



068119-00001-052499

Printed: 07:43:19 Tuesday, 08 Jun, 1999 # 4 / 3216

Systems Integration Group, Inc.

PM 23

Page 18 17

Ms. Alice Walker, Ph.D.  
WILFARM L.L.C.  
c/o Alice Walker Consulting  
811 Country Club Dr.  
Senatobia, MS 38668

MAY 24 1999

Dear Ms. Walker:

Subject: Label Amendment Extending 2,4-D Use in Reduced or No-Tillage Soybeans  
(Pre-plant Only)  
WILFARM 2, 4-D Amine 4  
EPA Reg. No. 68119-1  
Your Application Dated April 8, 1999

The Agency is conditionally approving an amendment to the registration of the above-referenced product under the authority of section 3(c)(7)(B) of the Federal Insecticide, Fungicide Act (FIFRA). This amendment allows use of the subject product on reduced or no-tillage soybeans (pre-plant only) with a maximum permissible level for residues of the herbicide in or on soybeans of 0.1 ppm. This amendment will expire automatically on December 31, 2001. In addition, during the period that this amendment is effective, it will be subject to the conditions listed below:

- 1) This acceptance is based on your certification that the submitted labeling on preplant soybean use is an exact copy of the labeling accepted by the Agency on March 15, 1996. Please note that the acceptance of this labeling pertains to the previously approved preplant soybean use only and does not signify the acceptance of any other labeling revisions. No other label revisions are being reviewed or considered with this action. You should also note that if you fail to satisfy the conditions imposed in this certification, EPA may issue a notice to cancel this amendment under FIFRA section 6(e).
- 2) This conditional registration will expire automatically on December 31, 2001. Sale or distribution of the subject product bearing labeling for this use on reduced or no-tillage soybeans (pre-plant only) after December 31, 2001 will be illegal. The tolerance authorizing residues of the subject product will also expire on December 31, 2001. After that date, sale or distribution of food in interstate commerce containing any residue of the subject product will be a violation of the Federal Food, Drug, and Cosmetic Act.

CONCURRENCES

SYMBOL *	7505C							
SURNAME *	MHoward							
DATE *	May 20, 1999							

2 7 17

- 3) Finally, if and when a permanent tolerance is established, EPA will entertain an application to amend the registration of the subject product without any special limitations on the duration of the amendment.

A stamped copy of the labeling is enclosed for your records. Please submit one (1) copy of your final printed labeling before you release the product for shipment.

Sincerely yours,

Joanne I. Miller  
Product Manager (23)  
Herbicide Branch  
Registration Division (7505C)

Enclosure

3717

NOT FOR SALE TO OR USE BY HOMEOWNERS

WILFARM®

2,4-D AMINE 4

A SELECTIVE HERBICIDE

ACTIVE INGREDIENT:

Dimethylamine salt of 2,4-dichlorophenoxyacetic acid* .....	46.8%
INERT INGREDIENTS: .....	53.2%
TOTAL	100.0%

\*Equivalent to 38.9% of 2,4-dichlorophenoxyacetic acid. This product contains 3.8 lbs. of 2,4-D acid per gal.

EPA Reg. No. 68119-1

EPA Est. No. 70989-MO-1

KEEP OUT OF REACH OF CHILDREN

DANGER - PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand this label, find someone to explain it to you in detail.)

STATEMENT OF PRACTICAL TREATMENT

IF IN EYES: Hold eyelids open and flush with a steady, gentle stream of water for 15 minutes. Get medical attention.

IF SWALLOWED: Call a doctor or get medical attention. Do not induce vomiting. Drink promptly a large quantity of milk, egg whites, gelatin solution, or if these are not available, drink large quantities of water. Avoid alcohol.

IF ON SKIN: Wash with plenty of soap and water. Get medical attention.

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

See page two for additional precautionary statements.

Manufactured for:  
WILFARM L.L.C.  
5401 North Oak Trafficway  
Gladstone, MO 64118-4627

ACCEPTED  
with COMMENTS  
In EPA Letter Dated

MAY 24 1989  
Under the Federal Insecticide,  
Fungicide, and Rodenticide Act  
as amended, for the pesticide  
registered under EPA Reg. No.  
68119-1

NET CONTENTS  
1 GAL. (3.79 LITERS)



**PRECAUTIONARY STATEMENTS**

**DANGER**

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

Corrosive. Causes irreversible eye damage. May be fatal if absorbed through skin. Harmful if swallowed or inhaled. Do not get in eyes, on skin, or on clothing. Avoid breathing spray mist.

**PERSONAL PROTECTIVE EQUIPMENT**

Applicators and other handlers must wear coveralls over short-sleeved shirt and short pants, waterproof gloves, chemical-resistant footwear plus socks, protective eyewear, chemical-resistant headgear for overhead exposure, and chemical-resistant apron when cleaning equipment, mixing, or loading.

**Mechanical Transfer for Containers over 1 Gallon and Less Than 5 Gallons:** Mixers and loaders who do not use a mechanical system (probe and pump) to transfer the contents of this container must wear coveralls or a chemical-resistant apron in addition to the other required PPE.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. 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. After each day of use, clothing or PPE must not be reused until it has been cleaned.

**ENGINEERING CONTROLS STATEMENTS**

**Mechanical Transfer for Containers of 5 or More Gallons:** Do not open pour product from this container. A mechanical system (such as a probe and pump or spigot) must be used for transferring the contents of this container. If the contents of a non-refillable pesticide container are emptied, the probe must be rinsed before removal. If the mechanical system is used in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4)], the handler PPE requirements may be reduced or modified as specified in the WPS.

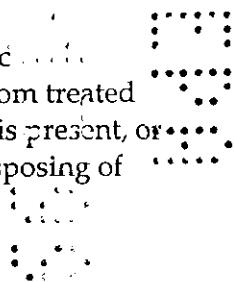
When handlers use enclosed cabs or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

**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**

This product is toxic to aquatic invertebrates. Drift or runoff may adversely affect aquatic invertebrates and nontarget plants. Do not apply when weather conditions favor drift from treated area. For terrestrial uses, 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.



Most cases of groundwater contamination involving phenoxy herbicides such as 2,4-D have been associated with mixing/loading and disposal sites. Caution should be exercised when handling 2,4-D pesticides at such sites to prevent contamination of groundwater supplies. Use of closed systems for mixing or transferring this pesticide will reduce the probability of spills. Placement of the mixing/loading equipment on an impervious pad to contain spills will help prevent groundwater contamination.

**DIRECTIONS FOR USE**

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

Do not apply this product 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.

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

**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 48 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 over short-sleeved shirt and short pants, waterproof gloves, chemical-resistant footwear plus socks, protective eyewear, and chemical-resistant headgear for overhead exposure.

**NON-AGRICULTURAL 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.

Do not allow people (other than applicator) or pets on treatment area during application. Do not enter treatment areas until spray has dried.

**STORAGE AND DISPOSAL**

**STORAGE:** Do not contaminate water, food, feed, seeds, fertilizer, insecticides, fungicides by transportation, storage, disposal or cleaning of equipment. Do not store near pesticides, fertilizers, or seeds. Store only in the original container, tightly closed and in a locked and secure place away from children and pets. This product can be stored in an unheated building. However, 2,4-D Amine 4 exposed to subfreezing temperatures should be warmed to at least 40°F and mixed thoroughly before using.

**SPILL OR LEAK PROCEDURES:** In the event of a spill or leak, make sure all personnel involved in spill cleanup follow good industrial hygiene practices. Small spills can be handled routinely. Cover the spill with an absorbent material such as vermiculite or sawdust to prevent dust. Sweep up the material and place in an appropriate chemical waste container. Seal container and dispose of according to pesticide disposal instructions below. Wash the spill area with a saturated solution of sodium carbonate and a strong detergent. Flush the spill area with water to remove any residue.

**PESTICIDE DISPOSAL:** Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law and may contaminate groundwater. If these wastes cannot be disposed of by use according to label instructions, contact your state Pesticide or Environmental Control Agency or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

**CONTAINER DISPOSAL:** Triple rinse (or equivalent), adding rinsate to spray tank. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**GENERAL INFORMATION**

2,4-D Amine 4 is a herbicide that provides control of many emerged susceptible annual and perennial broadleaf weeds.

Performance of this product may be affected by local conditions, crop varieties, and application method. User should consult local Extension Service, Agricultural Experiment or University Weed Specialists, and state regulatory agencies for recommendations in his area.

Best results are obtained when product is applied to young succulent weeds that are actively growing. The lower recommended rates will be satisfactory on susceptible annual weeds. For perennial weeds and conditions such as the very dry areas of the western states where control is difficult, the higher recommended rates should be used.

When product is used for weed control in crops, the growth stage of the crop must be considered.

Some plants and weeds, especially woody varieties, are difficult to control and may require repeat applications.

Application rates should be 1 to 5 gallons of total spray by air or 5 to 25 gallons by ground equipment unless otherwise directed. Regardless of application method, use the recommended amount of 2,4-D per acre. For crop uses, do not mix with oil, surfactants, or other adjuvants unless specifically recommended. To do so may reduce herbicide's selectivity and could result in crop damage.

Aerial applications should be used only when there is no danger of drift to susceptible crops. Do not apply this product when weather conditions such as temperature, air inversions, or wind favor drift from treated areas. Many states have regulations concerning aerial application of 2,4-D formulations. Consult local regulatory authorities before making applications. This product contains dimethylamine salt of 2,4-D, one of the least volatile forms of 2,4-D.

Because coarse sprays are less likely to drift than fine, do not use equipment (such as hollow cone

small orifice nozzles) or high spray pump pressure that produces fine sprays.

Product should not be allowed to come into contact with desirable, susceptible plants such as beans, cotton, fruit trees, grapes, legumes, ornamentals, peas, tomatoes, and other vegetables. This product should not be used in greenhouses. Excessive amounts of this product in the soil may temporarily inhibit seed germination and all plant growth.

Users should note that herbicide treatment of public water requires a permit from appropriate state agencies in most states. Your Conservation Department or Game and Fish Commission will aid you in securing a permit in your state.

Spray equipment used to apply 2,4-D should not be used for any other purpose until thoroughly cleaned by a suitable chemical cleaner.

**Spray Preparation:** Add the recommended amount of product to approximately 1/2 the volume of water to be used for spraying. Agitate well, then add the remainder of the water. Continue agitation during application until spray tank is empty.

**Use in Liquid Nitrogen Fertilizer:** Product may be combined with liquid nitrogen fertilizer suitable for foliar application on corn, grass, pastures, or small grains in one operation. Use product according to directions on this label for those crops. Use liquid nitrogen fertilizer at rates recommended by supplier or Extension Service Specialist. Mix the product and fertilizer according to the following instructions to reduce the possibility of incompatibility:

Fill the spray tank approximately 1/2 full with the liquid nitrogen fertilizer. In a separate clean container, mix the amount of product to be used with an equal amount of water. Add the product mixture to the spray tank while agitating. Add the remainder of the fertilizer while continuing to agitate. Apply immediately, maintaining agitation during application. DO NOT APPLY DURING COLD (NEAR FREEZING) WEATHER. Spray mixture must be used immediately and may not be stored. **Note:** Pre-mixing the product with an equal amount of water is important.

#### WHERE TO USE

This product is used to control broadleaf weeds in cereal crops, corn, sorghum, and soybeans; weeds and brush in rangelands, pastures, rights-of-way, and similar noncrop uses; tree injection and for aquatic weed control.

#### RECOMMENDED RATES OF PRODUCT PER ACRE\*

Crop	Normal Rates (usually safe to crop)	Higher Rates for Special Situations** (more likely to injure crop)
<b>SMALL GRAINS</b>		
<b>Spring Postemergent (not underseeded with legumes)</b>		
wheat, barley, rye	2/3 to 1-1/2 pts.	1 to 3 pints
oats	1/2 to 1 pint	1-1/2 to 2 pts.
millet	2/3 to 1-1/3 pts	2 to 3 pints
<b>Spring Postemergent (underseeded with legumes)</b>		
wheat, barley, oats, rye	1/4 to 1/2 pint	



<b>Preharvest (dough stage)</b>		
wheat, barley, oats	1 to 2 pints	2 to 3 pints
<b>CORN</b>		
Preplant	1 to 2 pints	
Preemergent	2 to 4 pints	
Emergent	1 pint	1-1/2 pints
Postemergent		
to 8 inches tall	1/2 to 1 pint	
8 inches to tasseling (directed spray only)	1 pint	1-1/2 to 2-1/2 pts.
Preharvest	1 to 2 pints	
<b>SORGHUM</b>		
Postemergent		
6 to 8 inches tall	2/3 to 1 pint	
8 to 15 inches tall (directed spray only)	1 pint	1-1/2 to 2 pints
<b>RICE</b>		
	1 to 2-1/2 pints	2 to 3 pints
<b>SUGARCANE</b>		
Preemergent	4 pints	
Postemergent	1-1/2 to 2 pints	

NOTE: The higher rates as recommended above may be necessary to control difficult weed problems, such as dry conditions in the western states. They should not be used, however, unless possible crop injury is acceptable. User should consult local Extension Service or Agricultural Experiment Station Weed Specialists for recommendations on special conditions.

\*If band treatment is used, base the dose on the actual area sprayed.  
\*\*Arizona, Idaho, Montana, Oregon, Utah, Washington, Wyoming.

**WEED LIST**

When used properly, product will kill or control the weeds listed below, in addition to many other noxious plants which are susceptible to 2,4-D:

- |   |                  |                     |                    |
|---|------------------|---------------------|--------------------|
| Alders                                  | Creeping jenny   | Mallow              | Southern wild rose |
| Alligatorweed                           | Croton           | Many-flowered aster | Sowthistle         |
| American lotus                          | Curly indigo     | Marijuana           | Spanishneedles     |
| Arrowhead                               | Dandelion        | Marshelder          | Spatterdock        |
| Artichoke                               | Devil's claw     | Mexicanweed         | Stinging nettles   |
| Aster                                   | Dock             | Morningglory        | Stinkweed          |
| Austrian fieldcress                     | Dogbane          | Muskthistle         | Sumac              |
| Beggarticks                             | Duckweed         | Mustard             | Sunflower          |
| Biden                                   | Elderberry       | Nettles             | Sweet clover       |
| Bindweed (hedge,<br>field and European) | Fleabane (daisy) | Nutgrass            | Tanweed            |
| Bitterweed                              | Fixweed          | Orange hawkweed     | Tarweed            |
| Bitter wintercress                      | Florida pusley   | Parrotfeather       | Thistles           |
|   | Frenchweed       | Parsnip             | Toadflax           |

Black-eyed Susan	Galinsoga	Pennycress	Tumbleweed
Blessed thistle	Goatsbeard	Pennywort	Velvet leaf
Blue lettuce	Goldenrod	Pepperweeds	Vervain
Boxelder	Goosefoot	Pigweed	Vetch
Broomweed	Ground ivy	Plantain	Virginia creeper
Buckhorn	Gumweed	Poison hemlock	Water hyacinth
Bull thistle	Healall	Pokeweed	Water lily
Bulrush	Hemp	Poorjoe	Water plantain
Burdock	Henbit	Povertyweed	Water primrose
Bur ragweed	Hoary cress	Prickly lettuce	Water shield
Buttercup	Honeysuckle	Primrose	Wild carrot
Canada thistle	Horsetail	Puncturevine	Wild lettuce
Carpetweed	Indigo	Purslane	Wild parsnips
Catnip	Indian mallow	Ragweed	Wild radish
Chickweed	Ironweed	Rush	Wild rape
Chickory	Jerusalem artichoke	Russian thistle	Wild strawberry
Cinquefoil	Jewelweed	Sagebrush	Wild sweet potato
Cockle	Jimsonweed	St. Johnswort	Willow
Cocklebur	Knotweed	Salsify	Witchweed
Coffeebean	Lambsquarters	Shepherdspurse	Wormsweed
Coffeeweed	Locoweed	Sicklepod	Yellow rocket
Common sowthistle	Lupines	Sneezeweed	

**Less Susceptible Weeds**

Kochia	Poison ivy	Wild garlic	Pigweed (hybrid)
Smartweed	Wild onion		

For best weed control at time of treatment, weeds should be small, actively growing and free of stress caused by extremes in climatic conditions, diseases, or insect damage. The response of the individual weed species to 2,4-D is variable. Consult your local County or State Agricultural Extension Service or Crop Consultant for advice.

**CROPS**

**Small Grains (barley, oats, wheat, rye, millet), not underseeded with a legume:** See table for recommended use rates. Spray when weeds are small after grain begins tillering but before boot stage (usually 4 to 8 inches tall). Do not apply before the tiller stage nor from early boot through milk stage. To control large weeds that will interfere with harvest or to suppress perennial weeds, preharvest treatment can be applied when the grain is in the dough stage. Best results will be obtained when soil moisture is adequate for plant growth and weeds are growing well.

**Small Grains (barley, oats, wheat, rye), underseeded with legumes:** Apply 1/4 to 1/2 pints after grain is 8 inches tall. Do not spray grain in boot to dough stage. Do not spray alfalfa or sweet clover unless the infestation is severe and injury to these legumes can be tolerated. Preharvest treatment can be applied when the grain is in the dough stage. Best results will be obtained when soil moisture is adequate for plant growth and weeds are growing well.

**Spring Planted Oats:** Apply in sufficient water to give good coverage. Apply after crop is fully tillered, except during the boot to dough stage.

**Fall Planted Oats:** Apply after full tillering but before early boot stage. Some difficult weeds may require the higher rates of 1 to 1-1/2 pints per acre for maximum control but injury may result. Do not spray during or immediately following cold weather.

**Note:** Oats are less tolerant to 2,4-D than wheat or barley and more likely to be injured. Do not permit dairy animals or meat animals being finished for slaughter to forage or graze treated grain fields within 14 days after treatment. Do not feed treated straw to livestock.

**For Emergency Weed Control in Wheat:** Perennial broadleaf weeds - apply 3 pints per acre when weeds are approaching bud stage. Do not spray grain in the boot to dough stage. The 3 pint per acre application can produce injury to wheat. Balance the severity of your weed problem against the possibility of crop damage. Where perennial weeds are scattered, spot treatment is suggested to minimize the extent of crop injury.

**Wild Garlic in Grain Stubble:** To prevent new growth of garlic following harvest, apply 2 to 3 quarts of product per acre to stubble. Do not forage for 14 days following application. Do not plant any crop for 3 months after treatment or until 2,4-D has disappeared from soil.

**Corn:** See table for recommended use rates.

**Preplant:** Apply 1 to 2 pints per acre in 15 to 30 gallons of water to control emerged broadleaf weed seedlings or existing cover crops prior to planting corn. Apply 7 to 14 days before planting. Do not use on light, sandy soil, or where soil moisture is inadequate for normal weed growth. Use high rate for less susceptible weeds or cover crops such as alfalfa.

**Preemergent:** Apply product from 3 to 5 days after planting but before corn emerges. Do not use on very light, sandy soils. Use the higher rates on heavy soils. Plant corn as deep as practical.

**Postemergent:** Best results are usually obtained when weeds are small and corn is 5 to 18 inches tall. When corn is over 8 inches tall, use drop nozzles to keep spray off corn foliage as much as possible. Do not apply from tasseling to dough stage. If corn is growing rapidly and temperature and soil moisture are high, use the 1/2 pint per acre rate to reduce possibility of crop damage. Delay cultivation for 8 to 10 days after treatment to prevent stalk breakage due to temporary brittleness caused by 2,4-D. Application rates of up to 1 pint per acre may be used to control some hard-to-control weeds. However, the possibility of injury to the corn is increased.

Do not use with atrazine, oil or other adjuvants. Since the tolerance of individual hybrids varies, consult your seed supplier, Extension Service or University Specialist for information.

**Preharvest:** After the hard dough or denting stage, apply 1 to 2 pints of product per acre by aerial or ground equipment to suppress perennial weeds, decrease weed seed production, and control tall weeds such as Cocklebur, Dogbane, Jimsonweed, Ragweed, Sunflower, Velvetleaf, and vines such as Bindweed that interfere with harvesting. Do not forage or feed corn fodder to livestock for 7 days following application.

**Note:** Hybrids vary in tolerance to 2,4-D. Some are easily injured. Spray only varieties known to be tolerant to 2,4-D. Consult the seed company representative, your Agricultural Experiment Station or Extension Service Weed Specialist for this information.

**Rice:** See table for recommended use rates. Apply in the late tillering stage of rice development at the time of first joint development (first to second green ring) usually 6 to 9 weeks after emergence. Do not apply after panicle initiation, after rice internodes exceed 1/2 inch, at early seedling, early panicle, boot, flowering, or early heading stage.

**Note:** Some rice varieties under certain conditions can be injured by 2,4-D. Before spraying consult local Extension Service or University Specialists for appropriate rates and timing of 2,4-D.

**Sorghum (Milo):** See table for recommended rate. Apply to sorghum when crop is 4 to 12 inches tall with secondary roots well established. Use drop nozzles when crop is over 10 inches high. Do not apply from flowering to dough stage. Rates of up to 1 pint per acre may be used to control some hard-to-control weeds. However, the chance of crop injury increases with the higher rates. Do not use with oil. Use lower rate if conditions of high temperature and high soil moisture exist.

**Soybeans (Preplant Only) - For Use in Crop Residue Management Systems:** Apply 1 pint of product not less than 15 days prior to planting soybeans or apply 2 pints not less than 30 days prior to planting. Apply to postemergent weeds when small, actively growing, and free of stress caused by extremes in climatic conditions, diseases, or insect damage. The response of individual weed species is variable. Consult your local county agent or State Agricultural Extension Service or Crop Consultant for advice. Use the higher rate on larger weeds and when perennials are present. (See WEEDS CONTROLLED below.)

Apply using aerial or ground equipment in sufficient gallonage to obtain adequate coverage of weeds. Use 2 or more gallons of water per acre in aerial equipment and 10 or more gallons of water per acre in ground equipment.

**WEEDS CONTROLLED**

alfalfa*	horseweed or marestalk	ragweed, giant
bindweed*	ironweed	shepherdspurse
bullnettle	lambsquarters, common	smartweed, Pennsylvania*
bittercress, smallflowered	lettuce, prickly	sowthistle, annual
buttercup, smallflowered	morningglory, annual	speedwell
Carolina geranium	mousetail	thistle, Canada*
cinquefoil, common & rough	mustard, wild	thistle, bull
clover, red*	onion, wild*	velvetleaf
cocklebur, common	pennycress, field	vetch, hairy*
dandelion*	peppergrass*	Virginia copperleaf
dock, curly	plantains	
evening primrose, cutleaf	purslane, common	
garlic, wild*	ragweed, common	*Partially controlled

After applying 2,4-D, plant soybean seed as deep as practical or at least 1-1/2 to 2 inches deep. Adjust the planter press wheel, if necessary, to ensure that planted seed is completely covered.

If desired, this product may be applied preplant to soybeans in tank mixtures with other herbicides such as Poast®, Poast® Plus, Roundup®, Roundup D-Pak®, Honcho®, Gramoxone® Extra, Prowl® DG, Prowl® 3.3 EC, Pursuit® Plus, Scepter® 70 DG, Squadron® and others that are registered for preplant soybean use.

Compatible crop oil concentrates, agricultural surfactants, and fluid fertilizers approved for use on growing crops may increase the herbicidal activity of 2,4-D on certain weeds and may be added to the spray tank. Read and follow all directions and precautions on this label and on all labels of adjuvants or fertilizers mixed with this product.

**NOTE:** Unacceptable injury to soybeans planted in treated fields may occur. Whether or not soybean injury occurs and the extent of the injury will depend on weather and agronomic factors such as the amount of weed vegetation and previous crop residue present. Injury is more likely to occur under cool rainy conditions and where there is less weed vegetation and crop residue present.

This soybean preplant treatment is not registered for use in California.

#### **RESTRICTIONS AND LIMITATIONS FOR USE IN SOYBEANS**

Do not apply this product prior to planting soybeans if you are not prepared to accept the results of soybean injury including possible loss of stand and yield.

Do not use on sandy soils with low organic matter content (less than 1.0%).

Do not apply this product when weather conditions such as temperature, air inversions, or wind favor drift from treated areas to susceptible plants.

Do not mow or cultivate weeds prior to treating with this product as poor control may result.

Do not feed treated hay, forage, or fodder or graze soybeans from treated fields to livestock. Do not feed or graze treated cover crops to livestock.

Only one application of this product may be made prior to planting soybeans per growing season, regardless of application rate used.

Do not replant fields treated with this product in the same growing season with crops other than those labeled for 2,4-D use.

**Sugarcane:** See table for recommended rate. Apply as a pre- or postemergent spray in the spring after canes emerge and through the layby stage. Consult your local Agricultural Experiment Station or Extension Service Weed Specialists on specific use of this product to control broadleaf and grassy weeds.

**Stone Fruit & Nut Orchards (except in California):** To control annual broadleaf weeds on the orchard floor, apply 3 pints per acre using coarse sprays and low pressure in sufficient volume of water to obtain thorough wetting of weeds. Treat when weeds are small and actively growing. Do not use on light, sandy soil. **NOTE:** Do not apply (1) to bare ground as injury may result, (2) to newly established or young orchards. Trees must be at least 1 year old and in vigorous condition, (3) during bloom, (4) more than twice a year, (5) immediately before irrigation and withhold irrigation for 2 days before and 3 days after treatment. Also, do not allow spray to drift onto or contact foliage, fruit, stems, trunks of trees or exposed roots, as injury may result. Do not graze or feed cover crops from treated orchards. Do not harvest stone fruit within 40 days of application or nuts within 60 days of application.

**Ornamental Turf such as lawns, golf courses, cemeteries, and parks:** Apply 2 to 4 pints on annual broadleaf weeds and 4 pints on biennial and perennial broadleaf weeds. Use enough water to give good coverage. Treat when weeds are young and actively growing. Perennial weeds should be near the bud stage but not flowering at application. Do not use on susceptible southern grasses such as St. Augustine. Do not apply to newly seeded areas until grass is well established. Bentgrass, clover, legumes, and dichondra may be injured by this treatment. **Notes for all turf sites (excluding sod farms):** The maximum number of broadcast applications per treatment site is 2 per year.

**Grasses in Conservation Reserve Program Areas:** To control or suppress annual broadleaf weeds, apply when weeds are actively growing. Use 1/2 to 1 pint per acre when weeds are small. Use higher rates on older weeds. Excessive injury may result if applied to young grasses with fewer than 6 leaves or prior to grasses being well established. To control or suppress biennial and perennial broadleaf weeds in established grasses, apply at a rate of 1 to 2 quarts per acre. Apply to actively growing weeds. Treat when biennial weeds are in the seedling to rosette stage and before flower stalks become apparent. Treat perennial weeds in the bud to bloom stage.

**Note:** Suggest at least 2 gallons of water per acre by air and 5 gallons of water per acre by ground. Do not harvest or graze treated Conservation Reserve Program areas. Do not apply to grasses in the boot to dough stage if grass seed production is desired.

**Grass Seed Crops:** Apply 1 to 4 pints of 2,4-D per acre in the spring or fall to control broadleaf weeds in grass being grown for seed. Do not apply from early boot to milk stage. Spray seedling grass only after the five leaf stage, using 3/4 to 1 pint per acre to control small seedling weeds. After grass is well established, higher rates of up to 4 pints per acre can be used to control hard-to-control annual or perennial weeds. For best results, apply when soil moisture is adequate for good growth. Do not use on bentgrass unless injury can be tolerated. Do not graze dairy cattle within 7 days of application.

**Fallow Land:** On established perennial species such as Canada thistle and Field bindweed, apply up to 3 quarts of product per acre. For annual broadleaf weeds, apply 1 to 2 quarts per acre. Do not plant any crop for 3 months after treatment or until, 2,4-D has disappeared from soil.

**Established Pastures and Rangelands:** Use 1 to 4 pints of product in sufficient water to give good coverage to one acre depending on type of weeds and stage of growth. Use only on established stands of perennial grasses. Do not use on bentgrass, alfalfa, clover, or other legumes. Do not use from early boot to milk stage where grass seed production is desired. Do not graze dairy cattle within 7 days of application. Do not apply this product within 30 days of cutting grass for hay. Remove meat animals from treated areas 3 days prior to slaughter.

**Control of Southern Wild Rose:** On rangelands, roadsides, and fencerows, use 1 gallon of product plus 4 to 8 fluid ounces of an agricultural surfactant per 100 gallons of water and spray thoroughly as soon as foliage is well developed. Two or more applications may be required. On rangeland, apply a maximum of 6 quarts of product per acre per application. Do not graze dairy animals on treated areas within 7 days after application.

**General Weed Control:** (Airfield, Roadsides, Vacant Lots, Drainage Ditch Banks, Fence Rows, Industrial Sites and similar areas): Use 1 to 3 quarts of product per acre. Usually 2 quarts per acre will give adequate control. Do not use on herbaceous ground covers or creeping grass such as

bentgrass. Legumes will usually be damaged or killed. Deep-rooted perennials may require repeat applications. Do not use on freshly seeded turf until grass is well established. Delay reseeding for 3 months or until 2,4-D has disappeared from soil.

**Rights-of-Way:** Apply up to 2 gallons of product per acre for the control of perennial broadleaf weeds and susceptible woody species. For less susceptible perennial broadleaf weeds and difficult-to-control woody species, use a combination of 2 gallons of product plus 1 to 4 quarts of Garlon® 3A per acre. For ground application, apply in 20 to 400 gallons per acre to treat dense brush that is 6 feet tall or taller. For aerial application, use 10 to 30 gallons per acre total spray volume.

**Woody Plant Control:** To control woody plants susceptible to 2,4-D, such as alder, buckbrush, elderberry, sumac, and willow on non-crop areas, use 2 to 3 quarts of product per acre in 100 gallons of water. Wet all parts of the plants thoroughly, including stem and foliage, to the point of runoff. Higher volumes of up to 400 gallons per acre are necessary where the brush is very dense and over 6 to 8 feet high. Applications are more effective when made on actively growing plants. Treatment should not be made during time of severe drought nor in early fall when leaves lose their green color. Hard-to-control species may require re-treatment in the following season.

**Poplar/Cottonwood Trees Grown for Pulp-Broadleaf Weed Control:** 2,4-D Amine 4 may be applied through wick applicators or conventional ground sprayers (excluding irrigation systems). Do not allow 2,4-D Amine 4 to contact leaves of the tree. Use 1/2 pint to 3 pints per acre prior to planting or after planting. Two quarts or more of a spreader-activator per 100 gallons of spray solution may be added to improve herbicide performance. Accord® may be mixed with 2,4-D Amine 4 to increase weed control.

**Tree Injection:** For the control of unwanted hardwoods such as elm, oak, hickory, and sweet gum in forest and non-crop areas, apply undiluted product by injecting 1 ml through the bark. Use one injection per inch of trunk diameter measured at breast height (4-1/2 feet from ground). For harder-to-control species (ash, maple, dogwood), use 2 ml of undiluted product per injection. All injections should be made as near the root collar as possible and should be evenly spaced around the trunk. Injections may be made at any time of the year but are most effective during the growing season. Maples should not be treated during the spring sap rise.

No Worker Protection Standard worker entry restrictions or worker notification requirements apply when this product is directly injected into agricultural plants.

**For Dilute Injection:** Mix 1 gallon of product in 19 gallons of water for dilute injections.

### AQUATIC APPLICATIONS

**Weeds and Brush on Irrigation Canal Ditchbanks:** Seventeen western states: Arizona, California, Colorado, Idaho, Kansas, Montana, Nebraska, New Mexico, Nevada, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, Wyoming.

For control of annual and perennial broadleaf weeds, apply 1 to 2 quarts of product per acre in approximately 20 to 100 gallons of total spray. Treat when weeds are young and actively growing before the bud or early bloom stage. For harder-to-control weeds, a repeat spray may be needed after 3 to 4 weeks for maximum results, using the same rates.

Apply no more than 2 treatments per season. For woody brush and patches of perennial broadleaf

weeds, mix one gallon of product in 150 gallons of water. Wet foliage thoroughly, using approximately 1 gallon of spray solution per square rod.

**Spraying Instructions:** Low pressure (10 to 40 psi) power spray equipment should be used and mounted on a truck, tractor, or boat. Apply while traveling upstream to avoid accidental concentration of chemical in the water. Spray when the air is calm, 5 mph or less. Do not use on small canals (less than 10 cfs) where water will be used for drinking.

Boom spraying onto water surface must be held to a minimum and no cross-stream spraying to opposite banks should be permitted. When spraying shoreline weeds, allow no more than 2-foot overspray onto water with an average of less than 1-foot overspray to prevent introduction of greater than negligible amounts of chemical into the water.

Do not allow dairy animals to graze on treated areas for at least 7 days after spraying. Water within treated banks should not be fished.

**For Aquatic Weeds in Lakes, Ponds, Reservoirs, Bayous, Canals, Rivers, Streams, Drainage Ditches, and Marshes:** Use 2-1/2 to 4-1/2 pints of product in 50 to 100 gallons of water per acre. Spray to wet foliage thoroughly. Application should be made when leaves are fully developed, above the water line, and plants are actively growing. Your State Conservation Department or Game and Fish Commission will assist you in determining the best time and rate for application under local conditions.

**Do not apply** to more than 1/3 to 1/2 of the surface area of a lake or pond in any one month because excessive decaying vegetation may deplete oxygen content of water and kill fish. Do not contaminate water intended for irrigation or domestic purposes except as indicated in directions for use on irrigation ditchbanks. Perennial and other hard-to-control weeds may require a repeat application to give adequate control.

**Water Hyacinth (*Eichornia crassipe*):** 2,4-D Amine 4 will control water hyacinth with surface and air applications. Use 2 to 4 quarts (4 lb. acid equivalent per gallon) per acre. Spray the weed mass only. Use 4 quarts when plants are matured or when the weed mass is dense. Apply when water hyacinth plants are actively growing. Repeat as necessary to kill regrowth and hyacinth plants missed in the previous operation.

**Surface Application:** Use power sprayers operated with a boom or spray gun mounted on a boat, tractor or truck. Thorough wetting of foliage is essential for maximum control. Use 100 to 400 gallons per acre of spray mixture. Special precautions such as the use of low pressure, large nozzles and thickening agents should be taken to avoid spray drift in areas of sensitive crops. For DIRECTA-SPRA™ operation use 2,4-D Amine 4 with 1 pint of drift control agent in 50 to 100 gallons of water. For other applications, follow the drift control agent label for mixing directions.

**Air Application:** Use drift control spray equipment or thickening agents mixed into the spray solution. Apply 1.0 gallon per acre of 2,4-D Amine 4 through standard boom systems with a minimum of 5 gallons of spray mix per acre. For MICROFOIL® drift control systems, apply 2,4-D Amine 4 in 12 to 15 gallons spray mix per acre.



2,4-D Acid Equivalent	1/2 lb.	1 lb.	2 lbs.	3 lbs.	4 lbs.
2,4-D Amine 4	1 pt.	2 pts.	2 qts.	3 qts.	4 qts.

**Water Milfoil (*Myriophyllum spicatum*):** For Eurasian Water Milfoil in programs conducted by the Tennessee Valley Authority in dams and reservoirs of the TVA system. 2,4-D Amine 4 will control water milfoil with surface, subsurface and air applications.

**How to Use:** To control water milfoil when less than 5 gallons of concentrate per acre is recommended, dilute the concentrate with water to apply a minimum of 5 gallons of spray mix per acre. Do not treat within 1/2 mile of potable water intakes. Shoreline areas should be treated by subsurface injection applied by boat to avoid aerial drift. Do not apply when weather conditions favor drift from target area. Do not contaminate water by cleaning of equipment washwaters.

**Open Water Areas:** To reduce contamination and prevent undue exposure to fish and other aquatic organisms, do not treat water areas that are not infested with aquatic weeds.

**Amounts To Use:** Apply 2-1/2 to 10 gallons of 2,4-D Amine 4 per acre. The higher rate is used in areas of greater water exchange. These areas may require a repeat application.

**When to Apply:** For best results, apply in spring or early summer when milfoil starts to grow. This timing can be checked by sampling the lake bottom in areas heavily infested with weeds the year before.

**Subsurface Application:** Apply 2-1/2 to 10 gallons of 2,4-D Amine 4 per acre as a concentrate directly into the water through boat mounted distribution systems.

**Surface Application:** Apply 2-1/2 to 10 gallons of 2,4-D Amine 4 per acre in a minimum spray volume of 5 gallons mix per acre.

**Air Application:** Use drift control spray equipment or thickening agents mixed into the spray solution. Apply 2-1/2 to 10 gallons per acre of 2,4-D Amine 4 through standard boom systems with a minimum of 5 gallons of spray mix per acre. For MICROFOIL® drift control spray systems apply 2,4-D Amine 4 in 12 to 15 gallons spray mix per acre.

**CONDITIONS OF SALE AND WARRANTY**

**Conditions of Sale:** This product is sold subject to, and buyer and user are deemed to have accepted the terms contained in, the Conditions of Sale and Warranty, Directions for Use, and Precautionary Statements, which may be varied only by agreement in writing by a duly authorized representative of WILFARM L.L.C.

**Inherent Risks:** The directions for use of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and should be followed carefully. However, 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 weather conditions, presence of other materials, or use of the product in a manner inconsistent with its labeling, all of which are beyond the control of WILFARM L.L.C. or the seller. All such risks shall be assumed by the buyer.

**Warranty Limitations:** WILFARM L.L.C. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the Directions for Use, subject to the inherent risks referred to above. WILFARM L.L.C. makes no other expressed or implied warranty of fitness or merchantability or any other expressed or implied warranty.

**Limitation of Liability:** In no case shall WILFARM L.L.C. or the seller be liable for consequential, special or indirect damages resulting from the use or handling of this product. No claim of any kind shall be greater in amount than the purchase price of the product in respect of which such damages are claimed.

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