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1812-245

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

NOV - 8 1990

L. Vernon White
Griffin Corporation
P.O. Box 1847
Valdosta, GA 31604-1847

Dear Mr. White:

Subject: LINEX 4L
EPA Reg. No. 1812-245
Re: Label Amendments
Your letter dated September 26, 1990

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable subject to the comments listed below. Please submit five (5) of your final printed labels incorporating these changes before distributing your product.

1. Please revise your "Environmental Hazards" statement to read "Do not contaminate water when disposing of equipment washwaters" as stated in our June 15, 1988 letter.

Sincerely,

Robert J. Taylor
Product Manager (25)
Fungicide-Herbicide Branch
Registration Division (H7505C)

enclosure

CONCURRENCES							
SYMBOL	H7505C						
SURNAME	COLL						
DATE	11/07/90						

ACCEPTED
with COMMENTS
in EPA Letter Dated:

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended for the pesticide
registered under EPA Reg. No.

1812-245

Linex[®] 4L

LINURON FLOWABLE WEED KILLER

ACTIVE INGREDIENT:

Linuron [3-(3, 4-dichlorophenyl)-1-methoxy-1-methylurea] 40.6%

INERT INGREDIENTS: 59.4%

TOTAL 100.0%

This product contains 4 lbs. of Linuron per gallon.

KEEP OUT OF REACH OF CHILDREN

CAUTION

STATEMENT OF PRACTICAL TREATMENT

IF SWALLOWED: Induce vomiting.

IF ON SKIN: Remove by washing.

IF IN EYES: Wash with large amounts of water and get medical attention.

SEE PRECAUTIONARY STATEMENTS

Griffin

Griffin. The Hardworking Difference™

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GRIFFIN CORPORATION

VALDOSTA, GEORGIA 31601

NET CONTENTS 2 ½ Gallons

EPA Reg. No. 1812-245

EPA Est. No. 1812-GA-3

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PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS & DOMESTIC ANIMALS CAUTION

Avoid breathing spray. Avoid contact with skin, eyes and clothing. In case of skin contact, remove with washing; for eyes, wash with copious amounts of water and get immediate medical attention. Do not apply this product in such a manner as to directly or through drift expose workers or other persons. The area being treated must be vacated by unprotected persons.

ENVIRONMENTAL HAZARDS

Do not apply directly to water. Do not apply where runoff is likely to occur. Do not apply where weather conditions favor drift from areas treated. Do not contaminate water by cleaning of equipment or disposal of wastes.

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

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

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinseate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

RE-ENTRY STATEMENT

Do not apply this product in such a manner as to directly or through drift expose workers or other persons. The area being treated must be vacated by unprotected persons.

Do not enter treated area for 24 hours following application unless protective clothing is worn.

Because certain states may require more restrictive re-entry intervals for various crops treated with this product, consult your State Department of Agriculture for further information.

Written or oral warnings must be given to workers who are expected to be in a treated area or in an area about to be treated with this product. (Indicate specific oral warnings which inform workers of areas or fields that may not be entered without specific protective clothing, period of time field must be vacated and appropriate actions to take in case of accidental exposure). When oral warnings are given, warnings shall be given in a language customarily understood by workers. Oral warnings must be given if there is reason to believe that written warnings cannot be understood by workers. Written warnings must include the following information: CAUTION. Area treated with LINURON on (date of application). Do not enter without appropriate protective clothing for 24 hours. In case of accidental exposure see Statement of Practical Treatment.

Required Clothing And Equipment For Mixing/Loading And Applying Linuron:

One-piece overalls which have long sleeves and long pants constructed of finely woven fabric as specified in the USDA/EPA Guide for Commercial Applicators.

Wide-brimmed hats.

Chemical resistance gloves which are mid-forearm to elbow length.

Any clothing worn while applying linuron must be cleaned before re-using. Clothing which has been drenched or has otherwise absorbed concentrated pesticide must be disposed in a sanitary landfill, or incinerated, or as directed by state and local authorities, by burning.

Instead of clothing and equipment specified above, the applicator can use an enclosed tractor cab which provides a filtered air supply (as described by Taschenberg and Bourke, 1975).

Written or oral warnings must be given to workers who are expected to be in a treated area or in an area about to be treated with this product.

ROTATIONAL CROP RESTRICTIONS

Do not rotate crops used for food or feed, which are not registered for use with linuron onto areas previously treated with this chemical.

IMPORTANT

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

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

Do not apply (except as recommended for crop use), or drain or flush equipment on or near desirable trees or other plants, or on areas where their roots may extend, or in locations where the chemical may be washed or moved into contact with their roots. Do not use on home plantings of trees, shrubs or herbaceous plants, nor on lawns, walks, driveways, tennis courts, or similar areas. Prevent drift of dry powder or spray to desirable plants. Do not contaminate any body of water. Keep from contact with fertilizers, insecticides, fungicides, and seeds.

Thoroughly clean all traces of LINEX[®] 4L from application equipment immediately after use. Flush tank, pump hoses, and boom with several changes of water after removing nozzle tips and screens (clean these parts separately). Do not contaminate water by cleaning of equipment or disposal of wastes. Do not re-use container.

GENERAL INFORMATION

LINEX[®] 4L Weed killer is a flowable herbicide to be mixed in water and applied as a spray for selective control of weeds in certain crops and for non-selective weed control on non-cropland areas. It is non-corrosive to equipment, non-flammable and non-volatile.

LINEX[®] 4L may be applied to soil prior to emergence of weeds to control susceptible weed seedlings for an extended period of time; the degree of control and duration of effect will vary with the amount of chemical applied, soil texture, rainfall and other conditions. Soils high in clay or organic matter require higher dosages than soil low in clay or organic matter to obtain equivalent herbicide performance. Moisture is required to activate the chemical; best results occur if rainfall (or irrigation) occurs within 2 weeks of application. In the Columbia River Basin, use LINEX[®] 4L only if crop is sprinkler irrigated.

LINEX[®] 4L may also be used to control emerged weeds. Results vary with rate applied and environmental conditions; best results are obtained on succulent weeds growing under conditions of high humidity and temperatures of 70°F or higher. Addition of a surfactant to the spray (where recommended) increases contact effects of LINEX[®] 4L.

Since the effect of LINEX[®] 4L varies with soils, uniformity of application, and environmental conditions, it is suggested that growers limit their first use to small areas. Observe all cautions and limitations on labeling of all products used in mixtures.

DIRECTIONS

LINEX[®] 4L Weed Killer should be used only in accordance with recommendations on this label.

SELECTIVE USE IN CROPS

PRE-EMERGENCE USE (Germinating Weeds): LINEX[®] 4L, at recommended rates, control barnyardgrass (watergrass), canarygrass, carpetweed, chickweed, crabgrass, fall panicum, Florida pusley, foxtail (including giant foxtail), galinsoga, goosegrass, lambsquarters, mustard, nettleleaf goosefoot, pigweed, purslane, ragweed, smartweed and wild radish. Treatment usually provides partial control of annual morningglory, cocklebur, prickly sida (teaweed), sicklepod and velvetleaf (buttonweed); it will not control established perennials such as Bermudagrass, Canada thistle, field bindweed, Johnsongrass and purple nutsedge. The lower dosages are effective on the lighter soils and the higher rates on heavier soils and on the more resistant seedling weeds. Sufficient moisture (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.

A good seed bed must be prepared before application of LINEX[®] 4L as crop injury may result if application is made to ground which is cloddy or compacted resulting in improperly planted seed. Plant seed to depth specified. Surface of the soil should not be cultivated or disturbed after application of LINEX[®] 4L and before emergence of the crop as weed control may be reduced and crop injury may result. However, if moisture is insufficient to activate the herbicide, a shallow cultivation (rotary hoe preferred) should be made after emergence of row crops while weeds are small enough to be controlled by mechanical means.

POST-EMERGENCE USE (Emerging Seedling Weeds): LINEX[®] 4L at recommended rates, controls Amsinckia, annual morningglory, annual ryegrass, barnyardgrass (watergrass), canarygrass, carpetweed, cocklebur, crabgrass, dog fennel, fall panicum, Florida pusley, foxtail (including giant foxtail), goosegrass, groundsel, knawel, lambsquarters, mustard, nettleleaf goosefoot, pigweed, prickly sida (teaweed), purslane, ragweed, rattail fescue, sesbania, sicklepod, smartweed, Texas panicum, velvetleaf (buttonweed) and wild buckwheat. Best results are obtained under conditions of high humidity and temperatures over 70°F. Control of emerged weeds under drought stress is usually impractical.

EQUIPMENT — SPRAY VOLUMES AND PRESSURES: Use a tractor-mounted fixed boom power sprayer properly calibrated to a constant speed and rate of delivery. Openings in screens should be equal to or larger than 50 mesh. Continuous agitation in the spray tank is required to keep the material in suspension. Agitate by mechanical or hydraulic means; if by-pass or return line is used, it should terminate at bottom of tank to minimize foaming. Avoid overlapping, and shut off spray booms while starting, turning, slowing or stopping, or injury to the crop may result.

For preemergence application, use 25 to 40 gals. per acre and spray pressure of 30 to 40 psi. For postemergence application, use sufficient volume (min. 25 gals. per acre) for thorough coverage of weed foliage; use spray pressure of 20 to 25 psi to keep spray drift to a minimum.

LINEX[®] 4L is labeled for application using ground equipment only. Aerial applications are prohibited.

SPRAY PREPARATION: Mix proper amount of LINEX[®] 4L into necessary volume of water; for preemergence applications, non-pressure nitrogen solution may be substituted for all or part of the water. Where use of surfactant is recommended dilute with 10 parts of water and add as last ingredient to nearly full tank.

USE RATES: All dosages of LINEX[®] 4L (and tank mixtures) are expressed as broadcast rates; for band treatment, use proportionately less. For example, use 1/3 of the broadcast rate when treating a 14" band where row spacing is 42". Where range of dosages is given, use the lower rate on lighter soils (low in clay or organic matter) and the higher rate on heavier soils (high in clay or organic matter). For postemergence application, use the lower rate on smaller weeds and the higher rate on larger weeds.

SOIL LIMITATIONS: Unless otherwise directed, do not use on sand, loamy sand, gravelly soils or exposed subsoils nor on soils containing less than 1% organic matter as crop injury may result.

REPLANTING: If initial seeding fails to produce a stand, the same crop may be replanted in soil treated preemergence with LINEX[®] 4L (or with recommended tank mixtures). Thoroughly rework soil before replanting; do not re-treat field with a second application as injury to the crop may result. Unless otherwise directed, do not replant treated areas to any other crop within 4 months after last application as injury to subsequent crops may result.

CARROTS — Preemergence Application — Michigan and Wisconsin: Make a single application of 1 to 3 pts. per acre after planting but before carrots emerge; plant seed at least 1 1/2" deep. Use the lower rate on lighter soils (low in clay or organic matter) and the higher rate on heavier soils (high in clay or organic matter). Subsequent postemergence application may be made provided the total does not exceed 4 pts. per acre per season.

Postemergence Application — U.S.: Apply 1 1/2 to 3 pts. per acre as a non-directed spray after carrots are at least 3" tall. Apply before annual grasses exceed 2" in height and before broadleaf weeds exceed 6" in height. Repeat application may be made but do not exceed 4 pts. per acre, do not exceed 40 psi spray nozzle pressure as crop injury may result. **ATTACHMENT 2**

LINEX[®] 4L may be applied following an application of Stoddard solvent provided treatments are at least one day apart. Stoddard solvent may be applied following an application of LINEX[®] 4L provided treatments are at least 2 weeks apart. Shorter time intervals between applications may result in injury to the crop. Do not apply LINEX[®] 4L as a tank mixture with Stoddard solvent, surfactants, nitrogen solution, other pesticides nor when temperature exceeds 85°F as crop injury may result.

Note: Because carrot varieties vary in their resistance, determine tolerance in LINEX[®] 4L 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. **ATTACHMENT 3**

CELERY — Post Emergence Application: Make a single application of 1 1/2 to 3 pts. per acre. Apply as a non directed spray after celery is transplanted and established but before celery is 8" tall. Apply before annual grasses exceed 2" in height and before broadleaf weeds exceed 6" 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 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 Rocky Mountains — Preemergence Application: Select one of the following herbicide treatments for application as a tank mixture. Make a single application after planting but before crop emerges. Plant seed at least 1 1/2" deep on flat or raised seedbeds only or injury to the crop may result. Do not spray over top of emerged corn.

LINEX[®] 4L + Lasso[®] 10L (Lasso with 2 parts of water and add as last ingredient to spray tank)

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Product Per Acre		
	Low Organic Matter (1% to 3%) LINEX [®] 4L (pts.) + "Lasso" (Qts.)	Moderate Organic Matter (3% to 6%) LINEX [®] 4L (pts.) + "Lasso" (Qts.)
Soil Texture		
Sandy loam	2 3/4 to 1 1/4 + 3/4 to 1	1 1/4 to 2 - 1 to 1 1/2
Silt loam	1 to 1 2/3 + 1 to 1 1/2	1 2/3 to 2 1/2 + 1 1/2 to 2
Clay loam	1 1/4 to 2 + 1 1/2 to 2	2 to 3 - 2 to 2 1/2

Replanting: Corn or soybeans may be replanted within 4 months; after 4 months, any crop may be planted.
LINEX[®] 4L + "Ramrod"

Product Per Acre		
	Low Organic Matter (1% to 3%) LINEX [®] 4L (pts.) + "Ramrod" (Lbs.)	Moderate Organic Matter (3% to 6%) LINEX [®] 4L (pts.) + "Ramrod" (Lbs.)
Soil Texture		
Sandy loam	2 3/4 to 1 1/4 + 1 to 2	1 1/3 to 2 + 2 to 3
Silt loam	1 to 1 2/3 + 1 1/2 to 2 1/2	1 2/3 to 2 1/2 + 2 1/2 to 4
Clay loam	1 1/4 to 2 + 2 to 3	2 to 3 + 3 to 4 3/4

Replanting: Corn may be replanted within 4 months; after 4 months, any crop may be planted.
LINEX[®] 4L + Atrazine

Product Per Acre		
	Low Organic Matter (1% to 2%) LINEX [®] 4L (pts.) + Atrazine 80% (Lbs.)	Moderate Organic Matter (2% to 5%) LINEX [®] 4L (pts.) + Atrazine 80% (Lbs.)
Soil Texture		
Sandy loam	2 3/4 to 1 + 1/2 to 2 3/4	1 to 2 + 2 3/4 to 1 1/4
Silt loam	1 to 1 1/2 + 2 3/4 to 1	1 1/2 to 2 1/2 + 1 to 1 1/2
Clay loam	1 1/3 to 1 2/3 + 3/4 to 1	1 2/3 to 3 + 1 to 2

Replanting: Corn may be replanted within 6 months. After 6 months, any crop may be planted except do not follow treated corn with sugar beets, tobacco, or vegetables in rotation.
CORN (FIELD AND SWEET) — Directed Postemergence Application: Make a single application as a directed spray after corn is at least 15" high (measured to the highest leaf surface only of standing plants). Do not spray over top of corn. Apply only when there is sufficient differential between height of corn and weeds so that the directed spray thoroughly covers all weed foliage without contact of upper leaves or whorl by spray or drift, as such contact may cause crop injury. Early cultivation (shallow hoe or other suitable equipment) will aid in achieving proper differential between height of corn and weeds.

Apply 1 to 3 pts. per acre; add 1 pt. surfactant for each 25 gals. spray mixture. For field corn, non-pressure solution may be substituted for all or part of the water. Use the lower rate on lighter soils (low organic matter) and where weeds do not exceed 2" in height; use the higher rate on heavier soils (high in clay or organic matter) for weeds up to 5 1/2" in height.

COTTON — East of Rocky Mountains — Directed Postemergence Application: Apply as a directed spray; adjust nozzles to minimize contact of cotton leaves with spray or drift or crop injury may result. Do not spray over top of cotton.

Apply 1 to 1 1/2 pts. per acre when cotton is at least 15" tall and emerged weeds do not exceed 2" in height; add 1 pt. surfactant for each 25 gals. spray mixture. If needed, a second application of same rate may be made one week or later after initial treatment. Alternatively, after cotton is 20" tall, make a single application of 2 to 3 pts. per acre following last cultivation; if emerged weeds are present, add surfactant as directed above.

Notes: Do not use on Pima varieties of cotton. Do not graze treated fields or feed forage from treated areas to livestock. Do not feed grain trash to livestock.

PARSNIPS: Preemergence Application: Make a single application of 1 1/2 to 3 pts. per acre. Apply after planting but before crop emerges. Plant seed at least 1/2" deep.

POTATOES: Preemergence Application: Make a single application as a broadcast spray after planting but before crop emerges. Plant seed at least 2" 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. Apply before grasses are 2" tall and before broadleaf weeds are 6" tall, preferably just before or when weed seedlings emerge. If emerged weeds are present, add 1 pt. surfactant for each 25 gals. spray mixture. In irrigated areas, best results are obtained when application is made to moist soil, followed within 2 weeks by 1" to 2" of sprinkler irrigation (or rainfall). On powder dry soils, irrigate prior to herbicide application and follow with sprinkler irrigation to activate the herbicide.

East of Rocky Mountains: Apply 1 1/2 to 2 1/2 pts. per acre on the lighter soils (sandy loams, silt loams; 1 to 2% organic matter) and 2 1/2 to 4 pts. per acre on heavier soils (silt, clay loams; 2 to 5% organic matter); on soils over 5% organic matter, use 4 pts. per acre and apply to emerged weeds (before potatoes emerge).

Central Sands Area: Apply 1 pt. per acre on sands and 2 pts. per acre on loamy sands.

Sorghum — Preemergence Application: Select one of the following herbicide treatments for application as a tank mixture. Make a single application after planting but before crop emerges. Plant seed at least 1/2" deep on flat or raised seedbeds only or injury to the crop may result. Do not spray over top of emerged crops.

LINEX[®] 4L + Propazine (Southwest)

Product Per Acre		
	Low Organic Matter (1% to 2%) LINEX [®] 4L (pts.) + Propazine 80% (Lbs.)	Moderate Organic Matter (2% to 4%) LINEX [®] 4L (pts.) + Propazine 80% (Lbs.)
Soil Texture		
Sandy loam	5.8 to 1 - 3.8 to 5.8	1 to 1 1/2 + 5.8 to 1
Silt loam		
Clay loam	1 to 1 1/2 + 5.8 to 1	1 to 2 + 5.8 to 1 1/4

Replanting: Do not follow treated sorghum with any fall crop, nor with sugar beets, tobacco, vegetables or potatoes in rotation. Prior to replanting, thorough seedbed preparation including fall or spring plowing is recommended.

LINEX[®] 4L + "Ramrod" (Great Plains)

Product Per Acre		
	Low Organic Matter (1% to 3%) LINEX [®] 4L (pts.) + "Ramrod" 55 (Lbs.)	Moderate Organic Matter (3% to 6%) LINEX [®] 4L (pts.) + "Ramrod" 55 (Lbs.)
Soil Texture		
Sandy loam	2 3/4 to 1 1/3 + 1 to 2	1 1/3 to 2 + 2 to 3
Silt loam	1 to 1 2/3 + 1 1/2 to 2 1/2	1 2/3 to 2 1/2 + 2 1/2 to 4
Clay loam	1 1/4 to 2 + 2 to 3	2 to 3 + 3 to 4 3/4

Replanting: Sorghum or field corn may be replanted within 4 months; after 4 months, any crop may be planted.

Note: Do not graze or feed sorghum forage or silage from treated fields to dairy animals.

Directed Postemergence Application: Make a single application of LINEX[®] 4L as a directed spray, add 1 pt. surfactant for each 25 gal. spray mixture. If sprayer is equipped with skids, shoes or shields, apply 1 pt. per acre when sorghum is 12" tall (free standing plants) and weeds are up to 2" in height; use 1 to 2 pts. per acre when sorghum is 15" tall and weeds are 2" to 4" 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 of upper leaves or whorl of sorghum by spray or drift as such contact may cause crop injury.

Note: Do not graze or feed plants to livestock within 3 months after postemergence application.

SOYBEANS — Preemergence Application: Select one of the following herbicide treatments and make a single application after planting but before crop emerges. LINEX[®] 4L alone or as a tank mixture with "Lasso" may be applied on flat or raised seed beds where seed are planted at least 1 1/2" deep. If applied on beds with seeds planted less than 1 1/2" deep crop injury may result. Do not spray over the top of emerged soybeans.

LINEX[®] 4L — If weeds have emerged, add 1 pt. for each 25 gals. spray mixture.

LINEX[®] 4L Pts. Per Acre

	Low Organic Matter (1.2 to 2%)	Moderate Organic Matter (2 to 5%)
Soil Texture		
Sandy loam	1 to 1 2/3	1 2/3 to 3
Silt loam	1 1/4 to 2 1/3	2 1/3 to 4
Clay loam	1 1/3 to 2 2/3	2 2/3 to 5 (Over 5% organic matter, use 6 pts.)

Replanting: Soybeans or field corn may be replanted within 4 months; after 4 months, any crop may be planted.

LINEX[®] 4L following "Treflan" Preplant — Where "Treflan" has been used as a preplant incorporated treatment (according to directions on "Treflan" label), apply as a separate operation using 1/2 the rate recommended above for LINEX[®] 4L alone. For rotation crops, follow instructions on "Treflan" label.

LINEX[®] 4L + "Amiben"

Product Per Acre		
	Low Organic Matter (1.2 to 3%) LINEX [®] 4L (pts.) + "Amiben" (Qts.)	Moderate Organic Matter (3% to 6%) LINEX [®] 4L (pts.) + "Amiben" (Qts.)
Soil Texture		
Sandy loam	2 3/4 to 1 1/2 + 3	1 1/2 to 2 + 3
Silt loam	1 to 1 2/3 + 3	1 2/3 to 2 1/4 + 4
Clay loam	1 1/4 to 2 + 4	2 to 3 + 5

Replanting: Soybeans or field corn may be replanted within 4 months; after 4 months, any crop may be planted.

LINEX[®] 4L + "Lasso" — East of Rocky Mountains (Dilute "Lasso" with 2 parts of water and add as last ingredient to spray tank).

Product Per Acre

	Low Organic Matter (1/2 to 3%) LINEX [®] 4L (pts.) + "Lasso" (Qts.)	Moderate Organic Matter (3% to 6%) LINEX [®] 4L (pts.) + "Lasso" (Qts.)
Soil Texture		
Sandy loam	2 3/4 to 1 1/4 + 3/4 to 1	1 1/4 to 2 + 1 to 1 1/2
Silt loam	1 to 1 2/3 + 1 to 1 1/2	1 2/3 to 2 1/2 + 1 1/2 to 2
Clay loam	1 1/4 to 2 + 1 1/2 to 2	2 to 3 + 2 to 2 1/2

Replanting: Soybeans or field corn may be replanted within 4 months; after 4 months, any crop may be planted.

LINEX[®] 4L + "Ramrod" (Seed Crop Only)

Product Per Acre		
	Low Organic Matter (1% to 3%) LINEX [®] 4L (pts.) + "Ramrod" 65 (Lbs.)	Moderate Organic Matter (3% to 6%) LINEX [®] 4L (pts.) + "Ramrod" 65 (Lbs.)
Soil Texture		
Sandy loam	2 3/4 to 1 1/3 + 1 to 2	1 1/3 to 2 + 2 to 3
Silt loam	1 to 1 2/3 + 1 1/2 to 2 1/2	1 2/3 to 2 1/2 + 2 1/2 to 4
Clay loam	1 1/4 to 2 + 2 to 3	2 to 3 + 3 to 4 3/4

Soybeans:

LINEX[®] 4L + "Dual" (Tank Mixture)

Product Per Acre		
	1/2 to 3% Organic Matter LINEX [®] 4L (pts.) + "Dual" 8E (Pts.)	3 to 6% Organic Matter LINEX [®] 4L (pts.) + "Dual" 8E (Pts.)
Soil Texture		
Sandy loam	2 3/4 to 1 1/4 + 1 1/4	1 1/4 to 2 + 1 1/2
Silt loam	1 to 1 2/3 + 1 1/2	1 2/3 to 2 1/2 + 2
Clay loam	1 1/4 to 2 + 2	2 to 3 + 2 to 2 1/2

Note: Do not graze feed forage from treated areas to livestock.

Replanting: Soybeans or field corn may be replanted within 4 months; for rotation crops, follow instructions on "Dual" 8E label.

LINEX[®] 4L + "Prowl" (Tank Mixture) or LINEX[®] 4L following "Prowl" Preplant.

Apply tank mixture as preemergence treatment only; for replant treatment, incorporate "Prowl" and then follow with LINEX[®] 4L as a separate operation.

Product Per Acre

	1 to 3% Organic Matter LINEX [®] 4L (pts.) + "Prowl" (Pts.)	3 to 6% Organic Matter LINEX [®] 4L (pts.) + "Prowl" (Pts.)
Soil Texture		
Sandy loam	2 3/4 to 1 1/4 + 1 to 1 1/2	1 1/4 to 2 + 1 1/2
Silt loam	1 to 1 2/3 + 1 1/2 to 2	1 2/3 to 2 1/2 + 1 1/2 to 2
Clay loam	1 1/4 to 2 + 1 1/2 to 2	2 to 3 + 2 to 2 1/2

Replanting: Soybeans or field corn may be replanted within 4 months; other crops may be planted the following year.

LINEX[®] 4L + "Surflan" 75W or "Surflan" AS (Tank Mixture)

Product Per Acre		
	LINEX [®] 4L (Pnts.)	"Surflan" 75W (Lbs.)
Soil Texture		
Sandy loam	2 3/4 to 1 1/4	2 3/4 to 1
Silt loam	1 to 1 2/3	1 to 1 1/3
Clay loam	1 1/4 to 2	1 1/3 to 1 2/3

Note: Do not use treated vines for feed or forage.

Replanting: Soybeans may be replanted within 4 months; after 4 months any crop may be planted except do not plant root crops within 12 months.

SOYBEANS — Minimum or No-Tillage:

LINEX[®] 4L may be used with "Paraquat or Roundup" as a tank mixture combination for preemergence and postemergence control of many broadleaf weeds and grasses and for top kill or suppression of some perennials where soybeans will be planted directly into a preformed bed (state seed bed), cover crop, or in previous crop residues such as corn or small grain stubble. Addition of "Surflan" 75W, "Surflan" AS, "Dual" 8E or "Lasso" to the tank mixture improves control of grasses and volunteer small grains.

Apply with ground equipment immediately before, during, or after planting but before crop emerges. Use 20 to 60 gallons of water per acre. Use the higher gallonage for dense stubble or vegetation. Maintain constant agitation.

LINEX[®] 4L + Paraquat — Select the rate from the table for preemergence use of LINEX[®] 4L alone and thoroughly mix in spray tank first, then add Paraquat as directed under "Paraquat Combinations" below.

LINEX[®] 4L + Surflan 75W (or AS) + Paraquat — Select the rate from the table for the preemergence use of LINEX[®] 4L + "Surflan" 75W or "Surflan" AS tank mixture and thoroughly mix in spray tank first; then add Paraquat as directed under Paraquat Combinations listed below. Do not use treated vines for feed or forage.

LINEX[®] 4L + "Dual" 8E + Paraquat or "Roundup" — Thoroughly mix LINEX[®] 4L and "Dual" 8E in spray tank first according to directions, then add Paraquat or "Roundup" as directed under Paraquat Combinations below. Do not graze or feed forage from treated areas to livestock.

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	Product Per Acre	
	1/2 to 3% Organic Matter LINEX [®] 4L (pts.) + "Dual" 8E (Pts.)	3 to 6% Organic Matter LINEX [®] 4L (pts.) + "Dual" 8E (Pts.)
Soil Texture		
Sandy loam	2/3 to 1 1/4 + 1 1/2	1 1/4 to 2 + 1 1/2
Silt loam	1 to 1 2/3 + 2	1 2/3 to 2 1/2 + 2
Clay loam	1 1/4 to 2 + 2 to 2 1/2	2 to 3 + 2 to 2 1/2

LINEX[®] 4L + "Lasso" + Paraquat or "Roundup" — Thoroughly mix LINEX[®] 4L and "Lasso" in spray tank first according to directions; then add Paraquat or "Roundup" as directed under Paraquat Combinations or "Roundup" Combinations below.

	Product Per Acre	
	1/2 to 3% Organic Matter LINEX [®] 4L (pts.) + "Lasso" (Qts.)	3 to 6% Organic Matter LINEX [®] 4L (pts.) + "Lasso" (Qts.)
Soil Texture		
Sandy loam	2/3 to 1 1/4 + 2	1 1/4 to 2 + 2 1/2
Silt loam	1 to 1 2/3 + 2 1/2	1 2/3 to 2 1/2 + 3
Clay loam	1 1/4 to 2 + 2 1/2	2 to 3 + 3

Paraquat Combinations — Select and tank mix one of the above treatments; then add 1 to 2 pints Paraquat per acre. Use the higher rate for weeds 4" to 6" tall. As the last ingredient, add 1/2 pint Surfactant WK or "Ortho" X-77 Spreader per 100 gallons of spray mixture, maintain constant agitation.

"Roundup" Combinations — Select and tank mix one of the above treatments. As the 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.

NOTE: Do not graze or feed forage from treated areas to livestock; do not use seed for food, or oil purposes.

Replanting: Soybeans, sorghum, or field corn may be replanted within 4 months; after 4 months, any crop may be planted.

Directed Postemergence Application: Apply LINEX[®] 4L alone or as a tank mixture with 2, 4-DB, as a directed spray to cover weed foliage with minimum contact of the soybean plant. Do not spray higher than 3" on the soybean stem or crop injury may result. Do not spray over top of soybean plants. For broadcast application, use a single hood-type spray nozzle ("K" series or equivalent) per middle mounted on an oiling shoe or gauge wheel. For band treatment, use two nozzles per row mounted on oiling shoes or gauge wheels, one on each side of row. To avoid spray drift, which may cause crop injury, do not exceed nozzle pressure of 90 psi nor use nozzle tips smaller than 8002T-Jet (or equivalent) and do not spray under windy conditions. For best results, use a preemergence treatment (such as LINEX[®] 4L) or cultivation to control early growth and to increase the differential between height of soybeans and weeds.

NOTE: Do not use on soils with less than 1% organic matter. Do not apply within 60 days of harvest. Do not soybean forage or hay to livestock from fields treated postemergence. Harvested soybeans may be for food, feed, or oil purposes.

LINEX[®] 4L — Midsouth and Southeast. Apply when soybeans are at least 12" tall and when weeds do not exceed 4" in height. In Midsouth, application may be made when soybeans are at least 8" tall and weeds do not exceed 2" in height. Make a single application of 1 to 2 pts. per acre (1/4 to 1 pt. per acre on 8" soybeans); add 1 pt. surfactant for each 25 gals. spray mixture. Alternatively, if application is made to 12" soybeans, make a split application of 1 pt. per acre followed by a second application at same rate after one week or later. Do not apply more than 2 pts. per acre per season for postemergence treatment.

LINEX[®] 4L + 2, 4-DB — U.S.: Apply 1 pt. LINEX[®] 4L plus 1/5 lb. 2, 4-DB (1 pt. "Butyrac"*** 175 or 13 fl. oz. "Butyrac" 200) per acre when soybeans are at least 8" tall and when weeds do not exceed 4" in height. Add 1 pt. surfactant for each 25 gals. spray mixture. A second application may be made if needed, but do not make more than 2 applications per season.

Soybeans: Broadcast Application — LINEX[®] 4L and Sencor DF*** and Lasso***

	Product Per Acre		
	LINEX [®] 4L (Pints)	Sencor DF (Lbs.)	Lasso (Quarts)
Soil Texture			
1/2 to 3% Organic Matter			
Sandy loam	1/3 to 1/2	1/6 to 1/4	3/4 to 1
Loam			
Silt loam			
Silt			
Sandy clay	1/2 to 3/4	1/4 to 1/3	1 to 1 1/2
Sandy clay loam			
Silt clay			
Silt clay	3/4 to 1 1/2	1/3 to 1/2	1 1/4 to 2
Clay			
Clay loam			

5 Broadcast Application — LINEX[®] 4L and Sencor DF***** and Dual 8E*****

	Product Per Acre		
	LINEX [®] 4L (Pints)	Sencor DF (Lbs.)	Dual 8E (Pints)
Soil Texture			
1/2 to 3% Organic Matter			
Sandy loam	1/3 to 1/2	1/6 to 1/4	1 to 1 1/4
Loam, Silt			
Loam, Silt			
Sandy clay	1/2 to 3/4	1/4 to 1/3	1 1/4 to 1 1/2
Sandy clay loam			
Silt clay			
Silt clay	3/4 to 1 1/2	1/3 to 1/2	1 1/2 to 2
Loam, clay			
Clay loam			

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WHEAT (WINTER) (Drill-Planted) — Idaho, Oregon, Washington: Plant seed at least 1" deep, when seed is planted during abnormally dry weather, treat after soil has been settled by rainfall or irrigation. Apply as a broadcast spray prior to emergence of wheat or to semi-dormant wheat plants. Application to actively growing plants may result in temporary yellowing (chlorosis) of wheat.

Crop injury may result where severe winter stress, disease or insect damage follows application, and also from failure to observe the following: Do not use on sand or loamy sand soils, nor on gravelly or sandy loams low in organic matter (less than 1%), nor on thinly covered or exposed sub-soil areas (clay knobs); do not treat wheat plants less than 1" deep; do not treat wheat where winter climatic conditions have caused "heaving" of plants; do not treat wheat plants lacking in vigor due to poor emergence, insect damage, disease, high alkalinity, or other causes; do not apply after wheat has reached the "boot" state of maturity nor when maximum daily temperature exceeds 60°F; do not use LINEX[®] 4L in combination with other pesticides (except as noted), surfactants, or nitrogen solution after wheat has emerged.

Do not graze or feed immature plants to livestock. Do not replant treated areas to any rotation crop within 6 months after last application as injury to subsequent crops may result.

West of Cascade Range: Make a single application of LINEX[®] 4L at 2 to 3 pts. per acre as soon as possible after planting. If wheat and weeds have emerged, apply before weeds are 3" to 4" tall.

East of Cascade Range: Make a single application of LINEX[®] 4L alone or, where recommended below, as a tank mixture with bromoxynil. If fall-planted wheat fails to grow due to winter kill or adverse growing conditions after fall treatment, allow 4 months before planting spring wheat. Do not retreat field with a second application during the same crop year as injury to the crop may result.

Where Average Annual Rainfall Exceeds 16 inches:

Fall Treatment: For early fall-planted wheat (seeded before September 10), apply 1 to 1 1/2 pts. LINEX[®] 4L per acre either before or after wheat has emerged but before weeds are 2" tall. Treatment after October 1 generally gives best results. Do not apply after soil freezes in the fall.

Spring Treatment: Apply 1 to 1 1/4 pts. LINEX[®] 4L per acre as soon as wheat starts to grow in the spring. Application after weeds have reached a height of 2" may give poor results.

Where Average Annual Rainfall is 10 to 16 inches:

Fall or Winter Treatment: After wheat is planted in the fall, apply 1 to 1 1/2 pts. LINEX[®] 4L per acre when sufficient moisture is available to germinate wheat seed. Apply either before or after wheat has emerged, but before weeds are 2" tall and before the soil freezes. Application later than March 1 may give poor results.

Where Average Rainfall is 10 to 20 inches:

Fall or Spring Treatment: Apply 1/2 pt. LINEX[®] 4L plus 1/4 lb. bromoxynil per acre as a tank mixture, either in the fall after wheat has emerged but before soil freezes or in the spring as soon as soil thaws; apply before weeds are 2" tall or across.

NON-CROP WEED CONTROL

For short-term control of annual weeds on non-cropland areas such as roadsides and fence rows — apply 2 to 6 pts. LINEX[®] 4L per acre in 40 to 100 gals. of water. For best results, apply shortly before weed growth begins or at early seedling stage of growth. For control of established annual weeds, add surfactant at rate of 2 pts. per 100 gals. of spray mixture and apply as a thorough coverage spray during periods when daily temperatures exceed 70°F, and before weed growth exceeds 8" in height.

NOTICE TO BUYER: Purchase of this material does not confer any rights under patents of countries outside of the United States.

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 product. All such risks shall be assumed by the Buyer. GRIFFIN MAKES NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

*Registered trademark of Monsanto Company. "Lasso" contains 4 lbs. alachlor.

**Registered trademark of Elanco Products Company.

***Registered trademarks of Union Carbide Company "Amben" contains 2 lbs. chloramben per gal.

****Registered trademark of Monsanto Company.

*****Registered trademark of Ciba-geigy Corp.

*****Registered trademark of American Cyanamid Co.

*****Registered trademark of Mobay Chemical Corp.

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LINEX 4L
EPA Reg. No. 1812-245

ATTACHMENT 1

CARROTS - Florida, Michigan, Ohio and Wisconsin - Preemergence Application:

ATTACHMENT 2

(West of Rocky Mountains, do not exceed 3 pints LINEX 4L per acre.)

ATTACHMENT 3

CELERY - East of Rocky Mountains - Post-transplant Application:

ATTACHMENT 4

HYBRID POPLAR - Midwest: Apply 2 to 4 pints LINEX 4L per acre before bud break in the spring. For application after bud break, apply 2 to 4 pints LINEX 4L 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 pints LINEX 4L per acre should be applied per year.

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ATTACHMENT 5

Northeast: For improved control of annual grasses apply:

LINEX 4L + Dual 8E

	1 to 3% Organic Matter	3 to 5% Organic Matter
Soil Texture	LINEX 4L (pts) + Dual 8E (pts)	LINEX 4L (pts) + Dual 8E (pts)
Coarse: Sandy Loam	1 to 1½ + 1-1½	1½ to 2 + 2
Medium: Loam, Silt Loam, Silt, Sandy clay, Sandy clay loam	1½ to 2 + 2	2 to 2½ + 2½ to 3