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1812-257

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**Griffin**



**FOR USE IN CALIFORNIA ONLY**

ACCEPTED

MAR 28 1994

Under the Federal Insecticide, Fungicide, and Herbicide Act as amended, for the product registered under EPA Reg. No. 1812-257

**Direx 4L<sup>®</sup>-CA**  
HERBICIDE

Made in the USA

## Diuron Flowable Herbicide

For Control of Many Annual and Perennial Grasses and Herbaceous Weeds

### ACTIVE INGREDIENT

Diuron (3- [3,4-dichlorophenyl]-1,1-dimethylurea)\* ..... 40%

INERT INGREDIENTS ..... 60%

TOTAL ..... 100%

Contains 4.0 lbs. of Diuron per gallon.

**KEEP OUT OF REACH OF CHILDREN  
CAUTION**

### STATEMENT OF PRACTICAL TREATMENT

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

IF IN EYES: Flush with plenty of water. Get medical attention if irritation persists.

GRIFFIN CORPORATION  
VALDOSTA, GEORGIA 31601

**Specimen Label**  
**BEST AVAILABLE COPY**

EPA REG NO 1812-257

2076

## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

## CAUTION

Precautionary Statements: Causes eye irritation. May irritate nose, throat and skin. Avoid breathing spray mist. Avoid contact with skin, eyes and clothing. If on skin remove by washing with soap and water. Get medical attention if irritation persists. If in eyes flush with plenty of water. Get medical attention if irritation persists.

### ENVIRONMENTAL HAZARDS

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

### 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/maintain PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

### 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.

### 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.

Direx 4L Herbicide should be used only in accordance with recommendations on this label.

Griffin will not be responsible for losses or damages resulting from use of this product in any manner not specifically recommended by Griffin. User assumes all risk associated with such non-recommended use.

### 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 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 intervals. 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 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

### 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.

Non-crop weed control is not within the scope of the Worker Protection Standard.

### STORAGE AND DISPOSAL

**STORAGE:** Store product in original container only, away from other pesticides, fertilizer, food or feed.

**PRODUCT DISPOSAL:** Do not contaminate water, food or feed by storage or disposal. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**CONTAINER DISPOSAL:** Triple rinse (or equivalent). 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

Injury to or loss of desirable trees or other plants may result from failure to observe the following:

Do not apply (except as recommended for crop use) or drain or flush equipment on or near desirable trees or other plants, or on areas where their roots may extend or in locations where the chemical may be washed or moved into contact with their roots. Do not use on home plantings, trees, shrubs or herbaceous plants, lawns, walks, driveways, grass tennis courts or similar areas. Prevent drift of spray to desirable plants. Do not contaminate any body of water. Do not mix/load or use near wells including abandoned wells and sink holes. Avoid storage of pesticides near well sites. Keep from contact with fertilizers, insecticides, fungicides and seeds. Calibrate sprayers only with clean water away from the well site. Do not apply this product through any type of irrigation system.

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Thoroughly clean all traces of Direx 4L from application equipment immediately after use.

Flush tank, pumps, hose and boom with several changes of water after removing nozzle tips and screens (clean parts separately).

Direx 4L is to be mixed with water and applied as a spray for selective control of weeds in certain crops and for weed control on non-cropland areas. It is non-corrosive to equipment, non-flammable and non-volatile.

Direx 4L may be applied to soil prior to emergence of weeds to control susceptible weed seedlings for an extended period of time. The degree of control and duration of effect will vary with the amount of chemical applied, soil texture, rainfall and other conditions. Soils high in clay or organic matter require higher dosages than soil low in clay or organic matter, for equivalent herbicide performance. Moisture is required to activate the herbicide. Best results occur if rainfall (or sprinkler irrigation) occurs within 2 weeks of application.

Direx 4L applied before emergence of crop and weeds, is an effective procedure because susceptible weeds are controlled in an early, vulnerable seedling stage before they compete with the crop. With favorable moisture conditions, Direx 4L continues to control weeds for some time as the crop becomes better able to compete. Should weed seedlings begin to break through the preemergence treatment in significant numbers, secondary weed control procedures should be implemented. These include cultivation and postemergence herbicide application.

Direx 4L may also be used to control emerged weeds. Results vary with rate applied and environmental conditions. Best results are obtained on succulent weeds growing under conditions of high humidity and temperature of 70°F or higher. Additions of a surfactant to the spray (where recommended) increases contact effects of Direx 4L.

Direx 4L may be used as a directed postemergence application. Contact of crop foliage and/or fruit with spray or mist must be avoided on the following crops: artichoke, corn (field), cotton, sorghum (grain), sugarcane and established plantings of apples, bananas, plantains, citrus, olives, papayas, peaches, pears, pecans and walnuts as injury may occur.

Under specified conditions (see RECOMMENDED USES), Direx 4L without surfactant may be applied over the top of alfalfa (established, dormant or semidormant) and asparagus (established).

Weeds species vary in susceptibility to Direx 4L and they may be more difficult to control when under stress. Combinations of Direx 4L with other herbicides (as registered) increase the number of weed species controlled. Consult labels of the companion product for this and other information. Observe all cautions on labeling of all products used in mixtures.

Since the effect of Direx 4L varies with soils, uniformity of application and environmental conditions, it is suggested that growers limit their first use to small areas.

## SELECTIVE USE IN CROPS

### PREEMERGENCE USE (Germinating Weeds)

Direx 4L, at recommended rates, controls and annual weeds and grasses such as:

0.6 to 0.8 quarts/acre	1.2 to 1.6 quarts/acre	1.6 to 4.8 quarts/acre
Crabgrass	Amsinckia	Ageratum
Barnyard grass	(Fiddleneck)	Annual lovegrass
(watergrass)	Annual	Annual ryegrass
Lambsquarters	bluegrass	Annual smartweed
Pigweed	Annual sweet	Annual sowthistle
Purslane	vernalgrass	Corn speedwell
Ragweed	Annual	Dayflower
	groundcherry	Flora's paintbrush
	Annual	Hawksbeard
	morningglory	Horseweed
	Chickweed	Johnsongrass
	Corn spurry	(seedling)
		Kochia
		Kyllinger (Kyllinga)
	Dogfennel	Marigold
	Foxtail	Mexican clover
	Gromwell	Orchardgrass
	Knawel	Peppergrass
	Pennycress	Pineappleweed
	Rattail fescue	Pokeweed
	Red sprangletop	Rabbit tobacco
	Shepherdspurse	Rice grass
	Tansymustard	Sandbur
	Velvetgrass	Spanishneedles
	Wild buckwheat	Velvetleaf
	Wild lettuce	(buttonweed)
	Wild mustard	Wild radish

### Partial Control:

0.8 quarts/acre	3.2 quarts/acre	6.4 to 8.0 quarts/acre
Annual morningglory	Horsenettle	Guineagrass
Cocklebur	Quackgrass	Maidencane
Prickly sida		Pangolagrass
(teaweed)		
Sesbania		
Sicklepod		

## APPLICATION DIRECTIONS

**AERIAL APPLICATION:** For alfalfa, asparagus and cotton (preplant) application may be made by aircraft in a minimum of 3 gallons of water per acre. Avoid overlapping of spray swath and avoid application under conditions where excessive drift may occur. Where land is bedded, make application parallel to rows.

**GROUND APPLICATION:** Use a boom power sprayer properly calibrated to a constant speed and rate of delivery. Openings in screens should be 50 mesh or larger. Continuous agitation is required in the spray tank to keep the material in suspension. Agitation may be by mechanical or hydraulic means. If by-pass or return line is used, it should terminate at bottom of tank. Avoid overlapping and shut off spray booms while starting, turning, slowing or stopping or injury to crop may result.

**PREEMERGENCE:** For preemergence application use 25 to 40 gallons/acre and spray pressure of 30 to 40 psi. Preemergence weed control will be reduced on high organic matter soils such as peat or muck.

**POSTEMERGENCE:** For postemergence application use sufficient volume (minimum of 25 gallons/acre) for thorough coverage of weed foliage. Use spray pressure of 20-25 psi to keep spray drift to a minimum.

Direx 4L at recommended rates controls seedling annual weeds such as crabgrass, goosegrass, barnyard grass (watergrass), crowfoot, pigweed, purslane and morningglory. Addition of a surfactant to the spray (where recommended) increases contact effects of Direx 4L. Best results are obtained on succulent weeds growing under conditions of high humidity and temperatures over 70°F or higher.

**MIXING INSTRUCTIONS:** Mix proper amount of Direx 4L into necessary volume of water. Where use of surfactant is recommended, dilute with 10 parts of water and add as last ingredient to nearly full spray tank.

**REPLANTING:** Unless otherwise directed, do not replant treated areas to any crop within 2 years after last application as injury may result.

**RATES:** All rates are expressed as broadcast rates where band applications are specified use proportionately less. For example, use 1/3 of the broadcast rate when treating a 14 inch band where row spacing is 42 inches. Where a range of dosages is given, use the lower rate on coarse textured soils low in clay or organic matter and the higher rate on the fine textured soils high in clay or organic matter. For postemergence application, use the lower rate on smaller weeds and the higher rate on the larger weeds.

**SOIL LIMITATIONS:** Crop injury may result from failure to observe the following: Unless otherwise directed, do not use on any sand, loamy

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sand, gravelly soils or exposed subsoils; nor on pecans where organic matter is less than 0.5%; nor on alfalfa, apples, artichoke, bermudagrass pasture, citrus, cotton, olives, papayas, peaches, pears, sorghum and walnuts where organic matter is less than 1%.

**FIELD CROPS:** A good seedbed must be prepared before preemergence use of Direx 4L, as crop injury may result if application is made to ground which is cloddy or compacted resulting in improperly planted seed. Plant seed to depth specified. Unless otherwise directed, the surface of the soil should not be cultivated or disturbed after application of Direx 4L and before emergence of the crop as weed control may be reduced and crop injury may result. However, if moisture is insufficient to activate the herbicide, a shallow cultivation (rotary hoe preferred) should be made after emergence of crops while weeds are small enough to be controlled by mechanical means. See "Soil Limitations" for crops listed below.

**FRUIT AND NUT CROPS:** Unless otherwise directed, make single application per year as a directed spray avoiding contact of foliage and fruit with spray or drift. See "Soil Limitations" section for restrictions. Do not graze livestock in treated orchards or groves.

## RECOMMENDED USES ALFALFA

Treat only stands established for 1 year or more. Do not apply to seedling alfalfa nor to alfalfa/grass mixtures. Do not apply to alfalfa under stress from disease, insect damage, shallow root penetration (such as shallow hard pans), alkali spots, nor to flooded fields as crop injury may result. Do not spray on snow-covered or frozen ground.

**Dormant and Semi-Dormant Varieties:** Use 1.2 to 2.4 quarts per acre. For control of volunteer alfalfa use 3.2 quarts per acre. Apply in fall or winter after alfalfa becomes dormant or semi-dormant, but before growth begins in the spring. Crop injury may result if application is made to actively growing alfalfa. For best results, apply before weeds have emerged or become established (2 inches in height or diameter). Control of established weeds is improved by applying Direx 4L with a suitable contact herbicide registered for such use. Sufficient rainfall for soil activation of Direx 4L is unlikely in California after February 1. Treated areas may be replanted to any crop after one year from last application if rate does not exceed 1.6 quarts per acre.

## APPLES

**Direx 4L Alone:** Use only under trees established in the orchard for at least 1 year. Do not treat varieties grafted on full-dwarf root stocks. Apply 3.2 quarts per acre from March through May. In the Far West, apply 3.2 quarts per acre to small weeds less than 2 inches in height or diameter under dormant trees. Alternatively, treatments to small weeds may be applied at 1.6 quarts per acre postharvest followed by 1.6 quarts per acre prior to bud break.

**Direx 4L plus Sinbar:** Use only under trees established in the orchard for at least 2 years. Apply either in the spring or after harvest in the fall before weeds emerge or during early seedling stage of weed growth.

### RATE PER ACRE

Soil Texture	1 to 2 % Organic Matter		More Than 2% Organic Matter	
	Direx 4L Quarts/Acre	Sinbar Lbs/Acre	Direx 4L Quarts/Acre	Sinbar Lbs/Acre
Sandy loam	0.8	+ 1.0	1.2	+ 1.5
Loam, silt loam, silt	1.2	+ 1.5	1.6	+ 2.0
Clay loam, clay	1.6	+ 2.0	1.6	+ 2.0

Where crop is grown under furrow irrigation or under raised-berm flood irrigation (trees 4 inches to 6 inches above waterline), apply only as a band treatment. Do not treat trees planted in the bottom of irrigation furrows, nor trees grown under flat flood or basin irrigation, as injury to trees may result. Where complete weed control to harvest is desired, additional weed control measures may be required.

## ARTICHOKE

Apply 1.6 to 3.2 quarts per acre in late fall or early winter after the last cultivation. Apply before weeds germinate or to emerging seedlings. Direct spray to cover the area between the rows and at the base of artichoke plants, keeping contact with crop plants at a minimum.

## ASPARAGUS

Apply as a band or broadcast treatment. Do not apply to young plants during the first growing season (except as noted below), nor to newly seeded asparagus, nor on plants with exposed roots as severe injury may result. Preemergence weed control will be reduced on soils with greater than 5% organic matter.

**Established Plantings:** On light sandy soils and other soils low in clay or organic matter, apply 0.8 to 1.6 quarts per acre. On soils high in clay or organic matter, use 1.6 to 3.2 quarts per acre. Two applications may be used. The first application should be made before weeds become established but no earlier than 4 weeks before spear emergence and no

later than the early cutting period. If weeds are controlled into the cutting period by cultural practices, application may be delayed until immediately after the last cultivation. A second application may be made immediately following completion of harvest provided rainfall is expected. When two applications are used in one season, do not exceed 2.4 quarts per acre per application. In Washington (irrigated crop), apply a single treatment of 3.2 quarts per acre. If treatment is delayed until late winter or early spring, incorporation of the chemical in the top 1 to 2 inches of soil may substitute for lack of rain to activate the herbicide.

**Newly Planted Crowns (San Joaquin Delta, California):** Make a single treatment of 1.6 to 3.2 quarts per acre on soils high in clay or organic matter. Use the lower rate on clay loams and the higher rate on peat soils. Do not use on soils containing less than 2% organic matter. Soil must be settled by rainfall or irrigation prior to treatment. Do not treat crowns planted to a depth of less than 2 inches.

## BANANAS AND PLANTAINS

**New Plantings:** To control annual weeds, apply 1.2 to 2.4 quarts per acre after planting but before weeds emerge. Do not apply to loose soil directly over the planting material.

**Established Plantings:** For control of annuals and for top-kill of perennial such as bermudagrass, birdseed grass and guineagrass. Apply 2.4 to 4.8 quarts per acre plus surfactant. Avoid contact of banana plants with spray or drift as injury may result. When tall, dense weed growth is present, remove weed growth before application. If application is made to soil free of weeds, omit surfactant from the spray mixture. Repeat treatment as needed. Apply at 6 week intervals or longer for a maximum of 9.6 quarts per acre (broadcast) in 12 months.

**Note:** Do not replant treated area to any crop within 2 years after last application as injury to subsequent crops may result, except sugarcane or pineapple may be planted after one year.

## BERMUDAGRASS PASTURES (Newly Sprigged)

For newly sprigged only, apply 0.8 to 2.4 quarts after planting and before emergence of bermudagrass or weeds. Alternatively, for control of emerged annual weeds up to 4 inches in height, apply 0.4 to 0.8 quarts per acre with surfactant. If bermudagrass has emerged at time of treatment, temporary burn of exposed plant parts may occur.

Plant sprigs (stolons) 2 inches deep in a well-prepared seedbed. Do not treat areas where sprigs are planted less than 2 inches deep as crop injury may result. Do not graze or feed foliage from treated areas to livestock within 70 days after application.

## BLACKBERRIES, BOYSENBERRIES, DEWBERRIES, LOGANBERRIES AND RASPBERRIES

Use only in fields which have been established for at least 1 year or more. Do not apply to berries interplanted with fruit trees. Do not apply to plants where roots are exposed as injury may result. Apply as a band treatment at base of canes or bushes. For spring application, apply before germination and growth of annual weeds.

**California:** For control of winter annual weeds, apply 1.6 quarts per acre in October or November. Repeat at same rate in late spring controls summer annuals. A single application of 2.4 quarts per acre in January or February will control annuals in some areas, but the separate fall and spring schedule is preferred.

## CITRUS

Use only under trees established in the grove for at least 1 year. Time application as indicated for specific areas, except application may be initiated any time of the year where sprinkle or flood irrigation can be timed to activate the herbicide. Established perennial weeds require other special control procedures. Do not apply under citrus trees that have been subjected to freezing within 6 months.

**Except Imperial and Coachella Valleys:** Apply 2.4 to 3.2 quarts per acre shortly after grove has been laid up in final form (non-tillage program) in late fall or early winter. Alternatively, apply 1.6 quarts per acre in October or November and repeat at the same rate in March or April. Subsequent annual applications of 1.6 to 2.4 quarts will usually give adequate weed control.

## CORN (Field)

**Postemergence:** Make a single application of 0.6 quart per acre in combination with non-pressure nitrogen solution. If nitrogen solution is not used, apply 0.8 quart per acre with surfactant. Apply as directed spray when corn is at least 20 inches high and weeds are no taller than 3 inches. DO NOT APPLY OVER TOP OF CORN. Do not replant to any crop within 1 year except cotton, corn, and grain sorghum may be planted the spring following treatment.

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## COTTON

During a single crop season, do not exceed the following amount of Direx 4L per acre as injury to subsequent crops may result: 0.8 quart on loamy sand, 1.2 quart on sandy loam, 1.6 quarts on clay loam, and 2.2 quarts on clay.

Injury may occur if Direx 4L is used in conjunction with soil-applied organic phosphate pesticides.

Do not allow livestock to graze treated cotton.

**Preplant:** Use Direx 4L alone or as a separate operation following preplant broadcast treatment with Trilin or other trifluralin products (incorporated according to directions on the trifluralin product label). Apply Direx 4L as a broadcast spray after beds are formed, pre-irrigated and final seedbeds prepared. Prior to planting, drag-off the tops of the beds and plant in moist soil not treated with Direx 4L. Treated soil is returned to the bed after planting when irrigation furrows are reformed after cotton has emerged. If more than 2 furrowing-out operations are performed prior to lay-by, or deep furrows are made early, weed control may be reduced in furrow bottoms.

Apply Direx 4L alone at 0.8 to 2.0 quarts per acre.

**Direx 4L following Trilin or other trifluralin products:**

### PREPLANT RATE/ACRE

Soil Texture	Preplant - Trilin or other trifluralin products	Preemergence - Direx 4L
Sandy loam, loam,	1 pint	0.5 to 0.8 quart
loam, silt		
Sandy clay loam,	1.5 pints	0.8 to 1.0 quart
clay loam, silty clay		
loam, sandy clay, clay		

**Note:** Seedling disease may weaken plants and increase the possibility of injury from the use of Trilin or other trifluralin products followed by Direx 4L. These treatments should be used only in conjunction with a standard fungicide seed treatment plus a good supplemental soil fungicide program such as captan-PCNB mixture.

**Replanting:** If initial seeding fails to produce a stand, cotton may be replanted in soil treated preemergence with Direx 4L, alone or following Trilin or trifluralin products (preplant). Wherever possible, avoid disturbing original bed. If necessary to rework soil before replanting, use shallow cultivation such as disking, do not relist nor move soil into the original drill area. Plant seed at least 1 inch deep. Do not retreat field with a second preplant or preemergence application of herbicide during the same crop year as injury to crop may result.

### SUBSEQUENT CROPS

Direx 4L Herbicide Type of Application	That May Follow Treated Cotton
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Band pre or postemergence	Any crop 4 months after last application
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Band pre plus postemergence or	Cotton, soybeans, corn or grain sorghums (not sorghos or forage sorghums nor grass sorghums) the next spring. Do not replant treated areas to any other crop within one year after last application as injury to subsequent crops may result.
Broadcast preemergence (and preplant) or	
Broadcast preemergence plus band postemergence	

Direx 4L Herbicide Type of Application	That May Follow Treated Cotton
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Broadcast postemergence (lay-by).	Cotton, corn, grain sorghums (not sorghos or forage sorghums nor grass sorghums) the next spring. Do not replant treated areas to any other crop within one year after last application as injury to subsequent crops may result.
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For subsequent crops in fields where Trilin (or other trifluralin products) is used, follow instructions on the trifluralin product label.

## GRAPES

Apply only as a band treatment to established vineyards at least 3 years old. On soils low in clay or organic matter (1 to 2%), severe plant injury may result if heavy rainfall or more than one inch of irrigation occurs soon after treatment. This risk must be assumed by the user.

**West of the Rocky Mountains:** For best results, apply during the winter months when weeds are less than two inches in height or diameter. Rainfall or overhead sprinkler irrigation sufficient to wet the soil to a depth of 2 inches is necessary to activate the herbicide. Abnormally heavy rainfall following application just before spring growth may move the

herbicide into the root zone of grapes which could result in injury. For initial treatment apply 2.4 to 3.2 quarts per acre. Subsequent annual applications of 1.6 quarts will usually give adequate weed control. Do not apply to vines with trunks less than 1-1/2 inches in diameter as injury may result.

## OLIVES

Use only under trees established in the grove for at least 1 year. Apply 1.6 quarts per acre after the grove has been laid-up in final form in late October or November. Repeat at same rate in March or April. Remove weed growth prior to treatment.

## PAPAYAS

Use only under trees established in the orchard for at least 1 year. Apply 2.0 to 4.0 quarts per acre, preferably before weeds emerge. If weeds have emerged, add surfactant.

## PEACHES

Direx 4L may be applied alone or as a tank mix with Sinbar.

**Direx 4L Alone:** Use only under trees established in the orchard for at least 3 years. Apply 1.6 to 4.0 quarts per acre in the early spring before weeds emerge or during the early seedling stage of weed growth. Do not apply within 3 months of harvest. In the Far West, do not apply within 8 months of harvest.

**Direx 4L plus Sinbar:** Use only under trees established in the orchard for at least 2 years. Apply either in the spring or after harvest in the fall before weeds emerge or during early seedling stage of weed growth.

### RATE / ACRE

Soil Texture	1 to 2 % Organic Matter		More Than 2% Organic Matter	
	Direx 4L Quarts/Acre	Sinbar Lbs/Acre	Direx 4L Quarts/Acre	Sinbar Lbs/Acre
Sandy loam	0.8	+ 1.0	1.2	+ 1.5
Loam, silt loam, silt	1.2	+ 1.5	1.6	+ 2.0
Clay loam, clay	1.6	+ 2.0	1.6	+ 2.0

Where crop is grown under furrow irrigation or under raised-berm flood irrigation (trees 4 inches to 6 inches above waterline), apply only as a band treatment. Do not treat trees planted in the bottom of irrigation furrows, nor trees grown under flat flood or basin irrigation, as injury to trees may result. Where complete weed control to harvest is desired, additional weed control measures may be required.

## PEARS

Use only under trees established in the orchard for at least 1 year. Do not treat varieties grafted on full-dwarf root stocks. Apply 3.2 quarts per acre from March through May. In the Far West apply 3.2 quarts per acre to weeds less than 2 inches in height or diameter under dormant trees. Alternatively, apply to small weeds at 1.6 quarts per acre postharvest followed by 1.6 quarts per acre prior to budbreak.

## PECANS

Use Direx 4L alone or as a tank mix with Sinbar. Make a single band or broadcast application as a directed spray using a minimum of 30 gallons of water per acre. Apply in the spring before weeds emerge or during the early seedling stage of growth.

### RATE PER ACRE

Soil Texture	Direx 4L Alone*	OR	Tank mix **	
			Direx 4L	+ Sinbar
Sandy loam	1.6 quarts		1.2 quarts	+ 1.5 lbs
Loam, silt loam, silt	2.4 quarts		1.4 quarts	+ 1.75 lbs
Clay loam, clay	3.2 quarts		1.6 quarts	+ 2.0 lbs

\* Use only under trees established in the grove for at least 3 years, and on soils with at least 0.5% organic matter.

\*\* Use only under trees established in the grove for at least 1 year, and on soils with at least 1% organic matter.

**Note:** Do not use on eroded areas where subsoil or roots are exposed, nor on trees that are diseased or lacking in vigor or on trees planted in irrigation furrows as injury may occur.

## SORGHUM (Grain)

**Southwestern States:** Apply 0.2 to 0.4 quart per acre plus surfactant. Apply as a directed postemergence spray after sorghum is 15 inches tall to control weeds 2 to 4 inches. DO NOT SPRAY OVER TOP OF SORGHUM. Use lower rate on broadleaf weeds up to 2 inches tall. Use the higher rate on grasses up to 2 inches and broadleaf weeds up to 4 inches tall. When the lower rate is used, a second application may be made if needed. Do not exceed 0.4 quart per acre. Treatment of weeds under drought stress is usually ineffective.

Do not replant treated areas to crops other than cotton or corn within 4 months following band treatment and 6 months following broadcast treatment as crop injury may result.

## WALNUTS (ENGLISH)

Use only under trees which have been established in the orchard for at least 1 year. As an initial treatment, apply 2.4 to 4.0 quarts per acre after the orchard has been laid-up in final form (non-tillage program) in late fall or early winter. Retreat annually with 1.6 to 2.4 quarts per acre. Alternatively, apply 1.6 quarts per acre in October or November and repeat in March or April.

## NON-CROP WEED CONTROL

Direx 4L is an effective general herbicide for the control of many weeds. The degree of control and duration of effect will vary with amount of chemical applied, soil type, rainfall and other conditions. Direx 4L may be used as a preemergence treatment at any time of the year except when ground is frozen, provided adequate moisture is supplied by rainfall or artificial means to activate the herbicide. Best results are obtained if applied shortly before weed growth begins. If dense growth is present, remove tops and spray the ground.

Increased contact activity on established weeds may be obtained by the addition of a non-ionic surfactant. Apply as a drenching spray to actively growing weeds during warm weather, when daily temperature will exceed 70° F.

Use a fixed-boom power sprayer properly calibrated to insure a constant rate of application. Mix proper amount of Direx 4L into volume of water necessary to obtain uniform coverage.

If a surfactant is used, dilute with 10 parts of water and add as last ingredient to nearly full tank. Direx 4L must be kept in suspension at all times. Agitate by mechanical or hydraulic means in the spray tank. If bypass or return line is used, it should terminate at bottom of tank to minimize foaming. Use 50 mesh or larger screens.

To control most annual weeds for an extended period of time on non-crop land such as utility, highway, pipeline and railroad right of ways, petroleum tank farms, lumberyards, storage areas, industrial plant sites, around farm buildings and similar areas apply 4 to 12 quarts per acre to control annual weeds including:

### Broadsleaves 4 to 12 quarts/acre

Ageratum	Knawel	Ragweed
Chickweed	Kochia	Sesbania
Cocklebur	Lambsquarter	Shepherdspurse
Corn speedwell	Marigold	Sicklepod
Corn spurry	Mexican clover	Smartweed,
Dayflower	Morningglory,	annual
Dogfennel	annual	Sowthistle,
Henbane	Pennycress	annual
(Mimosa)	Pigweed	Spanishneedles
Flora's paintbrush	Pineappleweed	Tansymustard
Gromwell	Pokeweed	Velvetleaf
Groundcherry,	Prickly lettuce	(buttonweed)
annual	Prickly sida	Wild buckwheat
Hawksbeard	(teaweed)	Wild lettuce
Horsenettle	Purslane	Wild mustard
Horseweed	Rabbit tobacco	Wild radish

### Grasses 4 to 6.4 quarts/acre

Barnyardgrass	Orchardgrass	Seedling johnsongrass
(watergrass)	Peppergrass	Velvetgrass
Bluegrass,	Quackgrass	Vernalgrass,
annual	Rattail fescue	sweet, annual
Crabgrass	Red sprangletop	
Foxtail	Ricegrass	
Kyllinga	Ryegrass, annual	
Lovegrass, annual	Sandbur	
6.4 to 12 quarts/acre		
Guineagrass		
Maidengrass		
Pangolagrass		

**Irrigation and drainage ditches:** Apply 4 to 12 quarts per acre to control most annual weeds as shown above. Apply only when water is not in the ditch. For irrigation ditches, apply during the non-crop season, and when ditch is not in use. To avoid crop injury, it is essential to minimize movement of Direx 4L in irrigation water. The herbicide must be fixed in the soil by moisture. Apply before expected seasonal rainfall, if possible when soil in the ditch is still moist. Following treatment, if rainfall has not totaled at least 4 inches, fill ditch with water and allow to stand for 72 hours. Drain off and waste remaining water before using ditch. Do not treat any ditch area into which roots of trees or other desirable plants may extend as injury may result.

## WARRANTY STATEMENT

Griffin warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for purposes stated on such label only when used accordance with directions, under normal use conditions. It is impossible to eliminate all risks inherently associated with 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 the manner of use or application, all of which are beyond the control of Griffin. In no case shall Griffin be liable for consequential, special or indirect damages resulting from the use or handling of this product. All such risks shall be assumed by the Buyer. GRIFFIN MAKES NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

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