

10654
PM 25
1471-151

ACCEPTED
'AUG - 9 1985
Under the Federal Insecticide,
Fungicide, and Rodenticide Act,
as amended, for the pesticide
registered under
EPA Reg. No. **1471-151**

ELANCO

0000
ID-5500-

Herbicide

Surflan®

Dry
Flowable

A.S.

TM

Net Contents ~~2.5 Gallons~~ 000

**A preemergence surface-applied herbicide for the control
of most annual grasses and certain broadleaf weeds.**

Active ingredient:
oryzalin* (3,5-dinitro-N,N'-dopropylsulfanilamide) 85
Inert ingredients 15
0.85 ————— Contains 0.85 pounds active ingredient per gallon pound
*Surflan®—the registered trademark for Elanco Products oryzalin.

EPA Reg. No. 1471-151
EPA Est. 07429-GA-01
FN-7029
000
000
000

Keep Out of Reach of Children.

CAUTION

See back of container for additional precautionary statements.

BEST AVAILABLE COPY

First Aid: If swallowed, call a physician or Poison Control Center. Drink one to two glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person. If on skin, wash with plenty of soap and water. Get medical attention if irritation persists. If in eyes, flush eyes with plenty of water. Get medical attention if irritation persists. If inhaled, remove individual to fresh air. If breathing difficulty occurs, get medical attention.

Directions for Use **Read All Directions Carefully Before Applying**

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

See Attached Literature for Complete Directions for Use.

Shake Well Before Using.

Precautionary Statements

Hazards to Humans and Domestic Animals

CAUTION

dust or

Harmful if swallowed, inhaled or absorbed through the skin. Avoid breathing spray mist and contact with skin or eyes. In case of contact, immediately flush eyes or skin with plenty of water. Get medical attention if irritation develops. SURFLAN A.S. may cause skin sensitization reactions in certain individuals. Use eye protection and protective clothing such as coveralls, a long sleeved shirt and impermeable gloves when handling this product.

Environmental Hazards

Do not apply directly to water or wetland. Do not contaminate water by cleaning of equipment or disposal of wastes. Cover or incorporate spills.

STORAGE AND DISPOSAL

Storage: Store in original container only. Do not store in direct sunlight. Do not store at temperatures above 120°F. If stored above 120°F, SURFLAN Dry Flowable could lose some of its dispersing properties, resulting in difficult application, poor weed control or crop injury. In case of leak or spill, contain material and dispose as waste.

Pesticide Disposal: Do not contaminate water, food or feed by storage or disposal. Wastes resulting from the 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, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

The manufacturer makes no warranties, express or implied, concerning the product or its use which extend beyond the description on the label or in literature published by Eanco Products Company and all statements made concerning this product apply only when used as directed. Eanco Products Company expressly disclaims all warranties, express or implied, in relation to any use of the product in combination or sequential use with any other product not specifically recommended in writing by Eanco Products Company. It is the responsibility of the user to determine if the use of the product in combination or sequential use is recommended by Eanco Products Company. The liability of Eanco shall in no manner extend to any damage or injury not directly caused by the inclusion of the Eanco product in such combination or sequential use.

Eanco Products Company • A Division of Eli Lilly and Company
Indianapolis, IN 46285, U.S.A.

WU 0430 AMX

00 0000 000

ELANCO

0000

0-2300



Dry Flowable

A preemergence surface-applied herbicide for the control of most annual grasses and certain broadleaf weeds.

Active Ingredient
 oryzalin* (3,5-dinitro-N,N'-
 dipropylsulfanilamide) 48.0%

Inert Ingredients 52.0%

0.85 ————— Contains four pounds active ingredient per gallon.
 *Surflan® — the registered trademark for Elanco Products oryzalin.

- Woods and Grasses Controlled (See 23)
- Oryzalin (p. 15)
- Soil and Systemic Recommendations
- No Till System Recommendations
- Tree and Shrub Recommendations
- Application with Fertilizer (p. 15)

85
15

pound

EPA Reg. No. 1471-112
 Elanco Products Company
 A Division of Eli Lilly and Company
 Indianapolis, IN 46285, U.S.A.

Copyright © 1985 by Elanco Products Company
 1985

Literature revised December 12, 1984

00-2600-0000

0000

00/00

BEST AVAILABLE COPY

3 of 54

ELANCO ID 0000

Revised February 12, 1985
Revised February 13, 1985
Revised February 14, 1985
Revised February 15, 1985
Duplicated February 15 revision and
EDD'd to MC03, Opr3 (Alvis) 2/28/85
Revised March 13, 1985
Revised March 19, 1985
Revised March 29, 1985

Surflan® Dry Flowable Herbicide

- Directions for Use
- Cautions and Precautions
- Crop Recommendations
- Tank Mix Recommendations

ELANCO PRODUCTS COMPANY
A Division of Eli Lilly and Company Indianapolis, IN 46285, U.S.A.

Surflan® - the registered trademark for Elanco Products oryzalin

Copyright (c) Elanco Products Company - 1985

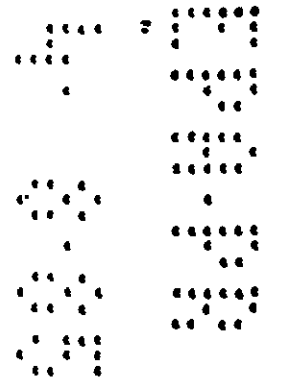
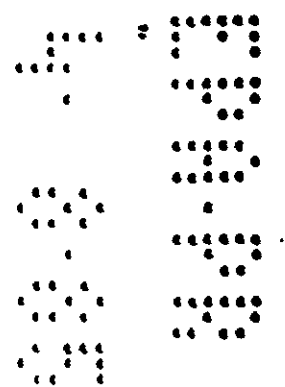


TABLE OF CONTENTS**Precautionary Statements****Storage and Disposal****Precaution****Weeds and Grasses Controlled:****Weeds Controlled in Field Crops by Surflan®****Weeds Controlled in Fruit,****Nut Crops and Vineyards by Surflan****Directions for Use****Soil Texture Guide****Mixing Directions****Soil Preparation****Application:****Ground Application****Aerial Application****Chemigation****Activation and Cultivation****Crop Recommendations****General Recommendations - Field Crops****Soybean - Surflan Alone****Soybean - Tank Mix Recommendations****Surflan/Amiben®****Surflan/Dyanap®****Surflan/Klean-Krop®****Surflan/Lexone®****Surflan/Lorox®****Surflan/Sencor®****No-Till Soybean - Surflan for Fall****or Early Spring Application****No-Till Soybean - Tank Mix Recommendations****Surflan/Paraquat - Control of Existing Vegetation****Surflan/Roundup® - Control of Existing Vegetation****Surflan/Lexone****Surflan/Lorox****Surflan/Sencor****No-Till Soybean - Surflan Over-the-Top Spray****for Weed Control in Wheat or Barley****Followed by No-Till Soybeans****Cotton - Surflan Alone (Texas Only)****Pea - Tank Mix Recommendation****Surflan/Treflan®****Potato (White) - Surflan Alone****Potato (White) - Tank Mix Recommendations:****Surflan/Lexone****Surflan/Sencor****Tobacco - Surflan Alone****Fruit, Nut Crops and Vineyards****(non-bearing and bearing) - Surflan Alone**

Fruit, Nut Crops and Vineyards - Tank Mix Recommendations:

Surflan Tank Mix Reference Table

Surflan/Casoron®

Surflan/Goal®/Paraquat

Surflan/Hyvar® X

Surflan/Karmex® (diuron)

Surflan/Krovar® I

Surflan/Xrovar® II

Surflan/Paraquat

Surflan/Princep® (simazine)

Surflan/Roundup

Surflan/Sinbar

Surflan/Solican®

Surflan Application with Liquid Fertilizers:

General Instructions

Liquid Fertilizer Mixing Instructions

Compatibility Test

Surflan Performance Guarantee

PRECAUTIONARY STATEMENTS

Keep Out of Reach of Children.

CAUTION

Hazards to Humans and Domestic Animals

...ul if swallowed, inhaled or absorbed through the skin. Avoid breathing dust or spray mist and contact with skin or eyes. Use eye protection and protective clothing such as coveralls, a long sleeved shirt and impermeable gloves when handling this product.

First Aid: If swallowed, call a physician or Poison Control Center. Drink one to two glasses of water and induce vomiting by touching back of throat with finger. Do not include vomiting or give anything by mouth to an unconscious person. If on skin, wash with plenty of soap and water. Get medical attention if irritation persists. If in eyes, flush eyes with plenty of water. Get medical attention if irritation persists. If inhaled, remove individual to fresh air. If breathing difficulty occurs, get medical attention.

Environmental Hazards

Do not apply directly to water or wetland. Do not contaminate water by cleaning of equipment or disposal of wastes. Cover or incorporate spills.

Storage and Disposal

Storage: Store in original container only. Do not store in direct sunlight. Do not store at temperatures above 120°F. If stored above 120°F, Surflan Dry Flowable could lose some of its dispersing properties, resulting in difficult application, poor weed control or crop injury. In case of leak or spill, contain material and dispose as waste.

Pesticide Disposal: Do not contaminate water, food or feed by storage or disposal. Wastes resulting from the 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, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Precaution

Do not feed forage from treated fields to livestock. Poor weed control or crop injury may result if directions are not followed. Over application may result in crop injury or soil residue. Do not plant any root crop for 12 months following a Surflan application.

Surflan Dry Flowable should not be impregnated on any dry bulk fertilizer. Do not impregnate nitrate containing fertilizer blends with Surflan A.S., 75W or Dry Flowable; the combination may result in explosive mixtures. Combining Surflan Dry Flowable with any dry bulk fertilizer may result in explosive mixtures.

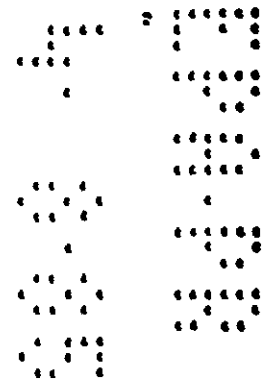
WEEDS AND GRASSES CONTROLLED

Weeds Controlled in Field Crops By Surflan

Surflan will not control established weeds.

GRASSES

- Barnyardgrass (Echinochloa sp.)
(Watergrass)
- Brachiaria (Brachiaria sp.)
(Signalgrass)
- Browntop panicum* (Panicum fasciculatum)
- Crabgrasses (Digitaria spp.)
(Large crabgrass)
- (Smooth crabgrass)
- Crowfootgrass (Dactyloctenium aegyptium)
- Fall panicum (Panicum dichotomiflorum)
(Spreading panicgrass)
- Foxtails (Setaria spp.)
(Bottlegrass)
- (Bristlegrass)
- (Giant foxtail)
- (Green foxtail)
- (Pigeongrass)
- (Robust foxtail)
- (Yellow foxtail)
- Goosegrass (Eleusine indica)
(Silver crabgrass)
- (Wiregrass)
- (Yardgrass)
- Johnsongrass (Sorghum halepense)
(Seedling only)



Texas panicum (Panicum texanum)
 (Buffalograss)
 (Coloradograss)

BROADLEAF WEEDS .

Carpetweed (Mollugo verticillata)
 Florida pusley (Richardia scabra)
 (Florida purslane)
 (Mexican clover)
 (Pusley)

Lambsquarters (Chenopodium album)
 Pigweeds (Amaranthus spp.)
 (Carelessweed)
 (Prostrate pigweed)
 (Redroot pigweed)
 (Rough pigweed)
 (Spiny pigweed)

Purslane, common (Portulaca oleracea)
 Spurge, prostrate* (Euphorbia supina)

*(See page 19 for special instructions for Texas only)

Surflan also provides partial control or suppression of:

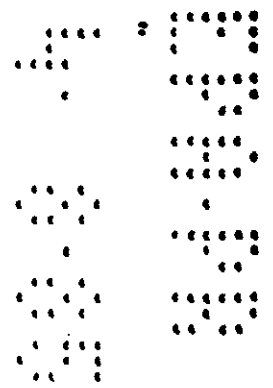
Ladysthumb	Smartweed, annual
Morningglory, annual	Spurge, spotted
Nightshade, black	Velvetleaf
Prickly sida (teaweed)	Volunteer wheat
Ragweed, common	

WEEDS CONTROLLED IN FRUIT, NUT CROPS AND VINEYARDS BY Surflan

Surflan applied in Fruit, Nut Crops and Vineyards controls the following weeds:

GRASSES

Barley, little	(Hordeum pusillum)
Barnyardgrass	(Echinochloa sp.)
(Watergrass)	
Bluegrass, annual (Poa)	(Poa annua)
Brachiaria	(Brachiaria sp.)
(Signalgrass)	
Browntop panicum	(Panicum fasciculatum)
Crabgrasses	(Digitaria spp.)
(Large crabgrass)	
(Smooth crabgrass)	
Crowfootgrass	(Dactyloctenium aegyptium)
Cupgrass	(Eriochloa gracilis)
Downy brome	(Bromus tectorum)
Fall panicum	(Panicum dichotomiflorum)
(Spreading panicgrass)	



Foxtails	(Setaria spp.)
(Bottlegrass)	
(Bristlegrass)	
(Giant foxtail)	
(Green foxtail)	
(Pigeongrass)	
(Robust foxtail)	
(Yellow foxtail)	
Goosegrass	(Eleusine indica)
(Silver crabgrass)	
(Wiregrass)	
(Yardgrass)	
Guineagrass	(Panicum maximum)
Johnsongrass	(Sorghum halepense)
(Seedling only)	
Junglerice	(Echinochloa colonum)
Lovegrass, Mexican	(Eragrostis mexicana)
Lovegrass, orcutt	(Eragrostis orcuttiana)
Oat, wild	(Avena fatua)
Ryegrass, annual (Italian)	(Lolium multiflorum)
Texas panicum	(Panicum texanum)
(Buffalograss)	
(Coloradograss)	
Witchgrass	(Panicum capillare)
 BROADLEAF WEEDS	
Carpetweed	(Mollugo verticillata)
Chickweed	(Stellaria media)
Cudweed	(Gnaphalium chilense)
Fiddleneck, coast	(Amsinckia intermedia)
Florida pusley	(Richardia scabra)
(Florida purslane)	
(Mexican clover)	
(Pusley)	
Henbit	(Lamium amplexicaule)
Knotweed, prostrate	(Polygonum aviculare)
Lambsquarters	(Chenopodium album)
Pigweeds	(Amaranthus spp.)
(Carelessweed)	
(Prostrate pigweed)	
(Redroot pigweed)	
(Rough pigweed)	
(Smooth pigweed)	
(Spiny pigweed)	
(Tumble pigweed)	
Puncturevine	(Tribulus terrestris)
Purslane, common	(Portulaca oleracea)
Rockpurslane, redmaids	(Calandrinia caulescens)
Sandbur, field	(Cenchrus incertus)
Shepherdspurse	(Capsella bursa-pastoris)
Sprangletop, red	(Leptochloa filiformis)

Surflan provides partial control or suppression of:

- | | |
|-----------------------------|----------------------------|
| Filaree, red and white stem | Nightshade, black |
| Groundsel, common | Prickly sida (teaweed) |
| Ladysthumb | Ragweed, common |
| Lettuce, prickly | Ragweed, giant (horseweed) |
| Mallow, common | Rocket, London |
| Milkweed, climbing | Smartweed, annual |
| Morningglory, annual | Sowthistle, annual |
| Mustard, black | Spurge, prostrate |
| Mustard, wild | Velvetleaf |

DIRECTIONS FOR USE

Surflan is a preemergence, surface applied herbicide for the control of most annual grasses and certain broadleaf weeds. General rule: The more coarse the soil or the lower the organic matter, the lower the rate.

SOIL TEXTURE GUIDE

Refer to the following guide to determine your soil texture.

<u>Soil Texture</u>	<u>Soil Classification</u>
Coarse (light) soils	Sand
	Loamy sand
	Sandy loam
Medium soils	Loam
	Silt loam
	Silty clay loam*
	Silt
	Sandy clay loam*
Fine (heavy) soils	Clay
	Clay loam
	Silty clay loam*
	Silty clay
	Sandy clay Sandy clay loam*

*Silty clay loam and sandy clay loam soils are transitional soils and may be classified as either medium or heavy textured soils. If silty clay loam or sandy clay loam soils are predominantly sand or silt, they are usually classified as medium textured soils. If predominantly clay, they are usually classified as fine textured soils.

MIXING DIRECTIONS

Use the following instructions for mixing Surflan Dry Flowable alone in water and tank mixed in water.

General Mixing Instructions in Water Alone

Start with a clean sprayer. Fill the spray tank three-fourths (3/4) full with clean water. Start agitation and increase pump speed to operating pressure. Add the correct quantity of Surflan Dry Flowable from the original package. Do not premeasure Surflan Dry Flowable into a larger container or enlarge the container opening. Continue agitation and finish filling the tank. Maintain agitation from mixing through application. Induction systems on custom application equipment may be used to disperse dry flowable in water.

When the sprayer tank opening is directly above the outlet port, fill the spray tank three-fourths (3/4) full with clean water. Do not start the sprayer or agitation. Add the correct quantity of Surflan Dry Flowable from the original package and allow the Surflan Dry Flowable particles to wet as they settle to the bottom of the tank. Finish filling the tank. Start and maintain agitation until the tank is empty. If the in line strainer becomes clogged, remove the screen and rinse in the spray tank. Replace the screen. Restart the sprayer and continue agitation.

General Tank Mix Instructions:

Vigorous, continuous agitation is required for all tank mixes. Sparger pipe agitators generally provide the best agitation in spray tanks. During filling, to prevent foaming, avoid stirring or splashing air into the mixture by placing the end of the fill pipe below the surface of the water in the spray tank. Do not allow the mixture to siphon back into the water source.

Mixing order: Fill the tank three-fourths (3/4) full with clean water. Start agitation and increase pump speed to operating pressure. Add Surflan Dry Flowable, then add other dry flowables, wettable powders (WP), aqueous suspensions (AS), flowables (F), liquids (L), solutions (S), and emulsifiable or liquid concentrate (EC) in this order to the water and agitate continuously until the product(s) are completely dispersed in the water. Maintain agitation from filling through application. If spraying and agitation must be stopped before the tank is empty, the materials may settle to the bottom. In this case, it is important to resuspend again all of the material in the bottom of the tank before continuing the spray application. Sometimes it is more difficult to resuspend settled material than it is to suspend it originally. A sparger agitator is particularly useful for this purpose.

Read and carefully follow all label instructions for each material added to the tank. Premixing dry and flowable formulations with water (slurrying) and pouring the slurry through a 20 or 35 mesh wetting screen in the top of the tank will help assure good initial dispersion in the tank water. In-line screens in the tank should be no finer than 16 mesh (16 mesh has bigger openings than 50 mesh).

If a buildup of material is seen on the walls of the spray tank, wash the tank with soapy water between fillings. Rinse and continue the spraying operation. Clean tank, lines, and screens thoroughly after use.

SOIL PREPARATION

Destroy existing weeds before or during a Surflan application. The soil surface should be level enough to allow a sprayer to be operated efficiently and at speeds appropriate for uniform application.

APPLICATION

Ground Application: Apply in 20 to 40 gallons of water per acre (broadcast basis), using any properly calibrated low pressure herbicide sprayer that will apply the spray uniformly. Use herbicide tips and screens no finer than 50 mesh in nozzle and in-line strainers. As the amount of water used (spray volume) decreases, the importance of accurate calibration and uniform application increases. Check the sprayer daily to ensure proper calibration and uniform application. Agitate thoroughly before and during application. Avoid boom overlaps that will increase rates above those recommended.

Aerial Application: Use a standard aerial herbicide boom sprayer. Aerial spray equipment should be calibrated to apply the proper amount of Surflan Dry Flowable alone or in tank mix combinations in two (2) to 10 gallons of spray mixture per acre. Nozzle screens and in-line strainers should be no finer than 50 mesh for tank mix combinations. Surflan Dry Flowable (alone or in tank mix combinations) mixes readily with water for these concentrate aerial sprays; however, constant vigorous agitation that sweeps the contents from the bottom of the spray tank up into the main body of the liquid is required to maintain a uniform suspension until spray tank is empty. Avoid overlap of spray patterns. Do not apply when weather conditions favor drift from target area.

Chemigation: Surflan Dry Flowable may be applied for weed control through center pivot and solid set sprinkler irrigation systems. Apply at rates recommended on this label. Prepare mixture with one (1) part water to one (1) part product. Injecting a larger volume of a more dilute slurry per hour will assure more accurate calibration of metering equipment. Maintain sufficient agitation to keep the herbicide in suspension. Meter slurry into irrigation water during entire period. Apply Surflan in a minimum of one inch (1") of irrigation water. The following precautions and recommendations must be followed to chemigate Surflan.

1. Apply only through properly maintained irrigation systems having continuously moving laterals and providing uniform distribution of water. Where a system does not provide uniform water distribution such as at the extreme ends of the lateral, around supports, where treated discharge water is released from water-powered motors, or where extreme changes in elevation occur, unacceptable weed control or crop injury may occur.
2. Apply the product only through irrigation systems containing anti-siphon and check valves, to prevent water source contamination and overflow and siphoning of the slurry tank, and interlocking controls between the metering device and the water pump, to insure simultaneous shut-off.
3. Inject the product with a positive displacement pump into the main line ahead of a right angle turn, to insure adequate mixing.
4. Application of more than label recommended quantities of irrigation water per acre may result in decreased product performance by removing the pesticide from the zone of effectiveness.
5. Do not apply when wind speed favors drift, when system connections or fittings leak, when nozzles do not provide uniform distribution, or when lines containing the product should be dismantled and drained. Use of low trajectory angle sprinklers or drop nozzles will decrease the likelihood of drift.

6. Greater accuracy in pesticide calibration and distribution will be achieved by injecting a larger volume of more dilute slurry per hour.
7. Constant agitation should be maintained in the slurry tank during the entire period of pesticide application.
8. Sample Calculation: One hundred thirty-five (135) acres to be covered by irrigation system.

Recommended rate of 1.2 pounds per acre times 135 acres equals 162 pounds of product.

Prepare slurry mixes using one (1) part water to one (1) part product and add to water in a 500 gallon nurse tank using the entire 162 pounds of product. Apply the entire 500 gallons to 135 acres.

Irrigation system requires 20 hours to apply 0.5 inch of water to 135 acres.

Injection rate equals 500 gallons divided by 20 hours equals 25 gallons per hour or 53.33 fluid ounces to be injected per minute.

Calibrate injection pump to deliver the herbicide mix into the irrigation system at the rate of 53.33 fluid ounces per minutes.

9. Posting Requirements: Areas being treated with pesticides applied through irrigation systems must be posted at the usual entrances to the area, at bulletin boards where workers assemble and where the treated area lies adjacent to roads, residential areas, or any other areas such as schools, parks or other public facilities. Posted signs must be legible from 25 feet away and be printed in English and any other appropriate language such as Spanish. Signs must be posted prior to application, during application and for at least one week after application, but may remain in place indefinitely. The sign must indicate the following:

NOTICE

Pesticides are applied in irrigation water in this field. Do not enter this field when the irrigation system is operating. Do not drink, bathe in or play in water or in furrows, puddles, ponds, canals or ditches associated with this irrigation system.

Precaution: Do not apply Surflan via center pivot irrigation systems to fruit and nut orchards or vineyards. In California, do not apply Surflan to non-dormant fruit and nut orchards or vineyards through overhead sprinkler irrigation systems.

ACTIVATION AND CULTIVATION

BEST AVAILABLE COPY

A single, one-half inch (1/2") rain or its equivalent in center pivot or sprinkler irrigation is necessary to activate Surflan when used alone or in a tank mix combination. If weeds begin to emerge, shallow cultivate one to two inches (1" to 2") to destroy existing weeds and place Surflan in zone of weed seed germination. If heavy rains pack the soil surface, rotary hoe to break the crust

to aid crop emergence. Crops treated with Surflan can be shallowly cultivated without loss of activity.

CROP RECOMMENDATIONS

Field Crops

General Directions

These recommendations are given as the broadcast (overall) rates of Surflan Dry Flowable per acre. For band application, use proportionately less. Surflan is not recommended for use on soils containing more than five percent (5%) organic matter. Only one (1) application of Surflan per season should be made.

Soybean--Surflan Alone

Apply Surflan Dry Flowable to the soil surface from four (4) weeks prior to planting up through two (2) days after planting at a broadcast rate per acre of 0.9 pounds on coarse soils; 1.2 pounds on medium soils and 1.8 pounds on fine soils.

Soybean--Tank Mix Recommendations:

Soybean--Surflan/Sencor® (metribuzin) or
Surflan/Lexone® (metribuzin) Tank Mix

The Surflan/Sencor or Surflan/Lexone tank mix effectively controls all of the annual grasses and broadleaf weeds listed for Surflan plus many additional weeds including:

Browntop millet	Redweed
Hemp sesbania	Sicklepod
Jimsonweed	Smartweed, annual
Prickly sida (teaweed)	Velvetleaf
Ragweed, common	

Surflan/Sencor and Surflan/Lexone also provide partial control or suppression of:

Cocklebur	Ragweed, giant
Morningglory	(horseweed)

The Surflan/Sencor or Surflan/Lexone tank mix may be applied from two (2) weeks prior to planting up through two (2) days after planting, but before crop emergence with any low pressure herbicide sprayer. Do not spray over top of emerged soybeans.

Broadcast Rates Per Acre

Surface Applied Before or After Planting

Soil Texture	Surflan Dry Flowable	+	Lexone 4L or Sencor 4L	or	Lexone Dry Flowable or Sencor Dry Flowable
	(pounds)		(pints)		(pounds)
Coarse	0.6-0.9		1/2		1/3
Medium	0.9-1.2		3/4		1/2
Fine	1.2-1.5		1		2/3

Do not use the Surflan/Sencor or Surflan/Lexone tank mix on soils containing more than five percent (5%) organic matter in a preplant surface application or postplant surface application.

Special Precaution: 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.

Caution: Please read the Sencor or Lexone labels carefully for cautions, precautions and special precautions before applying these products.

Destroy empty containers. Do not reuse.

Soybean--Surflan/Lorox® (linuron) Tank Mix

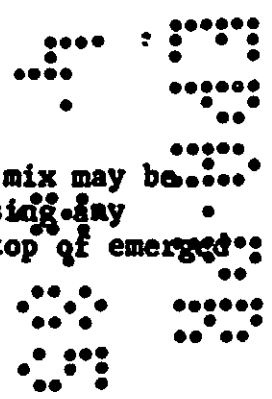
The Surflan/Lorox tank mix effectively controls all of the annual grasses and broadleaf weeds listed for Surflan plus many additional weeds including:

- | | |
|-------------------|----------------------|
| Canarygrass | Nettleleaf goosefoot |
| Chickweed, common | Radish, wild |
| Galinsoga | Ragweed, common |
| Mustard | Smartweed, annual |

Surflan/Lorox also provide partial control of:

- | | |
|-----------|-----------|
| Cocklebur | Sicklepod |
|-----------|-----------|

Follow Surflan procedures for soil preparation. The Surflan/Lorox tank mix may be applied within two (2) days after planting, but before crop emergence using any properly calibrated low pressure herbicide sprayer. Do not spray over top of emerged soybeans.



Broadcast Rates Per Acre

Soil Texture	Surflan Dry Flowable	+	Lorox 50 WP/L
	(pounds)		(pounds or pints)
Coarse	0.6-0.9		2/3 - 1 1/4
Medium	0.9-1.2		1 - 1 2/3
Fine	1.2-1.5		1 1/4 - 2

Do not use on sand or loamy sand soils.

Do not use the Surflan/Lorox tank mix on soils containing more than five percent (5%) organic matter.

Special Precaution: 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.

Caution: Please read the Lorox label carefully for cautions, precautions and special precautions before applying this product.

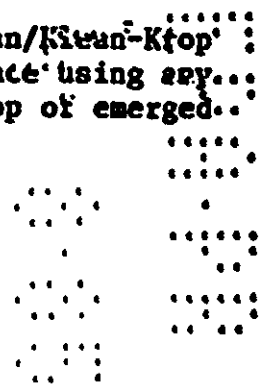
Destroy empty containers. Do not reuse.

Soybean--Surflan/Dyanap® or Surflan/Klean-Krop® Tank Mix

The Surflan/Dyanap or Surflan/Klean-Krop tank mix effectively controls all of the annual grasses and broadleaf weeds listed for Surflan plus many additional weeds including:

- | | | |
|--------------------|-----------------|----------------|
| Bindweed, field | Groundcherry | Sandbur |
| Chickweed | Morningglory | Shepherdspurse |
| Cocklebur | Mustard | Sprangletop |
| Cupgrass | Prickly sida | Stinkgrass |
| Florida beggarweed | (teaweed) | Velvetleaf |
| Galinsoga | Ragweed, common | Windmillgrass |

Follow Surflan procedures for soil preparation. Surflan/Dyanap or Surflan/Klean-Krop may be applied within two (2) days after planting but before crop emergence using a properly calibrated low pressure herbicide sprayer. Do not spray over top of emerged soybeans.



Broadcast Rates Per Acre

Soil Texture	Surflan Dry Flowable	+	Dyanap (2+1)S or Klean-Krop
	(pounds)		(quarts)
Coarse	0.6-0.9		6
Medium	0.9-1.2		6
Fine	1.2-1.5		6

Do not apply Surflan/Dyanap or Surflan/Klean-Krop to any soils with over five percent (5%) organic matter. Do not use on silt loam soils of extremely fine texture.

Special Precaution: 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.

Caution: Please read the Dyanap or Klean-Krop labels carefully for cautions, precautions and special precautions before applying these products.

Destroy empty containers. Do not reuse.

Soybean--Surflan/Amiben® (chloramben) Tank Mix

The Surflan/Amiben tank mix effectively controls all of the annual grasses and broadleaf weeds listed for Surflan plus many additional weeds including:

Chickweed	Ragweed, common
Coffeeweed	Smartweed, Pennsylvania
Kochia	Spurge, annual
Mustard, wild	Stinkgrass
Nightshade, black	Thistle, Russian
Prickly sida (teaweed)	Velvetleaf (buttonweed)

Surflan/Amiben may be applied within two (2) days after planting, but before crop emergence, using any properly calibrated low pressure herbicide sprayer that will apply the spray uniformly. Agitate thoroughly before and during application. Follow normal Surflan procedures for soil preparation. Do not spray over top of emerged soybeans.

BEST AVAILABLE COPY

18 of 54

Broadcast Rates Per Acre

Soil Texture	Surflan	+	Amiben 2S	or	Amiben DS
	Dry Flowable				
	(pounds)		(quarts)		(pounds)
Coarse	0.6-0.9		4 to 6		2.4 - 3.6
Medium	0.9-1.2		4 to 6		2.4 - 3.6
Fine	1.2-1.5		4 to 6		2.4 - 3.6

The higher rates of Amiben should be used on clay loams, clay or high organic (three to five percent) (3% to 5%) mineral soils. Do not use Surflan/Amiben on soils containing more than five percent (5%) organic matter.

Special Precaution: 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.

Caution: Please read the Amiben label carefully for cautions, precautions or special precautions before applying this product.

Destroy empty containers. Do not reuse.

No-Till Soybean--Surflan for Fall or Early Spring Application

Surflan 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 may be made up to four (4) weeks prior to planting but not later than April 15.

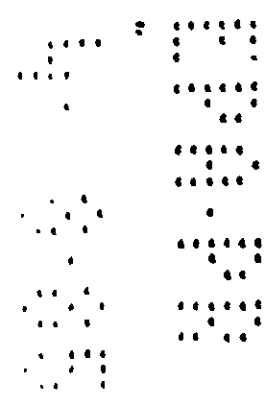
The soil should not be tilled between the Surflan application and soybean planting.

Early applied Surflan effectively controls all of the annual grasses and broadleaf weeds listed on pages 4 and 5 under weeds controlled in field crops by Surflan. Early applied Surflan also provides control of common ragweed and velvetleaf on medium and fine textured soils and partial control on coarse textured soils.

Surflan also provides partial control or suppression of:

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

Surflan will not control established weeds.



Broadcast Rates Per Acre

<u>Soil Texture</u>	<u>Surflan Dry Flowable</u> (pounds)
Coarse	1.2
Medium	1.5-1.8
Fine	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.

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

No-Till Soybean--Tank Mix Recommendations

No-till Soybean: Control of Existing Vegetation with paraquat or Roundup®

Tank mix Surflan with Sencor, Lexone or Lorox to give season long control of labeled annual grasses and broadleaf weeds. Add paraquat or Roundup to these tank mixes to provide postemergence control of existing vegetation.

Paraquat Combinations:

Choose Surflan + Sencor/Lexone or Lorox depending on your specific weed problem. Tank mix two (2) pints of paraquat 2 CL per acre to control existing annual weeds. As the last ingredient, add eight (8) ounces of Ortho X-77 Spreader (nonionic) per 100 gallons of spray solution. Maintain constant agitation.

Caution: Check the paraquat label for additional directions, cautions and special precautions before applying this product.

Roundup Combinations:

Choose Surflan + Sencor/Lexone or Lorox depending on your specific weed problem. To control emerged annual weeds, tank mix one and one-half (1 1/2) quarts of Roundup per acre. To control perennial weeds, tank mix two (2) to five (5) quarts of Roundup per acre depending on weeds to be controlled. Add Roundup as the last ingredient in the tank mix.

Caution: Check the Roundup label for additional directions, cautions, and special precautions before applying this product.

BEST AVAILABLE COPY

No-Till Soybean--Surflan/Sencor® or Surflan/Lexone® Tank Mix:

A tank mix combination of Surflan/Sencor or Surflan/Lexone is more effective in providing preemergence weed control in no-till soybeans than any one of these herbicides used alone.

Add paraquat or Roundup as directed above to control existing vegetation if necessary.

Weeds Controlled by Surflan and Sencor or Lexone (See pages 4, 5 and 11)

Apply the Surflan/Sencor or Surflan/Lexone tank mix at planting or within two (2) days after planting. Do not spray over top of emerged soybeans.

Broadcast Rates Per Acre

Soil Texture	Surflan	+	Sencor 4L or Lexone 4L	or	Lexone Dry Flowable or Sencor Dry Flowable
	Dry Flowable		(pints)		(pounds)
	(pounds)		(pints)		(pounds)
Coarse	0.9		1/2		1/3
Medium	0.9-1.2		3/4		1/2
Fine	1.8		1		2/3

Do not use on sandy loam or loamy sand soils with less than one percent (1%) organic matter. Not recommended on any soil containing more than five percent (5%) organic matter.

Spray Equipment: Use any properly calibrated low pressure herbicide sprayer. Agitate thoroughly before and during application. Sprayers should be accurately calibrated before applying the tank mix combination. Avoid boom overlaps that will increase rates above those recommended. Check the sprayer daily to ensure proper calibration and uniform application. As the amount of water used (spray volume) decreases, the importance of accurate calibration and uniform application increases.

Activation: A single one-half inch (1/2") rain or its equivalent in overhead irrigation is needed to activate the herbicide combination.

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 allow Surflan to come into direct contact with soybean seed or crop injury may result.

Caution: Read the Sencor or Lexone labels carefully for cautions, precautions and special precautions before applying these products.

No-Till Soybean--Surflan/Lorox® Tank Mix

A tank mix combination of Surflan/Lorox is more effective in providing preemergence weed control in no-till soybeans than either of these herbicides used alone:

add paraquat or Roundup as directed above to control existing vegetation.

Weeds Controlled by Surflan and Lorox (See pages 4, 5 and 12)

Apply the Surflan/Lorox tank mix at planting or within two (2) days after planting. Do not spray over top of emerged soybeans.

Broadcast Rates Per Acre

Soil Texture	Surflan Dry Flowable	+	Lorox 50 WP/L
	(pounds)		(pounds or pints)
Coarse	0.9		2/3 - 1 1/4
Medium	0.9-1.2		1 - 1 2/3
Fine	1.8		1 1/4 - 2

Do not use on soils containing more than five percent organic matter.

Spray Equipment: Use any properly calibrated low pressure herbicide sprayer. Sprayer should be accurately calibrated before applying the tank mix combination. Agitate thoroughly before and during application. Avoid boom overlaps that will increase rates above those recommended. Check the sprayer daily to ensure proper calibration and uniform application. As the amount of water used (spray volume) decreases, the importance of accurate calibration and uniform application increases.

Activation: A single one-half inch (1/2") rain or its equivalent in overhead irrigation is needed to activate the herbicide combination.

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 allow Surflan to come into direct contact with soybean seed or crop injury may result.

No-Till Soybean--Surflan Over-the-Top Spray for Weed Control in Wheat or Barley Followed By No-Till Soybeans

Surflan may be applied for weed control in wheat or barley and soybeans. Apply Surflan as an over-the-top spray after the small grain is fully tillered and jointing has been initiated but prior to heading. When combining wheat or barley, the cutter bar should be adjusted to leave standing stubble at a height of at least eight (8) inches. Stubble reduces wind erosion and loss of soil moisture. During combining, cut straw should be chopped and spread evenly over the field as a mulch. Straw is an important part of the stubblecrop no-till program and should not be removed from the field. Soybeans can be planted into the small grain before harvest or into the stubble immediately following harvest.

Follow recommended mixing and application procedures for Surflan.

Broadcast Rates Per Acre

<u>Soil Texture</u>	<u>Surflan Dry Flowable</u> (pounds)
Coarse	1.2
Medium	1.2-1.8
Fine	1.5-1.8

Precaution: Do not apply Surflan to soils containing more than five percent (5%) organic matter.

Tank Mixing Directions: Surflan may be tank mixed with most 2,4-D products. When tank mixing, add Surflan 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 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. Follow 2,4-D application recommendations, precautions and limitations.

Precaution: Do not apply Surflan to winter wheat or barley prior to the fully tillered stage as crop injury may result. Do not graze or feed treated forage, hay or straw to livestock. Do not remove straw from field.

Caution: Read the 2,4-D labels carefully for cautions, precautions and special precautions before applying these products.

Excessive nitrogen application may result in crop lodging. Please contact your local Extension office for nitrogen recommendations.

COTTON--Surflan Alone (in Texas only)

Apply Surflan to the soil surface at planting or within two (2) days after planting at a broadcast rate of 1.2 pounds on medium soils and 1.8 pounds on fine soils.

At the recommended rates for fine textured soils, Surflan will also control browntop panicum and prostrate spurge.

Precaution: Do not graze treated fields. If Surflan is not applied at or within two (2) days after planting, crop injury and poor weed control may result.

PEA (English or Green)--Surflan/Treflan® Tank Mix

The Surflan/Treflan tank mix provides weed control and suppression of common root rot (Aphanomyces euteiches) in peas.

Mixing and Application: Apply the tank mix up to two (2) weeks prior to planting. Apply in 20 to 40 gallons of water per acre in any properly calibrated low pressure herbicide sprayer.

Broadcast Rates Per Acre

Soil Texture	Surflan Dry Flowable	+ Treflan E.C. or M.T.F. [™]	or Treflan 5
All soil textures	0.6 pounds	1 pint	0.8 pint

Do not use the Surflan/Treflan tank mix on coarse soils with less than one and one-half percent (1 1/2%) organic matter. Incorporate according to label directions for Treflan. See the Treflan label.

Precautions: Please read the Treflan label for additional cautions and precautions. Do not feed forage from treated fields to livestock. 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 plant any root crop for 12 months following application.

POTATO (White)--Surflan ALONE

Follow Surflan label directions for soil preparation, activation and cultivation. Surflan should be applied to the soil surface at the recommended rate after planting and prior to crop emergence. Where rebedding and drag-off are standard cultural practices, applications should be made following drag-off.

Broadcast Rates Per Acre

Soil Texture	Surflan Dry Flowable (pounds)
Coarse	0.9
Medium	1.2

BEST AVAILABLE COPY

Do not use Surflan on soils containing more than five percent (5%) organic matter.

Precautions: Follow all directions carefully. Failure to do so may result in poor weed control. Over application may result in crop injury and/or soil residues. :

POTATO (White)--Surflan/Lexone® or Surflan/Sencor® Tank Mix

Surflan plus Sencor/Lexone effectively controls the weeds listed on the current Surflan and Sencor or Lexone labels.

Follow Surflan label directions for soil preparation, activation and cultivation. Surflan plus Sencor/Lexone should be applied to the soil surface at the recommended rate after planting and prior to crop emergence. Where rebedding and drag-off are standard cultural practices, applications should be made following drag-off.

Broadcast Rates Per Acre

Soil Texture	Surflan Dry Flowable	+	Lexone 4L or Sencor 4L	or	Lexone Dry Flowable or Sencor Dry Flowable
	(pounds)		(pints)		(pounds)
Coarse	0.9		1/2		1/3
Medium	1.2		2/3		1/2

Do not use Surflan/Sencor or Lexone tank mix on soils containing more than five percent (5%) organic matter.

Precautions: Follow all directions carefully. Failure to do so may result in poor weed control. Over application may result in crop injury and/or soil residues.

Read the Lexone or Sencor labels for additional warnings, cautions, precautions, and special instructions.

TOBACCO--Surflan Alone

Tobacco--Surflan at Layby

Air-Cured (Burley, Maryland, Dark) and Flue-Cured

Soil Preparation: The last cultivation should leave the middle of the rows weed free before application. Surflan should be applied as a directed spray following the last normal cultivation, usually four (4) to six (6) weeks after transplanting.

Application: Applications should be made in 20 to 40 gallons of water per acre using commercially available drop nozzles that will allow treatment to be made in a 16 to 24 inch band in the middle of the row between the crop rows. Surflan should be applied in a manner that will not allow the spray to contact the plant. In tobacco production, in areas where spray nozzles on the ends of the spray boom pass over the same middle of the row twice, use nozzles which apply one-half (1/2) the normal number of gallons per acre to prevent over application. Over application may result in injury to rotational crops.

Activation and Cultivation: A one-half inch (1/2") rain is necessary to activate Surflan. If adequate rainfall is not received to activate Surflan, erratic weed control may occur. If weeds begin to emerge, a shallow cultivation of one to two inches (1" to 2") will destroy existing weeds and place Surflan in the zone of weed seed germination.

BEST AVAILABLE COPY

Broadcast Rates Per Acre

Soil Texture	Surflan Dry Flowable (pounds)
Coarse	0.6-0.9
Medium	0.9-1.2
Fine	1.2

Precaution: Applied according to directions and under normal growing conditions, Surflan will not harm the treated crop. Do not spray Surflan in the bud of the tobacco plant as crop injury may occur. Over application may result in soil residue. Do not plant any root crop for 12 months following a Surflan application as crop injury may occur. Failure to follow directions may result in erratic weed control, tobacco crop injury, or soil residues. Soil residues may result in rotational crop injury.

FRUIT, NUT CROPS AND VINEYARDS (Non-bearing and Bearing)--Surflan Alone

Surflan applied as a preemergence herbicide controls many annual grasses and broadleaf weeds in several fruit, nut crops and vineyards. It is recommended on the following crops:

Almond	Macadamia nut	Small fruits:
Apple	Nectarine	Blackberry
Apricot	Olive	Blueberry
Avocado	Orange	Boysenberry
Cherry	Peach	Currants
Fig	Pear	Dewberry
Filbert	Pecan	Elderberry
Grape	Pistachio	Gooseberry
Grapefruit	Plum	Loganberry
Kiwi	Pomegranate	Raspberry
Lemon	Prune	Walnut, English

See page 5 for a listing of weeds controlled by Surflan alone.

General Directions: Existing vegetation should be destroyed either by tillage or by a tank mix with a contact or translocated herbicide. To assure the compatibility of Surflan with the contact or translocated herbicide, pour 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. Read the label for all directions, cautions and precautions.

BEST AVAILABLE COPY

Broadcast Rates Per Acre

Soil Texture	Surflan Dry Flowable	
	(pounds)	
All Soil Textures	Short Term (2-4 months)	2.4
	Long Term (6-8 months)	4.7
	(8-12 months)	7.1

Surflan is not recommended for soils containing more than five percent (5%) organic matter.

Band Treatment: The amount of product needed for band treatment may be calculated by the formula:

$$\frac{\text{band width}}{\text{row width}} \text{ in inches} \times \text{broadcast rate per acre} = \text{amount needed per acre of field}$$

Mixing and Application: Fill the spray tank three-fourths (3/4) full with clean water. Add the recommended amount of Surflan to water. Mix thoroughly. Use 20 to 40 gallons of water per acre (broadcast basis). Apply with a properly calibrated low pressure herbicide sprayer that will uniformly apply the spray. Check the sprayer daily for the proper calibration and uniform application. Provide good mixing of the spray suspension in the tank before and during application.

Chemigation: Surflan may be applied for weed control through solid set sprinkler irrigation systems. Apply at rates recommended on this label. Refer to page 9 for additional chemigation directions and precautions before applying Surflan through chemigation equipment for use in fruit, nut crops and vineyards.

Precaution: Do not apply Surflan through center pivot irrigation systems to fruit, nut crops or vineyards. In California, do not apply Surflan to non-dormant fruit, nut crops or vineyards through overhead sprinkler irrigation systems.

Activation: A single one-half inch (1/2") to one inch (1") rainfall or sprinkler irrigation to move Surflan into the weed seed germination zone is required to activate the herbicide. If weeds begin to emerge, a shallow cultivation of one to two inches (1" to 2") will destroy existing weeds and place Surflan in the zone of weed seed germination. The higher water amount is generally required on fine textured/high organic matter soil.

Precaution: Poor weed control may result if directions are not followed. Over application may result in crop injury or excessive soil residue. Apply the spray directly to the orchard or vineyard floor.

FRUIT, NUT CROP AND VINEYARDS--TANK MIX RECOMMENDATIONS: Surflan TANK MIX REFERENCE TABLE

Refer to the following table to determine which herbicides may be applied to your crop. Choose the Surflan combination based on your orchard or vineyard weeds to be controlled. Refer to the tank mix section for specific recommendations and precautions. Always read the label before application.

***Approved Crop**

	<u>Surflan</u>	<u>Goal</u>	<u>Hyvar X</u>	<u>Karmex</u>	<u>Krovar I/II</u>	<u>Paraquat</u>	<u>Princep</u>	<u>Roundup</u>	<u>Sinbar</u>
Almond	*	*				*	*	*	
Apple	*			*		*	*	*	*
Apricot	*	*				*			
Avocado	*					*	*	*	
Cherry	*					*	*	*	
Fig	*					*			
Filbert	*					*	*	*	
Grape	*	*		*		*	*	*	
Grapefruit	*		*	*	*	*	*	*	*
Kiwi	*								
Lemon	*		*	*	*	*	*	*	*
Macadamia									
Nut	*			*			*		
Nectarine	*	*				*			
Olive	*			*		*	*		
Orange	*		*	*	*	*	*	*	*
Peach	*	*		*		*	*		*
Pear	*			*		*	*	*	
Pecan	*			*		*	*	*	*
Pistachio	*							*	
Plum	*	*				*	*		
Pomegranate	*								
Prune	*	*				*			
Small fruits									
Blackberry	*			*		*	*		*
Blueberry	*			*		*	*		*
Boysen- berry	*			*		*	*		*
Currants	*								
Dewberry	*			*					*
Elderberry	*								
Gooseberry	*			*					
Loganberry	*			*			*		*
Raspberry	*			*		*	*		*
Walnut, English	*			*		*	*	*	*

FRUIT, NUT CROP AND VINEYARDS--TANK MIX RECOMMENDATIONS: Surflan TANK MIX
REFERENCE TABLE -- Cont.

*Approved Crop .

	<u>Casoron</u>	<u>Solicam</u>
Almond	*	*
Apple	*	*
Apricot		*
Avocado		
Cherry	*	*
Fig		
Filbert	*	*
Grape	*	
Grapefruit		*
Kiwi		
Lemon		*
Macadamia Nut		
Nectarine	*	*
Olive		
Orange		*
Peach	*	*
Pear	*	*
Pecan	*	
Pistachio		
Plum	*	*
Pomegranate		
Prune		*
Small fruits		
Blackberry	*	
Blueberry	*	
Boysenberry		
Currants		
Dewberry		
Elderberry		
Gooseberry		
Loganberry		
Raspberry	*	
Walnut, English	*	*

Surflan/Casoron® Tank Mix

The Surflan/Casoron tank mix controls the following weeds in addition to those controlled by Surflan alone:

Barley, wild	Jerusalem oak	Primrose, evening
Camphorweed	Maypops	Radish, wild
Coffeeweed	Melon, citron	Ragweed
Dandelion	Milkweed vine	Rosarypea
Deadnettle, red	Miners lettuce	Smartweed
Dogfennel	Mustard, wild	Spanishneedles
Gisekia	Natalgrass	Teaweed
Goosefoot	Peppergrass	Thistle, bull
Groundsel	Pineappleweed	Thistle, Russian
Horsetail	Plantain	Woodsorrel, yellow

Surflan/Casoron tank mix may be used for weed control in the following crops:

Apple	Filbert	Pecan
Almond	Grape	Plum
Blackberry	Nectarine	Raspberry
Blueberry	Peach	Walnut, English
Cherry	Pear	

General Directions: Follow recommended application procedures for Surflan. Apply Surflan/Casoron in at least 20 gallons of water per acre to ensure uniform coverage. If the application is followed by one-half inch ($\frac{1}{2}$ ") to one inch (1") of overhead irrigation for activation, use the lower Casoron rate. Surflan/Casoron must be activated; check the Surflan label for activation directions.

Broadcast Rates Per Acre

<u>Crop</u>	<u>Surflan Dry Flowable (Pounds)</u>	<u>Casoron W-50 (Pounds)</u>
Apple, Almond, Blueberry, Cherry, Grape, Nectarine, Peach, Pear, Plum, Filbert, Pecan, English Walnut	2.4-7.1	8-12
Blackberry and Raspberry	2.4-7.1	8

Do not use on pecan seedlings within six (6) months of planting. May be used on bearing, nonbearing and nursery stock. Do not apply until four (4) weeks after transplanting. Do not make application within one (1) month of harvest of nuts or stone fruits.

Blackberry and
Raspberry

2.4-7.1

8

Use only on established plantings. Do not apply during new shoot emergence.

BEST AVAILABLE COPY

Casoron Precautions: Do not use in seed beds, transplant or cutting beds or greenhouses. Do not apply until six (6) months after rooting of cuttings in the field, or after planting rooted cuttings. Do not apply on fruit stock within three (3) months prior to or following grafting or budding of root stocks or planting of new grafts. Do not apply more than the maximum recommended amount of Casoron W-50 per growing season. Do not use on "St. Lucie fine sand", "Arzell fine sand", or other light sand soil. Do not graze livestock in treated areas. Store in a tightly closed container in a dry place.

Caution: Read the Surflan and Casoron labels for directions, cautions and limitations prior to use.

Surflan/Goal®/Paraquat Tank Mix

Surflan can be tank mixed with Goal 1.6E and paraquat.

Surflan/Goal provides preemergence control of the following weeds in addition to those controlled by Surflan alone:

- | | |
|--------------------|--------------------|
| Burclover | Lettuce, prickly |
| Cheeseweed (malva) | London rocket |
| Filaree, broadleaf | Mallow, little |
| Filaree, redstem | Redmaids |
| Groundsel, common | Sowthistle, annual |

Paraquat may be tank mixed with Surflan/Goal to provide nonselective, postemergence control of existing emerged annual weeds and provide top kill of existing perennial weeds.

The tank mix is recommended for application to dormant crops including:

- | | |
|-----------|-------|
| Almond | Peach |
| Apricot | Plum |
| Grape | Prune |
| Nectarine | |

General Directions: Best preemergence activity from Goal is obtained when the tank mix is applied to a relatively weed free established berm or soil surface.

Broadcast Rates Per Acre

Crop	Surflan Dry Flowable (Pounds)	Goal 1.6E (Quarts)	Paraquat (Quarts)
All crops listed	2.4-7.1	5	1

BEST AVAILABLE COPY

Precautions:

- ◆ Dormancy determines the suitability and safety of using Goal 1.6E on tree fruit/grapes. Should bud swell occur prior to the dates listed, Goal 1.6E must not be used.
- ◆ DO NOT APPLY GOAL 1.6E (EITHER ALONE OR IN ANY COMBINATION RECOMMENDED ON THIS LABEL) TO TREE OR VINE PLANTINGS BEFORE OCTOBER 1 OR AFTER FEBRUARY 15. DO NOT APPLY GOAL 1.6E (EITHER ALONE OR IN ANY COMBINATION RECOMMENDED ON THIS LABEL) TO GRAPES IN THE COACHELLA VALLEY BEFORE OCTOBER 1 OR AFTER DECEMBER 31.
- ◆ Do not apply more than five (5) quarts (two pounds active) per broadcast acre of Goal 1.6E in one (1) season. Goal 1.6E should not be applied to grapes established less than three (3) years.
- ◆ Do not apply Goal 1.6E to grapes which are not staked or trellised.
- ◆ Do not feed or graze areas treated with Goal 1.6E to animals.
- ◆ Do not contaminate irrigation water or water used for domestic purposes with Goal 1.6E.
- ◆ Goal 1.6E or any of the combinations recommended on this label should be applied to only healthy growing trees and vines.
- ◆ Do not apply Goal 1.6E or any combination containing Goal 1.6E, that is recommended on this label, when weather conditions favor drift.
- ◆ Apply Goal 1.6E only to dormant fruit or nut trees or grape vines. Do not apply when foliage, buds or fruit/nuts are present.
- ◆ Direct Goal 1.6E spray toward the base of tree or vines. Avoid direct plant contact.

Mixing and Application: Apply Surflan/Goal in 20-40 gallons of water per acre. Fill the spray tank three-fourths (3/4) full. Agitate continuously. Add the recommended amount of Surflan to the spray tank. Add the recommended amount of Goal. Finish filling the tank with water to proper level. Do not allow the tank mix to remain in the tank without agitation.

Apply Surflan/Goal/paraquat in at least 50 gallons of water per acre. Use Ortho X-77® or Triton® AG-98 when tank mixing Surflan Dry Flowable/Goal/paraquat. Ortho X-77 and Triton AG-98 improve the compatibility of these herbicides when mixed together. Fill the spray tank one third to one half (1/3 to 1/2) full with clean water. Add either one (1) quart of X-77 or two (2) quarts of Triton AG-98 per 100 gallons of spray mixture, with the agitation running, add the recommended amount of Surflan and mix thoroughly. Continue filling the spray tank and add Goal, then paraquat. If a non-ionic spreader is being used, add it to the tank last:

Activation: A single one-half inch (1/2") to one inch (1") rain or sprinkler irrigation to move Surflan/Goal into the weed seed germination zone is required to activate the herbicide. If weeds begin to emerge, a shallow cultivation of one to two inches (1" to 2") will destroy existing weeds and place Surflan in the zone of

weed seed germination. The higher amount of water is generally required on fine textured/high organic matter soil.

Caution: Read the Surflan, Goal and paraquat labels for additional limitations, directions and cautions before applying these products.

Surflan/Hyvar® X Tank Mix

The Surflan/Hyvar X tank mix controls the following annual and perennial weeds in addition to those weeds controlled by Surflan alone:

<u>Annual Weeds</u>	<u>Perennial Weeds</u>
Mullein, turkey	Bermudagrass (All States)
Mustard	Johnsongrass (Texas)
Natalgrass (red top)	Nutsedge (Texas and California)
Sedge	Pangolagrass (Florida)
Sprangletop	Paragrass (Florida)
	Torpedograss (Florida)

The Surflan/Hyvar X tank mix is recommended on the following crops:

Citrus (Orange, Grapefruit, Lemon)

General Directions: Apply the tank mix in at least 40 gallons of water per acre. Use sufficient water to provide thorough and uniform coverage of the ground. Apply Hyvar X as a spray just before or during the period of active plant growth. If dense growth is present, results will be improved if vegetation is removed before treatment. Do not apply when ground is frozen.

Activation: Moisture is necessary to activate Surflan/Hyvar X tank mix; best results are obtained if moisture is supplied by rainfall or overhead sprinkler irrigation within two (2) weeks after application. Check activation instructions for Surflan alone.

Broadcast Rates Per Acre

Crop	Surflan Dry Flowable (Pounds)	Hyvar X (Pounds)
Citrus (Trees established for four (4) years or more)		
<u>Annual Weeds</u>	2.4-7.1	2-4

Apply any time of the year, preferably shortly before weed growth begins, when adequate moisture is available.

Perennial Weeds

2.4-7.1

4-8

Apply before weed growth begins. If dense growth is present, remove tops and spray the ground. Note: Effects on perennial weeds from Hyvar X are slow to appear, usually progressing over a period of several months. Check the Hyvar X label for more complete directions and precautionary statements prior to use for perennial weed control.

Precaution: Avoid contact of foliage and fruit with Hyvar X spray or mist. Temporary yellowing of citrus leaves may occur following Hyvar X treatment. Do not use on citrus in Kern County, California.

Because injury to citrus trees may result: do not use Hyvar X on soils low in organic matter less than one percent (1%) nor on poorly drained soils; do not apply more than eight (8) pounds per acre per year; do not treat trees planted in irrigation furrows; do not treat diseased trees such as those with foot rot. Do not use Hyvar X in citrus orchards interplanted with other trees or desirable plants, nor in home citrus plantings or in areas where roots of other valuable plants or trees may extend, as plant injury may result. Treated areas may be planted to citrus trees one (1) year after last Hyvar X application; do not replant to other crops within two (2) years after last application, as plant injury may result.

Surflan/Karmex® Tank Mix

The Surflan/Karmex tank mix controls the following weeds in addition to those controlled by Surflan alone:

Ageratum	Kochia	Puncturevine
Buckwheat, wild	Kyllinga	Radish, wild
Buttonweed	Marigold	Ricegrass, red
Clover, Mexican	Milkweed, climbing	Ryegrass, annual
Dayflower	Morningglory, annual	Smartweed
Dogfennel	Mustard, black	Sowthistle, annual
Fescue, rattail	Mustard, wild	Spanishneedles
Gromwell	Orchardgrass	Speedwell, corn
Groundcherry, annual	Paintbrush, Flora's	Spurry, corn
Hawksbeard	Pepperweed	Tansymustard
Horseweed	Pineappleweed	Tobacco, rabbit
Knawel	Pokeweed	Velvetgrass

The Surflan/Karmex tank mix is recommended on the following crops:

Apple	Orange
Caneberries	Peach
Grape	Pear
Grapefruit	Pecan
Lemon	Walnut, English

Broadcast Rates Per Acre

Crop	Surflan	+	Karmex 80W
	Dry Flowable		
	(Pounds)		(Pounds)
Apple	2.4-7.1		2-4

Use Karmex only under trees established in the orchard for at least one (1) year; do not treat varieties grafted on full-dwarf root stocks.

Broadcast Rates Per Acre

Crop	Surflan	+	Karmex 80W
	Dry Flowable		
	(Pounds)		(Pounds)
Caneberries	2.4-7.1		2-4

(Read the Karmex label for state and crop recommendations). Use Karmex only in fields established for at least one (1) year. Do not apply Karmex to berries interplanted with fruit trees. Do not apply to plants whose roots are exposed as injury may result.

Grape
New York and Pennsylvania--Perennial Grasses:

Use Karmex only in established vineyards (at least four years old) for spot control of perennial grasses such as orchardgrass, quackgrass and ryegrass. Apply Karmex in the spring as a band treatment to ridged soil two to four inches (2" to 4") high under the trellis at the rate of eight (8) to 12 lbs. per acre. Band width should not exceed 30 inches. Do not apply Karmex more than once every four (4) years. Use Karmex only on heavy soils such as loams, silt loams and clay loams. Do not use Karmex in areas where grape roots are shallow or exposed because of high bedrock, poor drainage, or erosion as injury to grapes may result.

U.S. (Except New York and Pennsylvania)--Perennial Grasses:

Apply Karmex only to established vineyards (at least three years old) as a band treatment to grape rows. Do not apply Karmex to vines with trunks less than one and one-half inches (1 1/2" in diameter as injury may

result. On soils low in clay or organic matter (one to two percent (1% to 2%)), severe plant injury may result from Karmex application if heavy rainfall or more than one inch (1") of irrigation occurs soon after treatment. This risk must be assumed by the user.

East of Rocky Mountains:

1 to 2% organic matter	2.4-7.1	2-3
------------------------	---------	-----

2 to 5% organic matter	2.4-7.1	3-6
------------------------	---------	-----

West of Rocky Mountains:

	2.4-7.1	2-4
--	---------	-----

(Apply Karmex in November, December, or January)

Crop	Surflan	+	Karmex 80W
	Dry Flowable		(Pounds)

Orange, Grapefruit and Lemon

Do not apply Karmex under citrus trees that have been subjected to freezing within six (6) months. Use Karmex only under trees established in the grove for at least one (1) year.

Arizona (except Yuma area) and California (except Imperial and Coachella Valleys)	2.4-7.1	2-4
Florida (oranges and grapefruit)	2.4-7.1	4-8
Texas (oranges and grapefruit)	2.4-7.1	2-4

Peach	2.4-7.1	2-5
-------	---------	-----

Use Karmex only under trees established in the orchard for at least three (3) years. Do not apply Karmex within three (3) months of harvest; in the far West, do not apply Karmex within eight (8) months of harvest.

Pear	2.4-7.1	2-4
------	---------	-----

Use Karmex only under trees established in the orchard for at least one (1) year. Do not treat varieties grafted on full-dwarf root stocks.

Pecan	2.4-7.1	2-4
-------	---------	-----

Use only under trees established in the grove for at least three (3) years. Do not use on soils with less than one-half percent ($\frac{1}{2}\%$) organic matter.

Walnut (English) California	2.4-7.1	2-3
--------------------------------	---------	-----

Use only under trees established in the orchard for at least one (1) year.

Mixing and Application: Fill the spray tank three-fourths ($\frac{3}{4}$) full with clean water and add the recommended amount of Karmex 80W. Mix thoroughly. Then add the recommended amount of Surflan, mix thoroughly and fill the tank. Vigorous, continuous agitation is required until spray tank is empty to keep the powders in suspension. Use 20 to 40 gallons of water per acre (broadcast basis). Apply with a properly calibrated low pressure herbicide sprayer that will apply the spray uniformly. Check the sprayer daily for proper calibration and to ensure uniform application. Provide good mixing of the spray suspension in the tank before and during application.

Activation: A single one-half inch ($\frac{1}{2}$ ") to one inch (1") rain or sprinkler irrigation is required to activate the herbicides. If weeds begin to emerge, a shallow cultivation of one to two inches (1" to 2") will destroy existing weeds and place Surflan and Karmex in the zone of weed seed germination.

Precaution: Poor weed control may result if directions are not followed. Over application may result in crop injury or excessive soil residue. Apply the spray directly to the orchard or vineyard floor.

Caution: Read the Karmex label carefully for directions, cautions, and precautions before applying this product.

Surflan/Krovar® I Tank Mix

The Surflan/Krovar I tank mix effectively controls the following weeds in addition to those weeds controlled by Surflan alone:

Filaree	Nightshade (annual)
Fleabane	Pineappleweed
Horseweed	Ragweed
Lettuce, wild	Shepherdspurse
Mustard, wild	Sowthistle (annual)
Natalgrass (red top)	Spanishneedles

The Surflan/Krovar I tank mix is recommended for use on the following crops:

Citrus (Orange, Lemon, Grapefruit)

General Directions: Apply any time of the year when rainfall or overhead irrigation is available to activate the tank mix, preferably just before the weeds have germinated.

Use only where trees have been established in the orchard for at least three (3) years. Use sufficient water (over 40 gallons/acre) to obtain uniform coverage.

Broadcast Rates Per Acre

Crop	Surflan	+	Krovar I
	Dry Flowable		
	(Pounds)		(Pounds)
Citrus (Trees established in the orchard for at least three (3) years)	2.4-7.1		3-6

Use for control of annual weeds in California, Arizona, Texas, Louisiana, and Florida only. Check the Krovar I label for complete directions for use and precautionary statements.

Activation and Cultivation: A single one-half inch ($\frac{1}{2}$ ") to one inch (1") rain or sprinkler irrigation to move the tank mix combination into the weed seed germination zone is required within two (2) weeks after application to activate the herbicides. If weeds begin to emerge, a shallow cultivation of one to two inches (1" to 2") will destroy existing weeds and place Surflan and Krovar I in the zone of weed seed germination. Citrus treated can be shallowly cultivated without loss of activity.

Precaution: Avoid contact of foliage and fruit with Krovar I spray or mist. Avoid overlapping, and shut off spray boom while starting, turning, slowing or stopping, or injury to trees may result. Continuous agitation in the spray tank is required to keep the material in suspension. Best results are obtained if application is made shortly before weed growth begins; if dense growth is present, remove tops and spray ground.

Temporary yellowing of citrus leaves may occur following Krovar I treatment. Because injury to citrus trees may result, do not use Krovar I on soils with less than one percent (1%) organic matter (one and one-half percent (1 1/2%) in Florida), poorly drained soils, gravelly soils, nor thinly covered or exposed subsoils; do not treat trees planted in irrigation furrows; do not treat diseased trees such as those with foot rot.

BEST AVAILABLE COPY

Do not replant Krovar I treated areas to any crop within two (2) years after last application as injury to subsequent crops may result, except that citrus trees may be planted one (1) year after the last application.

Surflan/Krovar® II Tank Mix

The Surflan/Krovar II tank mix effectively controls the following annual and perennial weeds in addition to those controlled by Surflan alone:

Annual Weeds and Vines Perennial Weeds

Balsam apple*	. Bahiagrass
Milkweed vine*	Bermudagrass
Natalgrass (red top)	Nutsedge
Nightshade (annual)	Pangolagrass
Ragweed	Paragrass
Spanishneedles	Torpedograss

*Seedling stage in Florida only.

The Surflan/Krovar II tank mix is recommended for weed control in the following crops:

Citrus (Orange, Lemon, Grapefruit)

General Directions: Use only where trees have been established in the orchard for at least four (4) years. Apply any time during the year when rainfall or overhead irrigation is available to activate the tank mix prior to weed germination. Moisture is necessary to activate the herbicides. Check the Surflan directions for activation moisture amounts. The tank mix should be activated within two (2) weeks after application. To obtain uniform coverage, use sufficient water (over 40 gallons/acre).

Broadcast Rates Per Acre

<u>Crop</u>	Surflan Dry Flowable (Pounds)	Krovar II (Pounds)
Citrus (Use only where trees have been established in the orchard for at least four (4) years.)	2.4-7.1	2-8

Consult the Krovar II label for complete directions for use for annual, perennial and seedling vine control, cautions and limitations prior to use.

Precautions: Avoid contact of foliage and fruit with Krovar II spray or mist. Avoid overlapping, and shut off spray boom while starting, turning, slowing or stopping, or injury to trees may result. Continuous agitation in the spray tank is required to keep the material in suspension. Best results are obtained if application is made shortly before weed growth begins; if dense growth is present, remove tops and spray the ground. Do not use Krovar II on citrus in Kern County, California.

Temporary yellowing of citrus leaves may occur following Krovar II treatment. Because injury to citrus trees may result, do not use Krovar II on soils low in organic matter (less than 1%), poorly drained soils, gravelly soils, nor thinly covered or exposed subsoils; do not apply more than 10 lbs. per acre per year (Florida, 12 lbs.); do not treat trees planted in irrigation furrows; do not treat diseased trees such as those with foot rot.

Do not replant Krovar II treated areas to any crop within two (2) years after last application as injury to subsequent crops may result, except that citrus trees may be planted one (1) year after the last application.

Surflan/Paraquat Tank Mix

Surflan may be tank mixed with paraquat. Surflan provides preemergence control of certain annual grass and broadleaf weeds while paraquat provides non-selective postemergence control of annual grass and broadleaf weeds and top kill and suppression of perennial weeds.

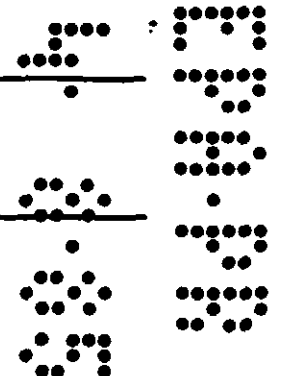
The tank mix is recommended on the following crops:

- | | | |
|---------------|-------------|-----------------|
| Almond | Grape | Peach |
| Apple | Grapefruit | Pear |
| Apricot | Lemon | Pecan |
| Avocado | Nectarine | Plum |
| Cherry | Olive | Prune |
| Fig | Orange | Walnut, English |
| Filbert | | |
| Small fruits: | | |
| Blackberry | Boysenberry | |
| Blueberry | Raspberry | |

General Directions: Surflan/paraquat may be applied any time throughout the growing season. Choose an application schedule based on the specific weeds to be controlled by the Surflan/paraquat tank mix.

Broadcast Rates Per Acre

Crop	Surflan Dry Flowable (Pounds)	+	Paraquat (Quarts)
All crops listed above	2.4-7.1		1-2*



Precaution: Do not allow paraquat spray to contact green stems, fruit or foliage as injury may result. Do not spray paraquat under windy conditions and use a shield for young trees or vines. Do not allow animals to graze on paraquat treated areas. Do not apply paraquat when nuts to be harvested are on the ground.

*Add a nonionic spreader at eight (8) oz. per 100 gallons spray volume

Mixing and Application: Add the recommended amount of Surflan to the spray tank according to directions for these tank mixes. Add paraquat last prior to filling the tank. Agitate continuously during filling and through application. Apply in at least 30 gallons of water per acre. Apply when the weeds and grasses are succulent and the new growth is from one inch (1") to six inches (6") high. Retreatment or spot treatment may be necessary for late germinating weeds and grasses.

Activation: A single one-half inch ($\frac{1}{2}$ ") to one inch (1") rain or sprinkler irrigation to move Surflan into the weed seed germination zone is required to activate the herbicide. If weeds begin to emerge, a shallow cultivation of one to two inches (1" to 2") will destroy existing weeds and place Surflan in the zone of weed seed germination.

Caution: Read the paraquat label carefully for directions, cautions and precautions before applying this product.

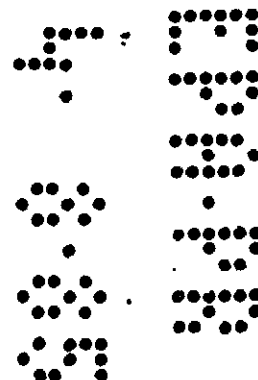
Surflan/Princep® (simazine) Tank Mix

The Surflan/Princep tank mix controls the following weeds in addition to those controlled by Surflan alone.

Brome, downy (cheat)	Paintbrush, Flora's
Fescue, rattail	Prickly lettuce
Fireweed	Ragweed
Hairgrass, silver	Ryegrass, annual
Knawel	Shieldscrew
Milkweed, climbing	Smartweed
Morningglory, annual	Spanishneedles
Mustard, black	Tansymustard
Mustard, wild	Wiregrass
Nightshade	

The tank mix is recommended on the following crops:

Almond	Lemon
Apple	Orange
Avocado	Peach
Caneberries	Pear
Cherry	Pecan
Filbert	Plum
Grape	Walnut, English
Grapefruit	



Where a rate range of application rates for Princep is given, use the lower rate on coarser textured soil and soil lower in organic matter; use the high rate on finer textured soils and soil higher in organic matter.

Broadcast Rates Per Acre

Crop	Surflan Dry Flowable	Princep 80W
	(Pounds)	(Pounds)
Apple, Pear and Sour Cherry	2.4-7.1	2 1/2-5

Almond and Peach California only

Apply two (2) to four (4) foot band on each side of tree row. For peach in other states see recommendations for peach, plum and sweet cherry.	2.4-7.1	1 1/4-2 1/2
-----------------------------------------------------------------------------------------------------------------------------------------------------------	---------	-------------

Do not apply Princep to trees established in the grove less than three (3) years. Do not apply Princep to the Mission (Texas) variety of almonds. Do not apply Princep to almond trees propagated on plum rootstocks. Do not replant almond or peaches in soil treated with Princep for 12 months after treatment. Do not apply Princep on gravelly, sandy or loamy sand soil or on soil with less than one percent (1%) organic matter. Do not apply Princep to areas where water will accumulate.

Broadcast Rates Per Acre

Crop	Surflan Dry Flowable	Princep 80W
	(Pounds)	(Pounds)

Avocado

California	2.4-7.1	2 1/2-5
------------	---------	---------

Do not apply Princep to areas where water will accumulate.

Caneberries

2.4-7.1	2 1/2-5
---------	---------

Apply two and one-half (2 1/2) to five (5) pounds of Princep per acre in the spring or apply a split application of two and one-half (2 1/2) pounds per acre in the spring plus two and one-half (2 1/2) pounds per acre in the fall. Apply

BEST AVAILABLE COPY

in a minimum of 40 gallons of water per acre. On plantings less than six (6) months old, use one-half (1/2) the above Princep rate. To control quackgrass, apply five (5) pounds Princep per acre in the fall or split the application applying two and one-half (2 1/2) pounds per acre in the fall plus two and one-half (2 1/2) pounds per acre in the spring, when quackgrass is actively growing. Do not apply Princep when fruit is present.

Filbert

Washington and Oregon

2.4-7.1

2 1/2-5

Apply Princep at two and one-half (2 1/2) to five (5) pounds per acre in the fall or apply a split application of two and one-half (2 1/2) pounds per acre in the spring and two and one-half (2 1/2) pounds per acre in the fall.

Broadcast Rates Per Acre

Surflan
Dry Flowable

Princep 80W

(Pounds)

(Pounds)

Precaution: If trees are planted on a hillside, excessive soil erosion may result from the elimination of weeds. Do not apply on gravelly, sandy or loamy sand soil. Do not apply when nuts are on the ground during the harvest period.

Grape

2.4-7.1

2 1/2-5

Apply Princep any time between harvest and early spring.

Precaution: Do not use Princep in vineyards established less than three (3) years. Do not apply Princep on gravelly, sandy or loamy sand soil.

Grapefruit, Lemon and Orange

Arizona (lemon and
orange only)

2.4-7.1

2 Spring
2 Fall

California (except
Imperial, Coachella
and Palo Verde Valleys)

2.4-7.1

2 1/2-5

Florida (grapefruit and
orange only)

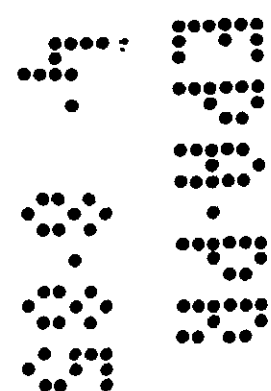
2.4-7.1

8-12

Texas

2.4-7.1

5-6



All areas: do not use Princep in nurseries. Do not apply Princep to bedded grapefruit, lemon, or orange. To avoid possible injury, do not apply Princep to trees under stress from freeze damage for one (1) year after the freeze.

Broadcast Rates Per Acre

Crop	Surflan Dry Flowable	Princep 80W
	(Pounds)	(Pounds)
Peach, Plum and Sweet Cherry	2.4-7.1	2-5

Apply Princep in late fall to early spring prior to weed emergence.

Peach: Use Princep only in Arkansas, Louisiana, Missouri, Oklahoma, Texas and the states east of the Mississippi.

Plum and Sweet Cherry: Use Princep only in Missouri and states east of the Mississippi River except Tennessee.

Pecan

Sand and loamy sand	2.4-7.1	DO NOT USE
Sandy loam	2.4-7.1	2-5
Loam or clay soil low in organic matter	2.4-7.1	2½-3½
Clay soil high in organic matter	2.4-7.1	3½-5

Note: Do not apply Princep when nuts are on the ground. Do not allow animals to graze in Princep treated areas.

Do not use Princep in Arizona, California, New Mexico or west of the Pecos River in Texas as injury will occur. Do not make Princep applications to transplanted trees that have been established less than two (2) years in the grove as injury may occur.

Broadcast Rates Per Acre

Crop	Surflan Dry Flowable	Princep 80W
	(Pounds)	(Pounds)
Walnut, English	2.4-7.1	2½-5

Do not apply Princep to gravelly, sandy or loamy sand soils. Leveling and furrowing operations after application will lessen effectiveness of weed control. Do not apply Princep when nuts are on the ground.

Mixing and Application: Fill the spray tank three-fourths (3/4) full of clean water. Follow instructions on the Princep 80W label for making a slurry of the Princep 80W in a small amount of water in a separate container, then pour the slurry into the spray tank. Mix thoroughly. Then add the recommended amount of Surflan. Mix thoroughly and continue filling the tank. Continuous, vigorous agitation is needed to keep the powders in suspension. Use 20 to 40 gallons of water per acre (broadcast basis). Apply with a properly calibrated low pressure herbicide sprayer that will apply the spray uniformly. Check the sprayer daily for proper calibration to ensure uniform application. Provide good mixing of the spray suspension in the tank before and during application.

Activation: A single one-half inch (1/2") to one inch (1") rain or sprinkler irrigation to move the tank mix combination into the weed seed germination zone is required to activate the herbicides. If weeds begin to emerge, a shallow cultivation of one to two inches (1" to 2") will destroy existing weeds and place Surflan and Princep in the zone of weed seed germination.

Precaution: Poor weed control may result if directions are not followed. Over application may result in crop injury or soil residues. Apply the spray directly to the orchard or vineyard floor.

Caution: Read the Princep label carefully for directions, cautions and precautions before applying this product.

Surflan/Roundup® Tank Mix

Surflan may be tank mixed with Roundup. In this tank mix, Surflan provides preemergence control of certain annual grass and broadleaf weeds while the Roundup provides non-selective, postemergence control of many annual and perennial weeds. This tank mix is recommended on the following crops:

Almond	Grape	Pear
Apple	Grapefruit	Pecan
Avocado	Lemon	Pistachio
Cherry (non-bearing)	Orange	Walnut, English
Filbert		

See page 5 for a listing of weeds controlled by Surflan alone.

General Directions: Surflan/Roundup may be applied any time throughout the growing season. Choose an application schedule based on the specific weeds to be controlled by the Surflan/Roundup tank mix. Consult the Roundup label for specific weed growth stage directions to achieve best results. Karmex and Princep may be tank mixed with Surflan/Roundup to provide preemergence control of those weeds listed. Use Roundup with the Surflan/Karmex tank mix for non-selective, postemergence control of annual weeds only. Use Roundup with the Surflan/Princep tank mix for non-selective, postemergence control of annual and perennial weeds.

Broadcast Rates Per Acre

All Crops .	Surflan	Roundup
	Dry Flowable	
	(Pounds)	(Quarts)
Existing annual grass and broadleaf weeds		
Less than 6" tall	2.4-7.1	1
Over 6" tall	2.4-7.1	1½
Existing perennial weeds	2.4-7.1	2-5

<u>Tree Crops</u>	<u>Preharvest Interval for Roundup Application</u>
Almond	21 days
Apple	14 days
Avocado	14 days
Cherry	1 year
Filbert	21 days
Grapefruit	14 days
Lemon	14 days
Orange	14 days
Pear	14 days
Pecan	21 days
Pistachio	21 days
Walnut	21 days

Note: Repeat treatments may be necessary to control weeds regenerating from underground parts or seed. The combined total of all Roundup treatments must not exceed 10.6 quarts per acre per year. Do not feed or forage areas treated with Roundup for eight (8) weeks after application.

PRECAUTION: EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT OF ROUNDUP SPRAY, DRIFT OR MIST WITH GREEN FOLIAGE, GREEN BARK OR BARK OF TREES ESTABLISHED LESS THAN TWO (2) YEARS, SUCKERS, OR FRUIT OF DESIRABLE TREES, CROPS, PLANTS OR OTHER DESIRABLE VEGETATION. SPRAY CONTACT WITH OTHER THAN MATURED BARK ON THE MAIN TRUNK CAN RESULT IN SERIOUS LOCALIZED OR TRANSLOCATED DAMAGE. If weeds have been mowed, allow regrowth to reach the recommended stage of growth prior to application of this product. Do not apply Roundup to weeds under drought stress.

VinesPreharvest Interval
for Roundup Application

Grape (Raisin, Table, Wine)

14 days

Note: Roundup applications should not be made when green shoots or canes or foliage are in the spray zone. (In the Northeast and Great Lakes regions, Roundup applications must be made prior to the end of bloom stage of grapes to avoid injury).

If repeat Roundup treatments are necessary for weed control in vineyards, do not exceed a total of 10.6 quarts of Roundup per acre per year. Do not treat grapes with Roundup between 14 days before harvest to fall dormancy when no green vegetation, canes or shoots exist.

PRECAUTION: DO NOT ALLOW ROUNDUP SPRAY, DRIFT OR MIST TO CONTACT GREEN FOLIAGE, GREEN BARK, SUCKERS OR VINES AND RENEWALS LESS THAN THREE (3) YEARS OF AGE. ROUNDUP SPRAY CONTACT OTHER THAN WITH MATURE BARK OF THE MAIN TRUNK, CAN RESULT IN SERIOUS LOCALIZED OR TRANSLOCATED DAMAGE.

Mixing and Application: Add the recommended amount of Surflan, or Surflan and other residual herbicides to the spray tank according to directions for these tank mixes. Add Roundup during the last step of the filling operation. Agitate continuously during filling and throughout application. Apply in 20 to 60 gallons of water per acre in a properly calibrated low pressure herbicide sprayer. Check the sprayer daily for proper calibration and uniform application.

Activation: A single one-half inch (1/2") to one inch (1") rain or sprinkler irrigation to move Surflan into the weed seed germination zone is required to activate the herbicide. If weeds begin to emerge, a shallow cultivation of one to two inches (1" to 2") will destroy existing weeds and place Surflan in the zone of weed seed germination.

Caution: Read the Roundup label carefully for directions, cautions and precautions before applying this product.

Surflan/Sinbar® Tank Mix

Surflan/Sinbar is recommended for weed control in the following crops:

Apple	Orange
Peach	Grapefruit
Blueberry	Lemon
Caneberries:	Pecan
Blackberry	
Boysenberry	
Dewberry	
Loganberry	
Raspberry	

BEST AVAILABLE COPY

Surflan/Sinbar controls weeds in addition to those controlled by Surflan alone. As the amount of Sinbar applied per acre increases, so does the number of additional

weeds controlled. Consult the Sinbar label for application rate required for the specific additional weeds to be controlled.

General Directions: Follow recommended application procedures for Surflan. Apply Surflan/Sinbar in at least 20 gallons per acre or more to ensure a uniform application. Moisture is necessary to activate the tank mix. Consult the Surflan label for activation information.

Broadcast Rates Per Acre

	Surflan Dry Flowable	Sinbar 80W*
	(Pounds)	(Pounds)
Apple, Peach	2.4-7.1	2-4

Apply either in the spring or after harvest in the fall before weeds emerge. Where the crop is grown under furrow irrigation or under raised-berm flood irrigation (trees four to six inches (4" to 6") above water line), apply Sinbar only as a band treatment. Do not treat trees planted in the bottom of irrigation furrows or trees grown under flat flood or basin irrigation, and do not use on eroded areas where subsoil or tree roots are exposed, as injury to trees may result.

Blueberry	2.4-7.1	2-4
-----------	---------	-----

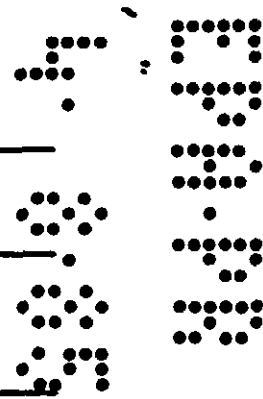
Apply in a minimum of 25 gallons of water per acre.

Treat only plantings established for one (1) year or more. Make a single band or broadcast application to ground beneath bushes: avoid contact of foliage and fruit with spray or mist. Apply either in the spring or after harvest in the fall before weeds emerge. Do not use Sinbar on eroded areas where subsoil or roots are exposed, nor on plants that are diseased or lacking in vigor, as injury to the plants may result. Sinbar treated areas may be planted to blueberries one (1) year after last application.

Caneberries:	2.4-7.1	1-2
Blackberry		
Boysenberry, Dewberry		
Loganberry, Raspberry		

Broadcast Rates Per Acre

	Surflan Dry Flowable	Sinbar 80W*
	(Pounds)	(Pounds)



Treat only plantings established for (1) year or more. Make a single band or broadcast application to the soil beneath the canes in the fall or early spring before fruit set and before weeds emerge. Do not spray foliage nor use on eroded areas where subsoil or roots are exposed, nor apply to plants that are diseased or lacking vigor as injury to the plant may result. Sinbar treated areas may be planted to caneberries one (1) year after last application. Do not apply Sinbar within 70 days before harvest.

Citrus:

Orange, Grapefruit, Lemon

Trees established for one (1) year:

2.4-7.1

2-4

Trees established for two (2) years or more:

Arizona and California

2.4-7.1

2-8

Florida and Texas

2.4-7.1

2-10

Apply as a band or broadcast treatment as a directed spray: avoid contact of foliage and fruit with spray or mist. Temporary yellowing of citrus leaves may occur following Sinbar treatment. Sinbar may be used on coarse soils but is not to be used on sands low in organic matter (less than one percent (1%)), on poorly drained soils, or on trees planted in irrigation furrows, as injury to trees may result. Sinbar treated areas may be planted to citrus trees one (1) year after last application.

*Sinbar application rates may vary with soil texture, weeds to be controlled, length of control desired and age of crop.

Caution: Read the Sinbar label for additional directions for use, cautions and special precautions prior to use.

Surflan/Solicam® Tank Mix

The Surflan/Solicam tank mix controls the following weeds in addition to those weeds controlled by Surflan alone:

Barley, wild

Brome, downy

Brome, ripgut

Bursage, annual

Cupgrass, southwestern

Dandelion, false

Filaree (red and whitestem)

Fingergrass, feather

Gramma grass, sixweeks

London rocket

Pineappleweed

Thistle, Russian and sow

Weeds suppressed by this tank mix in addition to those suppressed by Surflan alone include:

Bermudagrass

Horseweed

Nightshade, silverleaf

Nutsedge, purple

Quackgrass

BEST AVAILABLE COPY

Surflan/Solicam is recommended on the following crops:*

Almond	Nectarine
Apple	Peach
Apricot	Pear
Cherry	Plum
Citrus	Prune
Filbert	Walnut

*Apply Solicam on all of the above crops only in California, Oregon and Washington. In Arizona, use on citrus only. Use only on crops in the Imperial, Coachella or Palo Verde Valleys of California.

Orchard Establishment Requirements: Use Surflan/Solicam on crops listed above that have been established at least 18 months in the field with exception of citrus, where the trees should be established in the field for 12 months. In all cases, the soil should be settled and firm at the time of application. Do not use on nursery stock.

General Directions: Apply the tank mix to the soil surface from fall to early spring before weeds emerge, except on those crops where otherwise specified. The orchard floor must be free of weeds and must be relatively free of plant residues. Solicam does not control established weeds.

Apply as a directed spray. Avoid contact with fruit or foliage. Make only one application per year.

Activation: If no rainfall occurs within two weeks after application, the tank mix must be activated by sprinkler irrigation. Check activation instructions for Surflan alone.

Broadcast Rates Per Acre

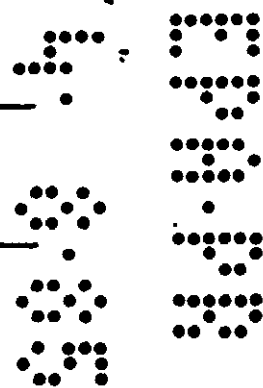
Use the lower Solicam rates on coarse soils. Use the higher rates on medium to fine soils or soils having organic matter content of greater than 3%.

Crop	Surflan Dry Flowable	Solicam 80W
	(Pounds)	(Pounds)

Almond	2.4-7.1	2½-5
--------	---------	------

Apply from October through January

Crop	Surflan Dry Flowable	Solicam 80W
	(Pounds)	(Pounds)



Precaution: Do not use on coarse textured soils such as sand, loamy sand, gravelly sand and fine sand.

Apple, Apricot, Filbert, Nectarine, Peach, Pear, Plum, Prune, Walnut	2.4-7.1	2½-5
-------------------------------------------------------------------------------	---------	------

Cherry	2.4-7.1	2½-5
--------	---------	------

Precaution: Do not use on coarse textured soils such as sand, loamy sand, gravelly sand and fine sand.

Citrus	2.4-7.1	2½-5
--------	---------	------

Apply any time during the year according to local practice.

Precaution: Do not use where citrus is interplanted with palm trees.

Solicam Precautions: Do not apply when nuts or fruit are on the ground at harvest. Do not graze livestock on treated areas. Do not feed or graze cover crops grown in treated orchards. Read the Solicam label for directions, cautions and limitations prior to use.

SURFLAN APPLICATION WITH LIQUID FERTILIZERS

GENERAL INSTRUCTIONS

Surflan Dry Flowable may be mixed with most liquid fertilizer materials. The combination of Surflan with solutions and suspension-type fertilizers has provided weed and grass control equal to the same rates of Surflan applied in water. Follow Surflan label recommendations regarding rates per acre, crops, application directions, special instructions, cautions and special precautions. Individual state regulations relating to liquid fertilizer mixing, registration, labeling and applications are the responsibility of the individual and/or company selling the fertilizer and chemical mixture. In all cases, vigorous and continuous agitation is required to mix Surflan Dry Flowable with the liquid fertilizer. Surflan Dry Flowable may be applied alone in liquid fertilizer without a compatibility agent. The use of a compatibility agent is especially important when tank mixing Surflan Dry Flowable with emulsifiable concentrates (EC) and liquid concentrates (LC). See the liquid fertilizer compatibility test below. If the emulsion is not properly formed, the EC/LC may rise to the surface of the fertilizer as an oil ("oils out"), the oil may combined with the Surflan Dry Flowable, wettable powder, liquid, flowable or aqueous suspension to form oily curds (viscous phase) which are difficult to disperse.

Any one of the compatibility agents listed below is helpful in causing emulsifiable and liquid concentrates to form non-oiling mixtures with liquid fertilizers. These compatibility agents can be used at rates as low as one and one-half (1½) to two (2)

pints per ton of liquid fertilizer and should be mixed well with the fertilizer containing Surflan Dry Flowable before adding the emulsifiable concentrate. Read the label on the compatibility agent and follow the directions.

1. Sponto 168D (Wilco Chemicals Co., Chicago, IL)
2. Compal (Farm Chemicals, Inc., Aberdeen, NC)
3. Unite (Hopkins Ag Chemical, Madison, WI)
4. T-Mulz 734-2 (Thompson-Hayward Chemical Co., Kansas City, KS)
5. Rigo Compatibility Agent (Rigo Co., Buckner, KY)
6. Amoco Spray Mate™ (Amoco Oil Co., Chicago, IL)
7. Kem-Link (Universal Coop, Minneapolis, MN)
8. Blendex™ (Helena Chemical Co., Cayce-West, Columbia, SC)
9. Spray-Aide™ (Miller Chemical and Fertilizer Corp., Hanover, PA)

Each of the above is a phosphate ester type surfactant designed to be used with liquid fertilizers. They usually do not work well as compatibility agents in tank mixtures in plain water.

TESTING FOR TANK MIX COMPATIBILITY IN LIQUID FERTILIZERS:

Tank mixtures with Surflan Dry Flowable, other dry flowables, wettable powders (WP), aqueous suspension (AS), flowables (F), liquids (L), solutions (S), or emulsifiable concentrates (EC) may not combine properly with some fluid fertilizer materials. Small quantities should always be tested before full-scale mixing. This will determine whether a compatibility agent is needed, and which agent does the best job. The nine (9) agents listed above have been thoroughly tested. There are many other surfactants on the market which were not designed for use with liquid fertilizers. Use the following test to select the correct agent for your mixture.

1. Put one (1) pint of the liquid fertilizer in a quart jar.
2. Add one (1) to four (4) teaspoonful(s) of Surflan Dry Flowable with an equal amount of the WP, AS, F, L, S or EC formulation (depending on the recommended rate per acre) to the liquid fertilizer. Close jar and agitate until dispersed evenly in the fertilizer. If the materials do not disperse well, it may be necessary to slurry the chemicals in water before adding to the fertilizer.
3. Observe the jar for about 10 minutes. If the materials rise to the surface and form a thick layer (oil curds) which will not disperse when agitated, compatibility agent is needed. If the mixture is easily dispersed to its original state with slight agitation, no agent is needed, but good agitation must be provided in the fertilizer spray tank.

BEST AVAILABLE COPY

4. If the need for a compatibility agent is shown in Step 3, using a clean quart jar, start at Step 1 above, add one-half ($\frac{1}{2}$) teaspoonful of the compatibility agent to the liquid fertilizer, mix well, then repeat Steps 2 and 3.

An effective compatibility agent will cause the mixture to remain uniformly mixed with little or no separating or oil rising to the surface for one half ($\frac{1}{2}$) hour or longer. If slight separation does occur, two (2) to three (3) inversions of the jar should give a uniform remix. If oily curds form which will not disperse, more agent or another agent should be tried.

Use a clean jar for each test. The compatible mixture will have a uniform appearance and will be relatively easy to keep mixed with gentle agitation of the jar.

SURFLAN PERFORMANCE GUARANTEE

(A LIMITED WARRANTY OF WEED AND GRASS CONTROL)

Elanco Products Company warrants that Surflan will control the weeds and grasses as indicated on its current label when used according to label directions and subject to the following limitations:

1. Purchaser must notify Elanco promptly if a lack of satisfactory control occurs. Such notice must be given within 30 days after the first planting or application of Surflan to the treated crop, whichever occurs later.
2. An Elanco representative must be satisfied that Purchaser used Surflan according to the label directions and must visually observe unsatisfactory control of weeds in the field.
3. The product guarantee will extend to the following applications only:
 - a. Preplant surface application (PPSA) when a light tillage is used prior to planting.
 - b. Postplant surface application (SA) when a light tillage is used prior to or just following crop emergence.
 - c. Any recommended application where a single one-half inch ($\frac{1}{2}$ ") rainfall or sprinkler irrigation occurs prior to weed seedling emergence.
4. The Purchaser must provide an Elanco representative with an invoice or other satisfactory record which shows the price and quantity of Surflan purchased.
5. Elanco's liability will be limited to a refund of the purchase price of the Surflan applied to the acreage on which weed control was not satisfactory or, at the option of the Purchaser, a refund of an equivalent amount of Surflan.

BEST AVAILABLE COPY

6. Void outside the U.S.A.

DISCLAIMER OF WARRANTIES

The warranty printed above is the only warranty applicable to this product. All other warranties, express or implied, including but not limited to the implied warranties of merchantability and fitness for a particular purpose, are disclaimed.

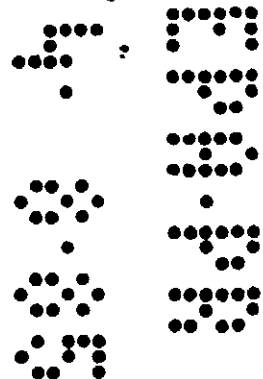
LIMITATION OF DAMAGES

Elanco's liability, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the return of the amount of the purchase price of the Surflan and under no circumstances shall Elanco be liable for special, indirect or consequential damages.

INHERENT RISKS OF USE

Failure to carefully follow the directions for use of Surflan may result in unsatisfactory weed control or crop injury. Factors such as seedling disease, foliage disease, cold weather, deep planting, excessive moisture, high salt concentration or drought may also result in unsatisfactory weed control or crop injury.

03/19/85



Amiben® - chloramben, Union Carbide Agricultural Products Co., Inc.
Casoron® - dichlobenil, Philips-Duphar
Dyanap® - naptalam + dinoseb, Uniroyal Chemical
Goal® - oxyfluorfen, Rohm and Haas Company
Hyvar® X--bromacil, E. I. duPont de Nemours and Company
Karmex® - diuron, E. I. duPont de Nemours and Company
Klean-Krop® - naptalam + dinoseb, Thompson-Hayward Company
Krovar® I and II - bromacil/diuron, E. I. duPont de Nemours and Company
Lexone®--metribuzin, E. I. duPont de Nemours and Company
Lorox®--linuron, E. I. duPont de Nemours and Company
Princep® - simazine, Ciba-Geigy Corporation
Roundup® - glyphosate, Monsanto Company
Sencor®--metribuzin, Bayer GmbH
Sinbar® - terbacil, E. I. duPont de Nemours and Company
Solicam® - norflurazon, Sandoz, Inc.
TREFLAN® - E.C., 5, M.T.F.[™] - trifluralin, Elanco Products Company

9/7/83 (Consistent with typeset copy from Ben Fiscus)
2/12/85 Revision in process

