

Genetic material Zorion 100% cotton & soybeans
to be used to produce Zorion 100% cotton & soybeans

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ZORIAL® DF

DRY FLOWABLE HERBICIDE

FOR CONTROL OF CRASS AND BROADLEAF WEEDS IN COTTON AND SOYBEANS

ACTIVE INGREDIENT:

norflurazon (4-chloro-5-(methylamino)-2-(alpha, alpha, alpha-trifluoro-m-toyl)-3(2H)-pyridazinone).....	80%
INERT INGREDIENTS:.....	20%
	<u>100%</u>

ACCEPTED
MAY 2 1984
EPA REG. NO. 11273-97

KEEP OUT OF REACH OF CHILDREN

CAUTION

PRECAUTIONARY STATEMENTS

Environmental Hazards: Do not apply directly to any body of water. Do not apply when weather conditions favor runoff or drift from treated areas. Do not contaminate water by cleaning of equipment or disposal of wastes.

NOTICE: Neither Zoecon nor the seller make any warranty, express or implied, including the warranties of merchantability and/or fitness for any particular purpose concerning this material, except those which are contained on this label.

LOCATION OF USE

For use in cotton and soybeans in the states of Alabama, Arkansas, North Florida, Georgia, Kentucky, Louisiana, Mississippi, Missouri, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, and Virginia.

ZOECON CORPORATION
CROP PROTECTION DIVISION

A S A N D O Z C O M P A N Y

Palo Alto, California 94303

U.S. PAT. No. 3,644,355
EPA Reg. No. 1.273-
EPA Est. No.

NET 5 POUNDS

ZORIAL is a trademark of Sandoz, Inc.
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WEEDS CONTROLLED

ZORIAL DF Herbicide at recommended rates is effective for:

A. Controlling the following weeds in cotton or soybeans:

Barnyardgrass	Carpetweed	Spotted Spurge
Crabgrass	Florida Pusley	Spurred Anoda
Foxtail	Pennsylvania Smartweed	(cottonweed)
Goosegrass	Pigweeds	Velvetleaf
Signalgrass	Prickly Sida	
Panicum spp.	Purslane	
Johnsongrass (seedling)	Sicklepod	

B. Suppressing the following weeds in cotton or soybeans:

Bermudagrass	Cocklebur	Morningglory
Johnsongrass (rhizome)	Common Ragweed	Russian Thistle
Nutsedge (yellow and purple)	Hemp Sesbania	Other Smartweeds
Lanceleaf Sage (mintweed)	Kochia	Venice Mallow

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Tank Mixes: Always predetermine the compatibility of labeled tank mixes by mixing small proportional quantities in advance.

Products should be added to the spray tank in the following order:

1. Wettable powders and water dispersable granules. Wettable powders should be premixed in a small amount of water. Water dispersable granulars should be added during filling. Allow both to disperse before other products are added. The order of addition is not important.
2. Flowable liquids.
3. Emulsifiable concentrates.
4. Surfactants.

Begin adding dispersable granular when 1/4 full. Continue agitation during the addition of all the materials and while filling and spraying. Begin adding wettable powders, flowable liquids, emulsifiable concentrates, and surfactants after the spray tank is 3/4 full.

APPLICATION DIRECTIONS

Ground Application: Apply the recommended rate of ZORIAL DF in 10-20 gallons of water per acre. Apply accurately with a fixed boom sprayer. Equip sprayer with 8002 to 8006 fan jet nozzle tips or equivalent for broadcast application. Use 8002E to 8006E nozzle tip or equivalent for band applications. Use screen size 50 mesh or larger.

Aerial Application: Apply the recommended rate of ZORIAL DF in 5 or more gallons of water per acre. To minimize drift, use ZORIAL DF with a drift control agent such as Nalco-Trol® and Ortho-Trol®. Do not apply during periods of gusty winds or winds in excess of 5 mph. Aerial spray equipment, flying speed and flying height should be carefully adjusted to provide a uniform application to the soil surface. Use markers to avoid overlapping and possible crop injury.

Preplant Incorporated Application (PPI): Apply ZORIAL DF at the recommended rate from 30 days to just prior to planting. In West Texas and Southwest Oklahoma, ZORIAL DF may be applied up to 60 days prior to planting. Incorporate not deeper than 2-3 inches with commonly used equipment. Incorporation should occur within one week after application.

Preemergence Surface Application (PRE): Apply ZORIAL DF at the recommended rate at the time of planting and preemergence to weeds.

Split Application - THE ZORIAL SPLIT™: Apply ZORIAL DF preplant incorporated, as indicated above, at one half the recommended rate. Apply the other half preemergence surface as recommended above.

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SOYBEAN INFORMATION

Do not use in soybeans in West Texas or Southwest Oklahoma.
 Do not use when the soil type is sandy, loamy sand, or sandy loam.
 Do not use the PPI treatment in soybeans unless as part of the split application treatment. Soybeans should be planted to a depth of 1-2 inches and soil firmly packed above and around the seed bed.

BROADCAST RATES IN POUNDS OF ZORIAL DF PER ACRE:

SOIL TYPE	PRE	Split	
		ppi	pre
loam, silty loam, silt sandy clay loam, sandy clay	1.9	.95	.95
clay loam, silty clay loam, silty clay, clay	2.5	1.25	1.25

ZORIAL DF COMBINATIONS IN SOYBEANS

ZORIAL DF plus Sencor® or Lexone® Tank Mix
 This combination is recommended for improved control of cocklebur, morningglory, hemp sesbania, common ragweed and Venice mallow.

Apply a tank mix of ZORIAL DF plus Sencor or Lexone preemergence surface at the rates per acre (broadcast) recommended in the following table. These rates represent 1/2 the normal ZORIAL DF rate and 1/2 to 3/4 the normal metribuzin rate. Apply using 10-20 gallons of water per acre.

Soil Type	Zorial DF	Less than 2% Organic Matter	2-4% Organic Matter
		Sencor or Lexone 50WP*	Sencor or Lexone 50 WP*
Medium	0.95 lb.	0.375-0.56 lb.	0.50-0.75 lb.
Fine	1.25 lb.	0.50 -0.75 lb.	0.50-0.75 lb.
Mississippi Delta Fine	1.25 lb.	0.75 -1.125 lb.	0.75-1.125 lb.

*When using Sencor 4 or Lexone 4F substitute pints for pounds (1 pint equals 1 pound).

When using Sencor DF or Lexone DF, multiply pounds 50WP by 0.67.
 Refer to the ZORIAL DF and Sencor or Lexone labels for further directions and precautions.

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ZORIAL DF plus Lasso® Tank Mix

Use 1/2 rate of ZORIAL DF recommended on its label and 1/2 to 3/4 the rate of Lasso recommended on its label. Apply preemergence surface in the minimum amount of water specified on the label of the combination partner.

Before applying this tank mix, read and carefully observe the cautionary statements and all other information appearing on the product labels.

COTTON INFORMATION

BROADCAST RATES IN POUNDS OF ZORIAL DF PER ACRE:

SOIL TYPE	PPI	PRE	Split	
			ppi	pre
sandy, loamy sand sandy loam	1.25	1.25	.625	.625
Southeastern coastal plains (Alabama and Georgia only)*	**	1.9	.95	.95
loam, silty loam, silt, sandy clay loam, sandy clay	1.9	1.9	.95	.95
clay loam, silty clay loam, silty clay, clay	2.5	2.5	1.25	1.25

* For improved control of hard to control weeds like pigweed, cocklebur and tropic croton.

**Do not use full rate PPI on COASTAL PLAINS SOILS.

West Texas and Southwest Oklahoma Only: Prior to application of ZORIAL DF, completely destroy the seed beds of the previous year by "cross-discing." Apply ZORIAL DF PPI only. To prevent removal of the herbicide application by wind, immediate incorporation is recommended. Soybeans can be planted as a replacement crop 45 days after the first planting of cotton. Do not plant peanuts as a replacement crop. Do not use ZORIAL DF on furrow planted cotton or on glandless cotton varieties. Do not use on sand or loamy sand (soils with greater than 70% sand content).

ZORIAL DF COMBINATIONS IN COTTON

ZORIAL DF PLUS COTORAN® 80W OVERLAY OR TANK MIX

This combination is recommended for improved control of cocklebur and morningglory.

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Overlay: Apply 1/2 to the full rate of ZORIAL DF ppi as recommended on its label. Apply 1/2 to the full rate of COTORAN 80WP as a preemergence overlay as recommended on its label.

Tank Mix: Apply 1/2 the recommended rate of ZORIAL DF ppi as directed for the ZORIAL SPLIT, and apply a tank mix of the remaining 1/2 rate of ZORIAL DF plus 1/2 to the full recommended rate of COTORAN 80W as a preemergence overlay in 20 gallons of water per acre. Or apply a tank mix of 1/2 to the full recommended rate of ZORIAL DF plus 1/2 to the full recommended rate of COTORAN 80W as a preemergence treatment in 20 gallons of water per acre.

SOUTHEASTERN COASTAL PLAINS SOILS (Alabama and Georgia only): Apply ZORIAL DF at .625 lbs. ppi followed by .625 lbs. plus 1/2 the full rate of COTORAN 80WP as a preemergence overlay as recommended on its label.

Refer to the ZORIAL and COTORAN labels for further directions and precautions.

Band Treatment: When applying a band treatment of ZORIAL DF the following formula may be used to calculate the amount per acre:

<u>Band width in inches</u>	x	Rate in lbs. per acre	=	Pounds per acre
Row width in inches		broadcast treatment		for band treatment

STORAGE AND DISPOSAL

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

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

Container Disposal: Completely empty container into application equipment. Then dispose of empty container in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

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Lexone is a trademark of E.I. DuPont de Nemours and Co.
Nalco-Trol is a trademark of Nalco Chemical Co.
Cotoran is a trademark of Ciba-Geigy.
Lasso is a trademark of Monsanto Co.

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