PM 25 62719-114 11/5 15

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(Container Label)

DowElanco

Paarlan* E.C.

A selective herbicide for preemergence control of annual grasses and broadleaf weeds in Tobacco.

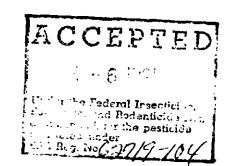
Active Ingredient:

Contains 14 pounds of active ingredient per quart.

*Trademark of DowElanco

Keep Out of Reach of Children. WARNING

See back of container for additional precautionary statements.



NOTICE

Read the entire label before Lising. Use only according to label directions. <u>Before</u> buying or using this product, read "WARRANTY DISCLAIMER" and "LIMITATION OF REMEDIES" elsewhere on this label.

IN CASE OF EMERGENCY - endangering life or property involving this product, call collect 517-636-4400.

EPA Reg. No. 62719-104 EPA Est. No. 00000-XX-00

DowElanco Indianapolis, IN 46268-1189, U.S.A.

PLANT SYMBOL

Net Contents - 1 Quart

7512

Precautionary Statements

Hazards to Humans and Domestic Animals WARNING

Causes substantial, but temporary eye injury. Causes skin irritation, Hermiul if swallowed, inhaled or absorbed through the skin. Do not get in eyes, on skin or on clothing. Avoid breathing vapor or spray mist. Wear eye protection and protective clothing such as coveralls, a long-sleeved shirt, shoes, and impermeable gloves when handling this product. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

First Aid

- If in eyes: Hold eyelids open and flush with a gentle steady stream of water for 15 minutes. Call a physician.
- If on skin: Wash with plenty of soap and water. Get medical attention if irritation develops.
- If swallowed: Do not induce vomiting. Call a physician or Poison Control Center. If available, administer activated charcoal (6-8 heaping teaspoonfuls) with a large quantity of water. Do not give anything by mouth to an unconscious person. Immediately transport to a medical care facility and see a physician.
- If inhaled: Remove individual to fresh air. If breathing difficulty occurs, get medical attention. If not breathing, give artificial respiration, preferably mouth-to-mouth, and get medical attention immediately.

Environmental Hazards

This pesticide is toxic to fish. Do not apply directly to water or wetlands (swamps, bogs or marshes). Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not apply when conditions favor runoff or drift from the target area. Do not contaminate water when disposing of equipment washwaters.

Directions for Use

- It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.
- Read All Directions Carefully Before Applying.
- See Attached Literature for Complete Directions for Use.

STORAGE AND DISPOSAL

- Storage: Store in original container only. In case of leak or spill, use absorbent materials to contain liquids and dispose as waste.
- Pesticide Disposal: Do not contaminate water, food or feed by storage or disposal.
 Wastes resulting from use of this product may be disposed of on site or at an approved waste disposal facility.
- Container Disposal: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

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WARRANTY DISCLAIMER

DowElanco warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below.

DOWELANCO MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTARII ITY

DOWELANCO MAKES NO OTHER EXPRESS OR IMPLIED WAPRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

INHERENT RISKS OF USE

It is impossible to eliminate all rinks associated with use of this product. Crop injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as untavorable temperatures, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tomadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of DowElanco or the seller. All such risks shall be assumed by Buyer.

LIMITATION OF REMEDIES

The exclusive remedy for losses or damages resulting from this product (including claims based on contract negligence, strict liability, or other legal theory), shall be limited to, at DowElanco's election, one of the following:

- (1) Refund of purchase price paid by buyer or user for product bought, or
- (2) Replacement of amount of product used.

DowElanco shall not be liable for losses or damages resulting from handling or use of this product unless DowElanco is promptly notified of such loss or damage in writing. In no case shall DowElanco be liable for consequential or incidental damages or losses.

The terms of the Warranty Disclaimer above and this Limitation of Remedies cannot be varied by any written or verbal statements or agreements. No employee or sales agent of DowElanco or the seller is authorized to vary or exceed the terms of the Warranty Disclaimer or this Limitation of Remedies in any manner.

Revised 01/29/90

(Product Label Literature)

DowElanco ID5030

Paarlan* E.C.

A selective herbicide for preemergence control of annual grasses and broadleaf weeds in Tobacco.

Active Ingredient:

Contains 13 pounds of active ingredient per quart.

*Trademark of DowElanco

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EPA Reg. NO. 62719-104

DowElanco Indianapolis, IN 46268-1189, U.S.A.

Precautionary Statements

Keep Out of Reach of Children

Hazards to Humans and Domestic Anim: .s WARNING

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First Aid

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- If in eyes: Hold eyelids open and flush with a gentle steady stream of water for 15 minutes. Call a physician.
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Directions for Use

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STORAGE AND DISPOSAL

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 Wastes resulting from use of this product may be disposed of on site or at an approved waste disposel facility.
- Contributer Disposal: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

PAARLAN GENERAL INFORMATION

Paarlan E.C. is a preemergence herbicide for control of annual grasses and broadleaf weeds. Paarlan E.C. may be applied in siquid sprays of water or liquid fertilizer, or impregnated on dry bulk fertilizer. Incorporation of Paarlan is required to assure effective weed control. Paarlan controls weeds by disrupting growth processes during germination. Paarlan does not control established weeds.

GENERAL USE PRECAUTIONS

- When applied according to use directions and under normal growing conditions, Paarlan will not harm the treated crop. Over application, uneven application or improper soil incorporation can result in erratic weed control, crop injury, delayed emergence or soil residue. Seedling disease, cold weather, deep planting, excessive moisture, high salt concentration or drought may weaken crop seedlings or transplants and increase the possibility of damage from Paarlan. Under these conditions, delayed crop development or reduced yields may result.
- Do not use Paarlan for weed control in tobacco seedbeds.
- Paarian should not be applied to soils that are wet or subject to prolonged periods of flooding as poor weed control may result.
- Chemigation: Do not apply Paarlan through any type of chemigation system.

SOIL TEXTURE GUIDE FOR APPLICATION RATES

Paarlin application rates are based on soil texture. A fine textured clay soil will require a higher application rate than a coarse textured sandy soil. Paarlin application rates are determined by "soil texture groupings" (coarse, medium or fine) which correspond to the various field soil textures to be treated. Using the table below, determine if the field soil to be treated is coarse, medium or fine and use the application rate recommended for that soil texture grouping.

Soil Texture Class	Soil Classification

Coarse (Light) Soils: Sand, loamy sand, sandy loam

Medium Soils: Loam, silty clay loam*, silt loam,

silt, sandy clay loam*

Fine (Heavy) Soils: Clay, clay loam, silty clay loam*, silty

clay, sandy clay, sandy clay loam*

^{*} Sitty clay loam and sandy clay loam soils are transitional soils and may be classified as either medium or fine textured soils. If sitty clay loam or sandy clay loam soils are predominantly sand or sitt, they are usually classified as medium textured soils. If they are predominantly clay, they are usually classified as fine textured soils.

SOIL PREPARATION

Destroy existing weeds before application of Paarlan. Chop and thoroughly mix surface residues into the soil to a depth of 4 to 6 inches by plowing or discing. Use tiliage equipment to break up large clods before application.

MIXING DIRECTIONS

Paarlan Alone

Paarlan may be applied in water and liquid fertilizer materials. Prior to mixing Paarlan in liquid fertilizer, refer to the label section entitled "TESTING FOR TANK MIX COMPATIBILITY IN LIQUID FERTILIZERS" for test procedures to determine compatibility with the fertilizer product to be used. The combination of Paarlan with solution and suspension-type fertilizers provides annual weed control equal to Paarlan applied in water. Individual state regulations relating to liquid fertilizer mixing, registration, labeling and application are the responsibility of the individual and/or company offering the fertilizer and chemical mixture for sale.

Start with a clean spray tank. Fill the sprayer to 1/3 to 1/2 of the required spray volume. Start agitation. Add the correct amount of Paarlan, continue agitation and fill spray tank to required spray volume. Maintain continuous agitation from mixing through application.

Precaution: Do not allow the mixture to back siphon into the water source.

Paarlan Tank-Mix Combinations

Paarlan E.C. may be tank mixed with other products and applied with water or liquid fertilizer materials. Prior to mixing Paarlan and another product in liquid fertilizer, refer to the tank mix product manufacturer's label to determine if application in liquid fertilizer is recommended. Also refer to the section in this label entitled "TESTING FOR COMPATIBILITY IN LIQUID FERTILIZERS" for testing procedures to determine tank-mix compatibility with the liquid fertilizer product to be used. Read and follow all label instructions for each material to be added to the spray tank.

Vigorous continuous agitation is required for all tank mixes. Sparger pipe agitators generally provide the best agitation in spray tanks. To prevent foaming, keep the end of the fill pipe below the surface of the water in the spray tank during filling to prevent air from being stirred or splashed into the mixture.

Mixing Order:

Fill the spray tank to 3/4 of the total spray volume required. Start agitation. Add different formulation types in the order indicated below, allowing time for complete mixing and dispersion after addition of each product. Allow extra mixing and dispersion time for dry flowable products.

Add different formulation types in the following order: dry flowables (DF); wettable

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powders (WP); aqueous suspensions (AS), flowables (F) and liquids (L); solutions (S); and finally Paarlan or other emulsifiable concentrates (EC).

Finish filling spray tank. Maintain continuous agitation during mixing, final filling and throughout application. It spraying and agitation must be stopped before the spray tank is empty, the materials may settle to the bottom. Settled materials must be resuspended before spraying is resumed. A sparger agitator is particularly useful for this purpose. Settled materials may be more difficult to resuspend than when originally mixed.

Premixing:

When tank mixing, initial mixing and dispersion of certain dry flowable or wettable powder products may be improved by premixing with water (slurrying). Where recommended, follow product label instructions for each material. Adding the slurried material to the spray tank through a 20 to 35 mesh wetting screen will help assure good initial dispersion. Line screens in the tank should be no finer than 50 mesh (100 mesh is finer than 50 mesh).

TESTING FOR COMPATIBILITY IN LIQUID FERTILIZERS

Paarlan alone or in combination with other products may not combine properly with some liquid fertilizer materials. Small quantities of such mixtures should always be tested before full-scale mixing. Use the procedure provided below to determine if a compatibility agent is needed or which available ager * performs best with the mixture being applied. Seven compatibility agents listed at the end of this section have been thoroughly tested. Other surfactant materials available may not be formulated for use with liquid fertilizers.

Testing Procedure:

- 1. Add 1 pint of liquid fertilizer to a 1 quart glass jar.
- 2. Add 1 to 4 teaspoonfuls (depending on application rate) of the products to be tank mixed in the liquid fertilizer. Add materials in the order recommended in the "MIXING INSTRUCTIONS" section of this label. Mix until evenly dispersed after addition of each formulation. If dry flowable or wettable powder formulations do not disperse well, it may be necessary to slurry the materials in a small amount of water before addition to the liquid fertilizer.
- 3. Observe the jar for about 10 minutes. If materials rise to the surface and form a thick layer (oil curds) which will not disperse again when agitated, a compatibility agent is needed. If the mixture is easily dispersed to its original state with slight agitation, no compatibility agent is needed, however, good agitation must be provided to maintain dispersion in the spray tank from mixing through application.
- 4. If the need for a compatibility agent is demonstrated in step 3, it may be tested as follows: Using a clean clear plastic or glass container, start at step 1, above. Add 1/2 teaspoonful of the compatibility agent to the liquid fertilizer, mix well, and then repeat steps 2 and 3.

An effective compatibility agent will cause the mixture to remain uniformly mixed with little or no separation or oil rising to the surface for 1/2 hour or longer. If slight separation occurs, 2 to 3 inversions of container should provide a uniform mixture. If oily curds form which will not disperse, try adding additional compatibility agent or test the effectiveness of an alternative compatibility agent using the procedure above. A clean jar should be used for each test.

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Compatibility Agents:

The phosphate ester-type surfactants listed below are designed for use with fiquid fertilizers and can be mixed at rates as low as 1 1/2 to 2 pints per ton of siquid fertilizer. They usually do not work well as compatibility agents for tank mixes in plain water. Add the compatibility agent just before adding herbicides. Read and follow label directions for the compatibility agent.

- 1. Sponto 168D (Witco Chemicals Co., Chicago, IL)
- Compet (Farm Chemicals, Inc., Aberdeen, NC) Not for use in California.
- 3. Unite (Hopkins Ag Chemical, Madison, WI)
- 4 T-Mulz 734-2 (Thompson-Hayward Chemical Co., Kansas City, KS) Not for use in California.
- Rigo Compatibility Agent (Rigo Company, Buckner, KY) Not for use in California.
- Amoco Spray Mate(TM) (Amoco Oil Co., Chicago, IL) Not for use in California
- Kem-Link (Universal Coop, Minneapolis, MN) Not for use in California

APPLICATION METHODS

Application in Liquid Sprays:

Apply Paarlan in a total spray volume of 20 to 40 gallons per acre (broadcast basis), using any properly calibrated low pressure herbicide sprayer that will apply the spray uniformly. As the amount of spray volume per acre decreases, the importance of accurate calibration and uniform application increases. Check the sprayer daily to insure proper calibration and uniform application. Avoid boom overlaps that will increase rates above those recommended.

Application in Dry Bulk Fertilizer

Paarlan may be impregnated on most dry bulk fertilizers. Compliance with state regulations relating to dry bulk fertilizer blending, registration, labeling and application are the responsibility of the individual and or company offering the fertilizer or chemical mixture for sale. Use any closed drum, beft, ribbon or other commonly used dry bulk fertilizer blender. To provide sufficient soil coverage, the required amount of Paarlan E.C. must be impregnated on a minimum of 200 pounds of dry bulk fertilizer per acre. If less then 6 pints of Paarlan are needed to impregnate a ton of fertilizer, add sufficient water to provide a minimum spray volume of 6 pints per ton.

Use the following formula to calculate the amount of Paarlan E.C. required to impregnate a ton of dry bulk fertilizer:

	2000	
Application Rate	X	Pints of Paarlan Required
(Pints of Paarlan	Pounds of Fertilizer	Per Ton of Fertilizer
Per/Acre)	Per Agre	

INCORPORATION DIRECTIONS

Apply and incorporate Paarlan before transplanting tobacco. The first incorporation must occur within 8 hours after application. A second incorporation is required with most equipment (see incorporation equipment, below, for specific instructions). If Paarlan is applied to a wet warm soil surface or if the wind velocity is consistently greater than 10 mph, variable weed control may result if incorporation is duleyed more than 6 hours. Operate equipment to mix Paarlan into the top 2 to 3 inches or the final seedbed. Generally, incorporation equipment will mix Paarlan approximately half as deep as equipment is operated. For example, operating equipment 4 inches deep will mix Paarlan into approximately the upper 2 inches of the seedbed.

Incorporation in Bedded Culture:

For best weed control results in bedded culture, Paarlan should be uniformly incorporated to a depth of 2-3 inches in the final seedbed.

<u>Application Prior to Bedding: Apply Paarlan and incorporate two times with recommended equipment.</u> Do not expose untreated coil during bedding, planting or cultivation as loss of weed control may occur.

Application After Bedding: Knock off beds to planting height before applying and incorporate Paarlan with recommended equipment that will conform to the shape of the bed. Avoid removal of treated soil from beds during planting or cultivation as loss of weed control may occur.

Incorporation Equipment:

Use equipment that mixes Paarlan thoroughly into the soil. Shallow incorporation less than 2 inches deep in the final seedbed may result in erratic weed control. Use of equipment not listed below may result in poor or erratic weed control and/or crop injury. The following types of equipment are recommended:

- Tandem disc: Set equipment to cut 4 to 6 inches and operate at 4 to 6 mph. Two
 incorporation passes in different directions are required. A single incorporation pass
 with a tandem or double disc does not provide adequate soil mixing.
- P.T.O. driven equipment (tillers, cultivators, hoes): Set equipment to operate 4 to 6 inches deep and operate no more than 4 mph. Only one incorporation pass is necessary with this type of equipment.

Cultivation After Planting

Soil treated with Paarlan may be shallowly cultivated or rotary hoed without loss of weed control activity. Co not cultivate deeper than the Paarlan treated layer or untreated soil may be exposed resulting in loss of weed control. In bedded culture, if weeds germinate in the bottom of the furrow due to the removal of treated soil, these weeds should be controlled by cultivation.

WEEDS AND GRASSES CONTROLLED BY PAARLAN

Annual Grasses

Comon Name Scientific Name

Barnyardgrass (Watergrass) Echinochloa crus-galli

Crabgrass Digitaria spp.

(Large crabgrass) (Small craburass)

(Smooth crabgrass)

Crowfootgrass Dactylnctenium aegyptium:

Foxtails Secaria spp.

(Bottlegrass) (Giant foxtail) (Giant green foxtail) (Green foxtail) (Robust white foxtail)

(Yellow foxtail)

Johnsongrass (Seedling only) Sorghum halepense

Panisum, fall Panicum dichotomiflorum Panicum, texas Panicum texanum

(Buffalograss) (Coloradograss)

Ryegrass, annual (Italian) Lolium multiflorum Sandbur, field Cenchrus incertus

Annual Broadleaf Weeds

Common Name Scientific Name

Carpetweed Mollugo verticillata Florida pusley Richardia scabra

(Florida purslane) (Mexican clover) (Pusley)

Lambsquarters, common Chenopodium album **Pigweeds** Amaranthus spp.

Redroot pigweed (Carelessweed) (Rough pigweed) Prostrate pigweed Spiny amaranth

Poorjoe Diodia teres Purslane, common Portulaca oleracea

APPROVED CROPS

TRANSPLANT TOBACCO

Air-cured Tobacco (Burley, Maryland, Dark)

Paarlan Alone:

Paerlan may be applied and incorporated from January 1 up until the time of transplanting. Do not apply after transplanting.

Broadcast Application Rates per Acre:

Apply at a rate of 2 pints per acre for all soil textures.

Paarlan Tank Mixes With Insecticides, Nematicides or Fungicides:

Paarlan at 2 pints per acre can be tank-mixed with Diazinon(R), Furadan(R), Lorsban(R) Mocap(R), Mocap Plus and Ridomil(R) for combined weed, insect, nematode and/or disease control (see mixing precaution below for Ridomil).

Flue-cured Tobacco

Paarlan Alone:

Paarlan may be applied and incorporated from January 1 up until the time of transplanting. Do not apply after transplanting.

Broadcast Application Rates per Acre:

Soil Texture	Paarlan E.C.
	(pints/Acre)
Coarse	2
Medium	2
Fine	2-2/3

Paarlan Tank Mixes With Insecticides, Nematicides or Fungicides: Paarlan at 2 pints per acre can be tank-mixed with Diazinon, Dyfonate, Dy-Syston, Furadan, Lorsben, Mo-Cap, Mo-cap Plus Vydate, Nemacur and Ridomil^a for combined weed, insect,

nematode and/or disease control.

*Ridomit: Psarian is usually compatible with Ridomit. To assure compatibility with Ridomit, add a small amount of each product in correct proportion to a small container of water or liquid fertilizer. Mix and let stand for five minutes. If the combination remains mixed or can be remixed easily, the mixture is compatible.

Precautions:

Note: Tank-mix product labels may require a time delay between application and planting, or may impose other types of limitations.

The user must comply with all applicable use directions, precautions and limitations imposed by the Paerlan or tank-mix product labels. Read and understand these additional use directions, precautions and limitations before use.

WARRANTY DISCLAIMER

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DOWELANCO MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

INHERENT RISKS OF USE

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Diazinon(R) - (diazinon, Ciba-Geigy)

Dytonate(R) - (fonotos, ICI)

Dy-Syston(R) - (disulfoton, Mobay)

Furadan(R) - (carbofuran, FMC)

Lorsban(R) - (chlorpyrifos, DowElanco)

Mocap(R) - (ethoprop, Rhone-Poulenc)

Mocap(R) Plus - (ethoprop plus disulfoton, Rhone-Poulenc)

Nemacur(R) - (fenamifos, Mobey)

Ridomil(R) - (metalexyl, Clbe-Geigy) Vydete(R) - (oxemyl, DuPont)

DowElenco

Indianapolis, IN 46268-1189, U.S.A.

Current revisions:

- Paarlan label edited and reformatted.
- Precautionary statements updated and signal word changed to "WARNING".
- Goosegrass deleted from "Weeds and Grasses Controlled" section.
- · Lorsban, Vydate, Dyfonate and Nemacur added to tank-mix sections.
- Dananit deleted from tank mix section.
- Paarlan "Performance Guarantee" deleted and replaced with DowElanco "Limitation of Remedies" section.