

PAT 39

November, 1980 (Revision)

A Practical Exercise for Understanding
the Pesticide Label

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Pesticide Recertification for Virginia is obtained by attending an approved program designed for this purpose. In addition, the attached exercise must be completed and returned for the General Category (Private) and for some of the commercial categories.

Please refer to the three enclosed pesticide labels ** and write the answers to the questions asked on pages 15 and 16. When you have finished, place your name, address, zip code, permit number and other information in the spaces provided on page 16. Tear off page 15 as indicated by the perforated line and fold as indicated on page 16, so that the address is on the outside. Staple or tape closed, place a stamp in the appropriate place, and mail to the person who administered the recertification session.

You will be contacted by the Virginia Department of Agriculture and Consumer Services, Richmond, Virginia before December 31; when your new permit is issued.

*Extension Specialist, Grains, and Extension Specialist, Plant Physiology, respectively.

**Brand names and products are used for information purposes only. No discrimination is intended and no endorsement by the Virginia Cooperative Extension Service or Virginia Tech is implied.

LD
5255
A762
1980
412

Princep®

4L

SAMPLE LABEL

Herbicide

For weed control in certain crops, on industrial sites, and around-the-farm

Active Ingredient:
Simazine: 2-chloro-4,6-bis (ethylamino)-s-triazine 41.9%

Inert
Ingredients: 58.1%
Total: 100.0%

Princep 4L contains 4 lbs. active ingredient per gal.

Use entire contents at one time.

Keep out of reach of children.

WARNING:

See additional precautionary statements at end of label booklet.

Princep® trademark of CIBA-GEIGY for simazine

EPA Reg. No. 100-526

See directions for use inside booklet.

2½
Gallons

U.S. Standard Measure

Agricultural Division
CIBA-GEIGY Corporation
Greensboro,
North Carolina 27409

CGA 6L19B

068

CIBA—GEIGY

DIRECTIONS FOR USE AND CONDITIONS OF SALE AND WARRANTY

IMPORTANT: Read the entire **Directions for Use** and the **Conditions of Sale and Warranty** before using this product.

Conditions of Sale and Warranty

The **Directions for Use** of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with 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 CIBA-GEIGY or the Seller. All such risks shall be assumed by the Buyer.

CIBA-GEIGY warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the **Directions for Use** subject to the inherent risks referred to above. **CIBA-GEIGY makes no other express or implied warranty of Fitness or Merchantability or any other express or implied warranty. In no case shall CIBA-GEIGY or the Seller be liable for consequential, special, or indirect damages resulting from the use or handling of this product.** CIBA-GEIGY and the Seller offer this product, and the Buyer and user accept it, subject to the foregoing **Conditions of Sale and Warranty**, which may be varied only by agreement in writing signed by a duly authorized representative of CIBA-GEIGY.

General Information

Princep 4L Herbicide should be applied before weeds emerge or following removal of weed growth. It controls a wide variety of annual broadleaf and grass weeds when used at selective rates in agricultural crops. When used at higher, nonselective rates in noncrop areas, it also controls many perennial broadleaf and grass weeds.

Where a range of application rates is given, use the low rate on coarser textured soil and soil lower in organic matter; use the high rate on finer textured soil and soil higher in organic matter.

Since Princep enters weeds mainly through their roots, moisture is needed to move it into the root zone. Very dry soil conditions following application may necessitate shallow cultivation or rotary hoeing.

Princep 4L is nonflammable.

Annual Weeds Controlled

| | |
|--------------------------|------------------|
| <i>Amaranthus</i> spp. | junglerice |
| annual bluegrass | lambsquarters |
| annual morningglory | mustard |
| annual ryegrass | nightshade |
| barnyardgrass | pigweed |
| (watergrass) | prickly lettuce |
| <i>Brachiaria</i> spp. | purslane |
| carelessweed | *quackgrass |
| carpetweed | ragweed |
| common chickweed | rattail fescue |
| crabgrass | Russian thistle |
| (<i>Digitaria</i> spp.) | shepherdspurse |
| downy brome (cheat) | shieldscrew |
| fall panicum | silver hairgrass |
| fireweed | smartweed |
| Flora's paintbrush | spanishneedles |
| Florida pusley | tansymustard |
| foxtails | wild oats |
| goosegrass | wiregrass |
| | witchgrass |

*See specific use directions.

Ground Application

Apply Princep 4L in 20-40 gals. of water per acre to assure even coverage unless otherwise specified. Use fan-type nozzles. Screens in nozzles and in suction and in-line strainers should be no finer than 50-mesh. Use a pump with capacity sufficient to maintain 35-40 psi operating pressure.

Aerial Application

Use aerial application only where specified in the use directions. Apply a minimum of one gal. of water for each qt. of Princep 4L applied per acre. Do not apply where uniform coverage cannot be obtained or where excessive spray drift may occur. Avoid application directly to animals or humans. Flagmen or loaders should avoid inhalation of spray mist or contact with skin and should wash thoroughly before eating and at the end of each day's operation.

Mixing Instructions

Mix Princep 4L with water and apply as a spray. Pour Princep 4L into the tank during or after filling. Hydraulic (jet) or mechanical

agitation is recommended during mixing and application to keep the material in suspension. All return lines to the tank must discharge below liquid level and agitation should not be so violent as to cause air bubbles to form in the liquid. Wash sprayer thoroughly after use.

Band Treatment

Use the following formula to calculate the amount of Princep 4L needed per acre for band treatment:

$$\frac{\text{band width in inches}}{\text{row width in inches}} \times \frac{\text{broadcast rate}}{\text{per acre}} = \frac{\text{amount needed}}{\text{per acre}}$$

Corn

Nitrogen solution or complete liquid fertilizer may replace all or part of the water as a carrier for Princep 4L. Do not apply after corn has emerged, as there is danger of liquid fertilizer causing crop injury. Use 10-40 gals. of spray mixture per acre.

Preplant

Broadcast in the spring after plowing at the appropriate rate in the following table. Apply before, during, or after final seedbed preparation. If soil is tilled or worked after application, avoid deep incorporation of Princep 4L. Best results will be obtained when Princep is applied within 2 weeks prior to planting.

Preemergence

Apply before weeds and corn emerge. Use the appropriate rate in the following table.

Note: Under dry weather conditions, preplant applications may give better weed control than preemergence.

| Soil | Broadcast* rate per acre |
|--|--------------------------|
| Sand, silt, and loam that is low in organic matter | 4 pts. |
| Soil containing moderate amounts of clay and organic matter | 4.8 pts. |
| Loam that is high in organic matter and clay (including dark prairie soils of Corn Belt) | 6 pts. |
| Peat, muck, and high-organic clay | 8 pts. |

*For calculation of band treatment rate, see General Information section.

Quackgrass Control

Broadcast 6-8 pts. per acre in the fall. Plow 2-3 weeks later, or if erosion is a problem, delay plowing until spring. Do not plant any crop except corn in the spring following treatment. Do not graze treated area.

Precautions: 1) Do not apply more than 8 pts. of Princep 4L per acre per year. 2) Do not plant any crop except corn until the following year as injury may occur. 3) Following harvest of the treated crop, plow and thoroughly till the soil in fall or spring to minimize possible injury to spring-seeded rotational crops, regardless of the rate used. 4) If Princep 4L is used at a rate higher than 6 pts. per acre or equivalent band rate, a crop of untreated corn should precede the next rotational crop. 5) Do not apply Princep 4L preplant incorporated for weed control in corn in the High Plains and Intermountain areas of the West (including central and western Kansas, western Nebraska, western Oklahoma, and the Panhandle of Texas) where rainfall is sparse and erratic or where irrigation is required. 6) In the High Plains and Intermountain areas of the West where rainfall is sparse and erratic or where irrigation is required, use Princep 4L when only corn is to follow corn or a crop of untreated corn is to precede other rotational crops. 7) In western Minnesota and eastern parts of the Dakotas, Nebraska and Kansas, do not rotate to soybeans if the rate applied was more than 4 pts. per acre or equivalent band rate as injury may occur. 8) Do not plant sugar beets, tobacco, vegetables (including dry beans), spring-seeded small grains, or small-seeded legumes and grasses the year following Princep 4L application as injury may occur.

Princep 4L Plus AAtrex® 4L (or 4LC) Tank Mix Combination for Weed Control in Corn

Apply the tank mix combination of Princep 4L plus AAtrex 4L (or 4LC) either before, during, or after planting corn but before weeds emerge to control early germinating annual weeds and late competing grasses. One application will control most annual broadleaf and grass weeds including fall panicum, crabgrass, barnyardgrass, foxtail, velvetleaf, carpetweed, morningglory, lambsquarters, pigweed, and ragweed. Apply in 10-40 gals. of water per acre.

Preplant

Apply the tank mixture as a broadcast treatment in the spring after plowing either before, during, or after final seedbed preparation. If soil is tilled or worked after application, avoid deep incorporation of Princep 4L plus AAtrex 4L (or 4LC). Best results will be obtained when the tank mix is applied within 2 weeks before planting.

Preemergence

Apply the tank mixture during or shortly after planting but prior to crop and weed emergence.

| Soil | Preplant and preemergence broadcast* rates per acre | |
|---|---|--------------------|
| | Princep 4L | AAtrex 4L (or 4LC) |
| Sand, loamy sand, sandy loam | 2 pts. | 2 pts. |
| Silt loam and clay loam low in organic matter | 2.4 pts. | 2.4 pts. |
| Silt loam and clay loam with medium to high organic matter and clay (including dark prairie soils of the Corn Belt) | 3 pts. | 3 pts. |

*For calculation of preemergence band treatment rate, see General Information section.

Precautions: 1) If weeds develop, a shallow cultivation will generally result in better weed control. 2) Following harvest of the treated crop, plow (moldboard or disk-plow) and thoroughly till the soil in fall or spring to minimize possible injury to spring-seeded rotational crops, regardless of the rate used. 3) Do not plant any crop except corn until the following year, as injury may occur. 4) Do not plant sugar beets, tobacco, vegetables (including dry beans), spring-seeded small grains, or small-seeded legumes and grasses the year following application or injury may occur.

Refer to the AAtrex 4L (or 4LC) label for further directions, limitations and cautions.

Fruit Crops

Apply the spray to the orchard or vineyard floor avoiding contact with fruit, foliage, or stems. Apply only to orchards or groves where trees have been established one year or more, unless specified differently. Make only one application per year, except as noted otherwise. Recommended rates are based on broadcast treatment. For band applications or spot applications around fruit trees, reduce the broadcast rate of Princep 4L and water per acre in proportion to the area actually sprayed.

Apples

Apply 2-4 qts. per acre.

Grapes

Apply 2-4.8 qts. per acre any time between harvest and early spring.

Precaution: Do not use in vineyards established less than three years.

Grapefruit, Lemons, Oranges

Arizona (Lemons and Oranges only): Apply a split application of 1.6 qts. per acre in the spring plus 1.6 qts. per acre in the fall.

California: Apply 2-4 qts. per acre in a single application; or apply 2 qts. per acre in the fall and 2 qts. per acre in the spring. Do not use in the Imperial, Coachella, or Palo Verde Valleys.

Florida (Grapefruit and Oranges only): Apply only once per year. For control of weeds listed under General Information, apply 6.4-9.6 qts. per acre in the spring; to also control milkweed vine, use 8-9.6 qts. per acre either preemergence or before vines are 12 inches tall.

Texas (Grapefruit and Oranges only): Apply 4-4.8 qts. per acre.

Precautions (all areas): 1) Do not use in nurseries. 2) Do not apply to bedded grapefruit, lemons, or oranges. 3) To avoid possible injury, do not apply to trees under stress from freeze damage for one year after the freeze.

Princep 4L Plus Evik® 80W for Grapefruit and Oranges

Use in grapefruit and oranges in Florida and Texas for control of weeds listed in the following directions and under General Information. Apply the rates given below in a minimum of 40 gals. of water per acre thoroughly covering existing vegetation, but avoiding contact with citrus fruit, foliage, or stems. Do not spray under windy conditions. Apply when weeds have resumed active growth in the spring, but before they exceed 4 inches in height (except as noted for vines). Apply only once per year. To avoid possible injury, do not use in nurseries, or around trees that have

been established in the grove less than two years, or where trees are under stress from freeze damage for one year after the freeze. Do not apply within 200 days before harvest. Do not graze treated areas. Observe all precautions and limitations on the labeling of Princep 4L and Evik 80W. When mixing, add Evik 80W slurry to water in spray tank, agitate thoroughly, then add Princep 4L and agitate thoroughly again.

Florida (Ridge Area): Apply 4 qts. of Princep 4L plus 5 lbs. of Evik 80W per acre; controls milkweed vine when applied either preemergence or on vines up to 24 inches tall.

Florida (Bedded Areas): Apply 3.2 qts. of Princep 4L plus 6 lbs. of Evik 80W per acre; controls balsamapple vine when applied either preemergence or on vines up to 12 inches tall.

Texas: Apply 3.2-4 qts. of Princep 4L plus 2-3 lbs. of Evik 80W per acre plus 2 qts. nonionic surfactant, such as X-77, per 100 gals. of spray mixture (add surfactant to spray tank last); controls buffelgrass, marionvine (ivy treebine), Texas panicum, sandbur, and sunflower, and gives top-kill of johnsongrass. Use 4 qts. of Princep 4L per acre for longer residual control; use 3 lbs. of Evik 80W per acre for control of heavy weed growth and for top-kill of johnsongrass; use the higher rate of both products for control of marionvine.

Nonselective Weed Control on Noncrop Land

Princep 4L may be used to provide long-term weed control on industrial sites, highway medians and shoulders, railroad rights-of-way, lumberyards, petroleum tank farms, and in non-crop areas on farms, such as around buildings, equipment and fuel storage areas, along fences, roadsides, and lanes. Aerial applications may be made where it is feasible.

Best results are obtained when Princep 4L is applied before weeds emerge. If weed growth has begun and removal is not feasible, include a contact or translocated herbicide in the spray. Use at least 1 gal. of water for each 1 qt. of Princep 4L; use more water if practical for both ground and aerial applications.

Annual broadleaf and grass weeds (including barnyardgrass, cheat, crabgrass, lambsquarters, foxtail, ragweed, puncturevine, and turkey mullein): Apply 4.8-10 qts. per acre.

Annual and perennial broadleaf and grass weeds (including quackgrass, bluegrass, redtop, burdock, Canada thistle, orchardgrass, purpletop, smooth brome, dogfennel and plantain): Apply 2 1/2-5 gals. per acre.

Hard-to-kill perennial weeds (including bull thistle and sowthistle): Apply 5-10 gals. per acre.

For longer residual control in regions of high rainfall and a long growing season, apply 5-10 gals. per acre.

Storage and Disposal

Do not contaminate water, food, or feed by storage, disposal, or cleaning of equipment. Open dumping is prohibited. Do not reuse empty container. Pesticide, spray mixture, or rinsate that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticides or buried in a safe place away from water supplies. Triple rinse (or equivalent) and dispose of container in an incinerator or landfill approved for pesticide containers, or bury in a safe place. Consult federal, state, or local disposal authorities for approved alternative procedures such as limited open burning.

Precautionary Statements

Hazards to Humans and Domestic Animals

WARNING

Causes eye irritation. Do not get in eyes. Harmful if swallowed, inhaled, or absorbed through the skin. Avoid breathing vapors or spray mist. Avoid contact with skin or clothing. Wash thoroughly after handling. Remove and wash contaminated clothing before reuse.

First Aid: In case of contact with eyes, flush with plenty of water for 15 minutes. Get medical attention if irritation persists. In case of contact with skin, wash with soap and water. If inhaled, remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth; get medical attention.

Environmental Hazards

Do not contaminate domestic, livestock, or irrigation water supplies or lakes, streams, or ponds. Do not contaminate water by cleaning of equipment or disposal of wastes.

AAtrex® trademark of CIBA-GEIGY for atrazine

Evik® trademark of CIBA-GEIGY for ametryn

Princep® trademark of CIBA-GEIGY for simazine



RESTRICTED USE PESTICIDE

For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification.

POISON

**DO NOT POUR FROM ORIGINAL CONTAINER
EXCEPT FOR IMMEDIATE USE.
ONE SWALLOW CAN KILL!**

SUPPLEMENTAL PAMPHLET

DIRECTIONS FOR USE.

**READ WORKER SAFETY RULES
ON BACK PANEL**

**TO PREVENT ACCIDENTS,
NEVER PUT INTO FOOD, DRINK
OR OTHER CONTAINERS.**



ORTHO[®]

Paraquat CL

**DO NOT USE OR STORE IN OR AROUND THE HOME
KEEP OUT OF REACH OF CHILDREN**

A Weed and Grass Killer · Harvest Aid Chemical.

Active Ingredient

Paraquat dichloride (1,1'-dimethyl-4,4'-bipyridinium dichloride) By Wt. 29.1%

Inert Ingredients

. 70.9%

Contains 2 lbs. Paraquat cation per gallon.



**DANGER
CAN KILL IF SWALLOWED
HARMFUL TO THE EYES AND SKIN**

FIRST AID TREATMENT

IF SWALLOWED

Immediately induce vomiting by inserting finger in throat. Administer fluids and induce further vomiting. Get to a hospital or physician fast. PROMPT TREATMENT IS ESSENTIAL. Symptoms of injury may be delayed.

SKIN CONTAMINATION

In case of contact, wash immediately with water. Remove clothing and wash skin where necessary. Prolonged contact will cause severe irritation. Repeated contact may increase danger of absorption.

EYE CONTAMINATION

In case of contact, wash thoroughly with water and get medical attention.

INHALATION

DO NOT BREATHE SPRAY MIST.

Exposure to spray mist may cause irritation and nose bleeds. Stop and check spray procedure.

Note to Physicians: Emergency Information — call (415) 233-3737.

WASH AND DESTROY CONTAINER WHEN EMPTY. NEVER REUSE.

READ ENTIRE LABEL. USE STRICTLY IN ACCORDANCE WITH DANGER STATEMENTS AND DIRECTIONS, AND WITH APPLICABLE STATE AND FEDERAL REGULATIONS.

READ DANGER AND FIRST AID TREATMENT ON FRONT PANEL AND WORKER SAFETY RULES ON BACK OF PAMPHLET.

NOTE: Do not use Around Home Gardens, Schools, Recreational Parks or Playgrounds.

Do not combine ORTHO Paraquat CL with liquid fertilizer solutions except as specified below. DO NOT combine with suspension type liquid fertilizers as the activity of Paraquat will be reduced.

DIRECTIONS

PREPLANT OR PREEMERGENCE USES

PREPLANT OR PREEMERGENCE USE—For Kill of Emerged Annual Broadleaf Weeds and Grasses and for Top Kill and Suppression of Perennials—Apply when the weeds and grasses are succulent and growth is from 1" to 6" high (larger plants are less affected by this treatment). Note: To prevent injury to germinating crop seedlings, do not apply preplant or preemergence to soils lacking clay minerals, i.e., peat, muck, pure sand, artificial planting media.

ASPARAGUS: Preplant or Preemergence—Apply 1 to 2 qts. per sprayed acre as a band treatment over the row or as a broadcast treatment prior to, during, or after planting, but before emergence of the crop. Add ORTHO X-77® Spreader (non-ionic) at 8 oz. per 100 gals. spray. Apply 50 to 100 gals. spray per acre. Allow maximum weeds and grass emergence prior to treatment. Seeding or transplanting should be done with a minimum of soil disturbance. Weeds and Grasses emerging after treatment will not be controlled. Crop plants emerged at time of application will be injured. Do not apply within 18 months before harvest.

COTTON: Preplant Treatment—Ground Application: Apply 1 to 2 qts. per acre as a single broadcast application in 20 to 60 gals. water. Beds should be preformed to permit maximum weed and grass emergence prior to treatment. Seeding should be done with a minimum amount of soil disturbance. Weeds and grasses emerging after application will not be controlled. Add ORTHO X-77® Spreader (non-ionic) at 8 oz. per 100 gals. spray.

CORN, LETTUCE, MELONS, PEPPERS, SOYBEANS, SORGHUM, SUGAR BEETS, TOMATOES, SAFFLOWER (California Only): Preplant or Preemergence Treatment—Apply 1 to 2 qts. per sprayed acre as a band treatment over the crop row, or as a broadcast treatment, prior to, during or after planting—but before emergence of the crop. **Aerial Application**—5 to 10 gals. water per acre. **Ground Application**—Use 20 to 60 gals. diluted spray. Add ORTHO X-77® Spreader (non-ionic) at 8 oz. per 100 gals. of diluted spray. Seedbeds should be formed as far ahead of planting and treatment as possible to permit maximum weed and grass emergence. Seeding should be done with a minimum amount of soil disturbance. Weeds and grasses emerging after application will not be controlled. Crop plants emerged at time of application will be killed.

BARLEY, WHEAT: Preplant and Preemergence Treatment—Apply 1 to 2 qts. per sprayed acre as a band treatment over the crop row, or as a broadcast treatment prior to, during or after planting—but before emergence of the crop. **Aerial Application**—5 to 10 gals. water per acre. **Ground Application**—Use 20 to 60 gals. diluted spray. Add ORTHO X-77® Spreader (non-ionic) at 8 oz. per 100 gals. of diluted spray. Seedbeds should be formed as far ahead of planting and treatment as possible to permit maximum weed and grass emergence. Seeding should be done with a minimum amount of soil disturbance. Weeds and grasses emerging after application will not be controlled. Crop plants emerged at time of application will be killed. Do not graze livestock in treated area.

CORN ONLY: For Kill of Existing Vegetation and Residual Weed Control Where Corn Will Be Planted Directly Into a Cover Crop, Established Sod or in Previous Crop Residues.

Tank-Mix with Atrazine:

Apply 1 to 2 pts. ORTHO Paraquat CL plus 2½ to 3¼ lbs. Atrazine 80 Wettable per acre, as a broadcast spray. Refer to Atrazine 80 Wettable label for directions, limitations and cautions. Apply 20 to 60 gals. diluted spray per acre. Add ORTHO X-77® Spreader (non-ionic) at 8 fl. oz. per 100 gals. diluted spray. Add Atrazine to spray tank first, mixing thoroughly in water. Then add Paraquat and surfactant. Constant agitation recommended at all times.

Paraquat plus Atrazine may be applied in liquid nitrogen and/or complete liquid fertilizer solutions when 25 or more gallons of dilute solution are applied per acre in combination with 1 to 2 pts. of ORTHO X-77® Spreader (non-ionic) per 100 gals. Equipment must be adjusted and calibrated to obtain thorough coverage of undesirable vegetation. Inadequate coverage and/or the absence of ORTHO X-77® Spreader (non-ionic) will result in a severe reduction of Paraquat activity. Phosphate containing liquid fertilizer solutions will reduce the activity of Paraquat. When liquid fertilizer solutions containing phosphorus are used with Paraquat, and a rapid kill is desired, use the high Paraquat label rate.

Tank-Mix with AATREX® 80 W and PRINCEP® 80 W:

Apply 1 to 2 pts. ORTHO Paraquat CL plus 1¼ to 2½ lbs. PRINCEP 80 W plus 1¼ to 2½ lbs. AATREX 80 W per sprayed acre prior to, during or after planting—but before crop emergence. Use the low rates of PRINCEP and AATREX on light soils, and the higher rates on heavy clay soils. Use 20 to 60 gals. of diluted spray per sprayed acre. Add ORTHO X-77® Spreader (non-ionic) at 8 fl. oz. per 100 gals. diluted spray. Add the AATREX to the spray tank while agitating, then add the PRINCEP, Paraquat and ORTHO X-77® Spreader (non-ionic). Continue agitation during application. Refer to the AATREX and PRINCEP labels for specific precautionary statements.

PRINCEP® and AATREX® trademarks of CIBA-GEIGY.

Tank-Mix with BLADEX® 80 W:

Apply 1 to 2 pts. ORTHO Paraquat CL plus 1½ to 5 lbs. BLADEX 80 W, depending upon soil type, as a broadcast spray. Apply 20 to 60 gals. diluted spray per acre. Add ORTHO X-77® Spreader (non-ionic) at 1 qt. per 100 gals. diluted spray. Add BLADEX 80 W to spray tank first, mixing thoroughly in water. Then add Paraquat and surfactant. Constant agitation recommended at all times. Do not mix with liquid fertilizer. Refer to BLADEX 80 W label for directions, limitations and cautions.

BLADEX® Shell trademark.

GRAIN SORGHUM: For Desiccation and Residual Control of Annual Broadleaf Weeds and Grasses Where Sorghum Will Be Planted Directly Into Previous Crop Residues—Apply 1 to 2 pts. ORTHO Paraquat CL plus 2 to 3 lbs. Atrazine 80 Wettable per acre as a broadcast ground spray before, during or after planting but before crop emergence. Refer to Atrazine 80 Wettable label for directions, limitations, cautions and for a list of weeds controlled by preemergence activity of Atrazine. Apply 20 to 60 gals. diluted spray per acre. Add ORTHO X-77® Spreader (non-ionic) at 16 to 32 fl. oz. per 100 gals. diluted spray. Water or nitrogen solutions may be used as a carrier. Add Atrazine to spray tank first, mixing thoroughly in carrier. Then add Paraquat and ORTHO X-77® Spreader (non-ionic). Constant agitation recommended at all times. This herbicide tank mixture will not control volunteer sorghum or shattercane which emerges after application.

SOYBEANS: Preplant or Preemergence Treatment—Apply 1 to 4 pts. of Paraquat per sprayed acre as a band treatment over the crop row, or as a broadcast treatment, prior to, during or after planting—but before emergence of the crop. Use the 1.0 pt. rate when spring annual broadleaf weeds and grasses are less than 4 inches high or when a directed spray or cultivation will be used within 3 weeks after planting. **Aerial Application**—5 to 10 gals. spray mix per acre. **Ground Application**—20 to 60 gals. spray mix per acre. Add ORTHO X-77® Spreader (non-ionic) at 8 fl. oz. per 100 gals. of diluted spray. Seeding should be done with a minimum amount of soil disturbance. Weeds and grasses emerging

after application will not be controlled. Crop plants emerged at time of application will be killed.

SOYBEANS: Minimum Tillage Systems.

Tank-Mix with LASSO® and LOROX® 50 WP:

Use this tank mixture for control of most emerged annual weeds, suppression of many emerged perennial weeds and preemergence control of many annual weeds when soybeans will be planted directly into a cover crop, stale seed bed, or in previous crop residues such as wheat stubble. This tank mixture will not control regrowth from perennial weeds. Do not apply by air.

For weeds controlled preemergence, see the LASSO or LASSO EC and LOROX 50 WP labels. Refer to the LASSO or LASSO EC and LOROX 50 WP labels for precautionary statements, crop rotation restrictions, rates which are dependent upon soil textures, directions, limitations, and cautions.

Broadcast Treatment — Apply 1 to 2 pts. ORTHO Paraquat CL in this tank mixture in 20 to 60 gals. water per acre immediately before, during or after planting but before crop emergence. Use the 2 pt. rate if any weeds are 4 to 6 inches tall. This mixture may not control weeds taller than 6 inches. As density of stubble, crop residue or weeds increases, spray gallonage should be increased within the recommended range for complete coverage. Add ORTHO X-77® Spreader (non-ionic) at 8 fl. oz. per 100 gals. of diluted spray. First, add the LOROX 50 WP to the spray tank while agitating, then add the LASSO or LASSO EC, ORTHO Paraquat CL and ORTHO X-77® Spreader (non-ionic). Continue agitation during application.

LASSO® trademark of Monsanto Company.

LOROX® trademark of DuPont.

SOYBEANS (Preemergence Treatment)—For Kill of Emerged Annual Broadleaf Weeds and Grasses and For Top Kill and Suppression of Emerged Perennials Where Soybeans Will be Planted Directly into a Preformed Bed, Cover Crop, or in Previous Crop Residues.

Tank-Mix with LOROX®:

Apply 1 pt. ORTHO Paraquat CL plus 1 to 3 lbs. LOROX® Linuron Weed Killer—50 Wettable on sandy loam, 1¼ to 4 lbs. on silt loam, 1½ to 5 lbs. on clay loam soils per sprayed acre as a band treatment over the crop row or as a broadcast treatment after planting — but before emergence of the crop. **Aerial Application** — Apply 5 to 10 gals. spray mix per acre. **Ground Application** — Use 20 to 60 gals. diluted spray. Add ORTHO X-77® Spreader (non-ionic) at 8 oz. per 100 gals. of diluted spray. Seeding should be done with a minimum amount of soil disturbance. Crop plants emerged at time of application will be killed. For band applications, compute amount of Paraquat and LOROX needed per acre by dividing the band width by the inches between crop rows and then multiplying the answer by the recommended broadcast rates. Refer to the LOROX Linuron Weed Killer label for cautions.

This herbicide tank mixture WILL NOT CONTROL Rhizome Johnsongrass.

LOROX® trademark of DuPont.

Tank-Mix with LASSO® and SENCOR®:

For Contact Action on Emerged Weeds and Preemergence Control of Smartweed, Pigweed and Cocklebur, Foxtail and Crabgrass. (This tank mix should be used instead of Paraquat + LOROX or PARAQUAT + SENCOR when better preemergence control of crabgrass and foxtail is desired.)

Apply 1 to 2 pts. ORTHO Paraquat CL plus 2 to 2½ qts. LASSO (4 lb./gal. EC) plus ½ to 2 lbs. SENCOR 50 WP per acre as a preemergence broadcast ground spray. Refer to LASSO and SENCOR 50 WP labels for rates which are dependent upon soil textures, directions, limitations and cautions. Apply in 20 to 60 gals. spray mix per acre. Use the 2 pt. rate of Paraquat if weeds are 4 to 6 inches tall. This mixture will not control weeds taller than six inches. Add ORTHO X-77® Spreader (non-ionic) at 8 fl. oz. per 100 gals. of diluted spray. Add SENCOR 50 WP to the spray tank first and mix thoroughly. Then add LASSO followed by ORTHO Paraquat CL and ORTHO X-77® Spreader (non-ionic). Constant agitation is recommended at all times. Do not use treated vines for feed or forage. LASSO® trademark of Monsanto Company.

SENCOR® trademark of the Parent Company of Farbenfabriken Bayer GmbH, Leverkusen.

Tank-Mix with SENCOR®:

For Contact Action on Emerged Weeds and Preemergence Control of Smartweed, Pigweed and Cocklebur. (This tank mix should be used instead of Paraquat + LOROX when infestations of emerged smartweed, pigweed and cocklebur are present at application and when better preemergence control of these species is desired.)

Apply 1 to 2 pts. ORTHO Paraquat CL plus ¾ to 2 lbs. SENCOR 50 WP according to SENCOR label recommendations as a broadcast ground spray before, during or after planting but before emergence of the crop. Use the 2 pt. rate of ORTHO Paraquat CL if weeds are 4 to 6 inches tall. This mixture will not control weeds taller than six inches. Apply in 20 to 60 gals. spray mix per acre. Add ORTHO X-77® Spreader (non-ionic) at 1 qt. per 100 gals. of diluted spray. Do not use treated vines for feed or forage.

Refer to the SENCOR 50 WP label for cautions, limitations and recommended rates for specific soil textures. In using minimum tillage equipment, it is important to observe the proper planting depth caution stated on the SENCOR label so application is not made directly onto the soybean seed.

SENCOR® trademark of the Parent Company of Farbenfabriken Bayer GmbH, Leverkusen.

POTATOES: (After Planting — Preemergence Treatment) Ground Application

— Apply 1 to 2 pts. per acre as a broadcast application in 30 to 100 gals. water. Add ORTHO X-77® Spreader (non-ionic) at 8 oz. per 100 gals. spray. **Aerial Application (North Dakota Only)** — Apply 1 to 2 pts. per acre in 5 to 10 gals. of water. Add ORTHO X-77® Spreader (non-ionic) at 1 qt. per 100 gals. of diluted spray. The application should be delayed to provide maximum weed and grass emergence but should be applied not later than ground cracking, before potatoes have emerged. Application made after crop emergence has reduced yields of certain sensitive varieties. Weeds and grasses emerging after application will not be controlled. Postemergence cultivations should be performed as required to control subsequent weed and grass emergence.

FOR KILL OF EMERGED VOLUNTEER BARLEY (California Only) — Preplant in Cotton, Potato, Lettuce, Melon, Safflower, Sugar Beet and Tomato Fields

— Apply ½ to 1 pt. per acre broadcast as a preplant treatment to pre-formed seedbeds. **Aerial Application** — Use 5 to 10 gals. water per acre. Add ORTHO X-77® Spreader (non-ionic) at 8 oz. per 100 gals. diluted spray.

SEEDBED PREPARATION FOR ESTABLISHING GRASSES FOR SEED PRODUCTION: To Control Grasses and Broadleaved Weeds

— Prepare the seedbed and allow weed seeds to germinate. When broadleaved weeds and annual grasses are at the 3 to 5 leaf stage apply 1 qt. in 20 to 40 gals. water per acre (larger weeds will be less affected by this treatment). Add ORTHO X-77® Spreader (non-ionic) at 8 oz. per 100 gals. diluted spray. This treatment can be repeated prior to or on day of seeding. Do not allow animals to graze on treated areas. Do not use seed from treated areas for animal feed. Do not use straw from treated areas for animal bedding or feed.

PASTURE AND RANGE RESEEDING

PASTURE AND RANGE RESEEDING: Suppression of Existing Sod and Undesirable Emerged Broadleaf Weeds and Grasses to Permit Pasture and Range Reseeding — Apply recommended rates in water to make 18 to 75 gals. diluted mix per sprayed acre. Add 8 oz. ORTHO X-77® Spreader (non-ionic) per 100 gals. spray. Apply broadcast or in bands over the drill row prior to, or at time of seeding desired grasses and/or forage legumes. Apply as a band treatment when recovery of the sprayed sod is desired, such as in the

case with desirable fescue grass. Apply as a broadcast treatment when existing grass species is undesirable and should be totally suppressed, such as in the case with run-down bluegrass sod.

West of Cascade and Sierra Nevada Mountains—1 to 2 pts. per sprayed acre prior to, or at time of seeding grasses such as Harddinggrass and Palestine Orchardgrass. Apply in October through December after first fall rains and after weeds have emerged and sod has started new growth. For best seeding results, apply on moderate to heavily grazed areas. Do not use in areas with heavy sod and weed growth. Do not pasture treated areas until growth of newly planted seedlings is 3 to 6 inches high.

East of Cascade and Sierra Nevada Mountains and West of Rocky Mountains—1 to 4 pts. per sprayed acre prior to, or at time of seeding of grasses such as perennial wheatgrasses. Apply in spring after broadleaf weeds and grasses have emerged but before spring rains have stopped. If broadleaf weeds such as tumble mustard (*Sisymbrium altissimum*) are a problem, add 2,4-D (butyl ester) at 0.5 lb. active per sprayed acre. Do not pasture treated areas for one year following treatment.

East of Rocky Mountains—1 to 2 pts. per sprayed acre during the growing season. Use the 2 pts. rate to suppress vigorous and coarse sod species such as Bromegrass. See specific directions for use in the South and Southeast for suppression of Bermudagrass or Bahiagrass sods. Apply prior to, or at time of seeding grasses or forage legumes such as alfalfa, clover and birdsfoot trefoil. Apply only to grazed or mowed pastures which are not more than 2 to 3 inches in height at time of treatment. Do not graze treated areas until the newly planted seedlings have reached their recommended grazing height. Under good seedling emergence and growing conditions, allow a minimum of one month between treatment and first grazing. Seedling grasses, and forage legumes should be at least 6" tall; Sudangrass must be 18" tall and Sorghum-sudan 24" tall at first grazing. Under late fall or winter conditions, it may take 3 to 5 months for seeded grasses and/or legumes to reach recommended grazing height.

South and Southeast—Bermudagrass or Bahiagrass Sods—Late Summer or Early Fall Application for Sod Suppression when Seeding Winter Annuals: Apply 1 pt. per acre in 20 to 30 gals. water in late summer or early fall to sod that does not exceed 3 inches in height. Apply prior to, or at time of seeding winter annuals. Add 1 qt. ORTHO X-77® Spreader (non-ionic) per 100 gals. spray. Do not pasture in treated areas until 60 days after treatment or until winter annual seedlings are 9 inches tall.

BERMUDAGRASS PASTURES: For the Suppression of Emerged Annual Broadleaf and Grassy Weeds including Little Barley, Bromes, Buttercup and Carolina Geranium in Dormant Bermudagrass Pastures—Apply 1 pt. in 20 to 30 gals. water per acre during March. For control of Little Barley, apply before the mid boot stage. Add 1 qt. ORTHO X-77® Spreader (non-ionic) per 100 gals. spray mix. Do not pasture or mow for hay until 40 days after treatment.

ALFALFA, CLOVER

ALFALFA, CLOVER—Washington, Oregon, Colorado, Idaho, Montana, Utah, Nevada, Wyoming and California (counties of Del Norte, Siskiyou, Modoc, Shasta, Lassen, Plumas, Sierra and Nevada): **Apply for Desiccation of Ryegrass, Bluegrass, Cheatgrass, Dogfennel, Chickweed and Tansy Mustard in Dormant Alfalfa and Clover, Except Annual Clover**—Apply 2 to 3 pts. per acre (use high rate for cheatgrass) in 20 to 100 gals. spray mix by ground as a broadcast application. Apply by air in 5 to 10 gals. spray mix per acre. Apply to established stands after the last fall cutting when the crop is dormant but before spring growth starts. Do not apply if regrowth following the last fall cutting is more than 2" tall. Alfalfa and clover foliage present at the time of application will be burned. Apply when the broadleaved weeds and grasses are succulent and growth is from 1 to 6" tall. Add ORTHO X-77® Spreader (non-ionic) at 8 to 32 oz./100 gals. spray mix. Do not pasture animals in treated fields before first cutting. Do not graze,

cut or harvest within 90 days of application. Do not apply more than once per season.

Tank Mix with PRINCEP® 80W Simazine Weed Killer:

ALFALFA only—For control of Filaree, Jim Hill Mustard and Shepherdspurse, and for improved control of Bluegrass, Cheatgrass, Chickweed and Tansy Mustard. Apply 1 to 3 pts. ORTHO Paraquat CL plus 1 to 2 lbs. PRINCEP 80 W in 20 to 100 gals. spray mix per acre with ground equipment or 5 to 10 gals. spray mix per acre by air. Use the 1 pt. rate of Paraquat when weeds and grasses are less than 4" tall. Refer to PRINCEP label for cautions, limitations and recommended rates for specific soil types. Do not pasture animals in treated fields before first cutting. Do not graze, cut or harvest within 90 days of application. Do not apply more than once per season.

PRINCEP® trademark of CIBA-GEIGY.

Alfalfa, Suppression and Control of Broadleaf Weeds and Grasses in New Alfalfa Seedlings Grown for Hay (California Only).

| For Control of: | Use Rate Directions— For Suppression | Pints/Acre For Control |
|--|---|---------------------------|
| Spikeweed (4 in. tall or less) | ½ pt. | 1 to 2 pts. |
| Volunteer Small Grain (8 in. tall or less) | ½ to 1 pt. | 2 pts. |
| Fiddleneck (6 in. tall or less) | ½ to 1 pt. | 2 pts. |
| Shepherdspurse | 1 to 2 pts. | — |
| Annual Bluegrass | — | 1 to 2 pts. |
| Chickweed | — | 1 to 2 pts. |
| Red Maids (6 in. tall or less) | — | 1 to 2 pts. |

Apply as a broadcast ground application in 25 or 50 gals. spray mix per acre during late winter or early spring. Add ORTHO X-77® Spreader (non-ionic) at 16 oz./100 gals. spray mix. Do not use the ½ pt. rate unless the alfalfa has at least 3 trifoliate leaves; the 1 pt. rate unless the alfalfa has 6 trifoliate leaves; or rates over 1 pt. unless there are 9 trifoliate leaves. Alfalfa foliage present at time of application will be burned. Do not pasture animals in treated fields before first cutting. Do not graze, cut or harvest within 70 days of application. Do not apply more than once during the first growing season. **CAUTION: SEEDLING ALFALFA STANDS WILL BE REDUCED AND REPLANTING MAY BE NECESSARY. NOT RECOMMENDED IN SEEDLING ALFALFA GROWN FOR SEED.**

HARVEST-AID USES

COTTON HARVEST AID

TO AID IN OPENING OF MATURE BOLLS AND TO DESICCATE GREEN LEAVES: ½ pt. in combination with 1 pt. of phosphate or 1 gal. of chlorate defoliant per acre. Apply when 80% or more of the bolls are open and the remaining bolls to be harvested are mature. Development of immature bolls will be inhibited.

TO AID IN DEFOLIATION AND OPENING OF MATURE BOLLS OF WESTERN COTTON (New Mexico, Arizona, California): ½ pt. in combination with 1 pt. of phosphate or 1 gal. of chlorate defoliant per acre. Apply when 60% or more of the bolls are open and the remaining bolls to be harvested are mature. Development of immature bolls will be inhibited.

TO DESICCATE STRIPPER COTTON: 1 to 2 pts. per acre. When foliage is dense, use 2 applications of 1 pt. if necessary. Apply when 85% or more of the bolls are open and the remaining bolls to be harvested are mature. Development of immature bolls will be inhibited.

AERIAL APPLICATION—Apply 3 to 10 gals. spray mix per acre. Use ORTHO X-77® Spreader (non-ionic) at 1 pt. per 100 gals. spray mix. Do not apply during periods of thermal inversion to avoid drift.

GROUND APPLICATION—Apply 10 to 30 gals. spray mix per acre. Arrange nozzles to provide thorough coverage of the foliage. Use ORTHO X-77® Spreader (non-ionic) at 1 pt. per 100 gals. spray mix. May apply as split application. Do not pasture lactating dairy animals. Do not pasture livestock in treated fields within 15 days after treatment. Remove livestock from treated area 30 days before

slaughter. Do not feed gin trash to livestock. Do not apply to cotton within 3 days before harvest. Repeat application if necessary. Do not make more than 2 applications or exceed a total of 2 pts. per acre. When combined with phosphate defoliant, observe livestock cautions listed on the phosphate label. When combined with chlorate defoliant, do not pasture livestock on treated areas or feed treated foliage or gin trash. Do not apply within 7 days when used with phosphate or chlorate defoliant.

GUAR — For Use as a Preharvest Crop Desiccant—Apply 1 qt. in 20 to 30 gals. of water per acre. Add ORTHO X-77® Spreader (non-ionic) at 1 to 2 qts. per 100 gals. water. Apply after pods are fully matured. Do not harvest until at least 4 days after application. Do not graze treated areas or feed treated forage to livestock.

POTATO VINES: PREHARVEST VINE KILLING—1 to 2 pts. per acre. Use the 2 pt. rate where vine growth is vigorous or where quick vine kill is desired or 2 applications of 1 pt. when vine growth is dense. Use the 1 pt. rate on maturing vines. Apply in 50 to 100 gals. water per acre with thorough coverage. Add 8 oz. of ORTHO X-77® Spreader (non-ionic) per 100 gals. water. Do not make more than 2 applications with a minimum of 5 days between applications. Do not apply Paraquat to potatoes within 3 days before harvest. Do not pasture livestock in treated potato fields. To avoid injury to subsequent crops, do not use on muck or peat soils. Do not use Paraquat for desiccating potato vines when the potatoes are to be stored or used for seed as this use may result in tuber decomposition and failure of seed pieces to germinate and grow normally.

SOYBEAN HARVEST AID—Apply ½ to 1 pt. per acre on Broadleaf Weeds and Grasses. Use high rate on Cocklebur. Add 1 qt. ORTHO X-77® Spreader (non-ionic) per 100 gals. spray. **Aerial Application**—2 to 5 gals. spray per acre. **Ground Application**—20 to 40 gals. spray per acre. Apply when soybean plants are mature, i.e., beans are fully developed, at least ½ of leaves have dropped, and leaves left on plants are turning yellow. Immature soybeans will be injured. Mature cockleburs, especially drought-stressed plants, are tolerant to Paraquat and desiccation will not be complete. Do not pasture livestock within 15 days of treatment. Remove livestock from treated fields at least 30 days before slaughter.

SUNFLOWER (OILSEED VARIETIES ONLY) — For Desiccation of Sunflower Plants and Broadleaf Weeds and Grasses to Facilitate Harvesting: Apply 1 to 2 pts. ORTHO Paraquat CL per acre in 5 gals. spray mix by air or in 20 to 40 gals. by ground application equipment. Use the higher rate when crop stands or weed infestations are heavy. Apply when the sunflower seeds reach physiological maturity (when the heads are yellow and bracts are turning brown) and harvest 7 to 21 days after application. Add ORTHO X-77® Spreader (non-ionic) at 1 qt. per 100 gals. water. Do not graze treated areas or feed treated forage to livestock.

SUGARCANE — Preharvest Crop Desiccation (Florida and Texas Only)—Apply ½ to 1 pt. per acre. Apply to mature plant or stubble cane using 4 to 10 gals. water per acre. Use higher rate under cool, cloudy weather conditions. ORTHO X-77® Spreader (non-ionic) should be added to all sprays at the rate of 1 pt. per 100 gals. water. Apply with aircraft sprayer 3 to 14 days before burning and harvest. For rapid results, apply when weather is clear and warm. Apply as a coarse spray at low pressure when air is calm to prevent spray drift.

DIRECTED SPRAYS

ORCHARDS, VINEYARDS, WINDBREAK, SHADE AND ORNAMENTAL TREES: For kill of annual broadleaf weeds and grasses and for top kill and suppression of perennials and green suckers under Filbert trees, in the interspaces and around the base of

trees and vines—Almonds, Apples, Apricots, Avocados, Bananas, Cherries, Citrus, Coffee, Figs, Filberts, Grapes, Macadamia Nuts, Nectarines, Olives, Papayas, Peaches, Pears, Pecans, Plums, Prunes, Walnuts and other Trees such as Arborvitae, Ash, Elm, Fir, Oak and Pine—Apply as a directed spray at 1 to 2 qts. per sprayed acre in 50 to 200 gals. water (use 30 to 50 gals. water for pecans) to thoroughly cover the weeds and grasses. Add ORTHO X-77® Spreader (non-ionic) at 8 oz. per 100 gals. Apply when the weeds and grasses are succulent and the new growth is from 1 to 6 inches high. For mature woody weeds, green suckers, late germinating weeds and grasses, and for perennials—retreatment or spot treatment may be necessary. **CAUTION:** Do not allow spray to contact green stems, fruit or foliage as injury may result. Do not spray under windy conditions and use a shield for young trees or vines. Do not allow animals to graze on treated areas. Do not apply when nuts to be harvested are on the ground.

ALMONDS, GRAPES AND WALNUTS (California Only); ORANGES (California and Florida Only); SOUR CHERRIES (Michigan Only), APPLES, PEACHES, PEARS: Tank Mix With PRINCEP® 80 W Simazine Weed Killer—For Top Kill and Residual Control of Annual Broadleaf Weeds and Grasses and For Suppression of Perennial Weeds—For broadcast application apply 1 to 2 qts. ORTHO Paraquat CL per acre and PRINCEP 80 W at the following rates per acre:

| Crop | Rate PRINCEP 80 W Per Sprayed Acre | Precautions |
|--|--|--|
| Almonds and Peaches (California Only) | 1¼-2½ lbs. in 2-4 ft. band on each side of tree row. 1¼ lbs. provides residual control of burclover, common chickweed, wild mustard and shepherds-purse. | Do not treat trees established less than 3 years. Do not treat Mission variety of almonds. Do not apply to almond trees propagated on plum root stalks. Do not replant almonds or peaches in treated soil. Do not apply on gravelly sand or loamy sand soil or on soil with less than 1% organic matter. Do not treat areas where water will accumulate. |
| Apples Pears Sour Cherries (Michigan Only) Walnuts (California Only) | 2½-5 lbs. | Do not apply to sandy soil. Leveling and furrowing operations after application will lessen effectiveness of weed control. |
| Peaches (Arkansas, Louisiana, Missouri, Oklahoma, Texas and states East of the Mississippi River) | 2-5 lbs. | Do not apply to sandy or gravelly soil. |
| Grapes (California Only) | 2½-6 lbs. | Do not use in vineyards established less than 3 years. |
| Oranges (California Only) Except Imperial, Coachella and Palo Verde Valleys (Florida Only)— Bedded | 2½-5 lbs. 4 lbs. | Do not use in nurseries. To avoid possible injury, do not apply to trees under stress from freeze damage for one year following the freeze. |

Use the low rate of PRINCEP 80 W on coarse textured soils and low organic matter soils. Use the high rate on fine textured soils and high organic matter soils. Apply as a tank mix in 50 to 200 gals. of water per acre to the orchard floor avoiding contact with fruit, foliage or stems. Add ORTHO X-77® Spreader (non-ionic) at 8 fl. oz. per 100 gals. diluted spray. Apply when weeds and grasses are succulent and the new growth is from 1 to 6 inches tall.

For band applications or spot applications around trees, reduce the broadcast rate and the amount of water in proportion to the area actually sprayed.

Make only one application per year. Apply in orchards where trees have been established one year or more. Do not spray under windy conditions and use a shield for young trees. Do not apply to almonds and walnuts when nuts are on the ground during the harvest period. Do not allow animals to graze treated areas.

Refer to the PRINCEP 80 W Simazine label for general information, caution and warning statements.

PRINCEP® trademark of CIBA-GEIGY for simazine herbicide.

HOPS (Washington, Oregon and Idaho Only): For Kill of Annual Bluegrass, Ryegrass, Barnyardgrass, Pigweed and Chickweed — Apply as a directed spray in the interspaces and around the base of hop plantings using 1 qt. in 20 to 100 gals. water per acre to thoroughly cover weeds and grasses. Add ORTHO X-77® Spreader (non-ionic) at 8 fl. oz. per 100 gals. spray mix. Do not apply around hop vines less than 10 ft. tall. Apply when weeds and grasses are succulent and growth is from 1 to 6 inches tall. Retreatment or spot treatment may be necessary. **For Suckering and Stripping (Cascade, Yakima Cluster and Bullion Varieties Only):** Spray only basal 2 ft. of vines using 1 qt. in 20 to 100 gals. water per acre. Add ORTHO X-77® Spreader (non-ionic) at 8 fl. oz. per 100 gals. spray mix. Do not apply to hop vines less than 10 ft. tall. Repeat as necessary. **CAUTION:** Do not apply more than 3 times per season. Do not apply within 14 days of harvest. Do not allow spray to contact green stems, foliage, flowers or cones, as injury may result. Do not allow animals to graze in treated hopyards. Hop vine refuse and silage may be fed to livestock.

GUAVA — Apply as directed spray at 2 qts. per sprayed acre in 50 to 200 gals. to thoroughly cover the weeds and grasses. Add ORTHO X-77® Spreader (non-ionic) at 8 oz. per 100 gals. Apply when the weeds and grasses are succulent and the new growth is from 1 to 6 inches high. For mature woody weeds, late germinating weeds and grasses and for perennials — retreatment or spot treatment may be necessary. **CAUTION:** Do not allow spray to contact green stems, fruit or foliage as injury may result. Do not spray under windy conditions and use a shield for young trees. Do not allow animals to graze on treated areas.

PASSION FRUIT — Apply as a directed spray at 2 qts. per sprayed acre in 50 to 200 gals. to thoroughly cover the weeds and grasses. Add ORTHO X-77® Spreader (non-ionic) at 8 oz. per 100 gals. Apply when the weeds and grasses are succulent and the new growth is from 1 to 6 inches high. For mature woody weeds, late germinating weeds and grasses and for perennials — retreatment or spot treatment may be necessary. **CAUTION:** Do not allow spray to contact green stems, fruit or foliage as injury may result. Do not spray under windy conditions and use a shield for young vines. If bark is still green, wrap vine prior to application to prevent injury. If application is to be made during harvesting season, apply Paraquat only after picking fruits off the ground. Do not allow animals to graze on treated areas.

PINEAPPLES: For Kill of Annual Broadleaf Weeds and Grasses and Top Kill and Suppression of Perennials — Apply as a directed spray using 1 to 2 qts. in 100 to 200 gals. water per sprayed acre to thoroughly cover the weeds and grasses. Add ORTHO X-77® Spreader (non-ionic) at 8 oz. per 100 gals. Apply when weeds and grasses are succulent and new growth is from 1 to 6 inches high. Retreatment may be necessary on more mature weeds. Do not apply within 20 days of harvest.

SMALL FRUITS (Blackberries, Boysenberries, Raspberries, Blueberries) — **For Kill of Annual Broadleaf Weeds and Grasses and for Top Kill and Suppression of Perennial Weeds in the Interspaces and Around the Base of Bushes** — Apply as a coarse directed spray at 1 to 2 qts. per sprayed acre in 50 to 200 gals. water to thoroughly wet the weeds and grasses. Add ORTHO X-77® Spreader (non-ionic) at 8 oz. per 100 gals. water. Apply before emergence of new canes or shoots as injury to those canes or shoots can result. Apply as a coarse spray to avoid drift injury from fine spray mist.

GRAIN SORGHUM: Postemergence Directed Spray — For Kill of Emerged Crabgrass and Pigweed 3 Inches or Less in Height 1 to 2 pts. ORTHO Paraquat CL in 20 to 40 gals. water per sprayed acre. Use higher gallonage of water for larger weeds. For band applications, 1 pt. ORTHO Paraquat CL will cover 2 land or crop acres when a 20 inch band is treated in 40 inch rows. Treat when grain sorghum is naturally standing 12 inches tall or more. Add ORTHO X-77® Spreader (non-ionic) at 1 qt. per 100 gals. of spray. Do not exceed 30 psi; high pressure contributes to spray drift.

For best results, apply ORTHO Paraquat CL at 1 pt. per sprayed acre to grass and weeds less than 2 inches tall. Grass and weeds 2 to 3 inches tall should be sprayed with 2 pts. ORTHO Paraquat CL per sprayed acre. Use precision application equipment with spray nozzles mounted on skid shoes, oiling shoes, fenders or cultivators with gauge wheels and adjusted so that only the lower 3 inches or less of the sorghum stalk is sprayed. For best coverage on single rows, use 4 flat fan nozzles per row, 2 nozzles on each side of the row. The 2 forward nozzles should point forward and downward and rear nozzles should point to the rear and downward. For double row sorghum use one skid between the two rows with one nozzle spraying backward and downward.

Some sheath and lower leaf spotting and desiccation will occur. Basal spotting does not penetrate beneath and outer sheath. Degree of injury is related to precision of application and wind velocity. Do not spray under windy conditions.

FIELD CORN: Postemergence Directed Spray using ORTHO Paraquat CL Alone or ORTHO Paraquat CL + Atrazine Tank Mix — For Control of Emerged Annual Broadleaf Weeds and Annual Grasses less than 4 inches tall — Apply 1 pt. ORTHO Paraquat CL per acre in 20 to 40 gals. of spray mix. Apply when corn plants are at least 10 inches tall. Corn plants shorter than 10 inches may be injured and not recover. Corn height measured from soil surface to top of whorl. Apply with directed spray application equipment. Arrange nozzles to spray no higher than the lower three inches of corn stalks to provide for maximum contact of weeds with minimum contact of corn plants to prevent excessive sheath and lower leaf spotting and desiccation. Add 1 qt. ORTHO X-77® Spreader (non-ionic) per 100 gals. of spray. Do not mix with liquid fertilizer. **For Improved Control of Weeds, Especially Broadleaves, Tank Mix Paraquat and AATREX®:** AATREX 80W or 1 to 2 pts. AATREX 4L in combination with 1 pt. ORTHO Paraquat CL per acre. Add AATREX 80W or AATREX 4L to spray tank first, mixing thoroughly in water. Then add Paraquat and surfactant. Constant agitation recommended at all times. Refer to AATREX labels for limitation and cautions. Do not graze treated areas or feed treated forage to livestock. AATREX® trademark of CIBA-GEIGY.

CORN: For use in the USDA Witchweed eradication program to kill grassy weeds. Apply 1 qt. ORTHO Paraquat CL in 10 to 20 gals. spray per acre. Add 1 lb. VISTIC® per 100 gals. water. Apply as a spray directed onto the grassy weeds at the base of the corn stalks in the hills or row. Initiate sprays in early July and repeat in early August if regrowth of grassy weeds occurs. Do not graze livestock in treated area. VISTIC® Registered Trademark of Hercules, Inc.

SOYBEANS: Postemergence Directed Spray — For control of seedling Johnsongrass, Crabgrass, Goosegrass, Brachiaria, Echinochloa spp. (Texas Millet) and pigweed less than 2 inches tall apply ORTHO Paraquat CL at 4 fl. oz. (.063 lb. active) per acre. Use proportionately less for band treatment... for example on 40 inch rows and 16 inch band apply 1 gal. ORTHO Paraquat CL to 80 acres.

For 2 to 4 inch grass and 2 to 3 inch pigweed apply ORTHO Paraquat CL at 8 fl. oz. (.125 lb. active) per acre... for example on 40 inch rows and 16 inch band apply 1 gal. ORTHO Paraquat CL to 40 acres. Soybeans should be 8 inches tall at first application. If needed, make second application 7 to 14 days later. Do not treat more than twice.

Apply 20 gals. spray mix per treated acre. Use proportionately less for band treatments... for example 8 gals. spray mix per 16 inch band on 40 inch rows.

For best coverage, use 4 flat fan nozzles per row, 2 nozzles on each side of row. The two forward nozzles should point forward and downward and rear nozzles should point to the rear and downward. Do not exceed 30 psi; high pressure contributes to drift. Adjust nozzles to spray no higher than the lower three inches of the soybean plant. Do not treat if soybeans are below 8 inches tall; soybeans treated topically will be killed. Add ORTHO X-77®

Spreader (non-ionic) at 1 to 2 qts. per 100 gals. of spray.
Do not graze treated areas or feed treated forage to livestock.

SUGARCANE—Directed Spray: For Kill of Emerged Annual Broadleaf Weeds and Grasses and for Top Kill of Perennials—

Apply as a shielded or directed spray when weeds are 2 to 6 inches high. Avoid contact with cane foliage to prevent serious leaf burn and reduced yields. Make a second and final application, if necessary, when new weed growth is 2 to 6 inches high. Add ORTHO X-77® Spreader (non-ionic) at 8 fl. oz. per 100 gals. spray mix.

Florida Only—Apply 1 qt. in 50 to 100 gals. of water per acre. For optimum results, apply early in the season (March-April) when weeds are small. Do not apply after June 1st as cane growth may be stunted and yields reduced.

Hawaii Only—Apply 1 qt. in 20 to 200 gals. of water per acre. Do not apply after cane rows have closed in.

Louisiana Only—Apply ½ to 1 qt. in 20 to 200 gals. of water per acre. For tiller control, apply when tillers are less than 18" high. Use the higher rate of Paraquat with heavier weed infestations or tiller growth. Do not apply within 30 days of harvest.

TOMATOES AND PEPPERS (Middle Atlantic, Southeast, South Central Regions and Southwest to the Western Boundary of Texas): Postemergence Directed Spray—For Kill of Emerged Annual Broadleaf Weeds and Grasses and for Top Kill and Suppression of Emerged Perennial Weeds between Plastic Mulch Covered Rows after Crop Plant Emergence or Establishment—

Apply as directed spray using 1 qt. per sprayed acre in 20 to 100 gals. spray mix. Apply with conventional ground equipment directing spray between the rows and using shields to prevent spray contact with crop plants. Add ORTHO X-77® Spreader (non-ionic) at 8 fl. oz. per 100 gals. spray mix. Apply when weeds and grasses are succulent and weed growth is 1 to 6 inches high. Weeds and grasses emerging after application will not be controlled. Do not allow spray to contact tomato or pepper plants as injury or excessive residues may result. Do not apply more than 3 applications per crop season. Do not allow animals to graze on treated areas.

NONCROP USES

NONCROP AREAS (Rights-of-way, including Federal, State, County and Township Highways, Roads, Dividers and Medians. Public Airports, Railroads, Electric Utilities (including Transformer Stations and Substations). Pipelines (including Pumping Stations). And Other Areas such as: Around Commercial Buildings, Storage Yards and Other Installations, Fence Lines, Parkways and Similar Noncrop Areas)—For the Control of Annual Broadleaved Weeds and Grasses (such as Burclover, Chickweed, Filaree, Groundsel, Nettle, Pigweed, Plantain, Puncturevine, Purslane, Red Clover, Shepherdspurse, Thistle, Wild Mustard, Wild Radish, Wild Oats, Blue Grass, Cheat Grass, Crabgrass) and Top Kill and Suppression of Perennial Weeds (such as Bermudagrass, Johnsongrass, and Morningglory)—1 to 2 qts. per acre. Apply for full coverage and thorough weed contact (50 to 100 gals. diluted spray per acre). Best results are obtained when applications are made to young, succulent weeds and grasses. Mature, woody weeds are less susceptible. Repeat as needed. Add ORTHO X-77® Spreader (non-ionic) at 8 oz. per 100 gals. Paraquat is compatible with many residual herbicides. Avoid spray contact with foliage or fruit of food crops and ornamentals.

RESIN SOAKING

RESIN SOAKING IN PINES (Loblolly, Shortleaf, Longleaf, Slash, Virginia, Pond, Pitch and Spruce Pines):

Tree Selection—Select trees to be treated from stands on sites not subject to periods of extreme drouth stress as the desiccat-

ing effect of paraquat to pines is accentuated during such periods, causing a reduction in the amount of oleoresin deposited in the xylem. Select trees to be treated from vigorous, non-stagnated stands, either natural or planted. In stagnated stands or commercial timber stands, plan treating with paraquat not sooner than three years after a commercial thinning.

Application Directions—Apply ORTHO Paraquat CL diluted in water (0.2% to 5% cation wt./wt. basis, depending on the type of treatment method) to a suitable wound in the tree trunk to bring the treatment into contact with the xylem (sapwood). One of the following methods may be used:

Bark Streaks or Cuts: This type of wound is made using a standard or rotary bark hack or a chainsaw chipping tool employed in naval stores work to remove a single one-inch wide streak of bark about 1 to 2 feet from ground level. The total length should not exceed ⅓ of the tree circumference. Multiple streaks or cuts can result in serious girdling of the trunk and premature death of the tree. A coarse spray (about 2 to 6 ml.) of paraquat solution (1% to 5% cation, wt./wt. basis) should be applied to runoff to the exposed xylem, using a plastic acid bottle or a low-pressure sprayer. Wear rubber gloves when using the acid bottle. The amount of spray required per cut depends on tree circumference and the length of cut or streak (⅓ of circumference). For a 9-inch diameter tree, 3 ml. of spray will cover the 1 inch wide streak. Using 3 ml. of a 2% or 4% paraquat solution will result in application of 60 or 120 mg. paraquat per streak.

Tree Injection: Pressure injections of 1% to 4% paraquat solution (cation, wt./wt. basis) should be applied beneath the bark and just beneath the cambium layer. Injections should be made 1 to 2 inches apart around ⅓ of the tree circumference or no closer than 3 inches apart all around the tree. From 0.2 ml. to 0.4 ml. of paraquat solution is applied per injection. Using 2% to 4% paraquat solution, this results in 36 to 144 mg. paraquat applied per 9-inch diameter tree, for holes spaced 1 inch apart around ⅓ of the tree or 3 inches apart all around the tree.

Bore Holes: ⅜ to ⅝ inch diameter holes 2 to 6 inches deep, depending on tree diameter, are bored sloping slightly downward and tangentially inward rather than directly towards the center of the tree. Solutions of 0.3% to 5% paraquat can be used. Lower concentrations (0.3%) are usually applied at higher volumes of 15 to 35 ml. per tree, resulting in application of 45 to approximately 100 mg. paraquat per tree. Using 2% to 4% solutions and applying 5 ml. per single hole per tree results in application of 100 or 200 mg. paraquat per tree. Bore hole applications in the range of 45 to 100 mg. paraquat per tree have resulted in effective oleoresin induction.

Time of Treatment: Resin soaking can occur from treatments made any time of the year, however, cool season treatments under non-drouth conditions usually result in less severe pine beetle infestations and longer tree life.

Interval Between Treatment and Tree Harvest: The interval between application of paraquat and tree harvest should be a minimum of six months and preferably from 12 to 24 months. Intervals of over six months may not be possible under conditions of drouth or serious pine beetle attacks, which may make early harvest necessary. The paraquat treatment may encourage beetle attack, or may cause premature death of the tree. Desiccation of the xylem tissue, rather than the desired resin soaking, may occur, and is more likely at higher dosage rates.

Effect on Stem Growth:

Paraquat treatment can result in reduced stem growth during the interval between treatment and tree harvest.

**Dilution Table for ORTHO Paraquat CL (2 lbs. cation per gallon)
To 1 Gal. of**

| Concentration of Cation Desired (Wt./Wt. Basis) | ORTHO Paraquat CL, add the following No. Gals. of Water: |
|--|---|
| 0.2% | 118.8 |
| 0.5% | 46.8 |
| 1.0% | 22.9 |
| 2.0% | 10.9 |
| 3.0% | 6.9 |
| 4.0% | 4.9 |
| 5.0% | 3.7 |

WORKER SAFETY RULES

Avoid accidents. Follow these pesticide Safety rules when handling this product.

USE STRICTLY IN ACCORDANCE WITH DANGER STATEMENTS AND DIRECTIONS, AND WITH APPLICABLE STATE AND FEDERAL REGULATIONS.

WASH SPLASHES from skin and eyes immediately
REMOVE and wash contaminated clothing
WASH before eating, smoking and drinking

CONCENTRATE/MIXING

Wear full face shield, rubber gloves and apron when handling concentrate.

SPRAY APPLICATION

Avoid working in spray mist. If there is risk of exposure wear goggles and approved face mask capable of filtering spray droplets. Wear waterproof footwear and clothing when spraying or when contacting vegetation wet with spray.

ENVIRONMENTAL SAFETY CAUTIONS

WILDLIFE

This product is toxic to wildlife. Birds and other wildlife in treated areas may be killed. Keep out of lakes, streams and ponds.

DRIFT

ORTHO Paraquat CL is a contact herbicide that kills all green plant tissue. Do not apply under conditions involving possible drift to food, forage or other plantings that might be damaged or the crops thereof rendered unfit for sale, use or consumption. Do not apply when weather conditions favor drift from areas treated.

CHEMICAL HAZARD

This product reacts with aluminum to produce hydrogen gas which may form a highly combustible gas mixture. Such gas could flash or explode, causing serious personal injury, if ignited by open flame, spark, welder's torch, lighted cigarette or other ignition source. Do not mix or store in containers, spray tanks, nurse tanks or such systems made of aluminum or having aluminum fittings. After dilution with water to spray concentrations, spray systems made of, or containing aluminum parts, may be used but should not be used for extended (overnight) storage.

EQUIPMENT/CONTAINERS

Flush all spray equipment with water after use each day. ORTHO Paraquat CL is corrosive to aluminum. Aluminum spray equipment and aluminum aircraft structures that are exposed to spray solution or spray drift should be flushed thoroughly with water immediately after use.

WASH and destroy containers when empty—Never reuse. DO NOT CONTAMINATE water when cleaning equipment or disposing of wastes. Apply this product only as specified on this label.

STORE AT TEMPERATURES ABOVE 32° F.

Do not contaminate feed, foodstuffs or drinking water.

Do not store next to feed or food, or transport in or on vehicles containing foodstuffs or feeds.

CONDITIONS OF SALE: 1. Chevron Chemical Company (Chevron) warrants that this material conforms to the chemical description on the label and is reasonably fit for use as directed hereon. Chevron neither makes, nor authorizes any agent or representative to make, any other warranty of FITNESS or of MERCHANTABILITY, guarantee or representation, express or implied, concerning this material.

2. Critical and unforeseeable factors beyond Chevron's control prevent it from eliminating all risks in connection with the use of chemicals. Such risks include, but are not limited to, damage to plants and crops to which the material is applied, lack of complete control, and damage caused by drift to other plants or crops. Such risks occur even though the product is reasonably fit for the uses stated hereon and even though label directions are followed. Buyer and user acknowledge and assume all risks and liability (except those assumed by Chevron under 1 above) resulting from handling, storage and use of this material.

X-77® Registered Trademark of KALO Laboratories, Inc.

Manufactured for

Chevron Chemical Company

Ortho Agricultural Chemicals Division
San Francisco CA 94119 Richmond CA 94804
Product 1000-22
Form 7894-F2
EPA Reg. No. 239-2186-AA

Code 2834

50 Lbs. Net Weight

Furadan® 10 Granules

Insecticide — Nematicide

EPA Reg. No. 279-2712 AA EPA Est., 279-IL-1

Active ingredient:

*Carbofuran 10.0%

Inert ingredients: 90.0%

*2,3-dihydro-2,2-dimethyl-7-benzofuranyl
methylcarbamate 100.0%

Furadan — FMC trademark U.S. Patent No. 3,474,171

KEEP OUT OF REACH OF CHILDREN.

WARNING

If swallowed, induce vomiting by sticking finger down throat or by giving soapy or strong salty water to drink. Repeat until vomit is clear. Never give anything by mouth to an unconscious person. Get medical attention. If in eyes, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention. **Note to physician:** Carbofuran is an acetylcholinesterase inhibitor. Atropine is antidotal. Give 2 mg. intramuscularly. If in eyes, use one drop of Homatropine.

For Emergency Assistance - Call 716-735-3765

PRECAUTIONARY STATEMENTS

Hazard to humans (& domestic animals).

Warning

May be fatal if swallowed or absorbed through eyes. Do not get in eyes or on clothing. Avoid contact with skin.

Environmental hazards.

This pesticide is toxic to fish and wildlife. Use with care when applying in areas frequented by wildlife or adjacent to any body of water. Birds feeding on treated areas may be killed. Keep out of lakes, ponds or streams. Cover or incorporate granules which are spilled during loading and which are visible on soil surfaces in turn areas.

Use Caution

Do not plant crops other than alfalfa, corn, peanuts, peppers, potatoes, rice, sorghum, strawberries, sugar beets, sugarcane and tobacco within 18 months of last application. Soybeans and oats may be planted the following season. Any other crop may be planted if it is not harvested or grazed.

DIRECTIONS FOR USE

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

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage, disposal or cleaning of equipment. Open dumping is prohibited.

Pesticide that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticides or buried in a safe place away from water supplies. Dispose of in an incinerator or landfill approved for pesticide.



FMC Corporation
Agricultural Chemical Group
Philadelphia PA 19103

037

containers, or bury in a safe place. Consult Federal, State or Local disposal authorities for approved alternative procedures such as limited open burning.

Directions for Use

Field Corn — Conventional, Minimum & No-Tillage

Corn Rootworms (Northern, Southern & Western), Flea Beetles, aids in the control of first generation European Corn Borer, reduce losses due to Stalk Rot by reducing the incidence of insect wounds which permit entry by the stalk rot fungi; Armyworm and Fall Armyworm control for approximately 4 to 6 weeks after planting — Use 7½ to 10 lbs. of Furadan 10 Granules per 13,000 linear feet (1 acre with 40 inch row spacing). Apply in a 7 inch band ahead of the planter press wheel and incorporate into the top 1 inch of soil by use of special covering devices or by dragging a short length of chain. —OR— Direct the granules into the planter shoe with the seed. —OR— Place the applicator tube directly behind the planter shoe so that the granules drop into the furrow and mix with the covering soil.

Southwestern Corn Borer (second to third generation) — Apply 15 to 30 lbs. per acre into the seed furrow by placing the granular application tube directly behind the planter shoe.

European Corn Borer (first generation), Wireworm — Use 20 to 30 lbs. per 13,000 linear feet (one acre with 40 inch row spacings) and apply "at planting" as above (in a covered band or in the seed furrow).

Nematodes (sting, stunt, stubby root, root knot, dagger, lesion, lance, and spiral) — Use 15 to 20 lbs. per 13,000 linear feet (one acre with 40 inch row spacing). Apply at planting time in a 7 to 15 inch band and incorporate into the top 3 inches of soil.

Field Corn — Post Plant

Northern & Western Corn Rootworm — Use 7½ to 10 lbs. per acre by banding over the row or by side dressing both sides of the row and cultivating into the soil.

Field Corn — Foliar Application

Southwestern Corn Borers (second to third generation) and European Corn Borers - Use 10 lbs. per acre. Apply with aircraft by broadcasting over the corn plants or with ground equipment by directing the granules into the corn whorls. Apply when eggs begin to hatch. Do not make a foliar application if Furadan 10 Granules were applied at more than 10 lbs. per acre at planting. Do not make more than two foliar applications per season.

Corn Applicator Indicator Setting

Furadan 10 Granules is a dense, free-flowing product which will require application equipment to be calibrated to apply the recommended amount per acre. The following are approximate settings for guidance in calibration:

| Manufacturer and Type | Indicator Setting | |
|--|-------------------|-------------|
| | 7½ lbs. / A | 10 lbs. / A |
| Noble (fiber glass) | 9 | 12 |
| Gandy (901 appl. with resilient Rotors at 4 mph) | 15 | 17 |
| Allis Chalmers (18" wheel with tire) | 6 | 7 |
| E-Z Flo (Model 201-5-25 fiber glass appl.) | 9 | 12 |
| John Deere | RI-N29 | RI-N33 |
| International Harvester — Gate No. 1 | Dial 6 | Dial 8 |

Peanuts

Do not feed treated peanut forage to dairy animals or animals being finished for slaughter.

Row banding application method:

Nematodes (root knot, sting, stunt, lesion, ring) in Southeastern States and in Southwestern States of Texas and Oklahoma and for control of Thrips in Southeastern

SPECIMEN LABEL

States — Apply Furadan 10 Granules in a band over the row prior to planting and incorporate 3 to 6 inches into the soil. Use the rate indicated below for various band widths.

Potato Leafhopper (Southeastern U.S. only) - To aid in control, apply Furadan 10 Granules in a band over the row prior to planting and incorporate 3 inches into the soil. Use the rate indicated below for various band widths. Additional control measures may be needed late in the season for potato leafhopper.

| Band Width | Rate/Acre (36 inch rows) | Rate/1000 linear feet |
|------------|--------------------------|-----------------------|
| 12 inches | 20 to 40 lbs | 1 1/3 to 2 3/4 lbs |
| 18 inches | 30 to 50 lbs | 2 to 3 1/2 lbs |

In-furrow at planting application method:

Thrips, Potato Leafhopper and as an aid in the control of Southern Corn Rootworm in Southeastern States — Use in furrow at planting, 5 to 10 lbs. per acre (36 inch row spacing); 1/3 to 2/3 lbs. per 1000 linear feet of row.

Peppers

Green Peach Aphid — (Delmarva Peninsula & South Jersey only), European Corn Borer — Make two applications of Furadan 10 Granules by sidedressing on either one or both sides of the row. Make a first application two to four weeks after transplanting using 20 lbs. per acre (equivalent to 3/4 lb. per 500 linear feet with 38 inch rows). Make the second application four to six weeks later using 30 lbs. per acre (1 lb. per 500 linear feet). Do not make the second application within 21 days of harvest.

Potatoes

Colorado Potato Beetle, Potato Flea Beetle, Potato Leafhopper and Green Peach Aphid control in the Northeast including Delmarva Peninsula and the North-central States including Colorado and for Potato Tuberworm control in Virginia - Use 2 1/4 pounds of Furadan 10 Granules per 1000 linear feet of row (30 pounds per acre on 38 inch row spacing). Apply directly into the bottom of the furrow during the planting operation.

Sorghum

Greenbug - Use only on grain sorghum or sorghum grown for forage.

Use 9-12 ounces of Furadan 10 Granules per 1000 linear feet of row (7.5-10 lbs. per 13,000 linear feet). Apply directly into seed furrow. — OR — Use 12 ounces Furadan 10 Granules per 1000 linear feet of row (10 lbs. per 13,000 linear feet). Apply in a 7 inch band over the row and incorporate granules into the top 1 inch of soil by use of a press wheel, dragging a short length of chain or other suitable device.

Pounds of Furadan 10 Granules to Apply
Per Acre Using Various Row Spacings

| | 20" | 30" | 40" |
|----------------------|-------------|-------------|--------------|
| In-furrow 7" Band | 15-20 20 | 10-13 15 | 7.5-10 10 |

Sugar Beets

Sugar Beet Root Maggot — Use 20 lbs. of Furadan 10 Granules to 23,750 linear feet of row or 4 ounces per 300 feet (equivalent to 1 acre using 22 inch row spacing). Apply granules in a 6 to 7 inch band and incorporate into the top 1 inch of soil using a suitable device.

Sugarcane

Apply Furadan 10 Granules at the rate of 2 1/2 to 5 lbs. per 1000 linear feet of row (equivalent to 20 to 40 lbs. per acre based on 60 inch row spacings). Do not use in Hawaii.

Nematodes (root knot & stunt), Wireworm —

Plant cane Apply the above rate as a 15 inch band directly over the planted cane and cover with soil.

Wireworm (Florida only), Nematodes (Root knot & stunt) —

Stubblecane Apply the above rate as a 15 inch band over the stubble row. Use anytime after harvest until regrowth reaches 18 inches. Cover with a 1 to 2 inch layer of soil. Covering with more than 2 inches of soil may reduce stand.

Tobacco — Burley

Flea Beetles — Use 30 to 40 lbs. per acre. Broadcast granules over the soil surface prior to transplanting and incorporate with a suitable device.

Tobacco — Flue Cured

Nematodes (root knot & stunt), Wireworms, Hornworms, Flea Beetles and to aid in the control of Budworms — Use

60 lbs. per acre. — OR — Use 40 lbs. per acre for full season control of flea beetles and approximately 60 days control of hornworms. Apply Furadan 10 Granules before forming beds. Broadcast granules over the soil surface and incorporate 4 to 6 inches with suitable device. Form beds and plant as usual.

Cottonwood

Cottonwood Twig Borer, Cottonwood Leaf Beetle, Clearwing Borer — In commercial plantations use 10 to 20 lbs. per acre (12 ft. row spacing) or 2 3/4 to 5 1/2 lbs. per 1000 linear feet of row. Apply during June or July to the root zone of the cutting by the use of a granular subsoil applicator as a sidedress 10 to 12 inches from the trees in a continuous band on both sides of the trees. In Nursery plantings use 40 lbs. per acre (40 inch row spacing) or 3 lbs. per 1000 linear feet of row. Apply during May or June to the root zone of the cutting, sidedressing 10 to 12 inches from the trees in a continuous band on both sides of the trees.

Pine Seedlings

Pales Weevil and Pitch-Eating Weevil control in pine plantations — Use 10 grams (1 teaspoon) per seedling at transplanting. Distribute the granules in a 6 inch radius on the soil around each seedling. Cover granules with soil. Do not use at planting if seedlings were treated with Furadan 4 Flowable slurry root dip.

Southern Pine Seed Orchards

Seedbugs, Coneworms, Coneborers - Use 4 to 8 ounces per inch of tree diameter. Cone beetles - Use 8 ounces per inch of tree diameter. Broadcast within the drip area of the tree and incorporate with a suitable device. Make one (1) application in winter or early spring. Do not graze or feed orchard plants or plant parts.

Siberian Elm

Elm Leaf Beetle control by commercial applicators only and in the States of Colorado, Nebraska, Kansas, New Mexico, Arizona, Utah and Wyoming only — Apply Furadan 10 Granules, before insects appear in the spring, at the rate of 1/2 ounce per inch of trunk circumference. Measure the circumference (girth) of the tree 3 to 4 feet above the ground. Dig one hole for each inch of girth, 3 to 9 inches deep under the drip line of the tree. Thoroughly soak area under the tree. Place granules required in each hole. Replace soil plug immediately and compress soil. Keep treated areas soaked with water for 14 days.

| If Girth of tree is: | Locate Holes away from trunk | Amount of Furadan 10 Granules |
|-------------------------|----------------------------------|----------------------------------|
| 1 to 10 inches | 1 ft. | 0.5 to 5 ounces |
| 14 to 20 inches | 3 ft. | 7 to 10 ounces |
| 24 to 80 inches | 6 ft. & 12 ft. (alternating) | 12 to 20 ounces |
| 44 to 80 inches | 10 ft. & 12 ft. (alternating) | 22 to 40 ounces |
| 80 inches and larger | 12 ft. & 20 ft. (alternating) | 40 ounces |

Dealers Should Sell in Original Packages Only.

Terms of Sale or Use On purchase of this product buyer and user agree to the following conditions:

Warranty FMC makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label. Except as so warranted, the product is sold as is. Buyer and user assume all risk of use and/or handling and/or storage of this material when such use and/or handling and/or storage is contrary to label instructions.

Directions and Recommendations Follow directions carefully. Timing and method of application, weather and crop conditions, mixture with other chemicals not specifically recommended, and other influencing factors in the use of this product are beyond the control of the seller and are assumed by buyer at his own risk.

Use of Product FMC's recommendations for the use of this product are based upon tests believed to be reliable. The use of this product being beyond the control of the manufacturer, no guarantee, expressed or implied, is made as to the effects of such or the results to be obtained if not used in accordance with directions or established safe practice.

Damages Buyer's or user's exclusive remedy for damages for breach of warranty or negligence shall be limited to direct damages not exceeding the purchase price paid and shall not include incidental or consequential damages.

1. All pesticides are poisonous, but some are more toxic than others. Of the three labels that are attached which product is the most toxic?

2. If someone accidentally swallowed Furadan, get medical attention immediately and take the label with you. What information is on the label to help the doctor?

3. Princep 4L has 41.9% active ingredient, but percentages do not need to be used to figure rates of application per acre because the label states that Princep 4L contains _____ lbs. active ingredient per gallon.
4. Which of the three attached labels is for a "Restricted Use Pesticide"?

5. Application of a pesticide to a crop requires consideration of many factors including the crop to be planted next in the rotation. Crop restrictions are in effect for a period of _____ months for Furadan.
6. Princep 4L is labeled to control many weeds including:

7. Directions for use of pesticides are always included on the label. Several factors affect the rate at which a product should be used but the rate of Paraquat is determined by the amount of vegetation to be sprayed. The rate per acre of Princep is determined largely by the _____ of the soil.
8. Tank-mix combinations of pesticides may be more effective in controlling a broad spectrum of weeds. The order in which the pesticides are added to the tank can be critical.
 - (a) When using a tank mix of Paraquat plus Bladex 80W, which should be added to the tank first?

 - (b) Why can't suspension type liquid fertilizer be used as the carrier?

9. Special storage is needed for pesticides. Do not store next to feed or food. Which of the attached 3 labels is from a pesticide that should be stored above 32°F?

10. General directions for safe disposal of pesticide containers are listed on the container. Is there a state approved land fill for pesticides and container disposal in your area?

Yes _____ No _____

If you do not know, contact the Bureau of Solid and Hazardous Waste Management, Virginia Department of Health, Madison Building, Room 927, 109 Governor Street, Richmond, VA 23219 or call (804) 786-5271.

FOLD

[Please print clearly one letter per block]

Pesticide App.
Permit Number

NAME, Last

First

Middle
Initial

MAILING ADDRESS

RFD and Box or Street (include numbers)

City

State

ZIP

County

Extension Agent

Social Security No.
(optional)

Date of Session

Please check if address is
different than on permit

FOLD

PLEASE PRINT RETURN ADDRESS HERE

PLACE
STAMP
HERE

PRINT ADDRESS OF EXTENSION AGENT OR THE PERSON
WHO ADMINISTERED TRAINING SESSION HERE