

62575-9

10/24/2007

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U.S. Environmental Protection Agency  
Office of Pesticide Programs  
Registration Division (7505C)  
1200 Pennsylvania Ave., N.W.  
Washington, D.C. 20460

EPA Reg. Number:  
62575-9  
Date of Issuance:  
OCT 24 2007

Term of Issuance:

Name of Pesticide Product:  
Biesterfeld Diuron 80 Weed  
Killer

NOTICE OF PESTICIDE:

Registration  
 Reregistration

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

Biesterfeld U.S. Inc.  
200 Madison Avenue, Suite 2109  
New York, NY 10016

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is reregistered in accordance with FIFRA provided you agree in writing to:

1. It is recommended you add an appropriate company telephone number or toll-free hotline number at the end of the FIRST AID statement section.
2. On page 8, in the section Blueberries, Caneberries, and Gooseberries- Western Washington and Western Oregon, revise the word "recommended" to "directed"
3. On page 11, revise the word "recommendation" to "instruction" in the section LATE SEASON (LAY-BY)

You will submit one (1) 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). A stamped copy of labeling is enclosed for your records.

Signature of Approving Official:  
  
James Tompkins, Product Manager (25)  
Herbicide Branch, Registration Division (7505P)

Date:  
10-24-07





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## FIRST AID

**IF SWALLOWED:** Call a Poison Control Center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to by a Poison Control Center or doctor. Do not give anything by mouth to an unconscious person.

**IF IN EYES:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact, if present, after the first 5 minutes, then continue rinsing eye. Call a Poison Control Center or doctor for treatment advice.

**IF ON SKIN OR CLOTHING:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a Poison Control Center or doctor for treatment advice.

**IF INHALED:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferable mouth-to-mouth if possible. Call a Poison Control Center or doctor for further treatment advice.

## 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 wash waters. Apply this product only as specified on this label.

## 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.

## SPRAY DRIFT MANAGEMENT

### Requirements for reducing spray drift for diuron ground and aerial applications.

Use best practices to avoid drift to all other crops and non-target areas. Do not apply when conditions favor drift from target areas. The interaction of many equipment and weather-related factors determine the potential for spray drift. Avoiding spray drift at the application site is the responsibility of the applicator. The applicator must follow the most restrictive precautions to avoid drift, including those found in this labeling as well as applicable state and local regulations or ordinances. A drift control agent may reduce drift, however, it may also decrease weed control.

Do not make aerial or ground applications when the wind speed exceeds 10 miles per hour.

Do not make aerial or ground applications into temperature inversions.

Apply as a medium or coarser spray (according to ASAE standard 572) for standard nozzles.

### Additional requirements for ground applications:

When applying to crops, apply with nozzle height no more than 2 feet above the ground or crop canopy. When applying to non-crop areas, use lowest nozzle height consistent with safety and efficacy. Direct spray into target vegetation.

### Additional requirements for aerial applications:

The spray boom should be mounted on the aircraft so as to minimize drift caused by wing tip vortices. The boom length must not exceed 75% of the wingspan or 90% of rotor blade diameter.

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When aerial applications are made with cross-wind, the swath will be displaced downwind. The applicator must compensate for this displacement at the downwind edge of the application area by adjusting the path of the aircraft upwind. Use upwind swath displacement.

When applying to crops, do not release spray at a height greater than 6 to 10 feet above the ground or crop canopy. When applying to non-crop areas, apply at a minimum safe altitude above the area being treated.

Release spray at the lowest height consistent with efficacy and flight safety.

Do not apply by air if drift can occur to sensitive non-target crops or plants that are within 100 feet of the application site.

#### Application Restrictions

On Rights of Way/Non Crop Areas, the maximum rate per application is 15 lbs Diuron 80 (12 lbs active ingredient) per acre of high rainfall or dense vegetation and 10 lbs Diuron 80 (8 lbs active ingredient) per acre in all other areas. Apply a maximum of two (2) applications per year. The minimum retreatment interval is 90 days. Do not exceed the maximum annual application rate of 15 lbs Diuron 80 (12 lbs active ingredient) per acre per year.

#### General Application Restrictions

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.

#### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR 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 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, chemical-resistant gloves made of any waterproof material, and 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. Do not apply this product in a way that will contact workers or other persons either directly or through drift. Do not enter or allow others to enter until sprays have dried.

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

Do not apply (except as directed 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 of

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trees, shrubs or herbaceous plants, nor on lawns, walks, driveways, tennis courts, or similar areas. Prevent drift of dry powder or spray to desirable plants. Do not contaminate any body of water. Keep from contact with fertilizers, insecticides, fungicides, and seeds.

Thoroughly clean all traces of Diuron 80 from application equipment immediately after use. Flush tank pump, hoses, and boom with several changes of water after removing nozzle tips and screens (clean these parts separately).

#### NON-CROP WEED CONTROL

AROUND FARM BUILDINGS, STORAGE AREAS,  
INDUSTRIAL PLANT SITES, PETROLEUM TANK FARMS,  
UTILITY HIGHWAY PIPELINE, LUMBER YARDS,  
IRRIGATION AND DRAINAGE DITCHES.

#### GENERAL INFORMATION

Diuron 80 Weed Killer is mixed in water and applied as a spray for control of weeds. It is non-corrosive to equipment, non-flammable and non-volatile.

Diuron 80 may be applied to the soil prior to emergence of weeds to control susceptible weed seedlings for an extended period depending on dosage rate used. Results vary with soil type. Heavy soils (high in organic matter) may require the higher application rates to obtain equivalent herbicidal performance. Best results occur if rainfall (or irrigation) occurs within two weeks of application.

Diuron 80 also may be used to control emerged seedling annual weeds by including a surfactant in the spray mixture. Best results are obtained on succulent weeds growing under high humidity and temperatures of 70°F or higher.

Since the effect of Diuron 80 varies with soils, uniformity of application and environmental conditions, it is suggested that growers limit their first use to small areas. This is especially important where the operator is not completely familiar with requirements for precise application and over dosage can result in injury to crops.

#### USE PRECAUTIONS

Before spraying, calibrate equipment to determine quantity of water necessary to uniformly cover area to be treated. Weigh proper amount of Diuron 80 and then mix into necessary volume of water. Material must be kept in suspension at all times by continuous agitation. Except for small areas, use fixed boom power sprayers properly calibrated to insure a constant rate of application. Openings in screens should be equal to or larger than 50 mesh. 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 foam. Do not use air agitation. When a range of dosage rates is listed, use the lower rates on lighter soils (sandy loams, loams, and soil low in organic matter), and the higher rates on heavier soils (clay loams, clays, and soils high in organic matter).

#### NON-CROP WEED CONTROL

Diuron 80 is an effective herbicide for the control of many annual and perennial grasses and herbaceous weeds on non-crop areas where bare ground is desired. The degree of control and duration of effect will vary with the amount of chemical applied, soil type, rainfall and other conditions.

Diuron 80 may be used as a pre-emergence 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 application is made to the soil shortly before weed growth begins. If dense growth is present, remove tops and spray the ground.

Increase contact activity on established weeds may be obtained by the addition of a surfactant at the rate of two (2) quarts per 100 gallons of spray mixture. Apply as a drenching spray to actively growing weeds during warm weather when daily temperature will exceed 70°F.



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Diuron 80 plus a surfactant is an effective treatment of emerged seedling weeds for use as a directed post emergence spray in certain crops. Rates as low as ¼ lb. Diuron 80 per acre plus a surfactant control seedling pigweed. Rates of ½ lb. Diuron 80 per acre control seedling weeds such as crabgrass, goosegrass, barnyardgrass (watergrass), crowfoot, pigweed, purslane and annual morningglory. Best results are obtained under conditions of high humidity and temperatures over 70°F.

**SOIL LIMITATIONS:** Crop injury may result from failure to observe the following: Unless otherwise directed, do not use (1) on light (sand, loamy sand or gravelly) soils (2) on alfalfa, apples, barley, citrus, cotton (pre-plant and lay-by), grapes, olives, pears, plumosus fern, sorghum, sugar cane and winter wheat where organic matter is less than 1% (3) on blueberries, birdsfoot trefoil, caneberrries, gladiolus and gooseberries where organic matter is less than 2%. Unless otherwise directed, do not replant treated areas to any susceptible crop within two years after last application as injury to subsequent crops may result.

### CROPS

**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 14-inch band where row spacing is 42 inches. Unless otherwise directed, surface of soil should not be cultivated or disturbed after application as crop injury may result.

**ALFALFA:** Use in areas where alfalfa becomes winter dormant and in areas of California (North of the Tehachapi Mountains) where alfalfa becomes semi-dormant. Use 1-1/2 to 3 lbs. Diuron 80 per acre (except east of the Appalachian Mountains, use 1-1/2 to 2 lbs. Diuron 80). Apply anytime after alfalfa is dormant in the fall but before crop begins growth in the spring. For control of volunteer alfalfa seedlings in the Far West, use 4 lbs. Diuron 80 per acre (see Soil Limitations). Treat only stands established for one year or more. Do not apply to seedling alfalfa nor to alfalfa grass mixtures, do not apply to established alfalfa with unusually shallow root penetration (such as shallow hard pans, in alkali spots) as crop injury may result. The maximum application rate per crop cycle is 2.4 pounds of active ingredient (3.0 pounds of Diuron 80) per acre. Apply a maximum of one application per year

**PACIFIC NORTHWEST:** Apply in the fall after alfalfa becomes dormant but no later than mid December.

**ARIZONA, CALIFORNIA, AND NEVADA:** Application may be made on dormant alfalfa as late as January.

**EASTERN COLORADO AND KANSAS:** For control of tansy mustard, apply 1 lb. Diuron 80 per acre shortly after emergence of mustard in the fall or winter and 2 lbs. Diuron 80 per acre if weeds are 2 to 4 inches tall. If other annual weeds are present, use 2 to 3 lbs. Diuron 80 per acre in February or March.

**OTHER AREAS:** Where alfalfa becomes winter dormant, apply in March or early April before spring growth begins.

**APPLES AND PEARS:** Use only under trees established in the orchard for at least 1 year. Apply 4 lbs. Diuron 80 per acre to area under individual trees or as a band in the tree row. The maximum application rate is 4 lbs Diuron 80 per acre. Apply a maximum of two (2) applications per year. The minimum retreatment interval is 90 days. Avoid contact of foliage or fruit (see Soil Limitations). Apply in the spring (March through May). Do not treat dwarf varieties. Aerial application is prohibited. Do not exceed the maximum application rate of 4 lbs Diuron 80 (3.2 lbs active ingredient) per acre per crop cycle

**FAR WEST:** Treatment may be made in Winter (December through February) apply 2 lbs. Diuron 80 per acre as a postharvest treatment, followed by 2 lbs. Diuron 80 per acre in the spring. The maximum rate per application is 4 lbs Diuron 80 per acre. Apply a maximum of two (2) applications per year. The minimum retreatment interval is 90 days. Aerial application is prohibited.

**ASPARAGUS:** Do not apply to newly seeded asparagus nor to young plants with exposed roots, as severe injury may result. Apply as a band or broadcast treatment. On light sandy soils and other soils low in clay or organic matter, apply 1 to 2 lbs. Diuron 80 per acre. Two applications may be used. The first application should be made before weeds become established but no



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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 3 lbs. Diuron 80 per acre per application. In Washington (irrigated crop), apply only a single treatment of 4 lbs. Diuron 80 per acre in late November or December. Aerial application is prohibited.

**BARLEY (Winter) WESTERN OREGON AND WESTERN WASHINGTON:** Apply a single treatment of 1-1/2 to 2 lbs. Diuron 80 per acre as soon as possible after planting but before emergence of barley. Do not apply to cloddy or compacted ground where seed is exposed or improperly planted. Treated area should not be replanted to any rotational crop within 1 year after last application as injury to the subsequent crop may result. Do not treat barley planted less than 1 inch deep.

**BIRDSFOOT TREFOIL (Lotus) WESTERN OREGON:** Treat only established stands at least 1 year old. Apply a single treatment of 2 lbs. Diuron 80 per acre when trefoil is dormant (October 15 to December 15, see Soil Limitations). Do not apply to seedling trefoil as injury may result. Do not replant treated areas to any crop within 1 year after application as crop injury may result. Aerial application is prohibited.

**BLUEBERRIES, CANEBERRIES AND GOOSEBERRIES:** Apply only to fields which have been established for at least 1 year. Do not apply to berries interplanted with fruit trees, do not apply to plants whose roots are exposed as injury may result. Spray only ground at base of bushes. Avoid spraying foliage as injury may result. Aerial application is prohibited.

**CALIFORNIA – Raspberries, Blackberries, boysenberries, Dewberries, and Loganberries:** For control of winter annual weeds, apply 2 lbs. Diuron 80 per acre as a band application at base of canes or bushes in October or November. A second treatment at the same rate in late spring controls summer annuals. A single application of 3 lbs. Diuron 80 per acre in January or February will control both winter and summer annuals in some areas but the separate fall and spring schedule is preferred. Aerial application is prohibited.

**WESTERN WASHINGTON AND WESTERN OREGON - Blueberries, Caneberries, and Gooseberries:** Same schedule as recommended in California. Aerial application is prohibited.

**INDIANA, MICHIGAN AND OHIO – Blueberries:** Make a band application of 2 to 4 lbs. Diuron 80 per acre in late spring but before germination and growth of annual weeds. As an alternative, apply 2 lbs. Diuron 80 per acre in the fall and repeat at the same rate in the spring. Aerial application is prohibited.

**INDIANA, MICHIGAN AND OHIO – Raspberries:** Make a single application as a band treatment at a rate of 3 lbs. Diuron 80 per acre in the spring before germination and growth of annual weeds. Aerial application is prohibited.

**MASSACHUSETTS – Blueberries:** For control of summer annuals, make a single application as a band treatment at a rate of 2 lbs. Diuron 80 per acre in late spring, but before germination and growth of weeds. Aerial application is prohibited.

**NEW JERSEY – Blueberries:** For control of winter annual weeds, apply 2 lbs. Diuron 80 per acre as a band treatment in October, November or December. Aerial application is prohibited.

**CITRUS:** Use only under trees established in the grove for at least one year. Apply as a directed spray avoiding contact of foliage and fruit with spray or drift. Time applications as indicated for specific areas except application may be initiated any time of the year where sprinkler or flood irrigations 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. Do not apply in home plantings of citrus or in areas where the roots of other valuable plants or trees may extend as injury may result. Aerial application is prohibited. For all areas (except Flatwood, FI): The maximum single application rate is 4 lbs Diuron 80 (3.2 lbs active ingredient) per acre. The maximum annual application rate is 8 lbs Diuron 80 (6.4 lbs active ingredient) per acre per year.

**ARIZONA (except Yuma area) AND CALIFORNIA (except Imperial and Coachella Valleys) – Oranges, Lemons, and Grapefruits:** Make a single application of 3 to 4 lbs. Diuron 80 per acre as a broadcast spray shortly after grove has been laid up in final form (non-tillage program) in late fall or early winter. As an alternative, apply 2 lbs. Diuron 80 per acre in October or November.

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and repeat at the same rate in March or April. Subsequent annual applications of 2 to 3 lbs. Diuron 80 per acre will usually give adequate weed control. Aerial application is prohibited.

FLORIDA (except Martin, Palm Beach, Broward and Dade Counties) – Oranges, Grapefruit, Tangelos and Tangerines: Apply 4 lbs. Diuron 80 per acre followed by the same rate 4 to 6 months later. The maximum single application rate is 4 lbs Diuron 80 per acre. The maximum annual application rate is 8 lbs Diuron 80 per acre per year.

For trees less than 4 years old:

Minimum retreatment interval is 60 days

Maximum of 2 applications per year

For trees 4 years old or greater:

Minimum retreatment interval is 80 days

Maximum of 2 applications per year

On non-bearing trees, treat when winter banks are pulled down. On bearing citrus, apply any time when season rains are expected. Aerial application is prohibited.

FLORIDA (Flatwood area only) – The maximum single application rate is 8 lbs Diuron 80 per acre. The maximum annual application rate is 8 lbs Diuron 80 per acre.

For trees less than 4 years old:

Minimum retreatment interval is 60-days

Maximum of 2 applications per year

For trees 4 years old or greater:

Minimum retreatment interval is 80-days

Maximum of 2 applications per year

For control of paragrass, guineagrass, maidencane, primrose willow, seamyrtle and loosestrife in ditches adjacent to citrus groves, use 1 lb. Diuron 80 per 1000 sq. ft. (40 lbs. Diuron 80 per acre) using sufficient spray volume (at least 4 gallons per 1000 square feet) to provide thorough and uniform coverage of the ditch. Apply in the spring before weed growth to control hard to kill species such as guineagrass. In bedded groves, do not treat water furrows between the beds as injury to the trees may result.

TEXAS – Oranges and Grapefruit: Apply a single treatment of 2 to 4 lbs. Diuron 80 per acre for annual weeds. Use up to 4 lbs. Diuron 80 per acre for control of Johnsongrass seedlings. Best results accompany application in the spring. Well established weeds should be eliminated by cultivation prior to treatment. Aerial application is prohibited.

#### CORN (FIELD)

POST-EMERGENCE – Apply  $\frac{3}{4}$  lb. Diuron 80 per acre in combination with a non-pressure nitrogen solution. If nitrogen solution is not used, apply 1 lb. Diuron 80 per acre and add 1-1/2 pints of a surfactant per 40 gallons of spray mixture. Apply as a single directed postemergence spray when the corn is at least 20 inches high and weeds are not taller than 3 inches. DO NOT APPLY OVER TOP OF CORN. Do not replant to any crop within one year except that cotton, corn and grain sorghum may be planted the spring following treatment. Aerial application is prohibited.

PRE-EMERGENCE – ARKANSAS, LOUISIANA, MISSISSIPPI AND TENNESSEE – Make a single treatment of 2/3 to 1 lb. Diuron 80 per acre as a broadcast or band treatment using the higher dosage on heavier soils (loams, clay loam). Do not use on light (sand, loamy sand or gravelly) soils as injury may result. Plant corn at least 1-1/2 inches deep. Do not replant treated areas to crops other than corn or cotton within 4 months following band treatment and 6 months following broadcast treatment as crop injury may result. Aerial application is prohibited.

#### COTTON

PRE-PLANT: ARIZONA AND CALIFORNIA ONLY: Apply 1 to 2-1/2 lbs. Diuron 80 per acre as a broadcast spray after furrows for pre-planting irrigation have been formed. Apply either just prior to planting or after the pre-planting irrigation but before seed beds are dragged off in preparation for planting.

Prior to planting, drag off the top of the seed bed and plant in untreated soil. Treated soil is returned to the bed after planting when irrigation furrows are reformed. If more than 2 furrowing

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out operations are performed prior to lay-by, weed control in the furrow bottoms may be lost. A lay-by application also may be made but the combined total per season must not exceed 1.2 lbs. Diuron 80 per acre on clay.

**PRE-EMERGENCE (EXCEPT ARIZONA AND CALIFORNIA):** Make a single application as a broadcast or band spray after planting but before cotton emerges. Use at the following rates:

**BROADCAST TREATMENT**

SOIL TYPE	SPRAY MIXTURE LBS. DIURON 80 IN 25 TO 40 GALS. WATER PER ACRE	LBS. DIURON APPLIED PER ACRE
Loamy sand	0.6	0.5
Sandy loam, loam, silt loam and silt	1.0	0.8
Sandy clay loam, clay loam, silty clay loam, and sand clay	1.25	1.0
Silty clay and clay	2.0	1.6

Do not use on sand as crop injury may result.

**BAND TREATMENT**

Use proportionately less, for example; for 14-inch band on 42 in row, use 1/3 of the broadcast rate.

Apply immediately after cotton is planted wherever possible. Planting and spraying should be combined in one operation. For best results, soil should be well prepared and as free as possible from trash and clods. Shallow incorporation (no deeper than 1/4 inch) with a rotary hoe or similar equipment following planting usually improves results, particularly during the dry weather. A wide press wheel following planting should be used to provide a level seed bed for subsequent early season post-emergence treatments.

Treatment usually provides weed control for a period of 3 to 8 weeks. Sufficient moisture (usually 1 to 2 inches) in the form of rainfall or irrigation is necessary after treatment to carry the chemical into the root zone of germinating weeds. Best results are obtained when this occurs within 2 weeks after application. If moisture is insufficient to activate Diuron 80 or if soil becomes crusted before crop emerges, a shallow rotary hoeing (no deeper than 1/4 inch) should be made before weeds become well established. If initial seeding fails to produce a stand, cotton may be replanted in soil treated with Diuron 80. Wherever possible, avoid disturbing original bed. If necessary to rework soil before replanting, use shallow cultivation such as discing. 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 pre-emergence application of Diuron 80 during the same crop year as injury to the crop may result.

**POST-EMERGENCE - EARLY SEASON:** Apply in combination with surfactant as a directed spray when cotton is at least 6 inches tall and when weeds do not exceed 2 inches in height. A second application may be made if needed. Control of weeds under drought, stress or over 2

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inches in height is usually impractical. Apply as a band treatment only, directing spray to cover weed foliage. **DO NOT SPRAY OVER TOP OF COTTON.** Use pressure of 20 to 25 psi and adjust nozzles to minimize contact of cotton leaves with spray or drift, or crop injury may result.

**BAND TREATMENT  
 AMOUNT PER ACRE OF CROPLAND WHEN APPLIED TO  
 14" BAND ON 42" ROWS (IN 10 TO 15 GALLONS OF WATER)**

Weed Problem	Diuron 80	Active Diuron
Annual Weeds	0.18 lb. (2.8 ozs.)	0.14 lb
Pigweed	0.09 kb. (1.4 ozs.)	0.07 lb

**LATE SEASON (LAY-BY)** – Use 1 to 1-1/2 lbs. Diuron 80 (1 to 2 lbs. Diuron 80 in Arizona and California) in 25 to 40 gallons of water per acre as a directed spray (see Soil Limitations). Apply when cotton is at least 12 inches high (at least 20 inches for Pima S-2). Keep contact of spray or drift on cotton plants to a minimum. **DO NOT SPRAY OVER TOP OF COTTON.** For control of germinating weed seedling, apply immediately after last cultivation, directing spray to cover the soil beneath cotton plants and between rows. Alternatively, for control of emerged annual weeds (4 inches or less in height) at lay-by, add 1 pint of surfactant for each 25 gallons of spray. Apply as a directed spray to cover weed foliage beneath cotton plants and between rows. **NOTE:** Treatment of 1/2 to 3/4 lb. Diuron 80 per acre plus surfactant followed by the same treatment later, if needed, may be used as an alternate to the preceding recommendation.

In irrigated cotton, best pre-emergence weed control is obtained if the field is irrigated within 3 to 4 days after application. Thoroughly wet the surface of the ground over the row to carry the herbicide into the root zone of germinating weeds.

**SUBSEQUENT CROPS**

- |  |   |
|--|---|
| Band, pre- or post-emergence   | Any crop 4 months after last application.   |
| Band, pre- plus post-emergence<br>or<br>Broadcast, pre-emergence (and pre-plant)<br>or | Cotton, soybeans, corn or grain sorghums (not sorgos or forage sorghums) the next spring. Do not replant treated acres to any other crop within one year after last application as injury to subsequent crops may result. |
| Broadcast, post-emergence (lay-by).  | Cotton, corn, grain sorghums (not 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.    |

Maximum application rate per crop cycle:

- 1.0 lbs Diuron 80 (0.8 lbs active ingredient) per acre in coarse soils
- 1.9 lbs Diuron 80 (1.5 lbs active ingredient) per acre in medium soils, and
- 2.8 lbs Diuron 80 (2.2 lbs active ingredient) per acre in fine soils

Apply a maximum of 3 applications per year. The minimum retreatment interval is 21 days.

**GLADIOLUS – EAST OF ROCKY MOUNTAINS:** Apply 1 to 2 lbs. Diuron 80 per acre as a pre-emergence and/or directed post-emergence treatment. If used for both do not exceed 1 lb. of

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Diuron 80 per acre per application, or a total of 2 lbs. per season. On cornel plantings, apply 1 lb. Diuron 80 per acre pre- or post-emergence, but not more than once. Do not use on cornel plantings in Florida. Do not spray over top of gladiolus foliage nor allow spray to drift onto foliage as injury may result. Aerial application is prohibited.

**GRAPES:** Apply only to established vineyards (at least 3 years old) as a band treatment to grape rows. Do not apply to vines with trunks less than 1-1/2 inches in diameter as injury may result.

**NOTE:** On soils low in clay or organic matter (less than 2%) severe plant injury may result if unusually heavy rains follow treatment. This risk must be assumed by the user. Aerial application is prohibited.

**EAST OF THE ROCKY MOUNTAINS:** On soils low in clay or organic matter (1 to 2%), use 2 to 3 lbs. Diuron 80 per acre. On soils high in clay or organic matter, use 3 to 5 lbs Diuron 80 per acre. Apply in the spring just prior to germination and growth of annual weeds. Aerial application is prohibited.

Maximum rate per application: 5 lbs Diuron 80 (4 lbs active ingredient) per acre.

Maximum application rate per crop cycle: 10 lbs Diuron 80 (8 lbs active ingredient) per acre.

Apply a maximum of 2 applications per year.

Minimum retreatment interval: 90 days.

**NEW YORK AND PENNSYLVANIA – CONTROL OF PERENNIAL GRASSES:** Apply only to established vineyards (at least 4 years old) for spot control of perennial grasses such as quackgrass, ryegrass and orchard grass as a band treatment to ridged soil (2 to 4 inches high) under the trellis at the rate of up to 5 lbs Diuron 80 per acre. Band width should not exceed 30 inches. Make one application in the spring of the year and do not apply the 5 lbs. Diuron 80 per acre rate more than once every 4 years. Use only on heavy soil types such as loams, silt loams, and clay loams. Do not use in areas where grape roots are shallow or exposed, because of high bedrock, poor drainage, or erosion, as injury to grapes may result. Aerial application is prohibited.

Maximum rate per application: 5 lbs Diuron 80 (4 lbs active ingredient) per acre.

Maximum application rate per crop cycle: 10 lbs Diuron 80 (6 lbs active ingredient) per acre.

Apply a maximum of 2 applications per year.

Minimum retreatment interval: 90 days.

**WEST OF ROCKY MOUNTAINS:** Apply in December, January or February. For initial treatment, make a single application of 3 to 4 lbs. Diuron 80 per acre. Subsequent annual applications of 2 lbs. Diuron 80 per acre will usually give adequate weed control. As an alternative to the above schedule, apply 2 lbs. Diuron 80 per acre in October or November and repeat application at the same rate in March or April. Aerial application is prohibited.

Maximum rate per application: 5 lbs Diuron 80 (4 lbs active ingredient) per acre.

Maximum application rate per crop cycle: 10 lbs Diuron 80 (6 lbs active ingredient) per acre.

Apply a maximum of 2 applications per year.

Minimum retreatment interval: 90 days.

**GRASS SEED CROPS (Perennial):** In areas as specified, apply only to established plantings at least 1 year old.

Maximum single application rate is 3 lbs Diuron 80 (2.4 lbs active ingredient) per acre.

Maximum of one (1) application per year.

Aerial applications are limited to the Pacific Northwest.

**COLORADO, KANSAS, NEW MEXICO AND OKLAHOMA:** On switchgrass side oats grama and sand bluestem, apply 2 to 3 lbs. Diuron 80 per acre during the dormant period shortly before weed seedlings emerge. Do not apply after crop begins growth in the spring as crop injury may result. In fields where ash residues have accumulated from burning straw, use 3 lbs. Diuron 80 per acre. Spread chaff or straw with a harrow or chopper before application. Aerial application is prohibited.

**WESTERN OREGON:** On alfa fescue, Highland bentgrass, Astoria bentgrass, orchardgrass, Kentucky bluegrass (Merion bluegrass), apply 2 to 3 lbs. Diuron 80 per acre between October 1 and November 15. In fields where ash residues have accumulated from burning straw, use 3 lbs. Diuron 80 per acre. Spread unburned chaff or straw with a harrow or chopper before application.

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If perennial velvetgrass (*Holcus lanatus*) is a problem, use 3 lbs. Diuron 80 per acre. For best results, apply as soon as possible after fall rains start. Established weeds (beyond 2 to 4 leaf stage) should be removed prior to treatment.

Well established vigorous stands of spring planted alfa fescue, orchardgrass and Kentucky bluegrass may be treated the following fall provided the crop is planted before April 1 and treatment is not applied before October 15. Use 2 lbs. Diuron 80 per acre.

**OLIVES – CALIFORNIA:** Use only under trees established in the grove for at least 1 year. Do not apply in acres where roots of other valuable plants or trees may extend as injury may result. Apply 2 lbs Diuron 80 per acre after the grove is laid up in final form in late October or November. A second application of 2 lbs Diuron 80 per acre should be made in March or April. Remove weed growth prior to treatment. Avoid contact of foliage with spray or drift. Aerial application is prohibited.

**PINEAPPLE – HAWAII:** Apply 4 to 8 lbs. Diuron 80 per acre as a broadcast spray immediately after planting and prior to weed emergence. Use 4 lbs. Diuron 80 per acre after harvesting plant crop (for ratoon crop). For plant crop only, a second and third broadcast or interspace application may be made prior to differentiation at the rate of 2 lbs Diuron 80 per acre at intervals of not less than 2 months. Additional applications to plant crop may be made as needed to interspace only using 2 lbs. Diuron 80 per acre. Do not apply more than 3 broadcast sprays (maximum 12 lbs. Diuron 80 per acre) prior to differentiation nor more than 16 lbs Diuron 80 total per acre per plant crop. Treated areas may be planted to pineapple or sugar cane 1 year after last application. Aerial application is prohibited.

**PLUMOSUS FERN – FLORIDA:** Treat only established stands at least 1 year old. Apply 3 lbs. Diuron 80 per acre following hand weeding and 3 to 5 days after mowing of fern (see Soil Limitations). Do not cultivate or disturb soil after application as crop injury may result. Aerial application is prohibited.

**SORGHUM (GRAIN) – SOUTHWESTERN STATES:** Apply  $\frac{1}{4}$  to  $\frac{1}{2}$  lb. Diuron 80 per acre as a directed postemergence broadcast or band treatment after sorghum is 15 inches tall to control weeds 2 to 4 inches in height. **DO NOT SPRAY OVER TOP OF SORGHUM.** Add 1 pint of a surfactant per 25 gallons of spray. Apply at spray pressures of 20 to 25 psi to minimize drift. Use the lower rate on broadleaved weeds up to 2 inches tall. Use the higher rate on grasses up to 2 inches and broadleaved weeds up to 4 inches tall. When the lower rate is used, a second application may be made if needed provided that the total herbicide applied in one crop year does not exceed  $\frac{1}{2}$  lb Diuron 80 per acre. Treatment of weeds under drought stress is usually ineffective. Do not replant treated areas to crops other than cotton or corn within 3 months following band treatments and 6 months following broadcast treatment as crop injury may result. Aerial application is prohibited.

**SUGAR CANE:** To prevent possible crop injury on new cane varieties, tolerance to Diuron 80 should be determined prior to adoption as field practice. Do not treat sugar cane growing on thinly covered subsoils or rocky areas as crop injury may result. See Soil Limitations. Temporary chlorosis of the crop may result from application over emerged cane. To minimize chlorosis, use directed post-emergence sprays.

**FLORIDA:** For high organic soils, apply 2 to 4 lbs Diuron 80 per acre as a broadcast or band spray prior to weed emergence after planting or after harvesting plant crop (for ratoon crop). A second and third application of 2 lbs. Diuron 80 per acre may be made as needed by directed spray inter row. Do not apply more than 3 treatments nor more than 6 lbs. Diuron 80 total per acre between planting (or ratooning) and harvest.

**HAWAII AND PUERTO RICO:** Apply 4 to 8 lbs. Diuron 80 per acre as a broadcast spray prior to weed emergence after planting or after harvesting plant crop (for ratoon crop). A second and a third application of 2 to 4 lbs. Diuron 80 per acre may be made as a broadcast spray over emerged cane or by directed spray inter row.

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If weeds are emerged, add a surfactant to the spray mixture at the rate of 1 to 2 quarts per 100 gallons and apply as a directed spray. **DO NOT SPRAY OVER TOP OF CANE.**

Do not apply more than 3 treatments nor more than 10 lbs. (Puerto Rico) or 12 lbs. (Hawaii) Diuron 80 total per acre between planting (or ratooning) and harvest. Treated areas may be planted to sugar cane or pineapple one year after last application.

**LOUISIANA:** Use on plant cane seeded on fallowed ground. Make a single application of 3 to 3-3/4 lbs. Diuron 80 per acre at either of the following times: **FALL TREATMENT** (August through October) – Treat a 2 foot band over the row after planting of cane, but before weeds or cane emerge. **SPRING TREATMENT** (January through April) – If shaving and off-barring are practiced, treat a 2-foot band over the row before weeds or cane emerge.

**WHEAT (WINTER):** Seed bed must be well prepared before pre-emergence application. Crop injury may result if application is made to ground that is cloddy or compacted, resulting in exposed or improperly planted seed. Whenever seedbed preparation and planting are carried out during abnormally dry weather, resulting in a surface layer of dust over planted seeds. Application should not be made until the dust is settled by rainfall or irrigation. Do not treat wheat planted less than 1 inch deep.

Do not use on thinly covered or exposed sub-soil areas (clay knobs), as injury to the crop may result. See Soil Limitations. Treated areas should not be replanted to any other crop within 1 year after last application as injury to the subsequent crop may result.

Do not apply post-emergence treatments where winter climatic conditions have caused heaving of wheat plants or after wheat has reached the boot stage as injury to the crop may result.

**KANSAS, OKLAHOMA AND TEXAS:** Make a single post-emergence application at the rate of 1-1/2 to 2 lbs. Diuron 80 per acre. Apply in the spring as soon as wheat (fall planted) starts to grow and before weeds are 2 inches tall. Application later than May 1 may give poor results.

**WASHINGTON, OREGON AND IDAHO (EAST OF CASCADE RANGE):** Make a single application at the rate of 1 to 1-1/2 lbs. Diuron 80 per acre. In areas having an average annual rainfall exceeding 16 inches: **FALL TREATMENT** – For early fall planted wheat (seeded before September 10), apply 3 to 6 weeks after planting but before weeds are 3 to 4 inches tall. Treatment after October 1 has generally given best results. Application should not be made after soil freezes in the fall. Wheat planted in late October should not be treated until the following spring.

**SPRING TREATMENT** – Apply as soon as wheat starts to grow in the spring. Treatment made prior to April 10 will usually give good results, provided weed growth is less than 4 inches tall. Application later than May 1 may give poor results.

**NOTE:** If fall planted wheat fails to grow due to winter kill or adverse growing conditions after fall treatment with Diuron, only fields treated before November 1 may be replanted to spring wheat. Spring wheat should not be planted before April 1, and only after deep discing and plowing to a depth of 4 to 6 inches prior to planting. Do not retreat field with a second application of Diuron 80 during the same crop year or injury to crop may result.

**WEST OF CASCADE RANGE:** Make a single application at the rate of 1-1/2 to 2 lbs. Diuron 80 per acre. Apply as soon as possible following planting. If wheat and weeds have emerged, apply before weeds are 3 to 4 inches tall.

## STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Always store pesticides in a secured warehouse or storage building. Do not store near seeds, fertilizers, insecticides or fungicides. Do not contaminate water, food, or feed by storage, disposal or cleaning of equipment.

**PESTICIDE DISPOSAL:** Open dumping is prohibited. Waste or rinse water that cannot be used according to label instructions must be disposed of according to applicable Federal, State or local procedures. Place in closed, labeled container for proper disposal.

**CONTAINER DISPOSAL:** Completely empty bag by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. Then dispose of empty bag.

