

352-767

2-7-2008

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<p align="center">U.S. ENVIRONMENTAL PROTECTION AGENCY Office of Pesticide Programs Registration Division (7505C) 1200 Pennsylvania Ave., N.W. Washington, D.C. 20460</p> <p align="center">NOTICE OF PESTICIDE: <u> X </u> Registration <u> </u> Reregistration</p> <p>(under FIFRA, as amended)</p>	<p>EPA Reg. Number: 352-767</p>	<p>Date of Issuance: FEB -7 2008</p>
<p>Term of Issuance: Conditional</p> <p>Name of Pesticide Product: DuPont Lineage Prep Herbicide</p>		
<p>Name and Address of Registrant (include ZIP Code): E.I. DuPont De Nemours and Company DuPont Crop Protection Stine-Haskell Research Center P.O. Box 30 Newark, DE 19714-0030</p>		
<p>Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.</p>		
<p>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.</p> <p>Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.</p> <p>This product is conditionally registered in accordance with FIFRA section 3(c)(7)(A) provided that you:</p> <ol style="list-style-type: none"> 1. Submit the results of the one year storage stability (830.6317) and corrosion characteristics (830.6320) when they are available. 2. Submit a copy of the validated enforcement analytical method (830.1800) to the EPA Analytical Laboratory at the following address. <p>EPA Analytical Laboratory 701 Mapes Road Fort Meade, MD 20755-5350 USA</p>		
<p>Signature of Approving Official: <i>Debbie K Walters for</i> James A. Tompkins, Product Manager (25) Herbicide Branch, Registration Division (7505P)</p>	<p>Date: 2/7/08</p>	

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3. Submit and/or cite all data required for registration/reregistration of your product when the Agency requires all registrants of similar products to submit such data.
4. Add the phrase, "EPA Registration No. 352- 767" to your label before you release the product for shipment.
5. Submit one (1) copy of the revised final printed label for the record before you release the product for shipment.

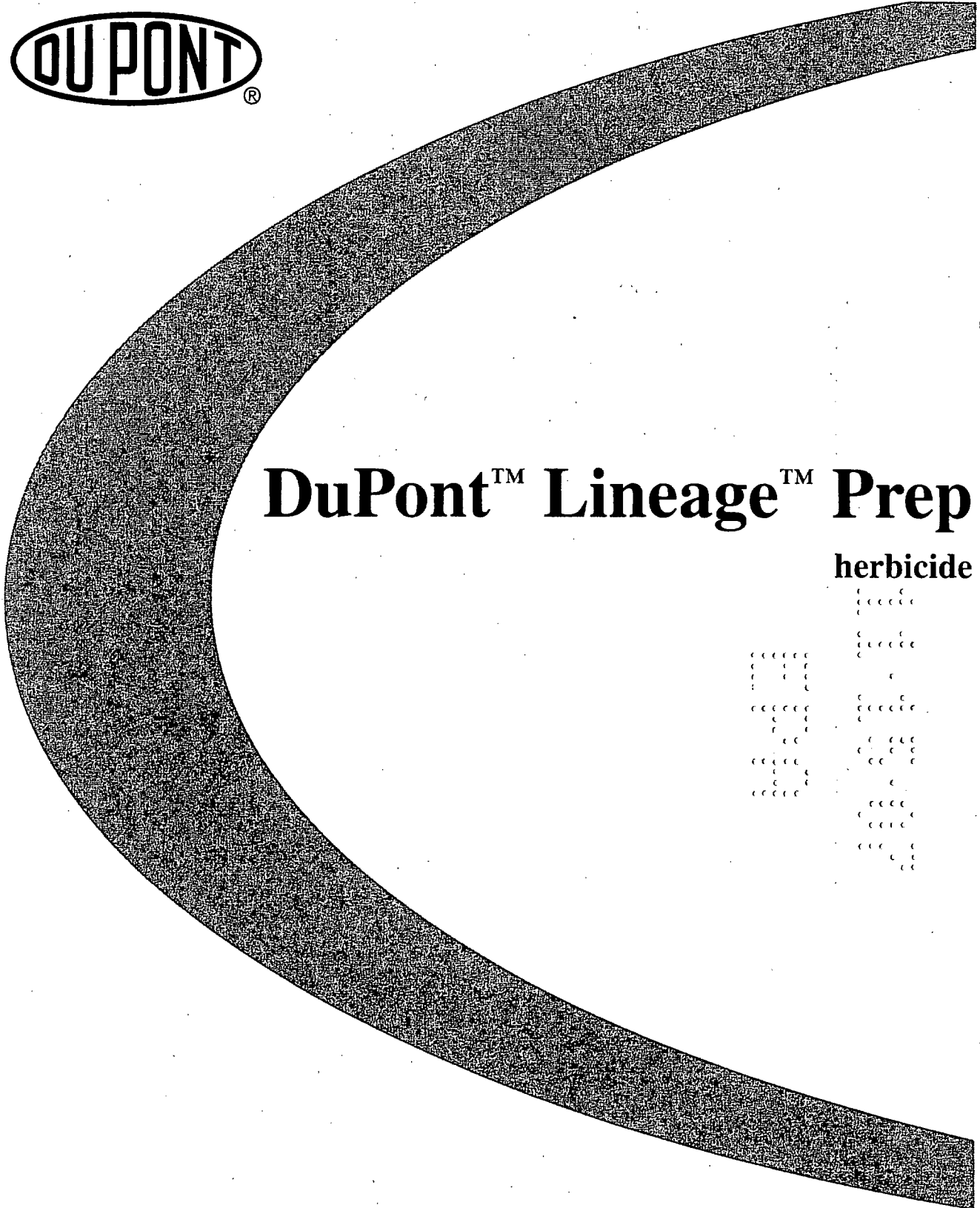
If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.

Enclosure



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DuPont™ Lineage™ Prep

herbicide

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DRAFT LABEL



DuPont™ Lineage™ Prep

herbicide

Dispersible Granules

Active Ingredient	By Weight
Imazapyr (2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-3-pyridinecarboxylic acid)	54.5%
Sulfometuron methyl {Methyl 2-[[[(4,6-dimethyl-2-pyrimidinyl)amino]-carbonyl]amino]sulfonyl}benzoate}	15.3%
Metsulfuron methyl Methyl 2-[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]-carbonyl]amino]sulfonyl}benzoate	4.1%
Inert Ingredients	26.1%
TOTAL	100.0%

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KEEP OUT OF REACH OF CHILDREN

CAUTION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand this label, find someone to explain it to you in detail.)

FIRST AID

If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

If swallowed: Have person sip a glass of water if able to swallow. DO NOT induce vomiting unless told to do so by a poison control center or doctor. DO NOT give anything to an unconscious person. Call a poison control center or doctor for further treatment advice.

If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-441-3637 for emergency medical treatment information.

ACCEPTED
FEB -7 2008
Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended for the pesticide registered under EPA Reg. No. 352-767

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PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Causes moderate eye irritation. Harmful if absorbed through skin, swallowed, or inhaled. Avoid contact with skin, eyes, or clothing.

Avoid breathing spray mist. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category A on an EPA chemical-resistant category selection chart.

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants.
- Shoes plus socks.
- Chemical resistant gloves made of any water proof material, such as polyethylene or polyvinylchloride.

Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

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

USER SAFETY RECOMMENDATIONS

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

ENVIRONMENTAL HAZARDS

For terrestrial uses, do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning of equipment or disposing of equipment washwaters or rinsate. This herbicide is phytotoxic at extremely low concentrations. Non-target plants may be adversely affected from drift.

PHYSICAL AND CHEMICAL HAZARDS

Spray solutions of LINEAGE™ PREP should be mixed, stored, and applied only in stainless steel, fiberglass, plastic, and plastic-lined steel containers.

Do not mix, store, or apply LINEAGE™ PREP or spray solutions of LINEAGE™ PREP in unlined steel (except stainless steel) containers or spray tanks.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation. DuPont™ LINEAGE™ PREP should be used only in accordance with recommendations on the label or in DuPont supplemental labeling.

Do not use on food or feed crops.

GENERAL INFORMATION

BIOLOGICAL ACTIVITY

LINEAGE™ PREP is quickly taken up by the leaves, stems and roots of plants with accumulations occurring in the growing points of the plant. Growth of treated plants stop soon after treatment. Within one to three weeks after application, the leaves begin to turn yellow (chlorosis) and then gradually become necrotic. Death of the plants may require several more weeks. LINEAGE™ PREP is rain-fast at one hour after application.

Warm, moist conditions following application accelerate the herbicidal activity of LINEAGE™ PREP; cold, dry conditions delay the herbicidal activity. In addition, undesirable hardwoods, vines and weeds hardened-off by drought stress are less susceptible to LINEAGE™ PREP. Moisture is needed to move LINEAGE™ PREP into the soil for preemergence weed control.

TANK MIXTURES

LINEAGE™ PREP herbicide may be tank mixed with other herbicides and /or adjuvants registered for the uses specified in the product label. Refer to the label of the tank mix partner (s) for any additional instructions or use restrictions. Tank mixing with 2,4 -D or products which contain 2,4-D have resulted in reduced performance of LINEAGE™ PREP. An anti-foaming agent, spray pattern indicator or drift reducing agent may be applied at the product labeled rate if needed or desired.

ADJUVANTS

For best performance, include a spray adjuvant when making postemergence applications of LINEAGE™ PREP.

Non-ionic Surfactants: Use a non-ionic surfactant at a minimum rate of 0.25% v/v (1 quart surfactant per 100 gallons of spray solution). Surfactant products must contain at least 70% non-ionic surfactant with a hydrophilic/lipophilic balance (HLB) of 12 to 17.

Methylated Seed Oils or Vegetable Oils: Under temperature or moisture stress conditions, a methylated seed oil (MSO) or vegetable oil based adjuvant may provide increased leaf absorption of LINEAGE™ PREP. For spray volumes of less than 30 gallons per acre use a rate of 1.5 to

2 pints per acre. For higher volume applications, spray volumes greater than 30 gallons per acre, include the MSO or vegetable oil adjuvant at 1% v/v (1 gallon per 100 gallons of spray solution).

Silicone Based Surfactants: Silicone based adjuvants reduce the surface tension of the spray droplet allowing better coverage of the leaf surface compared to some nonionic surfactants. In some cases, the silicone adjuvant may dry to quickly limiting uptake. Refer to the manufacturers recommendations for use rates.

Invert Emulsions: LINEAGE™ PREP may be applied as an invert emulsion. The spray solution results in an invert (water-in-oil) spray emulsion designed to minimize spray drift and spray run-off, resulting in more herbicide on the target foliage. The spray emulsion may be formed in a single tank (batch mixing) or injected (in-line mixing). Consult the invert chemical label for proper mixing directions.

Ammonium Nitrogen Fertilizer: In addition to a non-ionic surfactant or seed oil concentrate, ammonium nitrogen fertilizer may be added to the LINEAGE™ PREP spray solution. Use 32 to 48 ounces per acre of a high-quality urea ammonium nitrate (UAN), such as 28% N or 32% N, or a spray-grade ammonium sulfate (AMS).

RESISTANCE

When herbicides that affect the same biological site of action are used repeatedly over several years to control the same weed species in the same field, naturally-occurring resistant biotypes may survive a correctly applied herbicide treatment, propagate, and become dominant in that field. Adequate control of these resistant weed biotypes cannot be expected. If weed control is unsatisfactory, it may be necessary to retreat the problem area using a product affecting a different site of action. To better manage herbicide resistance through delaying the proliferation and possible dominance of herbicide resistant weed biotypes, it may be necessary to change cultural practices within and between crop seasons such as using a combination of tillage, retreatment, tank-mix partners and/or sequential herbicide applications that have a different site of action. Weed escapes that are allowed to go to seed will promote the spread of resistant biotypes. It is advisable to keep accurate records of pesticides applied to individual fields to help obtain information on the spread and dispersal of resistant biotypes. Consult your agricultural dealer, consultant, applicator, and/or appropriate state agricultural extension service representative for specific alternative cultural practices or herbicide recommendations available in your area.

INTEGRATED PEST MANAGEMENT

This product may be used as part of an Integrated Pest Management (IPM) program that can include biological, cultural, and genetic practices aimed at preventing economic pest damage. IPM principles and practices include field scouting or other detection methods, correct target pest identification, population monitoring, and treating when target pest populations reach locally

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determined action thresholds. Consult your state cooperative extension service, professional consultants or other qualified authorities to determine appropriate action treatment threshold levels for treating specific pest/crop systems in your area.

AGRICULTURAL USES

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard. Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours. PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls
- Shoes plus socks
- Chemical resistant gloves made of any waterproof material

GENERAL INFORMATION

DuPont™ LINEAGE™ PREP herbicide is a water soluble granule to be mixed with water and generally applied as a postemergent spray for the control of many broadleaf weeds, annual and perennial grasses, brush, vines and brambles in conifer plantations (site preparation, herbaceous weeds and release), and wildlife management areas. In certain natural regeneration conifer sites, it may be used for selective herbaceous and woody weed control. LINEAGE™ PREP can also be used for cut stem and stump treatments, for the control of woody vegetation along forest roads and for establishing and maintaining wildlife openings, except in the state of California. It may also be used to control weeds along the banks of drainage canals or ditches. Only treat up to the outer edge of a drainage ditch or canal when it contains water. Do not apply LINEAGE™ PREP on irrigation ditches or canals. Do not apply LINEAGE™ PREP on dry irrigation canals or dry irrigation ditches. For perennial species on the label, a postemergence application should be used. For best performance, an adjuvant should be added to the spray solution (see **Adjuvants** section for specific recommendations).

LINEAGE™ PREP may be applied on conifer plantations, wildlife management areas that contain areas of temporary surface water caused by the collection of water between planting beds, in equipment ruts, or in other depressions created by management activities in these sites, except in the states of California and New York. It is permissible to treat drainage ditches, intermittent drainage sites, intermit-

tently flooded low lying sites, seasonally dry flood plains, and transitional areas between upland and low land sites when no water is present, except in the states of California and New York. It is also permissible to treat marshes, swamps, and bogs after water has receded, as well as seasonally dry flood deltas, except in the states of California and New York.

LINEAGE™ PREP may be applied by ground spray equipment (boom sprayers, backpack sprayers, tree injection, etc.) and by aerial spray equipment. Fixed wing aircraft and helicopters can be used to apply LINEAGE™ PREP, however, do not make applications by fixed wing aircraft unless appropriate buffer zones can be maintained to prevent spray drift out of the target area or, when treating open tracts of land, spray drift as a result of fixed wing aircraft application can be tolerated. Aerial equipment designed to minimize spray drift, such as a helicopter equipped with a "Microfoil" boom, "Thru-Valve" boom or raindrop nozzles, must be used and calibrated. Except when applying with a "Microfoil" boom, a drift control agent may be added at the recommended rate.

Applying or draining or flushing equipment on or near sensitive desirable 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 may cause severe injury or death to these plants.

Good spray coverage of the target plant is desired. Excessive wetting which causes the spray to run off target plants should be avoided. LINEAGE™ PREP may be applied by either ground or aerial spray equipment. Do not treat irrigation ditches, or water used for crop irrigation or for domestic uses.

Note: Injury or loss of desirable trees or other plants may result if LINEAGE™ PREP is applied on or near desirable trees or other plants, on areas where their roots extend, or in locations where the treated soil may be washed or moved into contact with their roots.

CONIFER PLANTATIONS

SITE PREPARATION

LINEAGE™ PREP controls the labeled weed species prior to planting the conifer species below. Use the higher spray volumes and herbicide rates for heavy weed/brush infestations, hard to control species and dense hardwood canopies.

LINEAGE™ PREP applied postemergence at the recommended broadcast rates in the above table will provide control of many brush plants in conifer plantations. Allow 4 to 6 weeks after application for control of most herbaceous and grass weeds. The dead or dying plants may aid a site preparation burn, if needed. The residual activity of LINEAGE™ PREP will aid in the control of herbaceous weeds.

For ground boom or backpack spray equipment, apply LINEAGE™ PREP in a total spray volume of 5 to 100 gallons per acre. For helicopter applications, use a total

spray volume of 5 to 30 gallons per acre. Include a spray adjuvant with all postemergence applications. Use the higher spray volumes and herbicide rates for heavy weed/brush infestations, hard to control species and dense hardwood canopies.

In sites where tolerant wildling conifers, brush or weed species exist, tank mix DuPont™ LINEAGE™ PREP with other registered herbicides.

For quick brown out of foliage to aid burning, add 1 to 4 pints per acre of glyphosate (4 pounds active per gallon) or 1 to 3 pints per acre of triclopyr (4 pound active per gallon) to 16 ounces per acre of LINEAGE™ PREP. In site preparation areas with seedling pines (other than where Slash pines are to be planted), apply a tank mix of LINEAGE™ PREP at 16 ounces per acre plus glyphosate (4 pound active per gallon) at 3 to 4 quarts per acre.

Note: Where burning is desired, burn only after adequate rainfall has occurred to move LINEAGE™ PREP into the soil. Soil disturbance from bedding or plowing may reduce spring herbaceous weed control.

To reduce the potential for injury, do not plant Black Spruce seedlings for 3 months following a banded or broadcast application of LINEAGE™ PREP.

APPLICATION RATES

Apply LINEAGE™ PREP at the rates indicated by conifer species. Use a lower rate on coarse-textured soils (i.e., loamy sands, sandy loams) and a higher rate on fine textured soils (i.e. sandy clay loams and silty clay loams).

WEEDS CONTROLLED

LINEAGE™ PREP effectively controls or suppresses the weeds and vines listed under the "Weeds Controlled" section of this label when applied at the rates specified:

<u>Conifer Species</u>	<u>Rate</u> <u>(ounces per acre)</u>
Loblolly pine (<i>Pinus taeda</i>)	11 - 15
Longleaf pine (<i>Pinus palustris</i>)	11 - 15
Slash pine (<i>Pinus elliotii</i>)	10
Douglas fir (<i>Pseudotsuga menziesii</i>)	10 - 19
Western hemlock (<i>Tsuga heterophylla</i>)	10 - 19
Ponderosa pine (<i>Pinus ponderosa</i>)	10 - 19
Black spruce (<i>Picea mariana</i>)	10 - 19

TANK MIXTURES

South/Southeast US

LINEAGE™ PREP may be tank mixed with site preparation treatments applied in the late summer to broaden the spectrum of undesirable hardwoods and/or wildling pines controlled and provide herbaceous weed control in the year following transplanting.

The tank mixture rates recommended below are for the specific brush species listed in each section or in the tank mixture partner label.

LINEAGE™ PREP plus KRENITE® S Pine and Hardwood seedlings and saplings

To control a combination of pine and hardwood seedlings and saplings, apply a tank mixture of LINEAGE™ PREP at 10 to 15 ounces per acre plus KRENITE® S at 4 to 6 quarts per acre.

Use the higher rates when either pine saplings predominate or when high infestations of seedling pines are in the area to be sprayed. Along with seedling and sapling pines, this tank mix also provides control of Ash, Blackberry, Blackgum, Black locust, Box elder, Cherry, Dogwood, Elms (winged, slippery), Oaks (red, white), Red maple, Sassafras, and Sourwood brush weeds.

LINEAGE™ PREP plus GLYPHOSATE

For general weed and brush control, tank mix 15 to 25 ounces of LINEAGE™ PREP with 2 to 10 pounds of active ingredient (isopropylamine salt) of glyphosate per acre. Refer to the glyphosate product label for a list of species controlled.

For the brush weeds listed below, mix 11 ounces of LINEAGE™ PREP with 8 to 32 ounces of active ingredient (isopropylamine salt) of glyphosate per acre. Cherry, Dogwood, Elms, Hickory*, Oak, red, Oak, water, Persimmon, Sassafras and Sweetgum

*Suppression - a visible reduction in plant population and/or plant vigor as compared to an untreated area and generally not accepted as control.

CONIFER RELEASE

APPLICATION AFTER TRANSPLANTING

Apply LINEAGE™ PREP after transplanting to control certain species of hardwoods, broadleaf weeds and grasses as listed in the Weeds Controlled section of this label. A broadcast or directed application of LINEAGE™ PREP may be used to control or suppress labeled herbaceous, tree or brush species. In all ages of conifer stands, a low volume, directed spray application may be made to the targeted weed species while avoiding contact with the conifer foliage. Make sure to not apply more than the rates listed below as conifer injury may occur. Where infestations of hardwood brush species are competing with the conifers, make a broadcast application of LINEAGE™ PREP at the rate per conifer species listed below. Use the higher herbicide rates for heavy weed/brush infestations, hard to control species and dense hardwood canopies.

USE RATES FOR SELECTED SPECIES

Use Rates After Transplanting Conifers

<u>Species</u>	<u>Rate (ounces/acre)</u>
Loblolly Pine	10 to 15
Slash Pine	10 to 11

Mid rotation release: For broadcast applications underneath the pine canopy in established stands of Loblolly pine use 12 to 20 ounces per acre. For mid rotation release of Slash pine use the rates listed above.

Note: In Slash Pine stands, to control woody brush, make broadcast over-the-top release applications after August 15th.

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Only make applications to Slash pines that are 2 to 5 years old. Do not include an adjuvant and use the lower release rates on sandy soils. When release applications are made during periods of active conifer growth, minor stunting (slowing of growth) may occur. In conifers, except Loblolly Pine, only make broadcast applications of DuPont™ LINEAGE™ PREP after the second season of growth. To reduce the potential for minor stunting, make broadcast release applications late in the growing season. During the first growing season after planting of loblolly pines or in one year old naturally regenerated loblolly pine sites, LINEAGE™ PREP may be used for release treatments. For release of Loblolly Pines that are one year old apply LINEAGE™ PREP at 11 to 15 ounces per acre. These applications should only be made after July 15th. A non-ionic surfactant at 0.25% v/v may be included with this treatment.

For hard to control species or heavy infestations, use the higher labeled rates of LINEAGE™ PREP.

Do not apply LINEAGE™ PREP when conifers are under stress from diseases, drought, animal or winter injury or other environmental or mechanical stresses as injury may occur.

UNDESIRABLE HARDWOOD CONTROL

Apply 15 ounces per acre of LINEAGE™ PREP to control herbaceous weeds, grasses and undesirable hardwoods. Some minor conifer growth inhibition may be observed when release treatments are made during periods of active conifer growth. To minimize potential conifer height growth inhibition, broadcast release treatments may be made late in the growing season.

For Loblolly Pine, a registered conifer release surfactant may be added at the rate recommended on the surfactant label.

For Slash Pine, over the top broadcast release treatments must be made after mid-August and only in stands 2 to 5 years old. For over the top applications to slash pine do not add a surfactant. For light (sandy) soils do not exceed 11 ounces of LINEAGE™ PREP per acre.

Ash	Hickory*	Persimmon*
Black gum	Honeysuckle	Red maple*
Blackberry*	Hophornbeam	Sassafras
Cherry	Myrtle dahoon	Sweetgum
Dogwood*	Oak, red	Vaccinium
Elm*	Oak, white	
Hawthorn	Oak, water	

*Suppression - a visible reduction in plant population and/or plant vigor as compared to an untreated area and generally not accepted as control.

SPOT TREATMENT – RELEASE

In all ages of Loblolly and Slash pines, a directed postemergence or cut stem application of LINEAGE™ PREP may be applied to control unwanted hardwoods or other brush. Care should be taken to not make direct applications to desired plants as injury may occur. Injury may also occur to desired hardwoods or conifers where their roots extend into the treated area or if they share the same root system or their roots have become grafted to those of the treated trees.

WILDLIFE HABITAT MANAGEMENT

LINEAGE™ PREP herbicide may be used to control exotic and other undesirable vegetation for purposes of wildlife habitat management and enhancement within forests as well as terrestrial non-crop sites. Applications can be made to control undesirable vegetation (see WEEDS CONTROLLED section) prior to planting desirable vegetation species. Spot, directed foliar and cut stump and stem treatments can be made to selectively control unwanted plants for wildlife habitat management and enhancement.

SPECIFIC WEED PROBLEMS

KUDZU

LINEAGE™ PREP applied at 30 ounces per acre is recommended as part of a kudzu abatement program. Retreatment of any re-sprouting kudzu crowns following the initial treatment is necessary to fully control kudzu. Make applications to kudzu after leaves are fully mature and the plant has begun to bloom. Applications may continue until first frost. Apply LINEAGE™ PREP as a broadcast treatment for the initial application. Use spot-spray or broadcast followup applications as needed for thorough coverage. Thoroughly treat foliage and stems (spray-to-wet) without excess runoff. For handgun applications use a minimum of 100 gallons per acre. Boom or boom-less sprayer applications made by ground or air (helicopter only) equipment should use a minimum of 30 gallons per acre per application pass. Double pass applications from different directions can improve spray coverage. Prior to planting use a non-ionic surfactant (90% active ingredient) at the rate of 1 quart per 100 gallons of spray solution (0.25% v/v). After planting use a crop oil concentrate at the rate of 1 quart per 100 gallons of spray solution.

Do not apply more than 30 ounces per acre of LINEAGE™ PREP.

IMPORTANT PRECAUTIONS

CONIFER PLANTATIONS ONLY

- Applications of LINEAGE™ PREP made to conifers that are suffering from loss of vigor caused by insects, diseases, drought, winter damage, animal damage, excessive soil moisture, planting shock, previous agricultural practices, or other stresses, may injure or kill the trees.
- Applications of LINEAGE™ PREP made after transplanting should only be made after adequate rainfall has closed the planting slit and settled the soil around the roots following transplanting.
- Do not apply LINEAGE™ PREP to conifers grown for Christmas trees or ornamentals.
- Do not use a surfactant with LINEAGE™ PREP for herbaceous weed control when making over the top applications to conifer seedlings in the spring after transplanting. A surfactant specifically registered for conifer release may be used when targeting specific weed problems.

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such as, undesirable hardwoods. Refer to the surfactant label for recommended use rates.

- DuPont™ LINEAGE™ PREP applications may result in damage and mortality to other species of trees when they are present on sites with those listed in the preceding recommendations for conifer plantations uses.

MIXING AND APPLICATION INFORMATION

LINEAGE™ PREP herbicide should be applied at the following use rates depending upon the vegetation to be controlled and the type of application being made. Use the higher spray volumes and herbicide rates for heavy weed/brush infestations, hard to control species and dense hardwood canopies.

Vegetation	Application	Use Rate
Hardwood trees	Directed foliar, brush or spot spray	3 to 6 ounces per 3 gallons of water
Stump or cut stem		6 ounces per gallon of water
Herbaceous weeds	Broadcast	3 to 9 ounces per acre

See specific use directions in appropriate section.

GROUND OPERATED SPRAY EQUIPMENT

Thoroughly mix and apply the recommended amount of LINEAGE™ PREP herbicide in a minimum of 5 gallons of water per acre. To mix, fill the spray tank with one-half to three-quarters of the desired volume with clean water. Add the required amount of LINEAGE™ PREP to the spray tank while agitating. Add additional water to achieve the desired spray volume and agitate again. A suitable adjuvant (see Adjuvant section) may be added to the spray solution to enhance control of undesirable vegetation. A drift control agent and a foam reducing agent may be added at the recommended label rates, if needed. If desired, a spray pattern indicator may be added at the recommended label rate. For best results, uniformly cover the foliage of the vegetation to be controlled with the spray solution.

Side Trimming: Do not side trim with LINEAGE™ PREP unless severe injury or death of the treated tree can be tolerated. LINEAGE™ PREP is readily translocated and can result in death of the entire tree.

NON-AGRICULTURAL USES

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are not within the scope of the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses. Terrestrial non-crop weed control is not within the scope of the Worker Protection Standard. See the General Information section of this label for a description of non-crop sites. Do not enter terrestrial/non-crop treated areas without protective clothing until sprays have dried.

GENERAL INFORMATION

LINEAGE™ PREP herbicide is to be mixed with water and a surfactant, unless otherwise directed, and applied as a spray for the control of undesirable vegetation in terrestrial non-crop sites and unimproved turf. LINEAGE™ PREP herbicide is to be applied as a spray solution for general weed and brush control on private, public and military lands as follows: uncultivated nonagricultural areas (such as airports, highway, railroad and utility rights-of-way, sewage disposal areas, etc.); uncultivated agricultural areas - non-crop producing (such as farmyards, fuel storage areas, fence rows, non-irrigation ditch banks, barrier strips, etc.); industrial sites - outdoor (such as lumberyards, pipeline and tank farms, etc.). This product may be applied to terrestrial non-crops sites and unimproved turf sites that contain areas of temporary surface water caused by collection of water, in equipment ruts, or in other depressions created by management activities. It is permissible to treat intermittently flooded low lying sites, seasonally dry flood plains and transitional areas between upland and lowland sites when no water is present. It is also permissible to treat marshes, swamps and bogs after water has receded, as well as seasonally dry flood deltas. It may also be used to control weeds along the banks of drainage canals or ditches. Only treat up to the outer edge of a drainage ditch or canal when it contains water. Do not apply LINEAGE™ PREP on irrigation ditches or canals. Do not apply LINEAGE™ PREP on dry irrigation canals or dry irrigation ditches.

LINEAGE™ PREP provides preemergence and postemergence control of the broadleaf weeds, perennial and annual grasses, vines and brush species found on the label. For perennial species on the label, a postemergence application should be used. For best performance, an adjuvant should be included to the spray solution (see Adjuvants section for specific recommendations). Good spray coverage of the target plant is desired. Excessive wetting which causes the spray to run off target plants should be avoided. LINEAGE™ PREP may be applied by either ground or aerial spray equipment.

Note: Injury or loss of desirable trees or other plants may result if LINEAGE™ PREP is applied on or near desirable trees or other plants, on areas where their roots extend, or in locations where the treated soil may be washed or moved into contact with their roots.

APPLICATION INFORMATION

AERIAL APPLICATIONS

LINEAGE™ PREP may be applied by either ground or helicopter spray equipment. Aerial equipment designed to minimize spray drift, such as a helicopter equipped with a "Microfoil" boom, "Thru-Valve" boom or raindrop nozzles, must be used and calibrated. Except when applying with a "Microfoil" boom, a drift control agent may be added at the recommended rate.

Uniformly apply the recommended amount of LINEAGE™ PREP in a minimum of 5 gallons of water per acre. Use adequate spray volume to provide an accurate and uniform spray droplet distribution over the treated area and to avoid spray drift. Include a nonionic surfactant or methylated seed oil or a silicone based surfactant in the spray solution (see Adjuvant section). A

foam reducing agent may be added at the recommended label rate, if needed. Side trimming is not recommended with DuPont™ LINEAGE™ PREP unless death of the treated tree can be tolerated. All precautions should be taken to minimize or eliminate spray drift.

Important: Thoroughly clean application equipment, including landing gear, immediately after use of this product. Prolonged exposure of this product to uncoated steel (except stainless steel) surfaces may result in corrosion and failure of the exposed part. The maintenance of an organic coating (paint) may prevent corrosion.

GROUND APPLICATIONS

Low Volume Applications

Apply LINEAGE™ PREP in a minimum of 5 gallons of spray solution per acre. Prepare the spray solution by thoroughly mixing in water a sufficient quantity of LINEAGE™ PREP to apply 6 to 12 ounces per acre of LINEAGE™ PREP plus a recommended adjuvant (see **Adjuvant** section).

Good plant coverage is necessary for best results. The spray solution should cover the crown and at least 75% of the plant. Use adequate spray volume to help provide uniform distribution of spray droplets over the treated area and to avoid spray drift. Use the higher rates for hard to control brush species. Do not apply more than 30 ounces per acre of LINEAGE™ PREP.

Side Trimming: Side trimming with LINEAGE™ PREP can cause severe injury or death to the treated tree. Do not make side trimming applications unless death of the tree is acceptable.

High Volume Applications

When treating medium to high infestations of weeds, apply LINEAGE™ PREP at up to 100 gallons of spray solution per acre (GPA). Mix LINEAGE™ PREP at 16 to 30 ounces per acre plus a surfactant. Add a foam reducing agent if needed. Use the higher rate for hard to control species but do not apply more than 30 ounces per acre. Apply evenly to cover weed foliage.

DIRECTED FOLIAR OR SPOT SPRAY APPLICATIONS

When making directed or spot spray applications with ground spray equipment, or low-volume hand-operated spray equipment, thoroughly mix a solution of LINEAGE™ PREP and include a nonionic surfactant at a minimum of 0.25% by volume. To mix the spray solution, add the volume of LINEAGE™ PREP herbicide and nonionic surfactant indicated in the table below to the desired amount of water. Use the higher spray volumes and herbicide rates for heavy weed infestations and hard to control weed species.

SPRAY SOLUTION VOLUME	LINEAGE™ PREP	SURFACTANT (fluid ounce)
3 gallons	3 to 6 ounces	1.0
4 gallons	4 to 8 ounces	1.5
5 gallons	9 to 12 ounces	1.6
10 gallons	12 to 24 ounces	3.2
20 gallons	24 to 30 ounces	6.4

Important: Avoid direct application to desired plant species as injury may occur. Do not apply 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 exceed 30 ounces of LINEAGE™ PREP herbicide per acre.

Application Tips: For low volume, select proper nozzles to avoid over-application. Proper application is critical to ensure desirable results. Best results are achieved when the spray covers approximately 70 percent of the plant.

TOTAL VEGETATION CONTROL

BAREGROUND

LINEAGE™ PREP may be used in sites for bareground (total vegetation control) weed control. Preemergence or postemergence applications of LINEAGE™ PREP provides control of many annual and perennial broadleaf and grass weeds. It may be used alone at 11 to 30 ounces per acre or in tank mixes with other products registered for use on bareground sites. Consult the manufacturer's labels for specific rates, weeds controlled and use restrictions. Make applications using a spray volume of up to 100 gallons per acre and include an adjuvant. Apply at any time of the year. Make a thorough and uniform application with calibrated spray equipment per label recommendations. Use the higher rates of LINEAGE™ PREP for fall applications and in previously untreated areas or areas with high weed infestations. For postemergence applications always include a spray adjuvant. For faster brown-out or burn down results, add glyphosate or similar products to the tank. As above for postemergence applications, the addition of glyphosate or similar products may be added for faster brown-out or burndown of the escaped weeds. For added residual weed control or to broaden the weed control spectrum, tank mix with other residual products registered for use on bareground sites. The level and length of control will depend on the herbicide(s) rate applied, amount of rainfall, the soil texture and other environmental and applications conditions.

IMPORTANT PRECAUTIONS

CONIFER PLANTATIONS NON-CROP SITES

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

- If equipment is drained or flushed 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.
- Treatment of powdery, dry soil or light, sandy soil when there is little likelihood of rainfall soon after treatment may result in off target movement and possible damage to susceptible crops when soil particles are moved by wind or water. Injury to crops may result if treated soil is washed, blown, or moved onto land used to produce crops. Exposure to LINEAGE™ PREP may injure or kill most crops. Injury may be more severe when the crops are irrigated. Do not apply LINEAGE™ PREP when these conditions are identified and powdery, dry soil or light or sandy soil are known to be prevalent in the area to be treated.

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• Applications made where runoff water flows onto agricultural land may injure crops. Applications made during periods of intense rainfall, to soils saturated with water, surfaces paved with materials such as asphalt or concrete, or soils through which rainfall will not readily penetrate may result in runoff and movement of DuPont™ LINEAGE™ PREP. Do not treat frozen soil. Treated soil should be left undisturbed to reduce the potential for LINEAGE™ PREP movement by soil erosion due to wind or water. Do not use on lawns, walks, driveways, tennis courts, or similar areas. Do not apply in or on irrigation ditches or canals including their outer banks. Do not apply through any type of irrigation system. If non-crop or conifer plantation sites treated with LINEAGE™ PREP are to be converted to a food, feed, or fiber agricultural crop, or to a horticultural crop, do not plant the treated sites for at least two years after the LINEAGE™ PREP application. A field bioassay must then be completed before planting to crops. To conduct a field bioassay, grow to maturity test strips of the crop(s) you plan to grow the following year. The test strips should cross the entire field including knolls and low areas. Crop response to the bioassay will indicate whether or not to plant the crops(s) grown in the test strips. In the case of suspected off-site movement of LINEAGE™ PREP to cropland, soil samples should be quantitatively analyzed for LINEAGE™ PREP or any other herbicide which could be having an adverse effect on the crop, in addition to conducting the above-described bioassay.

Do not use this product in the following counties of Colorado: Saguache, Rio Grande, Alamosa, Costilla and Conejos. Do not use this product in California.

WEEDS CONTROLLED

LINEAGE™ PREP provides postemergence control and some residual control of the annual weeds in the following tables. The degree of control is both rate and species dependent. Postemergence applications generally provide best control of established biennials and perennial weeds. All rates in the Weeds Controlled table are expressed in the amount of herbicide required for broadcast applications. Review the weed lists and foot notes for additional application information prior to treating. Apply LINEAGE™ PREP at the rates indicated by weed type. When applied at lower rates, LINEAGE™ PREP provides short term control of weeds listed; when applied at higher rates, weed control is extended.

GRASSES

Apply 11 ounces per acre

Arrowgrass, seaside	<i>Triglochin maritimum</i>
Bluegrass, annual	<i>Poa annua</i>
Bahiagrass	<i>Paspalum notatum</i>
Barnyardgrass	<i>Echinochloa crus-gali</i>
Barley, foxtail	<i>Hordeum jubatum</i>
Barley, little	<i>Hordeum pusillum</i>
Barley, wild	<i>Hordeum spp.</i>
Brome, downy	<i>Bromus tectorum</i>
Brome, red	<i>Bromus rubens</i>
Brome, ripgut	<i>Bromus diandrus</i>
Canarygrass, reed	<i>Phalaris arundinacea</i>
Crabgrass	<i>Digitaria spp.</i>
Fescue	<i>Festuca spp.</i>
Foxtail, fescue	<i>Vulpia megalura</i>
Foxtail, green	<i>Setaria viridis</i>
Fescue, red	<i>Festuca rubra</i>
Goatgrass, jointed	<i>Aegilops cylindrica</i>
Johnsongrass	<i>Sorghum halepense</i>
Medusahead	<i>Taeniatherum caput-medusae</i>
Oat, wild	<i>Avena fatua</i>
Panicum (annual)	<i>Panicum spp.</i>
Panicum, browntop	<i>Panicum fasciculatum</i>
Panicum, fall	<i>Panicum dichotomiflorum</i>
Panicum, Texas	<i>Panicum texanum</i>
Rye	<i>Secale cereale</i>
Ryegrass, Italian	<i>Lolium multiflorum</i>
Saltgrass, seashore	<i>Distichlis stricta</i>
Sandbur, field	<i>Cenchrus incertus</i>
Sandbur, southern	<i>Cenchrus echinatus</i>
Signalgrass, broadleaf	<i>Brachiaria platyphylla</i>
Sprangletop, bearded	<i>Leptochloa fascicularis</i>
Siltgrass, Japanese	<i>Microstegium vimineum</i>
Wheat	<i>Triticum aestivum</i>

Apply 15 ounces per acre

Bluegrass, Canada	<i>Poa compressa</i>
Bluegrass, Kentucky	<i>Poa pratensis</i>
Brome, fescue	<i>Vulpia bromoides</i>
Brome, smooth	<i>Bromus inermis</i>
Dropseed, sand	<i>Sporobolus cryptandrus</i>
Foxtail	<i>Setaria spp.</i>
Lovegrass	<i>Eragrostis spp.</i>
Orchardgrass	<i>Dactylis glomerata</i>
Paragrass	<i>Brachiaria mutica</i>
Quackgrass	<i>Agropyron repens</i>
Sprangletop, bearded	<i>Leptochloa fusca</i>
Vaseygrass	<i>Paspalum urvillei</i>
Witchgrass	<i>Panicum capillare</i>

Apply 22 ounces per acre

Beardgrass	<i>Andropogon spp.</i>
Cheat	<i>Bromus secalinus</i>
Crowfootgrass	<i>Dactyloctenium aegyptium</i>
Cupgrass, woolly	<i>Eriochloa villosa</i>
Goosegrass	<i>Eleusine indica</i>
Itchgrass	<i>Rotthoellia exaltata</i>
Junglerice	<i>Echinochloa colonum</i>
Lovegrass	<i>Eragrostis spp.</i>
Maidencane	<i>Panicum hemitomon</i>
Reed, giant	<i>Arundo donax</i>
Threeawn, prairie	<i>Aristida oligantha</i>
Torpedograss	<i>Panicum repens</i>

Apply 27 ounces per acre

Bermudagrass	<i>Cynodon dactylon</i>
Bluestem, big	<i>Andropogon gerardii</i>
Cattail	<i>Typha spp.</i>
Cogongrass	<i>Imperata cylindrical</i>
Cordgrass, prairie	<i>Spartina pectinata</i>
Dallisgrass	<i>Paspalum dilatatum</i>
Feathertop	<i>Pennisetum villosum</i>
Guineagrass	<i>Panicum maximum</i>
Muhly, wirestem	<i>Muhlenbergia frondosa</i>
Phragmites	<i>Phragmites australis</i>
Sprangletop	<i>Leptochloa spp.</i>
Timothy	<i>Phleum pratense</i>

BROADLEAF WEEDS**Apply 11 ounces per acre**

Aster
 Beebalm
 Beakchervil, bur
 Beakchervil, woodland
 Blackeyed-susan
 Bouncingbet
 Burclover
 Buttercup, bur
 Carrot, wild
 Catchfly, conical
 Chamomile, false
 Chickweed, common
 Chickweed, mouseear
 Chicory
 Clover, crimson
 Clover, hop
 Cockle, cow
 Cocklebur
 Corncockle, common
 Coreopsis, plains
 Crazyweed, silky
 Croton, woolly
 Daisy, oxeye
 Dandelion
 Falseflax, smallseed
 Fiddleneck (tarweed)
 Flixweed
 Garlic, wild
 Geranium, Carolina
 Goldenrod
 Groundsel, common
 Heliotrope, seaside
 Hemlock, poison
 Horseweed/marestail4
 Houndstongue
 Lambsquarters
 Lettuce, miners
 Lettuce, wild
 Mallow, common
 Mallow, little
 Miners lettuce
 Mustard, black
 Mustard, blue
 Mustard, treacle
 Mustard, tumble
 Mustard, wild
 Orach, spreading
 Oxeye daisy
 Pennycress, field
 Pepperweed
 Plantain
 Pokeweed
 Purslane, common
 Pusley, Florida
 Ragweed, common
 Ragweed, giant
 Ragwort, tansy
 Salsify
 Shepherd's-purse
 Sneezeweed, bitter
 Sowthistle, annual
 Speedwell, common
 Sunflower, maximilian
 Tansy, common
 Tansymustard
 Vetch, common
 Vetch, crown
 Vetch, hairy
 Wheat
 Yankeeweed

Aster spp.
Monarda didyma
Anthriscus caucalis
Anthriscus sylvestris
Rudbeckia hirta
Saponaria officinalis
Medicago polymorpha
Ranunculus testiculatus
Daucus carota
Silene conica
Matricaria maritima
Stellaria media
Cerastium vulgatum
Cichorium intybus
Trifolium incarnatum
Trifolium procumbens
Saponaria vaccaria
Xanthium strumarium
Agrostemma githago
Coreopsis tinctoria
Oxytropis sericea
Croton capitatus
Leucanthemum vulgare
Taraxacum officinale
Camelina microcarpa
Amsinckia micrantha
Descurainia sophia
Allium vineale
Geranium carolinianum
Solidago spp.
Senecio vulgari
Heliotropium curassavicum
Conium maculatum
Conyza Canadensis
Cynoglossum officinale
Chenopodium album
Claytonia perfoliata
Lactuca spp.
Malva neglecta
Malva parviflora
Montia perfoliata
Brassica nigra
Chorispora tenella
Erysimum repandum
Sisymbrium altissimum
Sinapis arvensis
Atriplex patula
Chrysanthemum leucanthemum
Thlaspi arvense
Lepidium spp.
Plantago spp.
Physolacca Americana
Portulaca spp.
Richardia scabra
Ambrosia artemisiifolia
Ambrosia trifida
Senecio jacobaea
Tragopogon spp.
Capsela bursa-pastoris
Helenium amarum
Sonchus oleraceus
Veronica officinalis
Helianthus maximiliani
Tanacetum vulgare
Descurainia pinnata
Vicia sativa
Coronilla varia
Vicia villosa
Triticum aestivum
Eupatorium compositifolium

Apply 15 ounces per acre

Alligatorweed
 Blackberry
 Burdock
 Bursage, woollyleaf
 Camphorweed
 Caraway, wild
 Carpetweed
 Clover
 Crupina, common
 Dewberry
 Dock
 Dogfennel
 Dyer's woad
 Filaree
 Fireweed
 Fleabane
 Gaillardia, rose-ring
 Goosefoot, nettleleaf
 Gorse
 Gumweed, curlycup
 Henbane, black
 Halogeton
 Henbit
 Honeysuckle
 Mustard, Indian
 Knotweed, prostrate
 Kochia4
 Lespedeza
 Mullein
 Parsnip, wild
 Pigweed
 Poorjoe (buttonweed)
 Puncturevine
 Ragweed, western
 Rose, wild
 Including: Multiflora rose
 Macartney rose
 Smartweed
 Snakeroot, white
 Snakeweed, broom
 Snowberry, common
 Snowberry, western
 Sorrel
 St. John's wort
 Sunflower
 Sweet-clover
 Teasel
 Thistle, bull
 Thistle, musk
 Thistle, plumeless
 Thistle, Russian4
 Thistle, Scotch
 Turnip, wild
 Vervain, hoary
 Whitetop, hairy
 Woodsorrel, yellow

Alternanthera philoxeroides
Rubus spp.
Arctium spp.
Franseria tomentosa
Heterotheca subaxillaris
Carum carvi
Mollugo verticillata
Trifolium spp.
Crupina vulgaris
Rubus trivialis
Rumex spp.
Eupatorium capillifolium
Isatis tinctoria
Erodium spp.
Epilobium angustifolium
Erigeron spp.
Grindelia squarrosa
Chenopodium murale
Ulex europaeus
Grindelia squarrosa
Hyoscyamus niger
Halogeton glomeratus
Lamium alexiclaude
Lonicera spp.
Brassica juncea
Polygonum aviculare
Kochia scoparia
Lezpedeza spp.
Verbascum spp.
Pastinaca sativa
Amaranthus spp.
Diodia teres
Tribulus terrestris
Ambrosia psilostachya
Rosa spp.
Rosa multiflora
Rosa bracteata
Polygonum spp.
Ageratina altissima
Gutierrezia sarothrae
Symphoricarpos albus
Symphoricarpos occidentalis
Rumex spp.
Hypericum perforatum
Helianthus spp.
Melilotus spp.
Dipsacus spp.
Cirsium vulgare
Carduus nutans
Carduus acanthoides
Salsola kali
Onopordum acanthium
Brassica campestris
Verbena stricta
Lepidium pubescens
Oxalis stricta

Apply 22 ounces per acre

Carnelthorn, desert
 Cudweed
 Fiddleneck
 Knapweed, diffuse
 Loosestrife, purple
 Nettle, stinging
 Nutsedge, yellow
 Pepperweed, perennial
 Rocket, London
 Rocket, yellow
 Rush
 Saltbush
 Skeletonweed, rush
 Spurge, annual
 Starthistle, purple
 Starthistle, yellow
 Velvetleaf

Alhagi pseudalhagi
Gnaphalium spp.
Amsinckia intermedia
Centaurea diffu
Lythum salicaria
Urtica dioica
Cyperus esculentus
Lepidium latifolium
Sisymbrium irio
Barbarea vulgaris
Juncus spp.
Atriplex spp.
Chondrilla juncea
Euphorbia spp.
Centaurea calcitrapa
Centaurea solstitialis
Abutilon theophrasti

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Apply 27 ounces per acre

Arrowwood	<i>Pluchea sericea</i>
Knapweed, Russian	<i>Centaurea repens</i>
Knotweed, Japanese	<i>Polygonum cuspidatum</i>
Mallow, little	<i>Malva parviflora</i>
Milkweed	<i>Asclepias</i> spp.
Nightshade, silverleaf	<i>Solanum elaeagnifolium</i>
Primrose	<i>Oenothera kunihiana</i>
Rabbitbrush, gray	<i>Chrysothamnus nauseosus</i>
Ragweed, giant	<i>Ambrosia trifida</i>
Thistle, Canada	<i>Cirsium arvense</i>
Thistle, Texas	<i>Cirsium texanum</i>

VINES AND BRAMBLES

Apply 15 ounces per acre

Bindweed, field	<i>Convolvulus arvensis</i>
Bindweed, hedge	<i>Calystegia sepium</i>
Buckwheat, wild	<i>Polygonum convolvulus</i>

Apply 25 ounces per acre

Greenbriar	<i>Smilax</i> spp.
Morningglory	<i>Ipomoea</i> spp.
Poison ivy	<i>Rhus radicans</i>
Redvine	<i>Brunnichia cirrhosa</i>

Apply 29 ounces per acre

Kudzu*	<i>Pueraria lobata</i>
Trumpet creeper	<i>Campsis radicans</i>
Virginia creeper	<i>Parthenocissus quinquefolia</i>
Wild grape	<i>Vitis</i> spp.

BRUSH SPECIES

Apply 29 ounces per acre

Alder	<i>Alnus</i> spp.
Alder, red	<i>Alnus rubra</i>
American beech	<i>Fagus grandifolia</i>
Ash	<i>Fraxinus</i> spp.
Aspen	<i>Populus</i> spp.
Autumn olive	<i>Elaeagnus umbellata</i>
Bald cypress	<i>Taxodium distichum</i>
Birch	<i>Betula</i> spp.
Blackgum ¹	<i>Nyssa sylvatica</i>
Boxelder	<i>Acer negundo</i>
Black oak	<i>Quercus kelloggii</i>
Ceanothis	<i>Ceanothis</i> spp.
Cherry ¹	<i>Prunus</i> spp.
Chinaberry	<i>Melia azadarach</i>
Chinese tallow-tree	<i>Sapium sebiferum</i>
Chinquapin	<i>Castanopsis chrysophylla</i>
Cottonwood	<i>Populus trichocarpa</i> and <i>P. deltoides</i>
Cypress	<i>Taxodium</i> spp.
Dogwood	<i>Cornus</i> spp.
Eucalyptus	<i>Eucalyptus</i> spp.
Hawthorn	<i>Crataegus</i> spp.
Hickory	<i>Carya</i> spp.
Huckleberry	<i>Gaylussacia</i> spp.
Lyonia spp.	
Including: Fetterbush	<i>Lyonia lucida</i>
Staggerbush	<i>Lyonia mariana</i>
Madrone	<i>Arbutus menziesii</i>
Maple	<i>Acer</i> spp.
Maple, red	<i>Acer rubrum</i>
Maple, bigleaf	<i>Acer macrophyllum</i>
Melaleuca	<i>Melaleuca quinquenervia</i>
Mulberry ²	<i>Morus</i> spp.
Oak	<i>Quercus</i> spp.
Olive, Russian	<i>Elaeagnus angustifolia</i>
Persimmon ¹	<i>Diospyros virginiana</i>
Poison oak	<i>Rhus diversiloba</i>
Popcorn tree	<i>Sapium sebiferum</i>
Poplar	<i>Populus</i> spp.
Poplar, yellow	<i>Liriodendron tulipifera</i>
Privet	<i>Ligustrum vulgare</i>
Saltcedar	<i>Tamarix ramosissima</i>
Sassafras	<i>Sassafras albidum</i>
Sourwood ¹	<i>Oxydendrum arboreum</i>
Sumac	<i>Rhus</i> spp.
Sweetgum	<i>Liquidambar styraciflua</i>
Sycamore	<i>Platanus occidentalis</i>
Tanoak	<i>Lithocarpus densiflorus</i>
TiTi	<i>Cyrilla racemiflora</i>
Tree of heaven	<i>Ailanthus altissima</i>
Vaccinium spp.	
Including: Blueberry	<i>Vaccinium</i> spp.
Sparkleberry	<i>Vaccinium arboreum</i>
Willow	<i>Salix</i> spp.

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- 1 Best control prior to formation of fall leaf color.
 - 2 Degree of control may be species dependent.
 - 3 Use a minimum of 75 GPA - control of established stands may require repeat applications.
 - 4 Certain biotypes of Horseweed/marestail, Kochia and Russian thistle are less sensitive to DuPont™ LINEAGE™ PREP and may be controlled by tank mixes with herbicides with a different mode of action.

MIXING INSTRUCTIONS

1. Fill the tank 1/4 to 1/3 full of water.
2. While agitating, add the required amount of LINEAGE™ PREP.
3. Continue agitation until the LINEAGE™ PREP is fully dispersed, at least 5 minutes.
4. Once the LINEAGE™ PREP is fully dispersed, maintain agitation and continue filling tank with water. LINEAGE™ PREP should be thoroughly mixed with water before adding any other material.
5. As the tank is filling, add tank mix partners (if desired) then add the necessary volume of nonionic surfactant. Always add surfactant last.
6. If the mixture is not continuously agitated, settling will occur. If settling occurs, thoroughly re-agitate before using.
7. LINEAGE™ PREP spray preparations are stable if they are pH neutral or alkaline and stored at or below 100° F.
8. If LINEAGE™ PREP and a tank mix partner are to be applied in multiple loads, pre-slurry the LINEAGE™ PREP in clean water prior to adding to the tank. This will prevent the tank mix partner from interfering with the dissolution of the LINEAGE™ PREP.

SPRAY EQUIPMENT

Low rates of LINEAGE™ PREP can kill or severely injure most crops. Following an LINEAGE™ PREP application, the use of spray equipment to apply other pesticides to crops on which LINEAGE™ PREP is not registered may result in their damage. The most effective way to reduce this crop damage potential is to use dedicated mixing and application equipment. The selected sprayer should be equipped with an agitation system to keep LINEAGE™ PREP suspended in the spray tank.

Use a sufficient volume of water to thoroughly cover the foliage of undesirable weeds, generally 10 to 40 gallons per acre. Select a spray volume and delivery system that will deliver a uniform spray pattern. Be sure the sprayer is calibrated before use. Avoid overlapping and shut off spray booms while starting, turning, slowing or stopping to avoid injury to desired plants. Refer to the brush control section of this label for information unique to that particular use.

SPRAYER CLEANUP

Spray equipment must be cleaned before LINEAGE™ PREP is sprayed. Follow the cleanup procedures specified on the labels of previously applied products. If no directions are provided, follow the six steps outlined below.

At the End of the Day

When multiple loads of DuPont™ LINEAGE™ PREP herbicide are applied, it is recommended that at the end of each day of spraying, the interior of the tank be rinsed with fresh water and then partially filled, and the boom and hoses flushed. This will prevent the buildup of dried pesticide deposits that can accumulate in the application equipment.

1. Drain tank; thoroughly rinse spray tanks, boom, and hoses with clean water. Loosen and physically remove any visible deposits.
2. Fill the tank with clean water and 1 gal of household ammonia* (contains 3% active) for every 100 gal of water. Flush the hoses, boom, and nozzles with the cleaning solution. Then add more water to completely fill the tank. Circulate the cleaning solution through the tank and hoses for at least 15 min. Flush the hoses, boom, and nozzles again with the cleaning solution, and then drain the tank.
3. Remove the nozzles and screens and clean separately in a bucket containing cleaning agent and water.
4. Repeat step 2.
5. Rinse the tank, boom, and hoses with clean water.
6. If only ammonia is used as a cleaner, the rinsate solution may be applied back to the crop(s) recommended on this label. Do not exceed the maximum labeled use rate. If other cleaners are used, consult the cleaner label for rinsate disposal instructions. If no instructions are given, dispose of the rinsate on site or at an approved waste disposal facility.

* Equivalent amounts of an alternate-strength ammonia solution or a DuPont-approved cleaner can be used in the cleanout procedure. Carefully read and follow the individual cleaner instructions. Consult your agricultural dealer, applicator, or DuPont representative for a listing of approved cleaners.

Notes:

1. **Attention:** Do not use chlorine bleach with ammonia, as dangerous gases will form. Do not clean equipment in an enclosed area.
2. Steam-cleaning aerial spray tanks is recommended prior to performing the above cleanout procedure to facilitate the removal of any caked deposits.
3. When LINEAGE™ PREP is tank mixed with other pesticides, all required cleanout procedures should be examined and the most rigorous procedure should be followed.
4. In addition to this cleanout procedure, all pre-cleanout guidelines on subsequently applied products should be followed as per the individual labels.

SPRAY DRIFT MANAGEMENT

The interaction of many equipment and weather-related factors determines the potential for spray drift. The applicator is responsible for considering all these factors when making application decisions. AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR.

IMPORTANCE OF DROPLET SIZE

The most effective way to reduce drift potential is to apply large droplets (>150 - 200 microns). The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. The presence of sensitive species nearby, the environmental conditions, and pest pressure may affect how an applicator balances drift control and coverage. APPLYING LARGER DROPLETS REDUCES DRIFT POTENTIAL, BUT WILL NOT PREVENT DRIFT IF APPLICATIONS ARE MADE IMPROPERLY OR UNDER UNFAVORABLE ENVIRONMENTAL CONDITIONS! See Wind, Temperature and Humidity, and Surface Temperature Inversions sections of this label.

Controlling Droplet Size - General Techniques

- Volume - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- Pressure - Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. WHEN HIGHER FLOW RATES ARE NEEDED, USE A HIGHER-CAPACITY NOZZLE INSTEAD OF INCREASING PRESSURE.
- Nozzle Type - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using lowdrift nozzles.

Controlling Droplet Size - Aircraft

- Number of Nozzles - Use the minimum number of nozzles with the highest flow rate that provide uniform coverage.
- Nozzle Orientation - Orienting nozzles so that the spray is emitted backwards, parallel to the airstream will produce larger droplets than other orientations.
- Nozzle Type - Solid stream nozzles (such as disc and core with swirl plate removed) oriented straight back produce larger droplets than other nozzle types.

BOOM LENGTH AND HEIGHT

- Boom Length (aircraft) - The boom length should not exceed 3/4 of the wing length, using shorter booms decreases drift potential. For helicopters use a boom length and position that prevents droplets from entering the rotor vortices.
- Boom Height (aircraft) - Application more than 10 ft above the canopy increases the potential for spray drift.
- Boom Height (ground) Setting the boom at the lowest height which provides uniform coverage reduces the exposure of droplets to evaporation and wind. The boom should remain level with the crop and have minimal bounce.

WIND

Drift potential increases at wind speeds of less than 3 mph (due to variable direction and inversion potential) or more than 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given wind speed. AVOID APPLICATIONS DURING GUSTY OR WINDLESS CONDITIONS.

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Note: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they effect spray drift.

TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, set up equipment to produce larger droplets to reduce effects of evaporation.

SURFACE TEMPERATURE INVERSIONS

Drift potential is high during a surface temperature inversion. Surface inversions restrict vertical air mixing, which causes small suspended droplets to remain close to the ground and move laterally in a concentrated cloud. Surface inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no-wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates a surface inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce the effects of wind. However, it is the responsibility of the applicator to verify that the shields are preventing drift and not interfering with uniform deposition of the product.

ADDITIONAL USE PRECAUTIONS

SENSITIVE AREAS

The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

DRIFT CONTROL ADDITIVES

Drift control additives may be used with all spray equipment with the exception of controlled droplet applicators. When a drift control additive is used, read and carefully observe cautionary statements and all other information on the label. It is recommended that drift control additives be certified by the Chemical Producers and Distributors Association (CPDA).

WIND EROSION

Avoid treating powdery dry or light sandy soils when conditions are favorable for wind erosion. Under these conditions, the soil surface should first be settled by rainfall or irrigation.

STORAGE AND DISPOSAL

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

Pesticide Storage: Do not store below 10°F. Store product in original container only. Store in a cool, dry place.

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

Container Disposal: For Plastic Containers: 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.

For Metal Containers (non aerosol/stainless steel only): Triple rinse (or equivalent) the container. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities.

Container Refilling and Disposal (For Containers up to 250 gal): This is a refillable container. If the container is to be refilled, do not rinse with any material or introduce any pesticide other than DuPont™ LINEAGE™ PREP. Reseal and return the container to any authorized DuPont refilling facility. If the container is not to be refilled, triple rinse (or equivalent) and offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or by open burning, if allowed by state and local authorities. If burned, keep out of smoke. For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. In the event of a major spill, fire or other emergency, call 1-800-441-3637 day or night.

Container Disposal for Bulk Containers: When this container is empty, replace the cap and seal all openings that have been opened during use, and return the container to the point of purchase or to a designated location named at time of purchase of this product. The container must only be refilled with this pesticide product. DO NOT REUSE THE CONTAINER FOR ANY OTHER PURPOSE. Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, wornout threads and closure devices. Check for leaks after refilling and before transporting. Do not transport if this container is damaged or leaking. If the container is damaged, leaking or obsolete, contact DuPont at 1-800-441-3637. If not returned to the point of purchase or to a designated location, triple rinse emptied container and offer for recycling. Disposal of this container must be in compliance with state and local regulations. For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. In the event of a major spill, fire or other emergency, call 1-800-441-3637 day or night.

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