



001812-00320-041599

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Systems Integration Group, Inc.

Lorox® DF

Dry Flowable

<b>ACCEPTED</b>
<b>APR 15 1999</b>
Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 1812-320

**ACTIVE INGREDIENT:**

Linuron 3-(3, 4-dichlorophenyl)-1-methoxy-1-methylurea.....50.00%

**INERT INGREDIENTS:**.....50.00%

**TOTAL**.....100.00%

**KEEP OUT OF REACH OF CHILDREN**

**CAUTION**

**STATEMENT OF PRACTICAL TREATMENT**

**IF SWALLOWED:** Call a physician or Poison Control Center. Drink 1 or glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.

**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 irritations persists.

For medical emergencies involving this product, call toll free 1-800-237-1854.

Griffin LLC  
Valdosta, GA 31601

EPA Reg. No. 1812-320  
EPA Est. No. 37429-GA-1

**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS (AND DOMESTIC ANIMALS)  
CAUTION**

Harmful if swallowed. May irritate eyes, nose, throat and skin. Avoid breathing dust or spray mist. Avoid contact with skin, eyes and clothing. In case of skin contact, wash with soap and water. In case of contact with eyes, immediately flush with copious amounts of water. Get medical attention if irritation persists.

**PERSONAL PROTECTIVE EQUIPMENT**

Applicators and other handlers must wear:

- Coveralls over long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks

Mixers and loaders must wear:

- Coveralls over long-sleeved shirt and long pants
- Chemical-resistant footwear
- Chemical-resistant gloves
- Chemical-resistant apron

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.

*Engineering controls statement:*

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

**USER SAFETY RECOMMENDATIONS**

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

**ENVIRONMENTAL HAZARDS**

This pesticide is toxic to fish and aquatic invertebrates. 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 apply where weather conditions favor drift from areas treated. Do not contaminate water when disposing of equipment wash waters or rinsate.

**Ground Water Advisory:** This chemical is known to leach through soil into ground water under certain conditions as a result of agricultural use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

**Surface Water Advisory:** Linuron may contaminate surface water through spray drift or under certain conditions, from surface runoff into adjacent surface water bodies (ponds, lakes, streams, etc.) For several weeks post-application, linuron has a high potential to runoff when applied to fields with any of the following conditions: sloping land draining into nearby surface waters; very poorly to somewhat poorly drained soils; areas with extremely shallow ground water; frequently flooded areas; fields with surface water canals or ditches; and highly erodible land cultivated with poor management practices.

### 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.

### 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 24 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
- Shoes plus socks
- Chemical-resistant headgear for overhead exposure

### STORAGE AND DISPOSAL

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

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

**CONTAINER DISPOSAL: Plastic Containers** - Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke. **Paper and Plastic Bag:** Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill, or by incineration or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

### GENERAL INFORMATION

Lorox DF is a dispersible granule to be mixed in water and applied as a spray for selective control of weeds on certain crops and for non-selective weed control on non-cropland areas. Lorox DF is non-corrosive to equipment, non-flammable and non-volatile.

To control susceptible weed seedlings for an extended period of time, apply Lorox DF to soil before weed emergence. The degree of control and duration of effect will vary with the amount of chemical applied, soil texture, rainfall and other conditions. Higher dosages are needed for soils high in clay or organic matter. Soil low in clay or organic matter will require lower dosages to obtain equivalent herbicide performance. Since moisture is needed to activate Lorox DF, rainfall or irrigation is needed within 2 weeks of application.

When using Lorox DF to control emerged weeds best results are obtained on succulent weeds growing in temperatures of 70°F or higher with high humidity. Where recommended, addition of a surfactant to the spray increases contact effects of Lorox DF.

It is suggested that growers limit their first use to small areas as the effect of Lorox DF varies with soils, uniformity of application and environmental conditions. Follow all label directions on this and any product used in mixtures.

### GRASSES AND BROADLEAF WEEDS CONTROLLED BY Lorox DF

#### PREEMERGENCE USE ( GERMINATING WEEDS)

Lorox DF, at recommended rates, controls annual weeds such as:

#### Broadleaf Weeds

- Carpetweed
- Chickweed
- Dayflower, common

#### Grasses

- Barnyardgrass
- (watergrass)
- Canarygrass

Florida beggarweed	Crabgrass
Florida pusley (Florida purslane)	Foxtail
Galinsoga	(including giant)
Nettleleaf goosefoot	Goosegrass
Lambsquarter	Fall panicum
Mustard	
Pigweed	
Purslane (common)	
Radish, wild	
Ragweed (common)	
Shepard's-Purse	
Smartweed (Pennsylvania)	

Lorox DF will provide partial control of the following:

- Annual morningglory
- Cocklebur
- Prickly sida (teaweed)
- Sicklepod
- Velvetleaf (buttonweed)

Lorox DF will not control established perennials such as bermudagrass, Canada thistle, field bindweed, johnsongrass, and purple nutsedge. The lower dosage rates are effective on coarser soils and the higher rates on finer soils and on the more resistant seedling weeds. Sufficient moisture ( $\frac{1}{2}$ " to 1" on moist soils; 1" to 2" on dry soils) in the form of rainfall or sprinkler irrigation is necessary after treatment to carry the chemical into the root zone of germinating weeds; best results are obtained when this occurs within two weeks after application. If heavy rainfall occurs soon after application, injury to crop may result.

Lorox DF applied preemergence, before emergence of soybeans, asparagus, carrots, corn (field), parsnips, potatoes, 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, Lorox DF 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.

A good seed bed must be prepared before application of Lorox DF 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. Surface of the soil should not be cultivated or disturbed after application of Lorox DF 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 row crops while weeds are small enough to be controlled by mechanical means. Deep cultivation reduces the effectiveness of Lorox DF.

**POSTEMERGENCE USE (EMERGED SEEDLING WEEDS)**

Lorox DF, at recommended rates, controls weeds such as:

**Broadleaf**

Annual morningglory  
 Carpetweed  
 Cocklebur (common)  
 Dayflower (common)  
 Dog Fennel  
 Fiddleneck (amsinckia)  
 Florida beggarweed  
 Florida purslane  
 (Florida pusley)  
 Groundsel  
 Knawel  
 Lambsquarter  
 Mustard  
 Nettleleaf goosefoot  
 Pigweed  
 Prickly sida (teaweed)  
 Purslane (common)  
 Ragweed (common)  
 Sesbania  
 Sicklepod  
 Smartweed (Pennsylvania)  
 Velvetleaf (buttonweed)  
 Wild buckwheat

**Grasses**

Barnyardgrass  
 (watergrass)  
 Broadleaf signalgrass  
 Canarygrass  
 Crabgrass  
 Fall panicum  
 Foxtail (including giant)  
 Goosegrass  
 Rattail fescue  
 Ryegrass, annual  
 Texas panicum

Results of postemergence treatment of emerged weeds vary with rate applied and environmental conditions; best results are obtained on succulent weeds growing under conditions of high humidity and temperatures of 70 degrees F or higher. Addition of a surfactant to the spray (where recommended) increases contact effects of Lorox DF. Application will also provide control of emerging susceptible weed seedlings for an extended period of time

**APPLICATION DIRECTIONS****AERIAL APPLICATION IS PROHIBITED**

Lorox DF should be used only in accordance with recommendations on this label. Do not exceed 4 pounds per acre per year. Injury to or loss of desirable trees or other plants may result from failure to observe the following:

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

For preemergence application, use a minimum of 15 gallons of water per acre. For postemergence application, use sufficient volume of water (minimum of 25 gallons per acre) thorough coverage of weed foliage. Always apply in a manner and under conditions favorable to avoid spray drift.

**CLEANING:** Equipment should be cleaned of all traces of Lorox DF immediately after use. Nozzle tips and screens should be removed and cleaned separately. Flush tank, pump, hoses and boom with several changes of water.

Equipment should not be flushed or drained or Lorox DF applied 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. Lorox DF should not be used on home plantings of trees, shrubs or herbaceous plants, lawns, walks, driveways, tennis courts or similar areas. Keep drift of dry powder or spray from desirable plants.

**SPRAY PREPARATION:** The tank should be  $\frac{1}{4}$  full with clean water. Start agitation system, add Lorox DF and continue adding water. Each component of any tank mix should be added separately while adding water. Surfactant, if used, should be added last when the tank is nearly full. Agitation should continue throughout. If poor mixing should occur with any component, premix the component with two parts water before adding to the spray tank.

**RATES:** All rates are expressed as broadcast rates; for band treatment, use proportionately less. For example, use  $\frac{1}{3}$  of the broadcast rate when treating a 14" band where row spacing is 42". Where a range of dosages is given, use the lower rate on coarser soils (low in clay or organic matter) and the higher rate on finer soils (high in clay or organic matter); for postemergence application, use the lower rate of smaller weeds and the higher rate on larger weeds.

**SOIL LIMITATIONS:** Do not use on sand, loamy sand, gravelly soils or exposed subsoils nor on soils of  $<1\%$  organic matter unless otherwise directed by supplemental labeling for specific crop uses.

**REPLANTING:** If initial seeding fails to produce a stand, crops registered for the rate of Lorox DF that has been applied may be replanted into the treated area. Thoroughly rework soil before replanting. Do not retreat during the same crop year as injury to the crop may result.

**CROP ROTATION RECOMMENDATIONS:** Unless otherwise directed, any crop may be planted after 4 months except for cereals where only barley, oats, rye and wheat may be planted.

**West of the Rocky Mountains:** Carrots or celery may be planted 4 months after the last application. Do not plant any other crop until 1 year after the last application as crop injury may result. In the state of Washington, when

applications are made during the months of October, November, and December then these crops can be planted 6 months after application.

**FERTILIZER SPRAY MIXTURES:** For preemergence application, nonpressure nitrogen or fertilizer solution may be used in the spray mixture unless otherwise directed. Small quantities should be tested for compatibility by the following procedure before full scale mixing.

1. Measure one pint of intended spray water or fertilizer solution into a jar.
2. Add in the order given, the intended ingredients, shaking after each addition.
  - (a) Surfactants (spreaders), acidifiers, compatibility agents and activators: add 1 teaspoon for each pint/100 gallons.
  - (b) Dry ingredients (wetable powders, dry flowables): add 1 tablespoon for each pound/100 gallons.
  - (c) Flowables: add 1 teaspoon for each pint/100 gallons.
  - (d) Soluble ingredients: add 1 tablespoon for each pound/100 gallons.
  - (e) Spreaders/stickers: add 1 teaspoon for each pint/100 gallons.
3. The final mixture should be uniform and smooth with no evidence of coagulation occurring. If incompatibility is evident, begin test again with a compatibility agent added first. Six drops is equivalent to 4 ounces per 100 gallons. If this does not smooth the mixture, try higher concentrations and other compatibility agents.
4. Allow the mixture to stand undisturbed thirty minutes. If separation occurs, shake and observe the resulting mixture. If mixture is smooth proceed with spraying, provided the tank has good agitation. If mixture is not smooth do not spray. You may try:
  - (a) more compatibility agents.
  - (b) different formulations of the active ingredients (switch from WP or EC to flowable or from WP to EC).
  - (c) change active ingredients; some combinations will not tank mix.

### GENERAL CHEMIGATION INSTRUCTIONS

Apply this product only through one or more of the following types of systems: sprinkler including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set or hand move irrigation system(s). Do not apply this product through any other type of irrigation system.

Crop injury or lack of effectiveness or illegal pesticide residues can result from the nonuniform distribution of treated water.

If you have any questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

### CHEMIGATION SYSTEMS CONNECTED TO PUBLIC WATER SYSTEMS

Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.

Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into the reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional, interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Do not apply when wind speed favors drift beyond the area intended for treatment.

When mixing, fill nurse tank half full with water. Add Lorox DF slowly to tank while hydraulic or mechanical agitation is operating and continue filling with water. Stickers, spreaders, insecticides, nutrients, etc. should be added last. If compatibility is in question, use the compatibility jar test before mixing a whole tank. Because of the wide variety of possible combinations which can be encountered, observe all cautions and limitations on the label of all products used in mixtures.

Lorox DF should be added through a traveling irrigation system continuously or at the last 30 minutes of solid set or hand moved irrigation systems. Agitation is recommended. **Shut off injection equipment after treatment and continue to operate irrigation system until Lorox DF has been cleared from the last sprinkler head.**

### SPRINKLER CHEMIGATION

The system must contain a functional check valve, vacuum relief valve and low pressure drain appropriately

located on the irrigation pipeline to prevent water source contamination from backflow.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Do not apply when wind speed favors drift beyond the area intended for treatment.

When mixing, fill nurse tank half full with water. Add Lorox DF slowly to tank while hydraulic or mechanical agitation is operating and continue filling with water. Stickers, spreaders, insecticides, nutrients, etc. should be added last. If compatibility is in question, use the compatibility jar test before mixing a whole tank. Because of the wide variety of possible combinations which can be encountered, observe all cautions and limitations on the label of all products used in mixtures.

Lorox DF should be added through a traveling irrigation system continuously or at the last 30 minutes of solid set or hand moved irrigation systems. Agitation is recommended. **Shut off injection equipment after treatment and continue to operate irrigation system until Lorox DF has been cleared from the last sprinkler head.**

#### ASPARAGUS

**California, Hawaii, Idaho, Michigan, Minnesota, New Jersey, (preemergence only) North Carolina, North Dakota, Oregon, Washington & Wisconsin Only**

#### **Direct Seeded or Newly Planted Crowns:**

Do not exceed 4 pounds total per acre per season with a maximum of 3 applications per year. Do not use surfactant or fertilizer solution in spray mixture.

**Preemergence Application:** Make a single application of 2 to 4 lbs. per acre after planting seed 1½ inches deep in coarse soil and 1 inch deep in fine soils. During planting operation, spray activated charcoal as a 1 inches band on soil surface directly over seed rows at the rate of 300 lbs. per acre (equivalent to 15 lbs. per acre

of crop with 20 inches row spacing). Preemergence weed control will be reduced in soils with high organic matter (greater than 5% and peat or muck).

**Postemergence Application:** Make 1 or 2 applications of 1 to 2 pounds per acre when ferns are in 6 inches to 18 inches stage and weeds are not over 4 inches tall.

**Established Beds:**

Do not apply within 1 day of harvest. Do not exceed 4 pounds total per acre per season with a maximum of 3 applications per year. Do not use surfactant or fertilizer solution in spray mixture.

**Preemergence Application:** Make a single application of 2 to 4 lbs. per acre. Preemergence weed control will be reduced in soils with high organic matter (greater than 5% and peat or muck).

**Postemergence Application:** Make 1 to 3 applications of 1 to 2 pounds per acre before weeds exceed 4 inches in height. Apply before cutting season or immediately after cutting.

**Directed Postemergence Application (Fern Stage):** Make a single application of 4 pounds per acre as directed. Spray to base of plants for control of dudain melon.

In California, dudain melon and annual nightshade are controlled.

**BULBS**

**Tulip, Calla Lily, Daffodil and Dutch Iris  
California**

After planting of bulbs, settle the soil with sprinkler irrigation (rainfall will serve the same purpose); then before emergence of plants (bulbs), apply 2 lbs. Lorox DF per acre in a minimum of 20 gallons of water per acre. Treat only once during the growing season.

**CARROT**

**Preemergence Application - California, Florida, Michigan, Minnesota, North Dakota, Ohio Oregon, Washington, and Wisconsin only:**

A single application of 1 - 3 2 lbs. per acre in California, Florida, Minnesota, North Dakota, Oregon, and Washington and 1 - 3 lbs. per acre in Michigan, Ohio, and Wisconsin should be made after planting but prior to carrots emerging. Seed should be planted at least 1/2 inch deep. The lower rate should be used on lighter soils and the higher rate on heavier soils. Additional postemergence applications may be made as long as the total does not exceed 4 lbs. of Lorox DF per acre per season.

**NOTE:** To prevent possible crop injury in various varieties of carrots determine tolerance to Lorox DF before adoption as a field practice. Do not apply within 14 days of harvest.

**Postemergence - Entire U.S.:**

Apply 1.5 to 3 lbs. per acre as a non-directed spray after carrots are at least 3 inches tall. Apply before annual grasses exceed 2 inches in height and before broadleaf weeds exceed 6 inches in height. Repeat application may be made but do not exceed 4 lbs. Lorox DF per acre (West of Rocky Mountains, do not exceed 3 lbs. Lorox DF per acre). Do not exceed 40 psi spray nozzle pressure as crop injury may result.

**NOTE:** Because carrot varieties vary in their resistance, determine tolerance to Lorox DF prior to adoption as a field practice to prevent possible crop injury. Do not treat susceptible varieties which show an initial burning of foliage following postemergence treatment with Lorox DF. Do not apply within 14 days of harvest.

**Postemergence Application - Alternate Treatment for New York:** For control of emerged broadleaf weeds

early in the development of the carrot crop, apply 0.25 lb. per acre to carrots having at least one fully developed true leaf and 0.5 lb. per acre to carrots having three or more leaves. A single application applied prior to the five-leaf stage of carrots may not provide adequate season-long control. Multiple applications at 1- and 3-, and 2- and 4-, or 3- and 5-leaf stages will significantly improve weed control. Early crop injury can occur, however the effect should be transitory, with no yield losses attributable to crop injury. At normal rate recommendation, carrots must be at least 3 inches tall at the time of application. Failure to control weeds before this stage of development will result in significant yield losses due to weed competition.

**NOTE:** The activity of Lorox DF on both carrots and weeds is increased if applied after 3 or more cloudy days. If spraying is done under these conditions, the dosage of Lorox DF must be reduced. Do not apply when the temperature exceeds 85° F. Lorox DF often interacts with other herbicides or insecticides and damages carrots when the chemicals are tank mixed or applied sequentially at close intervals. Several days, preferably a week should elapse between Lorox DF applications and application of insecticides.

Lorox DF may be applied following an application of Stoddard solvent provided treatments are at least one day apart. Stoddard solvent may be applied following application of Lorox DF provided treatments are at least 2 weeks apart. Shorter time intervals between applications may result in crop injury. Do not apply Lorox DF as a tank mixture with Stoddard solvent, surfactants, nitrogen or fertilizer solution, or other pesticides, nor when temperature exceeds 85° F as crop injury may result.

## CELERY

### Post-transplant Application:

Make a single application of 1.5 to 3 pounds per acre *in all states except California. In California use 1.5 to 2 pounds per acre.* Apply as a non-directed spray after celery is transplanted and established, but before celery is 8 inches tall. Apply before annual grasses exceed 2 inches in height and before broadleaf weeds exceed 6 inches in height. In the Northeast, use only on celery grown on muck soils.

Do not exceed 40 psi spray nozzle pressure, and do not apply when temperature exceeds 85°F nor as a tank mixture with surfactants, nitrogen or fertilizer solution, or other pesticides as injury to the crop may result. Do not replant to crops other than celery or carrots within 4 months after application as injury to subsequent crops may result.

## CORN (Field)

### East of the Rocky Mountains only

### Preemergence Application:

Select one of the following herbicide treatments for application as a tank mixture. A single application should be made after planting but prior to crop emergence. Do not exceed 1.5 pounds per acre per season. Seed should be planted at least 1¾ inches deep on either flat or raised seed beds only or injury to the crop may result. Do not spray over top of emerged corn..

**Lorox DF + Lasso®:**

**Pounds of Lorox DF + Quarts of "Lasso" per acre**

Soil Texture Description	Percent Organic Matter in Soil	
	1 to 3%	3 to 6%
<b>Coarse:</b> Sandy Loam	2/3 to 1-1/4 + 3/4 to 1	1-1/4 to 1-1/2 + 1 to 1-1/2
<b>Medium:</b> Loam Silt loam, Silt, Sandy clay, Sandy clay loam	1 to 1-1/2 + 1 to 1-1/2	1-1/2 + 1-1/2 to 2
<b>Fine:</b> Silty clay, Silty clay loam, Clay, Clay loam	1-1/4 to 1-1/2 + 1-1/2 to 2	1-1/2 + 2 to 2-1/2

**Replanting:** Corn or soybeans may be replanted within 4 months. After 4 months, any crop may be planted.

**Lorox DF + Ramrod**

**Pounds of Lorox DF + Gallons of "Ramrod" (4lb/gal) per acre**

Soil Texture Description	Percent Organic Matter in Soil	
	1 to 3%	3 to 6%
<b>Coarse:</b> Sandy Loam	2/3 to 1-1/3 + 1-1/3 to 2-3/5	1-1/3 to 1-1/2 + 2-3/5 to 3-9/10
<b>Medium:</b> Loam, Silt loam, Silt, Sandy clay, Sandy clay loam	1-1/2 + 2 to 3-1/3	1-1/2 + 3-1/3 to 5-1/5
<b>Fine:</b> Silty clay, Silty clay loam, Clay, Clay loam	1-1/4 to 1-1/2 + 2-3/5 to 3-9/10	1-1/2 + 3-9/10 to 6-1/5

**Replanting:** Corn may be replanted within 4 months. After 4 months, any crop may be planted.

**Lorox DF + atrazine**

**Pounds of Lorox DF + Pounds of atrazine 80% per acre**

Soil Texture Description	Percent Organic Matter in Soil	
	1 to 2%	2 to 5%
<b>Coarse:</b> Sandy Loam	2/3 to 1 + 1/2 to 2/3	1 to 1-1/2 + 2/3 to 1-1/4
<b>Medium:</b> Loam, Silt loam, Silt, Sandy clay, Sandy clay loam	1 to 1-1/2 + 2/3 to 1	1-1/2 + 1 to 1-1/2
<b>Fine:</b> Silty clay, Silty		

clay loam, Clay,  
Clay loam

1-1/3 to 1-1/2 + 3/4 to 1

1-1/2 + 1 to 2

## HYBRID POPLAR

### Midwest

Apply 2 to 4 pounds Lorox DF per acre before bud break in the spring. For application after bud break, apply 2 to 4 pounds Lorox DF per acre as a directed spray. Spray should be directed to weed growth and to avoid contact with the poplar plant. Do not spray over the top of the poplar as injury to the plant will result.

Use the lower rate on light soils and higher rate on heavier soils. For best results on emerged weeds, treat at the seedling stage.

More than one treatment may be made but no more than 8 pounds Lorox DF per acre should be applied per year.

## PARSLEY

(East of Mississippi River and Texas)

In Texas, use on mineral soils only.

### Preemergence Application (Mineral and Muck Soils):

Make a single broadcast application of Lorox DF at a rate of 1 to 3 lbs. per acre after planting, but before the crop emerges. Do not exceed a total of 3 lbs. of Lorox DF per acre per season. Use lower rates on coarse soils and higher rates on heavier soils. Do not apply within 30 days of harvest.

### Postemergence Application (Muck Soils Only):

Make a single application of Lorox DF at a rate of 1 lb. per acre to control emerged weeds. Do not exceed a total of 3 lbs. of Lorox DF per acre per season. Apply after parsley has a minimum of 3 true leaves or crop injury may result. Apply when weeds are in the 1 to 3 true leaf stage. Do not apply within 30 days of harvest.

## PARSNIP

### Preemergence Application:

A single application of 1.5 to 3 lbs. per acre should be made after planting but prior to crop emergence. Seed should be planted at least 1/2 inch deep.

## POTATO

### Preemergence Application:

A single application of Lorox DF should be made as a broadcast spray after planting but prior to crop emergence. Seed should be planted at least 2 inches deep. Do not spray over top of emerged potatoes. If beds are to be dragged and/or hilled, apply after the final dragging or hilling operation. Application should be made before grasses and 2 inches tall and before broadleaf weeds are 6 inches tall, preferably just before or when weed seedlings emerge. A pint of surfactant for each 25 gallons of spray mixture can be added if emerged weeds are present. In irrigated areas, best results are obtained when application is made to moist soil, followed within 2 weeks by 1 to 2 inches of sprinkler irrigation (or rainfall). If soil is dry and powdery, irrigate before application and follow with sprinkler irrigation to activate herbicide. Do not use West of Rocky Mountains.

**East of Rocky Mountains only:**

On sandy loam, silt loam soil with 1 to 2% organic matter (coarser soils) apply 1.5 to 2.5 lbs. of Lorox DF per acre. On silts, clay loams and soils with 2 to 5% organic matter (fine soils) apply 2.5 to 3 lbs. per acre to emerged weeds (before potato emergence).

**Northeast:**

Use the following tank mix for improved control of annual grasses. Follow directions and precautions on the Dual® label also.

Lorox DF + Dual 8E

**Pounds of "Lorox" 50DF + Pints of Dual 8E per acre**

Soil Texture Description	Percent Organic Matter in Soil	
	1 to 3%	3 to 5%
<b>Coarse:</b> Sandy Loam	1 to 1-1/2 + 1-1/2	1-1/2 to 2 + 2
<b>Medium:</b> Loam, Silt loam, Silt, Sandy clay, Sandy clay loam	1-1/2 to 2 + 2	2 to 2-1/2 + 2-1/2 to 3

**SORGHUM**

**Preemergence Application:**

Select a registered herbicide treatment for application as a tank mixture. Make a single application as a tank mixture. Make a single application after planting but before crop emerges. In soil with 1 to 2% organic matter apply 0.5 to 1 pound per acre on sandy loam and 1 to 1.5 pounds per acre on loam, silt loam, silt, sandy clay, or sandy clay loam. In soil with 2 to 4% organic matter apply 1 to 1.5 pounds per acre on sandy loam and 1 to 2 pounds per acre on loam, silt loam, silt, sandy clay, or sandy clay loam. Plant seed at least 1 inch deep on flat or raised seedbeds only as injury to the crop may result. Do not apply over top of emerged sorghum.

**Directed Postemergence Application:**

Make a single application of Lorox 50DF as a directed spray. Add 1 pint surfactant for each 25 gallons spray mixture. If sprayer is equipped with skids, shoes or shields, apply 1 pound per acre when sorghum is 12 inches tall (free standing plants) and weeds are up to 2 inches in height. Use 1 to 2 pounds per acre when sorghum is 15 inches tall and weeds are 2 to 4 inches in height. Apply only when there is sufficient differential between height of sorghum and weeds so that the directed spray thoroughly covers all weed foliage without contact on upper leaves or whorf of sorghum by spray or drift as such contact may cause crop injury.

**Replanting:** Do not follow treated sorghum with any fall crop, nor with sugarbeets, tobacco, vegetables or potatoes in rotation. Prior to replanting, thorough seedbed preparation including fall or spring plowing is recommended. Sorghum or field corn may be replanted within 4 months, after 4 months any crop may be replanted.

**Note:** Do not graze or feed sorghum forage or silage from treated fields to dairy animals. Follow label instructions on product to be tank mixed.

**SOYBEAN- CONVENTIONAL TILLAGE**

Make only a single preemergence application of Lorox DF per season.

Do not exceed 2 lbs of Lorox DF in any application.

For broad spectrum weed control, select one of the following herbicide combination treatments and make a single application after planting but before crop emerges. Plant seed at least 1 3/4" deep on flat or raised seedbeds only or injury to the crop may result. Injury to soybeans may result if application is made to fields with standing water or fields too wet to cultivate. Do not apply more than 2 lbs per acre of Lorox DF in any application. Do not spray over top of emerged soybeans. Do not use on sand or loamy sand nor any soil containing less organic matter than listed below. Lorox DF + Lexone DF\*.

For control of common ragweed, hemp sesbania, jimsonweed, lambsquarters, pigweeds, prickly sida, sicklepod, velvetleaf, spotted spurge, Venice mallow, purslane, carpetweed, Pennsylvania smartweed, and partial control of cocklebur\*, use the following:

**Lorox DF + Lexone DF\***

**Pounds of Lorox DF + Lexone DF\* Per Acre**

Soil Texture Description	Percent Organic Matter in Soil	
	1 to 3%	3 to 6%
<b>Coarse:</b>		
Sandy Loam	1/3 to 1/2 + 1/6 to 1/4	1/2 to 3/4 + 1/4 to 1/3
<b>Medium:</b>		
Loam, Silt loam, Silt, Sandy clay, Sandy clay loam	1/2 to 3/4 + 1/4 to 1/3	3/4 to 1 1/2 + 1/3 to 1/2
<b>Fine:</b>		
Silty clay, Silty clay loam, Clay, Clay loam	3/4 to 1 1/2 + 1/3 to 1/2	1 1/2 to 2 + 1/2 to 2/3

\*For improved control of annual grasses, tank mix with "Lasso" or "Dual" (per labeling):

Herbicide Recropping/Restrictions

**“Lasso”** Soybeans or field corn may be replanted within 4 months; after 4 months, see “Replanting”.  
Treated vines may be grazed or fed to livestock 40 days after application.

or

**“Dual”** Soybeans or field corn may be replanted within 4 months, for rotation crops, see “Replanting” and follow instructions on “Dual” label.

**Do not graze or feed forage from treated areas to livestock.**

**NOTE:** Soybean varieties such as Altona, Coker 102 and 156, Govan, NKS 1884, Semmes, Tracy, Vansoy, Terra Vig 505 and 606, Agripro 55, Agrow 6520, Maple Amber, Portage, Vinton 81, and AP 71 are sensitive to Lexone DF. If Lexone DF is used on these varieties, injury may occur. Tolerance to Lexone DF should be determined before use on any other soybean variety. Varieties showing above average tolerance to Lexone DF are American Revere, Asgrow 1937, Asgrow 3659, Asgrow 3860, DSR 171, DSR 207, Essex, Fayette, Hisoy 170, Lakota, Lawrence, LOL 4207, NKS 1492, Pride B216, Pride B242, SRF 250, SRF 350P, Union, Wayne, Wells II, and Williams 82. For maximum weed control, use the higher rate (where a range of rates is listed) for the appropriate soil type and organic matter as shown in the following tables. If Lexone DF is used on soils having a calcareous surface layer or pH of 7.5 or higher, or if used in conjunction with soil applied organo phosphate pesticides such as Dasanit, Disyston, Mocap, Nema-cur, Thimet, Parathion, Lorsban 15G or Counter, injury to soybean may occur.

Do not feed treated plant parts to livestock. If atrazine was applied on the soil the year before, injury may occur. Increased possibility of crop injury may occur when soybean seedlings are weakened because of seedling disease, cold weather, deep planting (more than 2 inches), excessive moisture, high soil pH of 7.5 or higher, high salt concentration or drought. Do not use on sand or loamy sand soils.

**Cultivation After Planting:** Treated soil may be shallow-cultivated, rotary hoed or hand hoed without reducing the weed control activity of the tank mixture. Do not cultivate deeper than the treated layer of soil since this may bring untreated soil to the surface and poor weed control may result.

**Replanting:** Treated fields may be replanted to soybeans if initial seeding fails to produce a stand. Soil should not be reworked. Crop injury may result if second application is applied. Do not replant treated areas to any crop other than soybeans within four months after treatment as injury to subsequent crops may result.

**Lorox DF\***

**Pounds of Lorox DF per acre**

Soil Texture Description	Percent Organic Matter in Soil	
	1 to 3%	3 to 6%
<b>Coarse:</b> Sandy Loam	2/3 to 1 1/4	1 1/4 to 2
<b>Medium:</b> Loam, Silt loam, Silt, Sandy clay, Sandy clay loam	1 to 1 2/3	1 2/3 to 2

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<b>Fine:</b> Silty clay, Silty clay loam, Clay, Clay loam	1 1/4 to 2	2
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**\*For improved control of annual grasses, add as per the following labeling:**

**Herbicide Recropping/Restrictions:**

- “Lasso”** Soybeans or field corn may be replanted within 4 months; after 4 months, see “Replanting.”

or
- “Dual”** Soybeans or field corn may be replanted with 4 months; for rotation crops, see “Replanting” and follow instructions on “Dual” label. Do not graze or feed forage from treated areas to livestock.

or
- “Prowl”** Soybeans or field corn may be replanted within 4 months; crops listed in “Replanting” may be planted the following year.

or
- “Surflan”** Soybeans may be replanted within 4 months; after 4 months, see “Replanting” but do not plant potatoes within 12 months. Do not use treated vines for feed or forage.

or
- “Amiben”** Soybeans or field corn may be replanted within 4 months; after 4 months, see “Replanting.”

**For control of black nightshade, apply:**

**Lorox DF + Lasso**

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**Pounds of Lorox DF + Quarts of “Lasso” per acre**

**Soil Texture**

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<b>Description</b>	<b>1 to 3% Percent Organic Matter in Soil</b>	
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<b>Coarse:</b> Sandy Loam	3/4 to 1 1/2	+ 2
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**Medium:** Loam,

Silt loam, Silt, Sandy clay, Sandy clay loam	1 to 1 2/3	+	2 1/2 to 3
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<b>Fine:</b> Silty clay, Silty clay loam, Clay, Clay loam	1 1/4 to 2	+	3
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Do not use on sand or loamy sands.

**Replanting:** Soybeans or field corn may be replanted within 4 months; after 4 months, see "Replanting"

**For control of black nightshade in Kentucky, Illinois, Indiana and Ohio:**

**Lorox DF + Dual 8E**

**Pounds of Lorox DF + Pints of "Dual" 8E per acre**

**Soil Texture**

<b>Description</b>	<b>1 to 3% Percent Organic Matter in Soil</b>		
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<b>Coarse:</b> Sandy Loam	3/4 to 1 1/2	+	1 1/2
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<b>Medium:</b> Loam, Silt loam, Silt, Sandy clay, Sandy clay loam	1 to 1-2/3	+	2
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<b>Fine:</b> Silty clay, Silty clay loam, Clay, Clay loam	1 1/4 to 2	+	2 to 2 1/2
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Do not use on sand or loamy sands.

**Replanting:** Soybeans or field corn may be replanted within 4 months; after 4 months, see "Replanting".

**Preemergence Following "Treflan" or "Prowl" Preplant:**

Where "Treflan" or "Prowl" has been used as a preplant incorporated treatment (according to directions on product label), apply Lorox DF preemergence (after planting and before emergence of soybeans) as a separate operation using rates recommended below for Lorox DF alone. For rotation crops, follow instructions on "Treflan" or "Prowl" labels and see "Replanting". Plant seed at least 1 3/4" deep on flat or raised seedbeds only or injury to the crop may result. Injury to soybeans may result if application is made to fields with standing water or fields too wet to cultivate. Do not spray over top of emerged soybeans. Do not use on sand or loamy sand nor any soil containing less organic matter than listed below.

**Lorox DF Alone**--If weeds have emerged, add 1 pint surfactant for each 25 gals spray mixture.

**Lorox DF\***

**Pounds of Lorox DF per acre**

<b>Soil Texture</b>	<b>Percent Organic Matter in Soil</b>	
<b>Description</b>	<b>1 to 2%</b>	<b>2 to 5%</b>
<b>Coarse:</b> Sandy Loam	1 to 1 2/3	1-2/3 to 2
<b>Medium:</b> Loam,		

Silt loam, Silt, Sandy clay, Sandy clay loam	1 1/4 to 2	2
<b>Fine:</b> Silty clay, Silty clay loam, Clay, Clay loam	1 1/3 to 2	2 (Over 5% organic matter, use 2 lbs.)

**Replanting:** Soybeans or field corn may be replanted within 4 months; after 4 months, see "Replanting".

**SOYBEANS - MINIMUM OR NO TILLAGE**

**Preemergence to Soybeans Postemergence to Weeds:** "Lorox" 50DF preemergence to soybeans may be used for preemergence and postemergence control of many broadleaf weeds and grasses where soybeans will be planted directly into a preformed bed (stale seed bed), cover crop or in previous crop residues such as corn or small grain stubble. Apply with ground equipment immediately before, during or after planting but before crop emerges; maintain constant agitation of spray mixture.

**Lorox DF Alone**

**Lorox DF\***

**Pounds of Lorox DF per acre**

Soil Texture Description	Percent Organic Matter in Soil	
	1 to 2%	2 to 5%
<b>Coarse:</b> Sandy Loam	1 to 1 2/3	1-2/3 to 2
<b>Medium:</b> Loam, Silt loam, Silt, Sandy clay, Sandy clay loam	1 1/4 to 2	2
<b>Fine:</b> Silty clay, Silty clay loam, Clay, Clay loam	1 1/3 to 2	2 (Over 5% organic Matter, use 2 lbs.)

**Replanting:** Soybeans or field corn may be replanted within 4 months; after 4 months, see Replanting".

If small seedling weeds are present, add 1 pint surfactant for each 25 gals spray mixture for improved contact activity. On larger weeds, add "Paraquat" or "Roundup" or "Bronco" as described under these combinations; these treatments will also suppress some perennial weeds.

**Lorox DF + "Lasso" or "Dual" 8E or "Surflan"** --will improve control of grasses and volunteer small grains.

**Lorox DF + "Lasso"\* (or "Dual"\* or "Surflan"\*) + Paraquat or "Roundup"**-Thoroughly mix Lorox DF and companion herbicide in spray tank first according to directions; then add paraquat, or "Roundup" as directed under *Paraquat Combinations* or "Roundup" combinations below.

**Lorox DF + "Lasso"****Pounds of Lorox DF + Quarts of "Lasso" per acre**

<b>Soil Texture Description</b>	<b>Percent Organic Matter in Soil</b>	
	<b>1 to 3%</b>	<b>3 to 6%</b>
<b>Coarse:</b> Sandy Loam	3/4 to 1 1/2	1 1/2 to 2 + 2 1/2
<b>Medium:</b> Loam, Silt loam, Silt, Sandy clay, Sandy clay loam	1-1/8 to 2 + 2-1/2	2 + 3
<b>Fine:</b> Silty clay, Silty clay loam, Clay, Clay loam	1-1/4 to 2 + 2-1/2	2 + 3

\*For improved control of annual grasses and volunteer small grains, add as per labeling:

<b>Herbicide</b>	<b>Recropping/Restrictions</b>
"Lasso"	Soybeans or field corn may be replanted within 4 months; after 4 months, see "Replanting".
	or
"Dual"	Soybeans or field corn may be replanted within 4 months; for rotation crops see "Replanting" and follow instructions on "Dual" label. Do not graze or feed forage from treated areas to livestock.
	or
"Surflan"	Do not use treated vines for feed or forage. Soybeans may be replanted within 4 months; after 4 months, see "Replanting" and do not plant potatoes within 12 months.

For control of black nightshade apply with paraquat or "Roundup" as shown below:

**Lorox DF + Lasso****Pounds of Lorox DF + Quarts of "Lasso" per acre**

<b>Soil Texture Description</b>	<b>1 to 3% Percent Organic Matter in Soil</b>	
<b>Coarse:</b> Sandy Loam	3/4 to 1 1/2	+ 2
<b>Medium:</b> Loam, Silt loam, Silt, Sandy clay, Sandy clay loam	1 to 2	+ 2 1/2 3

<b>Fine:</b> Silty clay, Silty clay loam, Clay, Clay loam	1 1/4 to 2	+ 3
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**Replanting:** Soybeans or field corn may be replanted within 4 months; after 4 months, see "Replanting".

**Paraquat Combinations-**Select and tank mix in water one of the above treatments; then add 1/4 to 1/2 lb. active ingredient paraquat per acre for control of emerged weeds. Use the higher rate for weeds 4" to 6" tall. As the last ingredient, add 1/2 pint "Ortho" X-77 Spreader per 100 gals of spray mixture. Maintain constant agitation. Use 20 to 60 gals of water per acre. Use the higher gallonage for dense stubble or vegetation.

**Roundup Combinations-**Select and tank mix one of the above treatments. As last ingredient, add 1 1/2 quarts of "Roundup" per acre for control of emerged annual weeds or 2 to 4 quarts per acre for control of emerged perennial and annual weeds. Use 20 to 30 gals of water per acre.

**Lorox DF + Bronco**

**Pounds of Lorox DF + Quarts of "Bronco"(b) per acre**

**Soil Texture**

<b>Description</b>	<b>1 to 5% Percent Organic Matter in Soil(a)</b>	
<b>Coarse:</b> Sandy Loam	3/4 to 2	+ 3 1/4 to 5
<b>Medium:</b> Loam. Silt loam, Silt, Sandy clay, Sandy clay loam	1 1/8 to 2	+ 4 to 5
<b>Fine:</b> Silty clay, Silty clay loam, Clay, Clay loam	1 1/4 to 2	+ 4 to 5

(a)Do not use on sand, loamy sand, or muck soils as crop injury may result.

(b)Use the higher rate for dense stubble, heavy crop residue, or heavy weed population.

**Replanting Soybeans:** If initial seeding fails to produce a stand, treated fields may be replanted to soybeans; do not rework soil; do not retreat field with a second application as injury to the crop may result. Do not replant treated areas to any crop other than soybeans within four months after treatment as injury to subsequent crops may result. See "Replanting".

**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 in 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

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Lasso is a registered trademark of Monsanto Company.

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Lorox is a registered trademark of E.I. DuPont de Nemours and Company.

Prowl is a registered trademark of American Cyanamid Company.

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