUTS, STONE FRUIT AND NONBEARING CROPS

TOUCHDOWN can be tank mixed with the following herbicides for control or suppression of emerged annual and perennial weeds provided that use of the tankmix product on the crop being treated is allowed by the tankmix product tabel. The following residual herbicides provide preemergence control of weeds listed on the individual product labels.

# TOUCHDOWN plus:

- \* DEVRINOL® 50-DF herbicide
- \* Direx® 4L herbicide\*
- \* Goal® <del>1.6E herbicide</del><sup>1</sup>
- \* Karmex® <del>DF herbicide\*</del>
- \* Kerb®
- \* Krovar® Lherbicide<sup>9,4</sup>
- \* Krovar-II<sup>3,4</sup>
- \* Princep® 4L
- \* Princep® Caliber 90
- \* Prowl® <del>herbicide<sup>9,</sup>4</del>
- \* Prowl® 3.3 EC herbicide9.4
- \* Simazine /Caliber® 90 herbicide2.4
- \*Simazine (80W, 4L, or Caliber 90)<sup>2,4</sup> plus Surflan® herbicide (AS or 75 N)
- \*Simazine-4L274
- \*Simazine 80W2.4
- \* Sim-Trol® 4L3,4
- \* Sinbar®
- \* Solicam® <del>DF</del>
- \* Surflan AS9
- \* 2,4-D
- \* Surflan 75W<sup>3</sup>
- \* Goal 1.6E1 plus Surflan (AS or 75W)9
- \*Goal 1.6E1 plus Simazine (80W, 4L, or Caliber 90)24
- \*Goal 1.6E1 plus Surflan (AS or 75W)9 plus Simazine (80W, 4L; or Caliber 99)=1

Refer to the individual product labels for precautionary statements, restrictions, recommended rates, approved crops, and a list of weeds controlled.

Refer to the Tankmixes with Residual Herbicides section of the label for TOUCHEOWN rates and timing information.

<sup>\*</sup>A tankmix of TOUCHDOWN and Goal cannot be used in bearing citrus.

A tankmix of TOUCHDOWN and Simazine can only be used in bearing oranges, bearing grapefruit and in someening crops.

<sup>\*</sup>A tankmix of TOUCHDOWN and Krovar, Prowl, Sim-Trol or Surflan cannot be used in bearing grapes:

<sup>\*</sup>A tankmix of TOUGHDOWN and Caliber, Direx, Krovar, Prowl, Simazine or Sim-Trol cannot be used in beging stone frue

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#### PERENNIAL GRASS SUPPRESSION IN ORCHARD FLOORS

#### **BAHIAGRASS**

TOUCHDOWN can be used to inhibit seedhead emergence and suppress vegetative growth for approximately 40 to 50 days with a single application. By using a sequential application, suppression of vegetative growth and inhibition of seedhead emergence can be extended to 120 days. Applications must be made prior to seedhead emergence. Apply TOUCHDOWN at 20 to 30 days after complete green-up or after mowing to 4 inches tall. When a single application is planned, use 4 fluid ounces of TOUCHDOWN per acre plus 0.5 to 1.0% v/v nonionic surfactant/wetting agent in 10 to 25 gallons of water. When a sequential application is planned, use 3 fluid ounces per acre for the first application followed by another application of 3 fluid ounces per acre 40 to 50 days later.

#### **BERMUDAGRASS**

# For Suppression Only:

# East of the Rocky Mountains:

Apply 4 to 10 fluid ounces of TOUCHDOWN plus a nonionic surfactant/wetting agent in 3 to 20 gallons of water per acre. Make the application 2 weeks after complete green-up or after 3 to 4 inches of regrowth following mowing. Use 4 to 6½ fluid ounces per acre if a lesser degree of suppression is desired. A sequential application can be used when regrowth occurs.

#### West of the Rocky Mountains:

Apply 10 fluid ounces of TOUCHDOWN plus a nonionic surfactant/wetting agent per acre in 3 to 10 gallons of water per acre. Make the application 2 weeks after complete green-up or after 3 to 4 inches of regrowth following mowing. A sequential application can be used when regrowth occurs.

#### For Partial Control and Burndown:

TOUCHDOWN can be used for burndown and partial control of bermudagrass at 1½ to 2½ pints plus a nonionic surfactant/wetting agent in 3 to 20 gallons of water per acre. Use 1½ pints east of the Rocky Mountains and 2½ pints west of the Rocky Mountains.

Use this treatment only if reduction of the bermudagrass stand can be tolerated. Allow at least 21 days for complete burndown.

#### **COOL SEASON GRASS COVERS**

For suppression of orchardgrass, fine fescue, tall fescue, and quackgrass apply 5 fluid ounces of TOUCHDOWN plus a nonionic surfactant/wetting agent in 10 to 20 gallons of water per acre. Add ammonium sulfate at 2% by weight or 17 pounds per 100 gallons of spray mix.

For suppression of Kentucky bluegrass, use 4 fluid ounces of TOUCHDOWN plus a nonionic surfactant/wetting agent. Do not add ammonium sulfate for suppression of Kentucky bluegrass.

# LOW VOLUME APPLICATION (FLORIDA AND TEXAS ONLY)

To control or suppress the perennial weeds listed in the following table, apply the recommended rate of TOUCHDOWN plus a nonionic surfactant/wetting agent in 3 to 20 gallons of water per in the following table, apply the recommended rate of TOUCHDOWN plus a nonionic surfactant/wetting agent in 3 to 20 gallons of water per in the following table, apply the recommended rate of TOUCHDOWN plus a nonionic surfactant/wetting agent in 3 to 20 gallons of water per in the following table, apply the recommended rate of TOUCHDOWN plus a nonionic surfactant/wetting agent in 3 to 20 gallons of water per in the following table, apply the recommended rate of TOUCHDOWN plus a nonionic surfactant/wetting agent in 3 to 20 gallons of water per in the following table, apply the recommended rate of TOUCHDOWN plus a nonionic surfactant/wetting agent in 3 to 20 gallons of water per in the following table.

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acre. Use 10-20 gallons per acre if weed foliage is dense. Apply when weeds are actively growing. Refer to the WEEDS CONTROLLED section for application timing for specific perennial weeds. If perennial weeds have been moved or grazed, allow new growth to reach recommended growth stage prior to application.

# USES FOR TOUCHDOWN IN LOW VOLUME APPLICATIONS IN FLORIDA AND TEXAS ONLY

	Rate of TOUCHDOWN (Pints per Acre)			
Weed Species	11/3	22/3	4	51/3
Bermudagrass	В	В	PC	С
Guineagrass Texas and Florida Ridge Florida Flatwoods	B NR	C B	C	C
Paragrass	В	С	С	С
Torpedograss	NR NR	S	PC	PC

S = Suppression

B = Burndown

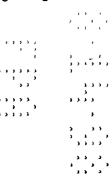
PC = Partial Control

C = Control

NR = Not Recommended

# GENERAL USE PRECAUTIONS FOR BEARING CITRUS, GRAPES, NUTS, STONE FRUIT AND NONBEARING CROPS

- Do not allow the spray, spray drift, or mist to contact green foliage or green bark on the trunk, suckers, open wounds, or other green parts of trees and vines. Contact with any tree or vine part other than mature brown woody bark may cause crop injury.
- Allow at least 13 days from the last application to harvest of citrus fruit.
- Allow at least 14 days from the last application to harvest of grapes.
- Allow at least 20 days from the last application to harvest of nuts.
- Allow at least 13 days from the last application to harvest of stone fruit.
- Avoid contact with stumps as injury to adjacent trees may occur from root grafting.



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#### **WEEDS CONTROLLED**

All weeds listed below are controlled by spray and hand-directed spot applications of TOUCHDOWN. For spray application, use the indicated rates. See DIRECTIONS FOR USE for mixing and application instructions.

TABLE 1 ANNUAL WEED CONTROL - TOUCHDOWN RATES

WEED SPECIES	SCIENTIFIC NAMES	MAXIMUM HEIGHT/ LENGTH (INCHES)	PINTS PER ACRE
Foxtails	Setaria sp.	12	1/2
Mustard, blue Mustard, tansy Mustard, tumble Mustard, wild	Chorispora tenella Descurainia pinnata Sisymbrium altissimum Brassica kaber	6	1/2
Barley Rye Sandbur, field Shattercane Stinkgrass	Hordeum vulgare Secale cereale Cenchrus incertus Sorghum bicolor Eragrostis cilianensis	12	1/2
Morningglory Sicklepod	lpomoea sp. Cassia obtusifula	2	2/3
Bluegrass, annual Bluegrass, bulbous Brome, downy Cheat Chickweed, common Chickweed, mouseear Cocklebur, common Corn Goatgrass, jointed Groundsel, common Henbit Horseweed/Marestail Kochia Lambsquarters, common Pennycress, field Rocket, London Spurge, annual Woolly cupgrass	Poa annua Poa bulbosa Bromus tectorum Bromus secalinus Stellaria media Cerastium vulgatum Xanthium strumarium Zea mays Aegilops cylindrica Senecio vulgaris Lamium amplexicaule Conyza canadensis Kochia scoparia Chenopodium album Thlaspi arvense Sisymbrium irio Euphorbia sp. Eriochloa villosa	6	2/3
Crabgrass Johnsongrass, seedling Oats, wild Panicum, Texas Pigweed, redroot Pigweed, smooth Witchgrass	Digitaria sp. Sorghum halepense Avena fatua Panicum texanum Amaranthus retroflexus Amaranthus hybridus Panicum capillare	12	2/3
Barnyardgrass Black nightshade Ryegrass, Italian Sheperdspurse Sicklepod Signalgrass, broadleaf Wheat	Echinochloa crus-galli Solanum sp. Lolium multiflorum Capsella bursa-pastoris Cassia obusifolia Brachiaria platyphylla Triticum aestivum	6	) 11

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Amaranth, livid Amaranth, slender Amaranth, spiney Horseweed/Marestail Lambsquarters, common	Amaranthus lividus Amaranthus viridus Amaranthus spinosus Conyza canadensis Chenopodium album	12	1
Red rice Teaweed	Oryza sativa Sida spinosus	4	1 1/3
Fleabane, rough Panicum, fall Pusley, Florida Sowthistle, annual Sprangletop Sunflower, common Thistle, Russian	Erigeron strigosus Panicum dichotomiflorum Richardia scabra Sonchus oleraceus Leptochloa sp. Helianthus annuus Salsola iberica	6	1 1/3
Goosegrass Sicklepod Spanishneedles Spurge, annual	Eleusine indica Cassia obtusifolia Biddens bipinnata Euphorbia sp.	6-12	1 1/3
Cubeaf eveningprimrose Carolina geranium	Oenothera laciniata Geranium carolinianum	12	1 1/3
Wheat	Triticum aestivum	12	1 1/2
Camphorweed Velvetleaf	Heterotheca subaxillaris Abutilon theophrasti	6	2
Fleabane, rough Kochia Sowthistle, annual Sunflower, common Thistle, Russian	Erigeron strigosus Kochia scoparia Sonchus oleraceus Helianthus annuus Salsola iberica	6-12	2
Filaree Panicum, fall Sprangletop	Erodium sp. Panicum dichotomiflorum Leptochloa sp.	12	2

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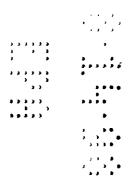


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# TABLE 2 ANNUAL WEED CONTROL - TOUCHDOWN RATES IN A TANKMIX WITH 0.25 LBS AI/A OF BANVEL OR 0.5 LBS AI/A OF 2,4-D

WEED SPECIES	SCIENTIFIC NAMES	MAXIMUM HEIGHT/ LENGTH (INCHES)	TOUCHDOWN PINTS PER ACRE
Lettuce, prickly Morninggfory Ragweed, common Ragweed, giant Smartweed, Pennsylvania Velvetleaf	Lactuca serriola Ipomoea sp. Ambrosia artemisiifolia Ambrosia trifida Polygonum pensylvanicum Abution theophrasti	6	2/3
Fleabane, rough Horseweed/Marestail Lambsquarters, common	Erigeron strigosus Conyza canadensis Chenopodium album	6-12	
Cocklebur, common Kochia Thistle, Russian	Xanthium strumarlum Kochia scoparla Salsola iberica	12	

Fead and follow Banvel and 2,4-D labels



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# TABLE 3 PERENNIAL WEED CONTROL - TOUCHDOWN RATES

	T	PINTS	
WEED SPECIES	SCIENTIFIC NAMES	PER ACRE	APPLICATION TIMING AND REMARKS
Alfalfa	Medicago sativa	2	At 6 to 8" or more after final cutting in fall. Deep till after 7 days
Artichoke, Jerusalem*	Helianthus tuberosus	5 1/3	Actively growing, at or after flowering
Bahiagrass	Paspalum notatum	44	Actively growing, seed head stage
Bermudagrass	Cynodon dactylon	5 1/3	Actively growing, seed heads present
Bindweed, field	Convolvulus arvensis	5 1 <i>1</i> 3	Actively growing, beyond full bloom
Bluegrass, Kentucky	Poa pratensis	2 2/3	Actively growing, boot to early seed head
Brackenfern	Pteridium aquilinum	5 1/3	Fronds fully expanded and at least 18" long
Bromegrass, smooth	Bromus inermis	2 2/3 - 4	Actively growing, boot to early seed head
Canarygrass, reed	Phalaris arundinacea	4	Actively growing, toot to head
Wheatgrass, Western	Agropyron smithii	4	Actively growing, boot to head
Cattail	Typha sp.	5 1 <i>1</i> 3	Actively growing, ≘arty head to early bud
Clover, red	Trifolium pratense	5 1/3	Actively growing, sarly head to early bud
Clover, white	Trifolium repens	5 1/3	Actively growing, ≘arly head to early bud
Cogongrass*	Imperata cylindrica	5 1/3	Actively growing, ate summer/fall greater than 18"
Crowfootgrass	Dactyloctenium aegyptium	2	Actively growing, less than 5"
Dandelion	Taraxacum officinale	3	Actively growing, sarty bud
Dayflowers*	Commelina sp.	4 1/3	Actively growing, less than 4 inches in height
Dock, curly	Rumex crispus	3	Actively growing, early bud
Dogbane, hemp	Apocynum cannabinum	5 1/3	Actively growing, late bud to flower
Dogfennel	Eupatorium capillifolium	2 2/3	Actively growing, less than 12 inches in height
Fescue	Festuca sp.	4	Actively growing, boot to early seedhead
Goatweed	Scoparia dulcis	4	Actively growing, less than 7" tall
Guineagrass	Panicum maximum	4	Actively growing, 7 leaf
_ Harsenettle	Solanum carolinense	5 1/3	Actively growing, early head to early bud
Johnsongrass	Sorghum halepense	2	Actively growing, boot to head or prior to frost
Milkweed, common	Asclepias syriaca	4	Actively growing, late bud to tower
Muhly, wirestem	Muhlenbergia frondosa	2 2/3	Actively growing, 8" in height as more, actively growing
Mullein, common	Verbascum thapsus	5 1/3	Early head to early bud'','
Nutsedge, purple Nutsedge, yellow	Cyperus rotundus Cyperus esculentus	.4"	Actively growing, sower
		2+2	Make sequential applications when actively growing, 3-5 leaf, less than 6" tall
Orchardgrass	Dactylis glomerata	2 2/3 - 4	Actively growing, minimum height of 12" in spring, 6" in fall

Paragrass	Brachiaria mutica	2 2/3	Actively growing, seedhead stage
Phaseybean*	Phaseolus lathyroides	5 1/3	Actively growing, less than 8" tall
Quackgrass	Agropyron repens	1 1/3	Actively growing, less than 5" tall - retreatment may be required
		3 1/3	Actively growing, greater than 8" tall
Redvine*	Brunnichia ovata	2	Actively growing, greater than 18" tall in September/October
Ryegrass, perennial	Lolium perenne	2	Actively growing, boot to head or prior to frost
Smallflowered Alexandergrass	Brachiaria subquadripara	2 2/3 - 4	Actively growing, less than 4 inches in height
Smartweed, swamp	Polygonum coccineum	2	Actively growing, early bud
Spurge, leafy	Euphorbia esula	3	Actively growing, greater than 12" tall in late summer or fall
Thistle, Canada	Cirsium arvense	4	Actively growing beyond bud stage
Timothy	Phleum pratense	4	Actively growing boot to head
Torpedograss*	Panicum repens	5 1/3	Actively growing at or beyond seedhead
Trumpetcreeper*	Campsis radicans	2 2/3	Actively growing late September/October
Vaseygrass	Paspalum urvillei	2	Actively growing, less than 12 inches in height
Virginia creeper	Parthenocissus quinquefolia	5 1/3	Actively growing, full leaf expansion

<sup>\*</sup>Partial Control

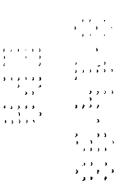


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# TABLE 4 PERENNIAL WEED CONTROL - TOUCHDOWN RATES IN A TANKMIX WITH 0.25 LBS AI/A OF BANVEL OR 0.5 LBS AI/A OF 2,4-D

WEED SPECIES	SCIENTIFIC NAMES	PINTS PER ACRE	APPLICATION TIMING AND REMARKS
Dandelion	Taraxacum offici <b>anale</b>	2/3	Actively growing, early bud
Dock, curty	Rumex crispus	2/3	Actively growing, early bud
Dogbane, hemp	Apocynum cannabinum	1 1/3	Actively growing, late bud to flower
Milkweed, common	Asclepias syriaca	1 1/3	Actively growing, late bud to flower
Milkweed, honeyvine	Ampelamus albidus	2 2/3	Actively growing, late bud to flower
Smartweed, swamp	Polygonum coccineum	2/3	Actively growing, early bud
Spurge, leafy*	Euphorbia esula	2/3	Actively growing, greater than 12" tall in late summer or fall

\*Partial Control Read and follow Banvel and 2,4-D labels





#### NONAGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.

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

# FARMSTEAD (NONCROP)

Applications can be made in noncrop areas around the farm such as:

Farmyards //

Rights-of-way

Soil Bank Land ...

Barrier Strips -/

Farm Buildings √

**Equipment Areas** 

Fuel Storage Areas / Fence Rows -

- Apply to annual and perennial grass and broadleaf weeds according to the WEEDS CONTROLLED section of this label.
- Avoid contact with the foliage of ornamentals or other desirable plants.
- Repeat applications may be necessary.

This product is sold only for uses stated on its label. No express or implied license is granted to use or sell this product under any patent in any country except as specified. Country: United States of America. U.S. Patent No. 4,315,765.

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