

43854-7

03/31/2000

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US ENVIRONMENTAL PROTECTION AGENCY OFFICE OF PESTICIDES PROGRAMS REGISTRATION DIVISION (75-767) WASHINGTON, DC 20460 NOTICE OF PESTICIDE: <input checked="" type="checkbox"/> REGISTRATION <input type="checkbox"/> REREGISTRATION (Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended)	EPA REGISTRATION NO. 43854-7	DATE OF ISSUANCE MAR 31 2000
	TERM OF ISSUANCE Conditional	
	NAME OF PESTICIDE PRODUCT Lange™ Turf Formula Dimension® 143 Preemergence Weed Control with Plant Food	

NAME AND ADDRESS OF REGISTRANT (Include ZIP code)

Lange-Stegmann Company
 One Angelica Street
 St. Louis, Missouri 63147

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

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

A copy of the labeling accepted in connection with this Registration/Reregistration is returned herewith.

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

This product is registered in accordance with FIFRA section 3(c)(5), provided that you:

1. Add the phrase "EPA Registration No. 43854-7" to the label before you release the product for shipment.
2. Submit one (1) copy of the final printed label, before you release the product for shipment under the stamped enclosed label.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records.

Enclosure

Joanne I. Miller
 Product Manager (23)
 Herbicide Branch
 Registration Division (7505C)

ATTACHMENT IS APPLICABLE

SIGNATURE OF APPROVING OFFICIAL

Joanne I. Miller

DATE

MAR 31 2000

LANGE® Turf Formula
DIMENSION®143
Preemergence Weed Control with Plant Food
(XX-XX-XX)

Dimension® is a selective herbicide that provides Preemergence control of listed annual grasses, such as crabgrass, broadleaf weeds in ornamental landscape areas, established lawns and ornamental turf, including golf course fairways, roughs and tee boxes.

Not for use on plants being grown for sale or other commercial use, or for commercial seed production, or for research purposes. For use on plants intended for aesthetic purposes or climatic modification and being grown in interior plantscapes, ornamental gardens or parks, or on golf courses or lawns and grounds.

In New York State this product may only be used by professional applicators at no more than 349 pounds (0.5 pounds active ingredient) per acre per year and is prohibited from use in Nassau and Suffolk Counties.

ACTIVE INGREDIENT:

*Dithiopyr, 3,5-pyridinedicarbothioic acid, 2-(difluoromethyl)-
 4-(2-methylpropyl)-6-(trifluoromethyl)-S,S-dimethylester..... 0.143%

INERT INGREDIENTS: 99.857%
 100.000%

*This product contains 0.0715 pounds of the active ingredient, dithiopyr, per 50 pound bag. Product protected by U.S. Patent No. 4,692,184. Other patents pending.

50 pound bag treats up to 24939 square feet for crabgrass control.

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EPA EST. NO. 43854-MO-1

Read the entire label before using this product.

Use only according to label instructions.

NOTICE: Before using this product, read the entire Precautionary Statements, Conditions of Sale and Warranty, Directions for Use, Use Restrictions and Storage and Disposal Instructions. If the Conditions of Sale and Warranty are not acceptable, return the product unopened within thirty days of purchase to the place of purchase.

KEEP OUT OF REACH OF CHILDREN

CAUTION

First Aid: If in Eyes – Immediately flush with plenty of water. Get medical attention if irritation persists.

If Inhaled – Remove individual to fresh air. Seek medical attention if breathing difficulty develops.

**PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

CAUTION! Causes eye irritation. Harmful if inhaled. Avoid contact with eyes or clothing. Avoid breathing dust. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse. Prolonged or frequently repeated skin contact while handling this material may cause allergic reaction in some individuals.

ENVIRONMENTAL HAZARDS

This product is toxic to fish and highly toxic to other aquatic organisms including oysters and shrimp. Use with care when applying to turf areas adjacent to any body of water. Drift and runoff from treated turf may adversely affect aquatic organisms in adjacent aquatic sites. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from treated areas. Do not contaminate water when disposing of equipment washwaters.

Directions for Use

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

STORAGE AND DISPOSAL
STORAGE: Store this product only in its original container in a dry, cool, secured storage area. Do not contaminate water, foodstuffs, feed or seed by storage or disposal.
SPILL: In case of spill, sweep up product and dispose of material according to "product disposal directions" listed below.
PRODUCT DISPOSAL: Wastes resulting from the use of this product that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticide disposal or in accordance with applicable Federal, state or local procedures.
CONTAINER DISPOSAL: - Do not reuse bag. Completely empty bag into application equipment, then dispose of emptied bag(s) in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

CONDITIONS OF SALE AND WARRANTY

LANGE-STEGMANN COMPANY warrants that the product conforms to its chemical description and is reasonably fit for the purpose stated on the label only when used in accordance with label directions under normal conditions of use. LANGE-STEGMANN COMPANY MAKES NO OTHER EXPRESS OR IMPLIED WARRANTIES EITHER OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE. Handling, storage and use of the product by Buyer or User are beyond the control of Lange-Stegmann Company and Seller. Risks such as crop injury, ineffectiveness or other unintended consequences, resulting from, but not limited to, weather or soil conditions, presence of other materials, disease, pest, drift to other crops or property or failure to follow label directions will be assumed by the Buyer or User. IN NO CASE WILL LANGE-STEGMANN COMPANY OR SELLER BE HELD LIABLE FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE HANDLING, STORAGE OR USE OF THIS PRODUCT.

GENERAL INFORMATION FOR TURF USE

This product is a selective herbicide that provides control of crabgrass and other annual grasses and broadleaf weeds in established lawns and ornamental turfs including golf course fairways, roughs and tee boxes. This product will not harm nearby established ornamentals when used according to label directions.

USE PRECAUTIONS

This product may be used on seeded, sodded or sprigged lawns and ornamental turfs that are well established. The grass must have developed a good root system and a uniform stand, and have received at least two mowings following seeding, sodding or sprigging before it can receive its first application of this product. Use of this product on lawns and ornamental turfs that are not well established, or on those that have been weakened by weather-, pest-, disease-, chemical-, or mechanical- related stress, may increase the chances for turf injury.

This product should only be applied to lawns and ornamental turfs that are composed of the following turfgrass species that have been determined to be tolerant to applications of this product. When applied as directed under the conditions described, the following established turfgrasses are tolerant to this product:

Cool-Season Grasses

bentgrass, creeping*
bluegrass, Kentucky
fescue, fine**
fescue, tall
ryegrass, perennial

Agrostis stolonifera
Poa pratensis
Festuca rubra
Festuca arundinacea
Lolium perenne

Warm-Season Grasses

bahiagrass
berumdagrass
buffalograss***
carpetgrass
centipedegrass
kikuyugrass
St. Augustinegrass
zoysiagrass

Paspalum notatum
Cynodon dactylon
Buchloe dactyloides
Axonopus affinis
Eremochloa ophiuroides
Pennisetum clandestinum
Stenotaphrum secundatum
Zoysia japonica

* Use of this product on certain varieties of creeping bentgrass, such as 'Carmen', 'Cohansey', or 'Seaside' and 'Washington' may result in undesirable turf injury. Not all varieties of creeping bentgrass have been tested.

DO NOT apply this product to Colonial bentgrass (*Agrostis tenuis*) varieties.

** Use of this product on certain varieties of fine fescue may result in undesirable turf injury. The following fine fescue varieties have been found to be sensitive to this product: 'Atlanta', 'Banner', 'Beauty', 'Bilgart', 'CF-2', 'Enjoy', 'HF-93', 'Highlight', 'Ivalo', 'Jamestown', 'Koket', 'Majenta', 'Mary', 'Pennlawn', 'Tamara', 'Tatjana', 'Waldorf' and 'Waldina'. Not all varieties of fine fescues have been tested.

***DO NOT use this product on seedling buffalograss in the spring or the first year of establishment until the turfgrass is fully green and has established new roots.

Reseeding, Overseeding or Sprigging

Reseeding, overseeding, or sprigging of treated areas within 4 months after application of this product may prevent the establishment of desirable turfgrasses. When reseeding or overseeding, proper cultural practices such as soil cultivation, irrigation and fertilization should be followed. For best results, use mechanical or power seeding equipment (slit seeders) designed to give good seed-to-soil contact.

Golf Course Putting Greens

Do not use this product on golf course Putting Greens.

Other Use Precautions

The early postemergence crabgrass control described below is limited. Post-emergence applications are only effective if applied before crabgrass has displayed its fifth leaf or first tiller.

For best results, use cultural practices that disturb the soil such as core-, spike-, or hydro-aerification and verticutting, should be done before application of this product. Do Not apply this product until grass has recovered from these cultural practices.

APPLICATION DIRECTIONS – Control of Crabgrass

Preemergence and Early Postemergence Control

- This product provides “preemergence” control of crabgrass (including the large, smooth and southern species) when applied prior to the emergence of crabgrass from the ground in established lawns and ornamental turfs.
- It can also provide “early postemergence” control of crabgrass. Post emergence crabgrass control will be obtained only when this product is applied prior to the tillering of crabgrass, which generally corresponds to the time when you can see the crabgrass plants in the lawn or turf. The practical benefit of this product’s early post emergence activity is that it can give the user a 2-4 week longer period of time to make applications to control crabgrass.

Application Frequency and Timing

- This product may be applied as a single application or as a split application for crabgrass control in the spring summer or fall.
- Do Not apply more than 8 lb. of this product/1000sq.ft. per year. Do not apply in Nassau and Suffolk Counties of New York.

Spring Applications

- For single applications made in the spring or early summer, this product should be applied at the appropriate rate corresponding to one of the control programs listed in Table 1 below, depending on the user’s location, the turfgrass mowing height, and whether the use is preemergence or early post emergence at the time of application.
- Use Program 1 (given in Table 1, below) for the preemergence control at sites where the turfgrass is cut high (e.g., homeowner lawns). This program provides 3-5 months of preemergence crabgrass control. This program should not be used for early postemergence crabgrass control.
- Use program 2 for preemergence control at sites where (a) turfgrass is cut low (e.g. golf fairways), and (b) turfgrass maintenance or weed control has not been conducted during the previous year. This program provides 4-6 months of preemergence

crabgrass control. This program may also be used for early postemergence control of crabgrass.

- Where split fertilizer applications are recommended, a rate in Table 1 may be applied in two applications made 6-10 weeks apart and prior to crabgrass emergence.

**Table 1: Recommended Application Use Rates
For Crabgrass*
(lb. of product/1000 sq.ft.)**

Program Use (turfgrass cut)	1 Preemergence (high)	2 Preemergence (low) Postemergence
Region		
North	2.0	4.0
Transition	2.91	5.83
South	4.0	8.0
Coastal South	5.83	8.0**

*DO NOT apply more than 8.0 lb of this product/1000sq.ft. per application, and no more than 24 lb. (8.0 lb. in New York) of this product/1000sq.ft. per year. Post emergence control is limited; see "Crabgrass Control" and "Precautions" sections above. Regions include areas listed below.

North: all other areas.

Transition: DE, KS, KY, MD, MO, NJ, VA, southern PA, southern areas of IL, IN, OH & coastal areas of CT, NY, & RI.

South: AL, AR, AZ, CA, GA, LA, MS, NC, NM, NV, OK, SC, TN, & TX.

Coastal South: HI, FL, & southern coastal areas of AL, GA, LA, MS, NC, SC, & TX.

**May require split or sequential applications for full control.

Fall Applications

- This product can also be applied in the late summer or early fall (late August through November) at the "Program 2" use rates listed in table 1 to provide control of crabgrass through the early part of the next spring.
- The fall application must be followed by an appropriate spring application to provide season-long control.

Tips for Improved Control

- For best results, apply this product within a few days after mowing and delay mowing again for a few days after the application.
- When treated lawn or ornamental turf areas are watered or receive significant rainfall within a few days after application of this product, improved weed control may result.
- Use of split (half-rate) application spaced 6-8 weeks apart may provide improved weed control.

Control of Other Grass and Broadleaf Weeds

Spring Applications

Used as directed for crabgrass control in the spring (Table 1), this product will also control or suppress the following weeds when applied prior to their emergence:

barnyardgrass

Lespedeza (common)

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bluegrass (annual, roughstalk)	oxalis (buttercup, creeping & yellow woodsorrel)
crowfootgrass	
foxtail (green & yellow)*	purslane (common)
goosegrass	speedwell (corn)
kikuyugrass	spurge (prostrate & spotted)
ryegrass (annual & perennial)	smutgrass

*Also controlled at the Program 2 rates.

Fall Applications

bluegrass (annual, roughstalk)	geranium (Carolina)
bittercress	parsley-piert
chickweed	pineappleweed
henbit	sheperdspurse

APPLICATION EQUIPMENT AND INSTRUCTIONS

Apply this product with drop or rotary-type centrifugal spreaders designed to apply granular herbicides. Calibrate application equipment before using and apply this product uniformly over the turfgrass area. *A more uniform application can be made by spreading one half of the required amount over the area and then applying the remaining one half at a right angle to the previous, **(see spreader settings for half rate).* Avoid the use of spreaders that would apply this product in narrow rows or concentrated bands. Avoid streaking, skips, or overlaps during application. Check equipment frequently to ensure equipment is functioning properly and delivering uniform distribution of granules.

GENERAL INFORMATION - LANDSCAPE ORNAMENTALS

This product provides preemergence control of listed annual grass and broadleaf weeds in landscape ornamentals. It may be applied to soil surfaces where ornamental plants are grown for aesthetic purposes in ornamental gardens, parks, golf courses and residential properties.

Ornamental plants on this label have shown tolerance to this product when applied as directed. It is impossible, however, to evaluate tolerance for all ornamental plant species or varieties or under all possible growing conditions. Under your growing conditions, a limited area involving only a few plants should be treated for tolerance evaluation prior to large-scale applications.

USE RATES

Apply this product with a properly calibrated spreader that will assure accurate, even particle distribution. This product may be applied as a single application or as a split application. Refer to the following table for product recommendations when treating a small area.

DO NOT apply more than 8 lb. of this product/1000 sq.ft. per application, and no more than 24 lb. (8.0 lbz. in New York) of this product/1000 sq.ft. per year. Do not apply in Nassau and Suffolk counties of New York.

Pounds Product/Acre	pounds Product/1000 Square Feet	pounds Product/100 Square Feet
349	8.0	0.8

APPLICATION TIMING AND RECOMMENDATIONS

This product is a preemergence herbicide that will not control established weeds. Make applications prior to weed seed germination or to bare ground. The best weed control is obtained when applied to soil that is free of clods, weeds and debris such as leaves. Prior to making an application, control existing vegetation by hand weeding, cultivation or with a postemergence herbicide. Once an application of this product has been made, do not disturb the soil surface as the herbicide barrier will be broken.

PRECAUTIONS

- Only apply this product to established ornamentals.
- Do not apply this product directly to bare root of ornamental plants as injury may result.
- Do not incorporate this product into soil. Dilution of active ingredient and possible injury to plant roots may occur.
- Do not apply to soil around ornamental plants that are under stress due to drought, flooding, excessive fertilizer or soil salts, wind injury, hail, frost damage, winter injury, injury from previously applied pesticides or injury due to insects, nematodes or disease.
- To avoid foliar damage to ornamentals, irrigate immediately after application to remove herbicide particles from the foliage.
- Do not apply under conditions that would affect product distribution. Wind could affect distribution and move product onto sensitive species. Uneven product distribution will result in uneven weed control.
- Do not apply this product on grasses grown for seed.
- Do not graze livestock or feed forage cut from areas treated with this product.

TOLERANT ORNAMENTALS

When applied as directed under the conditions described on this label, ornamentals listed below have shown tolerance in field trials. However, this product has not been tested on all cultivars of each species or under all possible growing conditions. Follow directions given above to determine plant tolerance under your growing conditions prior to large-scale use.

Common Name	Botanical Name	Tolerant Cultivars
Abelia, Dwarf	<i>Abelia X grandiflora</i>	Nana
Ajuga	<i>Ajuga reptans</i>	Bronze
	<i>Ajuga genevensis</i>	Bronze Beauty
Almond, Flowering	<i>Prunus gladulosa</i>	
Apple*	<i>Malus pumila</i>	
Arborvitae	<i>Thuja occidentalis</i>	Nigra
		Pyramidalis
		Smaragh
		Techny
		Woodwardii
Arborvitae, Golden	<i>Thuja orientalis</i>	
Aster, Chinese	<i>Callistephus chinensis</i>	Dwarf Queen
Ash, Green	<i>Fraxinus pennsylvanica</i>	
Ash, Mountain	<i>Sorbus aucuparia</i>	
Ash, Purple	<i>Fraxinus americana</i>	
Azalea	<i>Rhododendron spp.</i>	Brilliant
		Buccaneer

		Carror Chimes (Belgian) Exbury Fashion Hardijzer Beauty Hershey Red Higasa Hinocrimson Holland (Hybrid) Marion Lee Northern Lights Orange Cup Orchid Lights Snow Southern Charm
Azalea, Flame	<i>Rhododendron calendulaceum</i>	
Azalea, Kirishima	<i>Nandina domestica</i>	
Bamboo, Heavenly	<i>Berberis thunbergii</i>	
Barberry		Aurea Dwarf Pigmy Green Kobold Pygmy Red Rose Glow Atropurpurea Massachusetts
Barberry, Purple	<i>Berberis vulgaris</i>	
Bearberry (common)	<i>Arctostaphylos uva-ursti</i>	
Birch, River	<i>Betula nigra</i>	
Blueberry*	<i>Vaccinium spp.</i>	Bluecrop Blue Jay Jersey North Blue Northland
Bottlebrush	<i>Callistemon citrinus</i>	
Boxwood, Japanese	<i>Buxus microphylla</i>	Japonica
Boxwood, Weller	<i>Buxus sempervirens</i>	
Broom	<i>Cytisus spp.</i>	Moonlight : : : : :
Broom	<i>Genista pilosa</i>	Vancouver Gold : : : : :
Bugleweed Carpet	<i>Ajuga reptans</i>	: : : : : : : : :
Carex, Variegated	<i>Carex</i>	: : : : : : : : :
Camellia	<i>Camellia japonica</i>	Debutante : : : : : : : : :
	<i>Camellia sasangua</i>	Mathotiana Supremo : : : : : : : : :
Cedar, Red	<i>Juniperus virginiana</i>	Chansoneffe : : : : : : : : :
Cockscomb, Plumosa	<i>Celosia cristata</i>	: : : : : : : : :
Coleus	<i>Coleus blumei</i>	Red Kewpie : : : : : : : : :

Copper leaf	<i>Acalypha wilkesiana</i>	
Cotoneaster	<i>Cotoneaster apiculatus</i>	
Cycads	<i>Cycads revoluta</i>	
Coyotebrush	<i>Baccharis pelularis</i>	
Cypress, Bald	<i>Taxodium distichum</i>	
Cypress, Italian	<i>Cupressus sempervirens</i>	Glauca
Cypress, Leyland	<i>Cupressocyparis leylandii</i>	Gracilis
Cypress, Japanese False	<i>Chamaecyparis obtusa</i>	King Alfred
Daffodil	<i>Narcissus spp.</i>	Aztec Gold
Daylily	<i>Hemerocallis spp.</i>	Bright Yellow
		(Hybrid)
		Single Gold
		(Evergreen)
		Wilson's Yellow
Dogwood	<i>Cornus florida</i>	
Dogwood, American	<i>Cornus sericea</i>	Flavarimaea
Douglas Fir	<i>Pseudotsuga menziesii</i>	
Dusty Miller	<i>Senecio cineraria</i>	
Elm, Drake	<i>Ulmus parvifolia</i>	
Euonymus	<i>Euonymus fortunei</i>	Argenteo-variegata
		Auereo-marginata
		Colorata
		Emerald Gaiety
		Emerald 'N Gold
		Gold Edge
		Gold Princess
		Silver King
		Tricolor
		Vegetus
Fan Palm, European	<i>Chamaerops humilis</i>	
Fan Palm, Mexican	<i>Washingtonia robusta</i>	
Fescue	<i>Festuca glauca</i>	
Fetterbush	<i>Leucothoe fontiana</i>	Rainbow
Ficus	<i>Ficus retusa</i>	Nitidia
Fir, Fraser	<i>Abies fraseri</i>	
Forsythia	<i>Forsythia X intermedia</i>	Arnold Dwarf
		Bronxensis Dwarf
		Lynwood Gold
		Meadowlark
		Weeping
		Mystery Radicans
Gardenia	<i>Spring Glory</i>	
Geranium	<i>Gardenia jasminoides</i>	
Gum	<i>Pelargonium X hortorum</i>	
Hawthorn	<i>Eucalyptus citriodora</i>	
	<i>Crataegus spp.</i>	Cockspur White
		Crimson Cloud
		Enchantress

<p>Heather, Twisted Hibiscus</p>	<p><i>Erica cinerea</i> <i>Hibiscus spp.</i></p>	<p>Jack Evans Washington White Mediterranean Pink Brilliant Hula Girl Blue Bird</p>
<p>Hemlock, Canada Holly</p>	<p><i>Tsuga canadensis</i> <i>Ilex spp.</i> <i>Ilex X meserveae</i></p>	<p>Blue Boy Blue Girl Burfodii China Girl Compacta Forsteri Hellerie Japanese Northern Beauty Needlepoint Nellie R. Stevens Savanah</p>
<p>Holly, Chinese Holly, Japanese Holly, Yaupon Honeysuckle</p>	<p><i>Ilex X attenuata</i> <i>Ilex cornuta</i> <i>Ilex crenata</i> <i>Ilex vomitoria</i> <i>Lonicera japonica</i></p>	<p>Clavey's Dwarf Halliana Tatarian Canadian White Zebelli Red Hosta Albo Marginata</p>
<p>Hosta</p>	<p><i>Hosta spp.</i> <i>Hosta lancifolia</i> <i>Carpobrotus edulis</i> <i>Impatiens wallerana</i> <i>Iris spp.</i></p>	<p>Wedgewood Dwarf Blue Bulgaria Thorndale</p>
<p>Ice Plant Impatiens Iris</p>	<p><i>Hedera helix</i></p>	<p>Arcadia Armstrong Bar Harbor Blue Chip Blue Pacific Blue Rug Blue Star Broadmoor Buffalo Calgary Carpet Emerald Sea</p>
<p>Jasmine, Asian Juniper</p>	<p><i>Trachelopermum asiaticum</i> <i>Juniperus spp.</i> <i>Juniperus horizontalis</i> <i>Juniperus horizontalis</i></p>	

Mock Orange*	<i>Philadelphus spp.</i>	Variegata Golden Snowflake Double White
Mondo Grass	<i>Ophiopogon japonicus</i>	
Moss Rose	<i>Portulaca grandiflora</i>	Sunnyside
Myrtle, Crape	<i>Lagerstoemia indica</i>	Faurei Langer Muskogee Standard Pink
Myrtle, Wax	<i>Myrica cerifer</i>	
Nadina	<i>Nadina domestica</i>	Compacta Nana
Oleander	<i>Nerium oleander</i>	Hardy Red Petite Pink Sister Agnes
Oak, Laurel	<i>Quercus laurifolia</i>	
Oak, Pin	<i>Quercus palustris</i>	
Oak, Red	<i>Quercus rubra</i>	
Oak, Southern L.	<i>Quercus virginiana</i>	
Oak, Willow	<i>Quercus phellos</i>	
Osteospermum	<i>Osteospermum fruticosum</i>	Wirligig
Palm, Bangalow		
Pampas Grass	<i>Cortadaria selloana</i>	
Paper Flower	<i>Bougainvillea glabra</i>	Barbara Karst
Pachysandra	<i>Pachysandra terminalis</i>	
Peach*	<i>Prunus persica</i>	
Periwinkle, Dwarf	<i>Vinca minor</i>	
Petunia	<i>Petunia X hybrida</i>	Picoti
Photinia, Red Tip	<i>Photinia X fraseri</i>	
Pieris	<i>Pieris japonica</i>	
Pine, Australian	<i>Pinus nigra</i>	
Pine, Japanese Black	<i>Pinus thunbergiana</i>	
Pine, Loblolly	<i>Pinus teada</i>	
Pine, Longleaf	<i>Pinus palustris</i>	
Pine, Mugho	<i>Pinus mugho</i>	
Pine, Scotch	<i>Pinus sylvestris</i>	
Pine, Slash	<i>Pinus elliotii</i>	
Pine, Swiss Mt.	<i>Pinus mugo</i>	
Pine, Virginia	<i>Pinus virginiana</i>	
Pine, White	<i>Pinus strobus</i>	
Pineapple, Guava	<i>Feijoa fellowaiana</i>	
Pittosporum, Japan		
Potentilla	<i>Potentilla fruticosa</i>	Abbotswood
Privet	<i>Ligustrum japonicum</i>	Golden Vicary Regal Texanum Yellow Tipped

Privet, Glossy Pyracantha	<i>Ligustrum lucidum</i> <i>Pyracantha koidzumii</i>	Wax Gnome Lalandei Victory
Queen Palm	<i>Arecastrum rammanzoffianum</i>	
Quince, Japanese* Rhododendron	<i>Rhododendron spp.</i>	Album Cunningham White Fashion Hardy PJM Purple Gem Silvery Pink
Rhododendron, Carolina	<i>Rhododendron carolinianum</i>	
Rhododendron, Catawba Rodie Max (Rosebay)	<i>Rhododendron catawbiense</i> <i>Rhododendron maximum</i>	
Rose	<i>Rosa banksiaae</i>	Luta
Rosemary*	<i>Rosmarinus officinalis</i>	Nana
Rosemary, Bog	<i>Andromeda polifolia</i>	Rhea
Salvia	<i>Salvia farinacea</i>	Dragon Blood Red
Sedum	<i>Sedum spurium</i>	Red Carpet Yellow Fanall
Spiraea, Perennial Spiraea	<i>Astilbe X arendsii</i> <i>Spiraea spp.</i>	Anthony Waterer Red Dolchica Froebeli Pink Goldenflame Red Snowmound White Van Houtte White
Spiraea, Garland	<i>Spiraea spp.</i>	
Spruce, Black Hills	<i>Picea glauca</i>	
Spruce, Colorado Blue	<i>Picea pungens</i>	
Spruce, Norway	<i>Picea abies</i>	
Spruce, White	<i>Picea glauca</i>	Conica
Sourwood	<i>Oxydendrum arboreum</i>	
Sweetflag, Grassyy-Le		
Sweetgum	<i>Liquidambar styraciflua</i>	
Sycamore	<i>Platanus occidentalis</i>	
Tree Fern (Tiki Fern)	<i>Asparagus virgatus</i>	
Trumpet Flower, Evening	<i>Gelsemium sempervirens</i>	
Tulip	<i>Tulipa, spp.</i>	Apeldoorn
Verbana, Shrub	<i>Lantana sellowiana</i>	
Vervain	<i>Verbena spp.</i>	St. Paul

Viburnum	<i>Viburnum spp.</i>	American Cranberry Bush Arrowood Common Snowball European Cranberry Bush Linden Mohican Wright
Windmill Palm	<i>Trachycarpus fortunei</i>	
Xylosma	<i>Xylosma congestum</i>	
Yaupon	<i>Ilex vomitoria</i>	
Yew	<i>Taxus cuspidata</i> <i>Taxus X media</i>	Dwarf Denisiformis

*Ornamental species only: DO NOT USE ON FOOD PRODUCING TREES AND ORNAMENTALS.

WEEDS CONTROLLED

Used as directed, this product will control or suppress the following annual grass and broadleaf weeds when applied prior to their emergence. This product will not control established grasses, except for crabgrass in early stages of development, and broadleaf weeds, therefore, the area to be treated should be free of weeds prior to application.

GRASSES

- barley
Hordeum spp.
- barnyardgrass
Enchinochloa crus-galli
- bluegrass, annual
Poa annua
- brome
Bromus spp.
- crabgrass, large
Digitaria sanguinalis
- crabgrass, smooth
Digitaria ischaemum
- crabgrass, Southern
Digitaria ciliaris
- crowfootgrass
Dactyloctenium aegyptium

- Polygonum saviculare*
lespedeza, common
Lespedeza striata
Dactyloctenium aegyptium
- marestalk
Hippuris vulgaris
- medic, black
Medicago lupulina
- mustard
Brassica spp.
- oxalis, buttercup
Oxalis pes-caprae

BROAD LEAF WEEDS

- bittercress
Cardamine spp.
- carpetweed
Mollugo verticillata
- chickweed
Stellaria spp.
- geranium, Carolina
Geranium carolinianum
- henbit
Lamium spp.
- knotweed, prostrate

- dallisgrass (seedling)
Paspalum dilatatum
- goosegrass
Eleusine indica
- foxtail, green
Setaria verdi
- foxtail, yellow
Setaria faberi
- kikuyugrass
Pennisetum clandestinum
- oats, wild
Avena fatua
- ryegrass (annual & perennial)
Lolium spp.
- smutgrass
Sporobolus poireti

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Pineappleweed
Matricaria matricarioides
 pigweed, redroot
Amaranthus retroflexus
 parsley-piert
Alchemilla arvensis
 purslane, common
Portulaca oleracea
 rocket, London
Sisymbrium irio
 shepherdspurse
Capsella bursa-pastoris

speedwell, corn
Veronica arvensis
 spurge, garden
Euphorbia hirta
 spurge, prostrate
Euphorbia humistrata
 spurge, spotted
Euphorbia maculata
 woodsorrel, creeping
Oxalis corniculata
 woodsorrel, yellow
Oxalis stricta

APPLICATION EQUIPMENT AND INSTRUCTIONS

Apply this product with drop or rotary-type spreaders designed to apply granular herbicides. Avoid the use of spreaders that would apply this product in narrow rows or concentrated bands. Before each application, calibrate the spreader according to the equipment manufacturer's directions for adjusting the spreader settings such that the spreader delivers the appropriate application rate recommended above. Apply this product uniformly over the area to be treated. Spreading half of the required amount over the area and then applying the remaining half at a right angle to the previous direction can make a more uniform application. Avoid streaking, skips, or overlaps during application.

Check equipment frequently to ensure equipment is functioning properly and delivering uniform distribution of granules.

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LANGE® IS A REGISTERED TRADEMARK OF LANGE-STEGMANN COMPANY.

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 (314) 241-9531

ACCEPTED
 with COMMENTS
 In EPA Letter Dated

MAR 31 2000

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

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