

ACCEPTED

MAR - 9 1987

U.S. Department of Agriculture  
Federal Insecticide, Fungicide, and Rodenticide Act  
EPA Reg. No. 1471-112

SURFLAN® A.S. (E.P.A. REG. NO. 1471-112)  
SURFLAN® Dry Flowable (E.P.A. REG. NO. 1471-151)

SURFLAN/Lorox® Plus for Weed Control in Soybeans  
(Do Not Use in California)

SURFLAN may be tank-mixed with Lorox Plus for preemergence weed control in soybeans.

SURFLAN/Lorox Plus controls those weeds listed for SURFLAN alone plus these additional weeds:

Controlled

Cocklebur, common  
Jimsonweed  
Mustards  
Pigweed  
(Palmer amaranth)  
(Smooth)  
(Tall waterhemp)

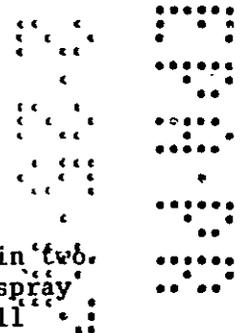
Prickly sida  
(Tezweed)  
Ragweed  
(Common)  
Smartweed  
Spotted spurge  
Velvetleaf

Partially Controlled

Burcucumber  
Eastern black nightshade  
Morningglory  
(Tall)  
(Ivyleaf)  
(Pitted)  
(Entireleaf)

Nutsedge species  
Ragweed  
(Giant)  
Sunflower

SURFLAN/Lorox Plus should be applied to the soil surface within (2) days after planting but before the crop emerges. Do not spray on top of emerged soybeans or severe crop injury or death will occur.



Soil Texture	SURFLAN		Lorox Plus Dispersable Granules
	A.S. (Pints)	or Dry Flowable (Pounds)	0.5-3% O.M. (Ounces)
Coarse	1	0.6	12 - 14
Medium	1	0.6	14 - 16
Fine	1 1/2	0.9	16 - 18

**NOTE:** SURFLAN/Lorox Plus will only provide partial control of fall panicum at these reduced SURFLAN use rates. For control of fall panicum use one and one-half (1 1/2), two (2) and three (3) pints per acre of SURFLAN A.S. and nine-tenths (0.9), one and two-tenths (1.2) and one and eight-tenths (1.8) pounds per acre of SURFLAN Dry Flowable on coarse, medium and fine textured soils respectively.

Do not apply Lorox Plus to soils with less than one-half percent (1/2%) organic matter.

Do not apply Lorox Plus to soils with pH greater than 6.8.

Use higher rates of Lorox Plus on soils with higher organic matter or heavy pressure from large deep germinating weed seeds.

Plant soybean seed in areas to be treated with Lorox Plus one and one-half to two (1 1/2 to 2) inches deep on a flat or raised seedbed only, or crop injury may occur.

Soybean injury from Lorox Plus may occur if excessive rainfall occurs after application but before soybeans germinate.

#### Activation and Cultivation

Preemergence activity of SURFLAN/Lorox Plus requires rainfall or irrigation to activate. Best results are obtained if treatment is made to moist soil and followed by a single rainfall or irrigation of one-half to one (1/2 to 1) inches before weeds germinate. On dry soil, one to two (1 to 2) inches is required for activation. If moisture is insufficient to activate the herbicide, a rotary hoeing or shallow cultivation should be made after emergence of the crop while weeds are small enough to be controlled by mechanical means.

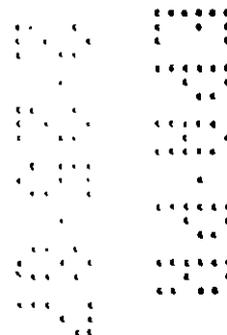
Precautions

Read the Lorox Plus label carefully for cautions and precautions relating to environmental hazards, planting of rotation crops, sprayer contamination and cleanup, soil pH, organic matter and soil texture use restrictions, restrictions where Scepter was used the previous year, grazing restrictions and other directions, precautions and limitations before applying the SURFLAN/Lorox Plus tank-mix.

Read the SURFLAN labels carefully for additional directions, precautions and limitations before applying these products.

Lorox® Plus (chlorimuron ethyl plus linuron, DuPont)  
Scepter® (imazaquin, American Cyanamid)  
SURFLAN® (oryzalin, Elanco)

Elanco Products Company  
A Division of Eli Lilly and Company  
Indianapolis, Indiana 46285





SURFLAN also provides partial control or suppression of:

Ladysthumb	Smartweed, annual
Morningglory, annual	Spurge, spotted
Nightshade, black	Volunteer wheat
Prickly sida (teaweed)	

- 1 Special instructions for Texas only (see complete label).
- 2 SURFLAN controls these weeds on medium and fine textured soils and provides partial control on coarse textured soils.

#### Broadcast Rates Per Acre

<u>Soil Texture</u>	<u>SURFLAN A.S.</u> (Quarts)	<u>SURFLAN Dry Flowable</u> (Pounds)
Coarse	1	1.2
Medium	1 1/4 - 1 1/2	1.5 - 1.8
Fine	1 1/4 - 1 1/2	1.5 - 1.8

Use the lower rate under light crop residue conditions and under light weed pressure. Use sequential herbicide applications in the spring to control escaped broadleaved weeds and to provide control of those weeds not controlled by SURFLAN. Do not apply SURFLAN to soils containing more than five percent (5%) organic matter.

#### SURFLAN/2,4-D Tank Mix

SURFLAN may be tank mixed with most 2,4-D products for control of established winter weeds. When tank mixing, add SURFLAN A.S. or Dry Flowable to the tank first and agitate until completely dispersed. Maintain agitation and add the 2,4-D product.

Certain ester formulations of 2,4-D require more vigorous agitation to keep the product well dispersed when mixed with SURFLAN A.S. or Dry Flowable.

To assure the compatibility of SURFLAN with 2,4-D, add the products into small containers of water in the correct proportions. After thorough mixing, let stand for five (5) minutes and check for compatibility. If the combination remains mixed or can be remixed easily, the mixture is compatible. Maintain vigorous agitation during mixing and until the spray tank is empty. Read the 2,4-D label carefully and follow all directions, precautions and limitations before use.

Precautions: Do not apply SURFLAN to frozen or snow covered ground. Read the SURFLAN labels carefully for additional directions, precautions and limitations before applying these products.

SURFLAN® (oryzalin, Elanco)

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SURFLAN A.S. (E.P.A. REG. NO. 1471-112)

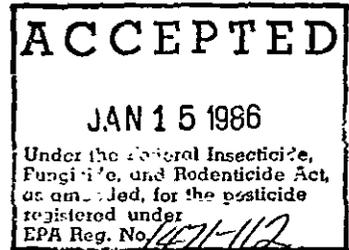
**SURFLAN/LASSO® MICRO-TECH™, AND  
SURFLAN/LASSO MICRO-TECH™/LEXONE® OR  
SENCOR® COMBINATIONS FOR WEED CONTROL IN SOYBEANS**

Surflan A.S. may be tank-mixed with Lasso Micro-Tech™ or Lasso Micro-Tech plus Lexone or Sencor for weed control in soybeans.

**Surflan/Lasso Micro-Tech Tank-Mix**

Surflan/Lasso Micro-Tech controls those weeds listed for Surflan alone plus provides partial control or suppression of the following weeds listed on either the Surflan or Lasso labels.

- Ladysthumb
- Morningglory
- Nightshade, black
- Nightshade, hairy
- Prickly sida (teaweed)
- Smartweed, Pennsylvania
- Velvetleaf



The Surflan/Lasso Micro-Tech tank-mix may be applied to the soil surface after planting, up through two (2) days after planting and prior to crop or weed emergence. Apply the tank-mix in 20 to 40 gallons of water per acre with any low pressure herbicide sprayer. Do not spray overtop of emerged soybeans.

**Broadcast Rates Per Acre**

<u>Soil Texture</u>	<u>Surflan A.S. (Quarts)</u>	<u>Lasso Micro-Tech (Quarts)</u>
Coarse	1/2	1 1/2 - 2
Medium	1/2	2 - 2 1/2

Use the lower rate in the above rate ranges on soils with less than 3% organic matter and the higher rate on soils with 3% or more organic matter. Use the higher rate in the recommended range in areas of heavy weed infestations.

Prickly sida (teaweed)  
 Ragweed, common  
 Smartweed, Pennsylvania  
 Velvetleaf

Surflan/Lasso Micro-Tech/Lexone or Sencor provides partial control or suppression of the following weeds listed on either the Surflan, Lasso Micro-Tech, Lexone or Sencor labels:

Cocklebur  
 Jimsonweed  
 Ladysthumb  
 Morningglory  
 Nightshade, black  
 Nightshade, hairy  
 Ragweed, giant  
 Sicklepod

The Surflan/Lasso Micro-Tech/Lexone or Sencor tank-mix may be applied to the soil surface after planting, up through two (2) days after planting and prior to crop or weed emergence. Apply the tank-mix in 20 to 40 gallons of water per acre with any low pressure herbicide sprayer. Do not spray overtop of emerged soybeans.

Broadcast Rates Per Acre

Soil Texture	Surflan A.S. (Quarts)	Lasso Micro-Tech (Quarts)	Lexone 4L or Sencor 4 (Pints)	Lexone Dry Flowable or Sencor Dry Flowable (Pounds)
Coarse	1/2	1 1/2 - 2	1/3 - 1/2	1/4 - 1/3
Medium	1/2	2 - 2 1/2	1/2 - 3/4	1/3 - 1/2

Use the lower rate in the above rate ranges on soils with less than 3% organic matter and the high rate on soils with 3% or more organic matter. Use the higher rate in the recommended range in areas of heavy weed infestations.

Do not use Lexone or Sencor on coarse soils with less than 1% organic matter.

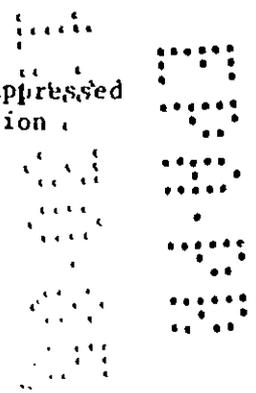
Special Precautions: Poor weed control and/or crop injury may result if directions are not followed. Over application may result in crop injury and/or soil residue. Do not use treated vines for feed or forage. Do not contaminate any body of water or apply to any area not specified on the label. Do not allow sprays to drift onto adjacent desirable plants. Do not plant any crop other than soybeans within four (4) months after application. Do not tank mix SURFLAN AS with Lasso EC. This combination is frequently incompatible and may cause application problems.

Caution: Read the Surflan, Lasso Micro-Tech, Lexone or Sencor labels carefully for directions, precautions and limitations before applying these products.

- SURFLAN® - oryzalin - Elanco Products Company
- Lasso® Micro-Tech™ - alachlor - Monsanto Company
- Lexone® - metribuzin - E.I. DuPont de Nemours and Company
- Sencor® - metribuzin - Bayer GmbH

cjsurfsupp124  
(Revised 12/03/85) - Deleted recommendations for fine textured soils; placed jimsonweed and sicklepod in partial control or suppressed category rather than controlled category for three-way combination treatment.

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cjsurfsupp124  
(Revised 09/12/85)

SURFLAN® A.S. (E.P.A. REG. NO. 1471-112)

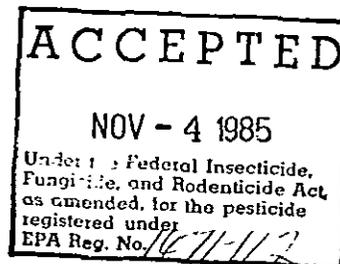
SURFLAN/LASSO® MICRO-TECH™, AND  
SURFLAN/LASSO MICRO-TECH™/LEXONE® OR  
SENCOR® COMBINATIONS FOR WEED CONTROL IN SOYBEANS

SURFLAN AS may be tank-mixed with Lasso Micro-Tech™ or Lasso Micro-Tech plus Lexone or Sencor for weed control in soybeans.

SURFLAN/LASSO Micro-Tech Tank-Mix

SURFLAN/Lasso Micro-Tech controls those weeds listed for SURFLAN alone plus provides partial control or suppression of the following weeds listed on either the SURFLAN or Lasso labels.

Ladysthumb  
Morningglory  
Nightshade, black  
Nightshade, hairy  
Prickly sida (teaweed)  
Smartweed, Pennsylvania  
Velvetleaf



The SURFLAN/Lasso Micro-Tech tank-mix may be applied to the soil surface after planting, up through two (2) days after planting and prior to crop or weed emergence. Apply the tank-mix in 20 to 40 gallons of water per acre with any low pressure herbicide sprayer. Do not spray overtop of emerged soybeans.

Broadcast Rates Per Acre

<u>Soil Texture</u>	<u>SURFLAN AS (Quarts)</u>	<u>Lasso Micro-Tech (Quarts)</u>
Coarse	1/2	1 1/2 - 2
Medium	1/2	2 - 2 1/2
Fine	1/2 - 3/4	2 1/2 - 3

Use the lower rate in the above rate ranges on soils with less than 3% organic matter and the higher rate on soils with 3% or more organic matter. Use the higher rate in the recommended range in areas of heavy weed infestations.

SURFLAN/LASSO MICRO-TECH/LEXONE OR SENCOR TANK-MIX

SURFLAN/Lasso Micro-Tech/Lexone or Sencor controls those weeds listed for SURFLAN alone plus these additional weeds that are listed on either the Lasso/Lexone or Sencor labels.

- Jimsonweed
- Prickly sida (tearweed)
- Ragweed, common
- Sicklepod
- Smartweed, Pennsylvania
- Velvetleaf

SURFLAN/Lasso Micro-Tech/Lexone or Sencor provides partial control or suppression of the following weeds listed on either the SURFLAN, Lasso Micro-Tech, Lexone or Sencor labels:

- Cocklebur
- Ladysthumb
- Morningglory
- Nightshade, black
- Nightshade, hairy
- Ragweed, giant

The SURFLAN/Lasso Micro-Tech/Lexone or Sencor tank-mix may be applied to the soil surface after planting, up through two (2) days after planting and prior to crop or weed emergence. Apply the tank-mix in 20 to 40 gallons of water per acre with any low pressure herbicide sprayer. Do not spray overtop of emerged soybeans.

Broadcast Rates Per Acre

Soil Texture	SURFLAN AS (Quarts)	Lasso Micro-Tech (Quarts)	Lexone Dry Flowable or Sencor Dry Flowable (Pounds)	
			Lexone 4L or Sencor 4 (Pints)	
Coarse	1/2	1 1/2 - 2	1/3 - 1/2	1/4 - 1/3
Medium	1/2	2 - 2 1/2	1/2 - 3/4	1/3 - 1/2
Fine	1/2 - 3/4	2 1/2 - 3	3/4 - 1	1/2 - 2/3

Use the lower rate in the above rate ranges on soils with less than 3% organic matter and the high rate on soils with 3% or more organic matter. Use the higher rate in the recommended range in areas of heavy weed infestations.

Do not use Lexone or Sencor on coarse soils with less than 1% organic matter.

Special Precautions: Poor weed control and/or crop injury may result if directions are not followed. Over application may result in crop injury and/or soil residue. Do not use treated vines for feed or forage. Do not contaminate any body of water or apply to any area not specified on the label. Do not allow sprays to drift onto adjacent desirable plants. Do not plant any crop other than soybeans within four (4) months after application. Do not tank mix SURFLAN AS with Lasso EC. This combination is frequently incompatible and may cause application problems.

Caution: Read the SURFLAN, Lasso Micro-Tech, Lexone or Sencor labels carefully for directions, precautions and limitations before applying these products.

- SURFLAN® - oryzalin - Elanco Products Company
- Lasso® Micro-Tech™ - alachlor - Monsanto Company
- Lexone® - metribuzin - E.I. DuPont de Nemours and Company
- Sencor® - metribuzin - Bayer GmbH

cjsurfsupp124  
(Revised 09/12/85)

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ACCEPTED  
 NOV - 4 1985  
 Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 71-112

cjsurfsupp121  
 (08/28/85)

SURFLAN® 75W (E.P.A. REG. NO. 1471-96)  
 SURFLAN® A.S. (E.P.A. REG. NO. 1471-112)  
 SURFLAN® DRY FLOWABLE (E.P.A. REG. NO. 1471-151)

SURFLAN® 75W, A.S., DRY FLOWABLE FOR  
 FALL OR EARLY SPRING APPLICATIONS FOR NO-TILL SOYBEANS

SURFLAN ALONE

SURFLAN A.S., SURFLAN 75W and SURFLAN Dry Flowable may be applied in the fall or early spring directly over undisturbed stubble from the previous crop. SURFLAN application can begin anytime following harvest after October 15. Spring applications should be made as early as possible in the spring prior to weed germination, but at least four (4) weeks before planting. SURFLAN will not control established weeds.

The soil should not be tilled between the SURFLAN application and soybean planting.

Early applied SURFLAN effectively controls these annual grasses and broadleaf weeds:

Grasses:

Barnyardgrass (Watergrass)	Foxtails (Bottlegrass)	Groosegrass (Silver crabgrass)
Brachiaria (Signalgrass)	(Bristlegrass)	(Wiregrass)
Browntop panicum <sup>1</sup>	(Giant foxtail)	(Yardgrass)
Crabgrasses (Large crabgrass)	(Green foxtail)	Johnsongrass (Seedling only)
(Smooth crabgrass)	(Pigeongrass)	Texas panicum <sup>1</sup>
Crowfootgrass	(Robust foxtail)	(Buffalograss)
Fall panicum	(Yellow foxtail)	(Colorado grass)
(Spreading panicgrass)		

Broadleaf Weeds:

Carpetweed	Pigweeds (Carelessweed)	Purslane, common
Florida pusley (Florida purslane)	(Prostrate pigweed)	Ragweed, common <sup>2</sup>
(Mexican clover)	(Redroot pigweed)	Spurge, prostrate <sup>1</sup>
(Pusley)	(Rough pigweed)	Velvetleaf <sup>2</sup>
Lambsquarters	(Spiny pigweed)	

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SURFLAN also provides partial control or suppression of:

Ladysthumb	Smartweed, annual
Morningglory, annual	Spurge, spotted
Nightshade, black	Volunteer wheat
Prickly sida (teaweed)	

- 1 Special instructions for Texas only (see complete label).
- 2 SURFLAN controls these weeds on medium and fine textured soils and provides partial control on coarse textured soils.

Broadcast Rates Per Acre

<u>Soil Texture</u>	<u>SURFLAN A.S.</u> (Quarts)	<u>SURFLAN 75W</u> (Pounds)	<u>SURFLAN Dry Flowable</u> (Pounds)
Coarse	1	1 1/3	1.2
Medium	1 1/4 - 1 1/2	1 2/3 - 2	1.5 - 1.8
Fine	1 1/4 - 1 1/2	1 2/3 - 2	1.5 - 1.8

Use the lower rate under light crop residue conditions and under light weed pressure. Use sequential herbicide applications in the spring to control escaped broadleaved weeds and to provide control of those weeds not controlled by SURFLAN. Do not apply SURFLAN to soils containing more than five percent (5%) organic matter.

SURFLAN/2,4-D Tank Mix

SURFLAN may be tank mixed with most 2,4-D products for control of established winter weeds. When tank mixing, add SURFLAN A.S., 75W or Dry Flowable to the tank first and agitate until completely dispersed. Maintain agitation and add the 2,4-D product.

Certain ester formulations of 2,4-D require more vigorous agitation to keep the product well dispersed when mixed with SURFLAN A.S. or Dry Flowable. SURFLAN 75W is incompatible with some ester formulations of 2,4-D.

To assure the compatibility of SURFLAN with 2,4-D, add the products into small containers of water in the correct proportions. After thorough mixing, let stand for five (5) minutes and check for compatibility. If the combination remains mixed or can be remixed easily, the mixture is compatible. Maintain vigorous agitation during mixing and until the spray tank is empty. Follow 2,4-D directions, precautions and limitations.

1/16/57

Precaution: Do not apply SURFLAN to frozen or snow covered ground.

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cjsurfsuppl21  
(Revised 08/28/85): Added SURFLAN Dry Flowable; modified April 15 application cutoff date to state "Spring applications should be made as early as possible in the spring prior to weed germination, but at least four (4) weeks before planting". Added "Do not apply SURFLAN to soils containing more than five percent (5%) organic matter". Added SURFLAN 2,4-D tank-mix directions.

