

<p>US ENVIRONMENTAL PROTECTION AGENCY OFFICE OF PESTICIDES PROGRAMS REGISTRATION DIVISION (75-767) WASHINGTON, DC 20460</p> <p>NOTICE OF PESTICIDE: <input checked="" type="checkbox"/> REGISTRATION <input type="checkbox"/> REREGISTRATION</p> <p><i>(Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended)</i></p>	<p>EPA REGISTRATION NO. <u>56479-1</u></p> <p>DATE OF ISSUANCE JAN 12 1987</p> <p>TERM OF ISSUANCE <u>Conditional</u></p> <p>NAME OF PESTICIDE PRODUCT Ipifluor 4FC Multiqrade</p>
<p>NAME AND ADDRESS OF REGISTRANT (Include ZIP code)</p> <p><input type="checkbox"/> <input type="checkbox"/></p> <p>EFFE FORTIS AG WEGSTASSE 25 CH-8750 Glarus Switzerland</p> <p><input type="checkbox"/> <input type="checkbox"/></p>	
<p>NOTE: Changes in labeling formula differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above U.S. EPA registration number.</p>	
<p>On the basis of information furnished by the registrant, the above named pesticide is hereby Registered/Reregistered under the Federal Insecticide, Fungicide, and Rodenticide Act.</p> <p>A copy of the labeling accepted in connection with this Registration/Reregistration is returned herewith.</p> <p>Registration is in no way to be construed as an indorsement or approval of this product by this Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.</p> <p>This product is conditionally registered in accordance with FIFRA section 3(c)(7)(A) provided that you:</p> <ol style="list-style-type: none"> 1. Submit/cite all data required for registration/reregistration of your product under FIFRA section 3(c)(5) when the Agency require all registrants of similar products to submit such data. 2. Make the labeling changes below before you release the product for shipment. <ol style="list-style-type: none"> a. Add the phrase "EPA Registration No. 56479-1." b. Under the ENVIRONMENTAL HAZARDS precautionary statement add the following: "Do not apply when weather conditions favor drift from treated areas." c. Delete reference to a "Technical Bulletin." Instead, refer to the relevant portion of the label as "Directions for Use." d. Under the directions for applying this product with liquid fertilizers, add a list of compatibility agents. Specify compatibility agents cleared for application to growing crops. <p><input type="checkbox"/> ATTACHMENT IS APPLICABLE</p>	
<p>SIGNATURE OF APPROVING OFFICIAL</p>	<p>DATE JAN 12 1987</p>

- e. Under the use directions for asparagus, note that the application rate for a single application on fine soils is 4 pints (both before or after harvest).
- f. The application rates for guar beans, mungbeans, lima beans, and snap beans must be modified to note that the following rates should be used for lima and snap beans--1 pint on coarse and medium soils and 1 1/2 pints on fine soils.
- g. Under the fall application directions for cotton (Ipifluor alone), note that the use is limited to the southeastern Missouri bootheel, and add the following States: New Mexico, Oklahoma, and South Carolina.
- h. Under Special Application to Cotton (Ipifluor alone), specify that use along the Texas Gulf Coast is limited to the following counties: Brazoria, Calhoun, Chambers, Fort Bend, Galveston, Harris, Jackson, ^{Jefferson}Liberty, Matagorda, Orange, Victoria, Waller, and Wharton.
- i. For the Ipifluor/Caparol 80W tank mix for cotton, note that the qualifying statement "Do not use on sand and loamy sand soils" applies only to the 2-pound recommended rate of Caparol on coarse soils. The qualifying statement should also be expanded to state that for band applications, the user should use proportionally less.
- j. For the Ipifluor/Cotoran tank mix for cotton, make the following modifications:
- In the precautionary text for use in New Mexico, note that the tank mix should not be used on sandy loam soils with less than 1 percent organic matter.
 - Under the use directions for Cotoran overlay, specify that the lower recommended application rate should be used on light soil and sandy soils low in organic matter.
- k. For the Ipifluor/Karmex overlay directions for cotton, note that the use is limited to Eastern Texas.
- l. Under the use directions for cucurbits, specify more prominently that the use is limited to the Western United States, including Texas.
- m. Modify the precautionary text for the Ipifluor/Avadex tank mix on peas to warn against grazing livestock on treated crops.

- n. Under the use directions for soybeans, special applications of Ipifluor alone, make the following modifications:
- Specify the counties where the product may be used in the Texas Gulf Coast (see h above).
 - Remove the asterisk from the statement following the application rate table for red rice control. The statement applies to all rates.
 - In the directions for control of Rhizome Johnsongrass in the Eastern United States note that the application may be made in spring or fall or as a split application.
- o. Under the use directions for sugar beets, special application, add Kansas to the list of States where application is permitted.
- p. Under the use directions for sugarcane, specify that the Plant Cane directions are limited to use in the Eastern United States only.
- q. Under the use directions for Trees and Vineyards, make the following modifications:
- In the application rate table for new plantings of vineyards in the Western United States, specify that 3 to 4 pints may be used on fine soils or soils with 2 to 10 percent organic matter.
 - Add the following precautionary statement for use directions in the Eastern and Western United States: "If crops are planted between the trees or vines, label directions for those specific crops apply to the area which is interplanted."
 - Under the Rhizome Johnsongrass directions, add the following precautionary statements: "Do not apply to vineyards within 6 months of harvest" AND "Do not interplant orchards or vineyards with other crops. If Ipifluor 4 EC Multigrade treated vineyards and orchards are diverted to other crop uses, plant only those crops for which Ipifluor 4 EC Multigrade is registered as a preplant treatment."
- r. Under the use directions for wheat, we do not understand the Fall Application directions. Do you intend these directions to apply to wheat only, or are they meant to be general fall application directions? Trifluralin labels do not contain fall application directions for wheat.

2. Under Special Precautions, add Oklahoma and South Dakota to the list of States where at least 25 inches of irrigation or rainfall was used to produce the crop.

3. Submit one (1) copy of your final printed labeling before you release the product for shipment.

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

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

Richard P. Mountfort *RFM*
Product Manager (23)
Fungicide-Herbicide Branch
Registration Division (TS-767C)

Enclosure

56479-R

Compared to/

2749 513

+

1471-35

1471-116

I P I F L U O R 4 E C MULTIGRADE

EMULSIFIABLE CONCENTRATE

ACCEPTED
with comments
JAN 2 1997
56479-1

S E L E C T I V E H E R B I C I D E

FOR THE PRE-EMERGENCE CONTROL OF ANNUAL GRASSES AND BROADLEAF WEEDS

ACTIVE INGREDIENT

d,d,d-trifluoro-2,6-dinitro-N,N-dipropyl-p-toluidine 41.2%

INERT INGREDIENTS 58.8%

TOTAL 100.0%

Contains 4 pounds of active ingredient per gallon.

C A U T I O N

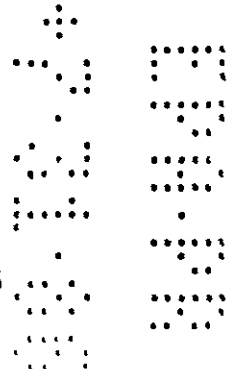
KEEP OUT OF REACH OF CHILDREN

SEE BACK OF CONTAINER FOR ADDITIONAL PRECAUTIONARY STATEMENTS

EPA Est.No.

EPA Reg.No.

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(PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Harmful if swallowed, inhaled or absorbed through the skin. Avoid contact with skin, eyes or clothing. Avoid breathing spray mist. When handling or applying, wear protective clothing such as goggles or face shield and rubber gloves. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

ENVIRONMENTAL HAZARDS

This product is toxic to fish. Do not apply directly to water. Do not contaminate water by cleaning of equipment or disposal of wastes. Do not apply when weather conditions favor drift

PHYSICAL AND CHEMICAL HAZARDS

Do not use or store near heat or open flame.

STATEMENT OF PRACTICAL TREATMENT

If swallowed: Call a physician. Drink 1 or 2 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 inhaled: Remove victim to fresh air. Get medical attention.

If in eyes: Immediately flush with plenty of water. Get medical attention.

If on skin: Wash with plenty of soap and water. Get medical attention.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Refer to Technical Bulletin for Use of IPIFLUOR 4 EC MULTIGRADE and read all directions carefully before applying.

STORAGE AND DISPOSAL

Storage.

May be stored in unheated facilities. Do not store near heat or open flame.

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.

Do not reuse empty containers. Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

TECHNICAL BULLETIN

FOR USE OF

IPIFLUOR 4 EC
MULTIGRADE

MPH Handels AG
Burgstrasse 28
CH-8750 Glarus, Switzerland

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PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Harmful if swallowed, inhaled or absorbed through the skin. Avoid contact with skin, eyes or clothing. Avoid breathing spray mist. When handling or applying, wear protective clothing such as goggles or face shield and rubber gloves. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

ENVIRONMENTAL HAZARDS

This product is toxic to fish. Do not apply directly to water. Do not contaminate water by cleaning of equipment or disposal of wastes.

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STORAGE AND DISPOSAL

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GENERAL INFORMATION

IPIFLUOR 4 EC MG* is a pre-emergence herbicide which is incorporated into the soil to provide long-lasting control of annual grasses and broadleaf weeds. It controls weeds by killing their seeds as they germinate. It does not control established weeds. Incorporation of IPIFLUOR 4 EC MG assures effective control regardless of weather conditions and permits shallow cultivation, rotary hoeing and hand hoeing without reducing its weed control activity.

WEEDS AND GRASSES CONTROLLED

GRASSES		BROADLEAF WEEDS	
Annual bluegrass	Poa Annua	Carpetweed	Mollugo verticillata
Barnyardgrass (Watergrass)	Echinochloa sp.	Chickweed	Stellaria media
Brachiaria (Signalgrass)	Brachiaria sp.	Field Bindweed	Convolvulus arvensis
Bromegrass (Cheatgrass-Downy brome)	Bromus tectorum	Florida pusley (Florida purslane- Pusley)	Richardia scabra
Cheat (Chess)	Bromus secalinus	Goosefoot	Chenopodium hybridum
Crabgrass (Large crabgrass- Smooth crabgrass)	Digitaria sp.	Henbit	Lamium amplexicale
Fall panicum	Panicum dichotom.	Knotweed	Polygonum aviculare
Foxtails (Bottlegrass- Bristlegrass- Giant foxtail- Green foxtail- Pigeongrass- Robust foxtail- Yellow foxtail)	Setaria sp.	Kochia (Fireweed)	Kochia Scopparia
Goosegrass (Silver crabgrass- Silvergrass- Wiregrass Yardgrass)	Eleusine indica	Lambquarters Pigweeds (Carelessweed- Prosoprate pig weed-Redroot- Rough pigweed- Spiny pigweed)	Chenopodium album Amaranthus sp.
Gulmeagrass	Panicum maximum	Puncturevine	Tribulus terrestris
Johnsongrass (Seedling and Rhizome)	Sorghum halepense	(Caltrop)	
Junglerice	Echinochloa col.	Purslane	Portulaca oleracea
Raouigrass (Itchgrass)	Rottboellia exalt.	Russian thistle (Tumbleweed)	Salsola kali
		Stinging nettle (Nettle)	Urtica dioica

not
rice

* In the text MultiGrade is abbreviated as MG

Cocklebur	<i>Cenchrus incertus</i>
(Burglass, ragwort, inkgrass (Lacegrass)	<i>Leptochloa filiflora</i> <i>Eragrostis ciliaris</i>
Wax panicum (Buffalograss- Coloradograss)	<i>Panicum texanum</i>
Wild cane (Shattercone)	<i>Sorghum bicolor</i>

IPLUOR 4 EC MG will not control certain resistant weeds such as Cocklebur, mallowweed, Ragweed, Velvetleaf, Nutsedge.

IPLUOR 4 EC MG, in mixture with other products, will control the following additional weeds:

IPLUOR 4 EC MG/SENCOR^R OR LEXONE^R TANK-MIX
(see Soybean section for instructions)

soybean:

Mallowweed	<i>Datura stramonium</i>
Flower, Venice (Flower-of-an-hour)	<i>Hibiscum trionum</i>
Mustard, wild (Charlock- Field Mustard)	<i>Brassica kaber</i>
Ragweed, common	<i>Ambrosia artemisiifolia</i>
Sesbania, hemp (Coffeebean- Indigo)	<i>Sesbania exaltata</i>
Smartweed, annual (Pennsylvania Smartweed- Smartweed)	<i>Polygonum pennsylvanicum</i>
Prickly sida (Teaweed- Spiny sida)	<i>Sida spinosa</i>
Velvetleaf (Butterprint- Buttonweed- Cottonweed- Elephant's ear- Indian mallow- Piermarker)	<i>Abutilon theophrasti</i>

Control of Cocklebur, Morning glory and Giant Ragweed may be erratic ranging from poor to excellent depending upon soil temperature, time of weed germination, depth of weed seed in the soil and amount and timing of soil moisture. Control may be improved with timely cultivation.

IPLUOR 4 EC MG/EPTAM^R TANK-MIX
(see Drybean section for instructions)

In drybean and potato:

Henbit	<i>Lamium amplexicale</i>
Nightshade, black	<i>Solanum nigrum</i>
Nightshade, hairy	<i>Solanum sarachoides</i>
Nutsedge (Nutsedge- Purple nutsedge- Yellow nutsedge)	<i>Cyperus sp.</i>
Wild oat	<i>Avena fatua</i>

IPLUOR 4 EC MG/AMIBEN^R TANK-MIX AND OVERLAY
(see Soybean and sunflower sections for instructions)

In soybean and sunflower:

Coffeeweed	<i>Sesbania exaltata</i>
Mustard; wild	<i>Brassica kaber</i>
Nightshade, black	<i>Solanum nigrum</i>
Prickly sida (Teaweed)	<i>Sida spinosa</i>
Ragweed, common	<i>Ambrosia artemisiifolia</i>
Spurge, annual	<i>Euphorbia maculata</i>
Smartweed, pennsylvania	<i>Polygonum pennsylvanicum</i>
Stinkgrass	<i>Eragrostis ciliaris</i>
Velvetleaf (Buttonweed)	<i>Abutilon theophrasti</i>

IPLUOR 4 EC MG/CAPAROL^R TANK-MIX
(see Cotton section for instructions)

In cotton:

Smartweed	<i>Polygonum pennsylvanicum</i>
Prickly sida (Teaweed)	<i>Sida spinosa</i>
Annual morning glory	<i>Convolvulus</i>
Ragweed, common	<i>Ambrosia artemisiifolia</i>
Groundcherry, annual	
Mustard, wild	<i>Brassica kaber</i>
Malva	
Wild oat	<i>Avena fatua</i>

The tank-mix also controls shallow germinating seedlings of Cocklebur and Coffee weed.

IPLUOR 4 EC MG/COTORAN^R TANK-MIX OR OVERLAY
(see Cotton section for instructions)

In cotton:

Butterweed	Abutilon theophrasti
Cocklebur	Xanthium strumarium
Goathead	
Groundcherry, annual	
Jimsonweed	Datura stramonium
Morning glory, annual	Convolvulus
Prickly sida	Sida spinosa
Ragweed	Ambrosia artemisiifolia
Ryegrass	Lolium
Sesbania	Sesbania
Sicklepod	Cassia obtusifolia
Smartweed	Polygonum pennsylvanicum
Tumbleweed	Amaranthus albus

IPIFLUOR 4 EC MG PREPLANT FOLLOWED BY XARMAX^R OVERLAY
(see Cotton section for instructions)

In corn:

Dogfennel	Eupatorium capillifolium
Groundcherry, annual	
Morning glory, annual	Convolvulus
Pennycress	Thlaspi sp.
Ragweed	Ambrosia artemisiifolia
Sneeperspense	Capsella bursa pastoris
Velvetgrass	Holcus lanatus
Wild lettuce	Lactuca sp.
Wild mustard	Brassica kaber

IPIFLUOR 4 EC MG/VERNAM^R TANK-MIX
(see Soybean and Peanut sections for instructions)

In soybean and peanut:

Morning glory, annual	Convolvulus
Coffeeweed	Sesbania exaltata
Purple nutsedge	Cyperus rotundus
Yellow nutsedge	Cyperus esculentus
V. leaf	Abutilon theophrasti

IPIFLUOR 4 EC MG/AYADEX^R TANK-MIX
(see Peas and Wheat sections for instructions)

In peas, spring wheat and barley:

Wild oat	Avena fatua
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SOIL PREPARATION

A good soil preparation is essential for best results: destroy existing weeds before herbicide application. Chop and thoroughly mix crop residues into the soil to a depth of at least 4 to 6 inches by deep plowing or disking before application. Use machinery that breaks up large clods.

SOIL TEXTURE

Before application determine soil texture in order to apply the correct rate. Rates given in this booklet refer to the following soil texture groups:

Coarse soils: sand, loamy sand, sandy loam

Medium soils: loam, silty clay loam, silt loam, silt, sandy clay loam

Fine 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 fine 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 they are predominantly clay, they are usually classified as fine textured soils.

APPLICATION DIRECTIONS

IPIFLUOR 4 EC MG is an emulsifiable concentrate which must be mixed with water and applied as a spray before or in the same operation as soil incorporation.

GROUND APPLICATION

Apply in 5 to 40 gallons of water/acre (broadcast basis) using any properly calibrated low-pressure sprayer that will uniformly apply the spray. Pour the recommended amount of product into the spray tank during the filling operation and mix thoroughly before spraying. As the amount of water decreases, the importance of accurate calibration and uniform application increases. Check the sprayer daily.

Do not apply the herbicide to soils which are wet or in poor conditions or to soils which are subject to prolonged period of flooding.

AERIAL APPLICATION

For best results apply to a dry soil surface at a spray volume of from 5 to 10 gallons/acre. Adjust pump pressure, nozzle arrangements, flying speed and height to provide uniform application. Use markers or flagmen to assure proper application spray widths.

Do not apply when the wind is blowing at a velocity of 5 mph or greater.

INCORPORATION

Before planting.

For best results the herbicide must be incorporated within 24 hours after application. A second incorporation is required at any time prior to planting using the equipment in a different direction from the first. Incorporation should place the product into the top 2 or 3 inches of the final seedbed.

Variable weed control may result from delayed incorporation if the herbicide is applied to a wet, warm soil surface or if the wind velocity is 10 mph or higher.

After planting.

When incorporating after planting (check crops approved for incorporation after planting), use P.T.O.-driven equipment or Rolling Cultivators and adjust to till the soil over the seed or throw treated soil toward the crop. Avoid disturbing the seed or mechanically damaging the crop.

In bedded culture.

For effective weed control in bedded culture the product should be incorporated in to the top 2 to 3 inches of the final seedbed. Knock off beds to planting height before application and incorporation on bedded ground. Avoid removal of treated soil from the seedbed before or during the planting operation. This will expose untreated soil and allow weeds to germinate in the drill row.

Equipment.

For incorporation use machinery which pulverize large clods and mix the herbicide thoroughly with the soil. Thorough incorporation may be achieved with the following: Disc, set to cut 4 to 6 inches deep and operated in two different directions at 4 to 6 mph; Field Cultivator, set to cut 3 to 4 inches deep and operated at 5 mph or more; Rolling Cultivator, set to cut 2 to 4 inches deep and operated two times at 6 to 8 mph (adequate for use on coarse and medium textured soils only); Bed Conditioner, set to cut 2 to 4 inches deep and operated one time at 4 to 6 mph (adequate for use on coarse and medium textured soils only); Mulch Treader and other similar disc-type implements, set to cut 3 to 4 inches deep and operated at 5 to 8 mph in two different directions. P.T.O.-driven equipment (tillers, cultivators, hoes), set to cut 2 to 3 inches deep with rotors spaced to provide a clean sweep of the soil and operated one time (they should not be operated at a speed greater than 4 mph).

APPLICATION WITH LIQUID FERTILIZERS

IPIFLUOR 4 EC MG may be mixed with most liquid fertilizers. The mixture has provided weed and grass control equal to the same rates of IPIFLUOR 4 EC MG applied in water.

Individual state regulations relating to fluid fertilizer mixing, registration, labeling and application are the responsibility of the individual and/or company selling the fertilizer and chemical mixture.

IPIFLUOR 4 EC MG alone or in tank-mixture may not combine properly with some fluid fertilizer material. Therefore, it is necessary to determine whether a compatibility agent is needed and which agent works properly testing small quantities before full-scale mixing.

1. Put 1 pt of fertilizer mixture in a quart jar.
2. Add 1 to 4 teaspoonfuls of the formulation which must be mixed to the liquid fertilizer (depending on the recommended rate/acre).
3. Close jar and agitate until the materials are dispersed evenly in the fertilizer. If the materials do not disperse well, slurry the chemicals in water before adding to the fertilizer.
4. Add 3 to 4 teaspoonfuls of IPIFLUOR 4 EC MG to the jar and shake well.

*add
list of
compatibility
agents*

Match mixture for about 10 minutes. If the mixture does not separate, or if agitation is only required to resuspend the combination may be used. If the mixture separates, gets very thick or syrupy DO NOT combine for field application. A compatibility agent is needed.

6. Mixing ability may be improved by adding a compatibility agent. Follow the procedure outlined above and add 0.1 teaspoonful of the compatibility agent in step 2. Complete the other steps to determine if the compatibility agent solves the problem.

The use of compatibility agents is especially important when tank mixing emulsifiable concentrates with dry flowables, wettable powders, aqueous suspensions, flowables, liquids or solutions in liquid fertilizers.

If a compatibility agent is needed, add it to the fluid fertilizer before adding the IPIFLUOR 4 EC MG alone or in mixture.

Follow normal application procedures to apply and incorporate.

APPLICATION WITH DRY BULK FERTILIZERS

Dry bulk fertilizers may be impregnated or coated with IPIFLUOR 4 EC MG. Application of dry bulk fertilizers impregnated with IPIFLUOR 4 EC MG has provided weed and grass control equal to the same rates of IPIFLUOR 4 EC MG applied in water.

All IPIFLUOR 4 EC MG label recommendations regarding rates/acre, approved crops incorporation, special instructions, cautions and special precautions must be followed. All individual state regulations relating to dry bulk fertilizer blending, registration, labeling and application are the responsibility of the individual and/or company selling the fertilizer and chemical mixture.

Limitations.

Apply a minimum of 200 pounds/acre of dry fertilizer impregnated with IPIFLUOR 4 EC MG at the recommended rates. Any commonly used dry fertilizer can be used for IPIFLUOR 4 EC MG impregnation except coated ammonium nitrate and straight limestone. These materials will not absorb the herbicide. Blends containing mixtures of these materials can be impregnated.

Impregnation.

Use any closed drum, belt, ribbon or other commonly used dry bulk fertilizer blender. Provide uniform spray coverage of IPIFLUOR 4 EC MG on to the fertilizer.

Rates.

Check the crop section to determine the rate of IPIFLUOR 4 EC MG /acre. See the rate table which follows to determine amount of IPIFLUOR 4 EC MG to be impregnated on a ton of dry bulk fertilizer based on the amount of fertilizer which will be applied/acre

Application.

Spread the fertilizer/chemical mixture normally with a properly calibrated applicator. Be certain the material is applied uniformly to the soil surface.

Incorporation.

Follow normal incorporation procedures.

Rate Chart for Impregnating Fertilizer with IPIFLUOR 4 EC MG
(Trifluralin added to a ton of fertilizer)

Fertilizer Rate Per Acre	1 pint	1 1/2 pints	2 pints	3 pints	4 pints
200 pounds	5 qts per ton	7 1/2 qts per ton	10 qts per ton	15 qts per ton	20 qts per ton
250 pounds	6 qts per ton	9 qts per ton	12 qts per ton	18 qts per ton	24 qts per ton
300 pounds	7 1/2 qts per ton	11 1/4 qts per ton	15 qts per ton	22 1/2 qts per ton	30 qts per ton
350 pounds	9 qts per ton	13 1/2 qts per ton	18 qts per ton	27 qts per ton	36 qts per ton
400 pounds	10 qts per ton	15 qts per ton	20 qts per ton	30 qts per ton	40 qts per ton
450 pounds	11 1/4 qts per ton	16 3/4 qts per ton	22 1/2 qts per ton	33 3/4 qts per ton	45 qts per ton

For rates other than those listed above, use the following formula to calculate the amount of Trifluralin to be impregnated on a ton of dry bulk fertilizer:

$$\frac{\text{Pints of IPIFLUOR 4 EC MG per acre}}{1} \times \frac{1000}{\text{Lbs Fertilizer/acre}} = \frac{\text{Quarts IPIFLUOR 4 EC MG}}{\text{Ton of Fertilizer}}$$

DEFLECTIONS FOR USE

Where applicable, rates are given for Eastern United States and Western United States. The dividing line between Eastern and Western States is the point where the average rainfall/year is a minimum of 20 to 25 inches.

Rates are given for broadcast application, for band application use proportional amount of product.

ALFALFA (Established)

Use restricted to Western US only.

Apply to established alfalfa stands at a broadcast rate/acre of 1 1/2 pt on coarse soil and 2 pts on medium and fine soils. Use incorporation equipment that will insure thorough soil mixing with a minimum of damage to the established alfalfa.

ASPARAGUS (Established)

In winter or early spring apply after ferns are removed but before spear emergence or apply after harvest in the late spring or early summer before ferning begins. Applied as a single or as a split application at the following:

Soil texture	Broadcast rate/acre		Single application	
	Split application Before harvest	After harvest	Before harvest	After harvest
Coarse	1 pt	+ 1 pt	2 pts	OR 2 pts
Medium	1 1/2 pts	+ 1 1/2 pts	3 pts	OR 3 pts
Fine	2 pts	+ 2 pts	4	OR 4

Maximum IPIFLUOR 4 EC MG in any calendar year: 2 pts/acre on coarse soil, 3 pts/acre on medium soil, 4 pts/acre on fine soil.

BEANS

DRY BEANS - CASTOR BEANS

Apply and incorporate before planting at the following:

Soil texture	Broadcast rate/acre	
	Eastern US	Western US
Coarse	1 pt	1 pt
Medium	1 1/2 pts	1 1/4 - 1 1/2 pts
Fine	2 pts	1 1/2 pts
2 to 5% organic matter	1 1/2 - 2 pts	1 1/2 - 2 pts
5 to 10% organic matter	2 pts	2 pts

Fall application.

For dry beans grown in Idaho, Oregon, Washington only, apply any time between October 15 and December 31 at a broadcast rate/acre of 1 pt on coarse soil, 1 1/4 - 1 1/2 pts on medium soil, 1 1/2 pts on fine soil.

IPIFLUOR 4 EC MG/ EPTAM^R TANK-MIX

FOR DRY BEANS

Apply from two days before planting (up to planting in the Eastern US) at the following:

Only Castor Beans dry beans?

←

✓

✓

Broadcast rate/acre

Soil texture	Broadcast rate/acre	
	IPIFLUOR Eastern US	4 EC MG Western US
Coarse	1 pt	1 pt
Medium	1 1/2 pts	1 1/4 - 1 1/2 pts
Fine	2 pts	1 1/2 pts
2 to 5% organic matter	1 1/2 - 2 pts	1 1/2 - 2 pts
5 to 10% organic matter	2 pts	2 pts

✓
Coarse 1 1/2
medium
fine - 2

Precautions: this combination should not be used on soybean, black-eyed peas (beans), lima beans and other flatpodded beans excepted Romano. Do not use the foliage from a crop treated with this tank-mix for feed or for grazing.

Observe all directions, precautions and limitations on both products labeling.

BEAN BEANS, MUNG BEANS, LIMA BEANS, SNAP BEANS

Apply and incorporate before planting at a broadcast rate/acre of 1 pt on coarse soil, 1 1/2 pts on medium and fine soils.

Time Beans
Snap Beans
1 pt on coarse
1 medium
5 to 10% 1 1/2
pts on fine

Green Beans + Mung Beans
1 pt on coarse
soil; 1 1/2

CARROTS

Apply and incorporate before planting at the following:

Broadcast rate/acre

Soil texture	Eastern US	Western US
Coarse	1 pt	1 pt
Medium	1 1/2 pts	1 1/4 - 1 1/2 pts
Fine	2 pts.	1 1/2 pts
2 to 5% organic matter	1 1/2 - 2 pts	1 1/2 - 2 pts
5 to 10% organic matter	2 pts	2 pts

1 1/2 pts on coarse + medium
2 pts - fine
all soils

CELERY

Both direct-seeded and transplant.

Apply and incorporate before planting or transplanting at the following:

Broadcast rate/acre

Soil texture	Western US only
Coarse	1 pt
Medium	1 1/4 - 1 1/2 pts
Fine	1 1/2 pts
2 to 5% organic matter	1 1/2 - 2 pts
5 to 10% organic matter	2 pts

1 1/2
Coarse + medium
2 pts
fine

COLE CROPS

BROCCOLI - BRUSSEL SPROUTS - CABBAGE - CAULIFLOWER

For transplants, apply and incorporate before transplanting at the following:

Broadcast rate/acre

Soil texture	Eastern US	Western US
Coarse	1 pt	1 pt
Medium	1 1/2 pts	1 1/4 - 1 1/2 pts
Fine	2 pts	1 1/2 pts
2 to 5% organic matter	1 1/2 pts	1 1/2 - 2 pts
5 to 10% organic matter	2 pts	2 pts

1 1/2
Coarse + medium
2 - fine
all

For direct-seeded, apply and incorporate before planting at the following:

Broadcast rate/acre

Soil texture	Eastern US	Western US
Coarse	1 pt	1 pt
Medium	1 pt $1\frac{1}{2}$	1 pt $1\frac{1}{4} - 1\frac{1}{2}$
Fine	1 $\frac{1}{2}$ pts 2	1 pt $1\frac{1}{2}$
2 to 5% organic matter	1 $\frac{1}{2}$ pts	$1\frac{1}{2}$ <i>Coarse + med - 2 fine</i>
5.1 to 10% organic matter	-	2 $\frac{1}{2}$ pts <i>all soils</i>

Direct-seeded cole crops have exhibited marginal tolerance to recommended rates. Stunting or reduced stands may occur.

COTTON

Pre-emergence application.

Apply and incorporate before planting, at planting or immediately after planting at the following:

Broadcast rate/acre

Soil texture	Eastern US	Western US
Coarse	1 pt	1 pt
Medium	1 $\frac{1}{2}$ pts	$1\frac{1}{4} - 1\frac{1}{2}$ pts ✓
Fine	2 pts	1 $\frac{1}{2}$ pts
2 to 5% organic matter	1 $\frac{1}{2}$ pts	1 $\frac{1}{2} - 2$ pts <i>Coarse + med - 2 fine</i>
5.1 to 10% organic matter	2 - 2 $\frac{1}{2}$ pts	2 pts <i>all</i>

When incorporating after planting care must be taken not to disturb the seed.

Post-emergence application.

Apply any time up to layby but not less than 90 days before harvest. Direct layby applications to the soil between the rows and beneath emerged cotton plants. Use the same rates as for pre-emergence application.

Fall application.

Any time from October 15 to December 31.

In Alabama, Arkansas, Northern Florida, Georgia, Louisiana, Mississippi, SE Missouri, North Carolina, Tennessee, Texas: apply and incorporate at a broadcast rate/acre of 2 pts on coarse and medium soils and 2 $\frac{1}{2}$ pts on fine soil.

*Wanted
new version
of this on
South Carolina*

- In Arizona, California, Nevada, apply and incorporate at a broadcast rate/acre of 1 $\frac{1}{2}$ pts on coarse soil, 2 pts on medium soil, 2 $\frac{1}{2}$ pts on fine soil.
- In other states other than those listed above, apply and incorporate at a broadcast rate/acre of 1 pt on coarse soil, 1 $\frac{1}{2}$ pts on medium soil, 2 pts on fine soil, 1 $\frac{1}{2}$ pts on soils with 2 to 5% organic matter, 2 to 2 $\frac{1}{2}$ pts on soils with 5.1 to 10% organic matter. *Coarse*

Special applications.

For the control of Fall Panicum in the states of Alabama, Florida, Georgia, North and South Carolina and Virginia, apply and incorporate at a broadcast rate/acre of 2 pts on both coarse and medium soils.

SOIL PREPARATION - See p. 5 1111-35

- For the control of Rhizome Johnsongrass in all cotton producing states except Arizona and California, apply a double-rate IPIFLUOR 4 EC MG program for 2 years in a row. Applications can be made in spring, any time before planting for two years in a row or between October 15 and December 31 for two years in a row at a broadcast rate/acre of 2 pts on coarse soil, 3 pts on medium soil and 4 pts on fine soil. Proper preparation of the soil before application and deep incorporation is essential for best results. Some Johnsongrass plants may escape: timely cultivation during the crop season is necessary.

In the season following a double-rate treatment, plant only rice and those crops for which IPIFLUOR 4 EC MG can be applied as a pre-plant treatment or injury may result.

For the control of Pigweed and seedling Johnsongrass in Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, SE Missouri, North and South Carolina, Tennessee and Southern Virginia, apply IPIFLUOR 4 EC MG, pre plant, at a broadcast rate/acre of 1-1 $\frac{1}{2}$ pts on coarse soil, 1 $\frac{1}{2} - 2$ pts on medium soil, 2 pts on fine soil (3 pts in Louisiana).

For a more complete control of all listed grasses and weeds in countries along the Texas Gulf Coast, apply up to 2 weeks before planting at a broadcast rate/acre of 1 $\frac{1}{2}$ pts on coarse soil, 2 pts on medium soil, 3 pts on fine soil.

Precautions: cotton should be planted after early season adverse weather conditions have passed especially when using higher rate programs.

IPIFLUOR 4 EC MG / CAPAROL^R TANK-MIX

For cotton grown in California, Arizona, New Mexico and Texas, apply to the flat soil surface before disking at the following:

Broadcast rate/acre

Soil texture	4 EC MG	CAPAROL ^R OR W
Coarse	1 pt	2 lbs
Medium	1 $\frac{1}{2}$ pts	2 $\frac{1}{2}$ lbs
Fine	2 pts	2 $\frac{1}{2}$ lbs

Do not use on sand and loamy sand soils. For band applications use proportionally less. This simulates the following table for double rate application. The above table is for the control of Johnsongrass. It has been registered for pre-plant treatment.

*more
apply
discing
PS
cost
countries
112
2 fine*

*1471-35
Precautions
on limitation*

carefully follow the procedures on the Caparol label for making a slurry and adding it to a partially filled tank of water. After the Caparol is well mixed add the IPIFLUOR 4 EC MG and agitate continuously.

precautions: do not use this tank-mix in the cut areas of newly leveled fields, in areas of excess salt and where flooding over the beds is likely to happen.

crop rotation:

Cabbage, okra, onion, peas may be planted in the fall after a spring application of the mixture.

Winter barley, winter rye and winter wheat can be planted in the fall also if they are plowed down and not used for food or feed.

Observe all directions, precautions and limitations on both products labeling.

IPIFLUOR 4 EC MG/COTORAN^R TANK-MIX

Use in Arizona and California.

Apply and incorporate at the following:

Soil texture	Broadcast rate/acre	
	IPIFLUOR	COTORAN 80W
Coarse	1 pt	1 1/4 lbs
Medium	1 1/2 pts	2 lbs
Fine	2 pts	2 1/2 lbs

Use 15-40 gallons of clean water/acre.

carefully follow the procedures on the Cotoran label for making a slurry and adding it to a partially filled tank of water. After the Cotoran is well mixed add the IPIFLUOR 4 EC MG and agitate continuously.

precautions: do not plant crops other than cotton on the treated land within 6 months after application of this tank-mix. Do not feed foliage from treated cotton plant or gin trash to livestock. Do not mix with liquid fertilizers.

- In West Texas do not use on sandy, loamy sand or fine sandy loam soils. Do not use on cotton planted in furrows.
- In Arkansas, Louisiana, Mississippi, use 1 lb of Cotoran in tank-mix with IPIFLUOR 4 EC MG on sandy loam soils low in organic matter.
- In New Mexico, do not plant treated land with crops other than cotton until one year after the last application. Do not use on sandy loam soils low in organic matter of less than 1% organic matter.

Observe all directions, precautions and limitations on both products labeling.

COTORAN OVERLAY: apply IPIFLUOR 4 EC MG as recommended and then Cotoran as a pre-emergence surface treatment at 1 1/4 to 2 1/2 lbs/acre. — on light silt + sandy soils (low or organic matter, use the lower rate).

IPIFLUOR 4 EC MG PREPLANT FOLLOWED BY KARMEX^R OVERLAY

For cotton grown east of the Mississippi river, Arkansas, SE Missouri, Louisiana, and Texas, apply and incorporate IPIFLUOR 4 EC MG before planting at usual rates then make a pre-emergence application of Karmex 80W at 0.6 to 1.5 lbs per broadcast acre. *after planting but before pre-emergence*

Precautions: do not use Karmex on sandy or low organic soils. Do not allow grazing on cotton treated with Karmex.

Refer to Karmex 80W label for additional instructions, cautions and precautions.

Do not use the higher rates on heavier silt + clay soils (above 10% organic matter)

CUCURBITS

CANTALOUPE - CUCUMBERS - WATERMELONS

Apply in post-plant emerged at the following: (Western US including Texas)

Soil texture	Broadcast rate/acre	
	Eastern U.S. Texas only	Western US
Coarse	1 pt	1 pt
Medium	1 1/4 - 1 1/2 pts	1 1/4 - 1 1/2 pts
Fine	1 1/2 pts	1 1/2 pts
2 to 5% organic matter	1 1/2 - 2 pts	1 1/2 - 2 pts
	2 pts	2 pts

1 1/2 pts on coarse + medium soils
2 pts on all organic matter

Apply as directed spray to the soil between the rows and beneath the plants which are in the 3 to 4 true-leaf stage. Care should be taken that incorporation machinery does not damage the plants.

GREENS (for processing) - KALE - MUSTARD GREENS

Apply and incorporate before planting at a broadcast rate/acre of 1 pt on coarse and medium soils, 1 1/2 pts on fine soil.

HOPS

Use restricted to Western US only.

Apply and incorporate while the crop is dormant at a broadcast rate/acre of 1 pt on coarse soil, 1 1/4 - 1 1/2 pts on medium soil, 1 1/2 pts on fine soil and soils with 2 to 10% organic matter.

MINT

Established Peppermint and Spearmint.

Restricted to Oregon, Washington, Idaho.

Apply at a rate of 1 pt on coarse soil, 1/4 pt on medium soil and 1/2 pts on fine soil during the dormant period.

Use incorporation equipment that will insure thorough soil mixing with a minimum damage to the established dormant mint.

not on other labels

ORCH

Apply and incorporate before planting at the following:

Broadcast rate/acre

Soil texture	Eastern US	Western US
Coarse	1 pt	1 pt
Medium	1 1/2 pts	1 1/4 - 1 1/2 pts
Fine	2 pts	1 1/2 pts
2 to 5% organic matter	1 1/2 - 2 pts	1 1/2 - 2 pts
5.1 to 10% organic matter	2 pts	2 pts

*1 1/2 pts on coarse soil
2 on all soils*

PEANUTS

Apply to peanuts grown in Texas and Oklahoma only.

Apply and incorporate before planting, at planting or immediately after planting at a broadcast rate/acre of 1 pt on coarse soil. Care should be taken not to disperse the seed when incorporating after planting.

IPIFLUOR 4 EC MG/VERNAH^R TANK-MIX (Texas + Oklahoma)

Apply up to 10 days prior to planting, incorporate immediately after application

at a broadcast rate/acre of 1 pt of IPIFLUOR 4 EC MG and 2 1/2 pts of Vernah 7E on coarse soil.

Observe all directions, precautions and limitations on both products labeling.

PEAS

SOUTHERN PEAS - EARLY PEAS

Apply and incorporate before planting at a broadcast rate/acre of 1 pt on coarse

and medium soils and 1/2 pts on fine soil.

Fall application

For dry and English peas grown in Idaho, Oregon and Washington only, apply and incorporate any time between October 15 and December 31 at a broadcast rate/acre of 1 pt on coarse soil, 1 1/4 - 1 1/2 pts on medium soil and 1 1/2 pts on fine soil. Do not apply in the fall to soils which are wet or are subject to prolonged period of flooding.

IPIFLUOR 4 EC MG/AVADEX^R BW TANK-MIX

For peas grown in Idaho, Oregon and Washington only, apply and incorporate up to 3 weeks before planting at the following:

Broadcast rate/acre

Soil texture	4 EC MG	AVADEX BW
Coarse	3/4 pts	1 1/4 qts
Medium	3/4 pts	1 1/4 qts
Fine	1 pt	1 1/4 qts

Precautions: do not apply to lentils. Do not use foliage from peas treated for feed or forage. Don't graze livestock on treated crops.

Observe all directions, precautions and limitations on both products labeling.

SOUTHERN PEAS *Precautions - specific p. 15. See*

Apply and incorporate before planting at the following:

Broadcast rate/acre

Soil texture	Eastern US	Western US
Coarse	1 pt	1 pt
Medium	1 1/2 pts	1 1/4 - 1 1/2 pts
Fine	2 pts	1 1/2 pts
2 to 5% organic matter	1 1/2 - 2 pts	1 1/2 - 2 pts
5.1 to 10% organic matter	2 pts	2 pts

is this right?

PEPPERS

Apply and incorporate before transplanting at the following:

Broadcast rate/acre

Soil texture	Eastern US	Western US
Coarse	1 pt	1 pt ✓
Medium	1½ pts	¼ - 1½ pts ✓
Fine	2 pts	1½ pts ✓
2 to 5% organic matter	1½ pts	1½ - 2 pts ✓
5.1 to 10% organic matter	2 pts	2 pts ✓

Do not apply after transplanting.

POTATOES

Not recommended for use in the state of Maine.

Apply after planting, before emergence or immediately following dragoff or after the potato plants have fully emerged at the following:

Broadcast rate/acre

Soil texture	Eastern US	Western US
Coarse	1 pt	1 pt ✓
Medium	1½ pts	¼ - 1½ pts ✓
Fine	2 pts	1½ pts ✓
2 to 5% organic matter	1½ pts	1½ - 2 pts ✓
5.1 to 10% organic matter	2 pts	2 pts ✓

Care should be taken so that incorporation machinery does not damage potato seed pieces or elongating sprouts. Set incorporation equipment so that bed and furrow will be uniformly covered by the product.

If the layer of IPIFLUOR 4 EC MG treated soil is not uniform, potato emergence may be retarded and stem brittleness can occur.

When applying and incorporating after potato plants have fully emerged, do not completely cover the foliage with treated soil.

Split application in Idaho, Oregon, Washington.

On all soils apply and incorporate ¾ pt before planting and ¾ pt after planting when potato plants have fully emerged.

Precautions: do not apply to soil containing 2% or more organic matter.

IPIFLUOR, 4 EC MG/EPTAM^R TANK-MIX

- For potatoes grown in Kansas, Minnesota, Nebraska, North Dakota, Oklahoma, South Dakota, Texas, apply after planting, but prior to crop emergence. In areas where potatoes are normally dragged off the mixture should be applied and incorporated up to or immediately following drag off.

Broadcast rate/acre

Soil texture	4 EC MG		EPTAM 7E
	Eastern US	Western US	
Coarse	1 pt	1 pt	¾ - 7 pts (*)
Medium	1-1½ pts	1-1½ pts	¾ - 7 pts (*)
Fine	1-2 pts	1-1½ pts	¾ - 7 pts (*)
2 to 5% organic matter	1½ pts	1½ pts	¾ - 7 pts (*)
5.1 to 10% organic matter	2 pts	2 pts	¾ - 7 pts (*)

(*) Use higher rate for nutsedge control. (only on coarse)

✓ Precautions: do not graze or feed forage to livestock from fields treated with this mixture.

✓ - For potatoes grown in Washington, Idaho, Oregon, apply and incorporate before planting at a broadcast rate of ¾ pts of IPIFLUOR 4 EC MG/acre and ¾ pts of EPTAM 7E/acre on all soils.

✓ Precautions: do not use this tank-mixture both before and after planting in the same season. Do not use foliage from treated crops for feed or forage.

Observe all directions, precautions and limitations on both products labeling.

SAFFLOWER

Apply and incorporate in the spring before planting or in the fall between October 15 and December 31 at the following:

Broadcast rate/acre

Soil texture	Eastern US	Western US
Coarse	1 pt	1 pt ✓
Medium	1½ pts	¼ - 1½ pts ✓
Fine	2 pts	1½ pts ✓
2 to 5% organic matter	1½ pts	1½ pts
5.1 to 10% organic matter	2 - 2½ pts	2 - 2½ pts

Fall application

For safflowers grown in Arizona, California, Idaho, Montana, Nevada, Oregon, Utah, Washington, Wyoming: apply and incorporate anytime between October 15 and December 31 at a broadcast rate/acre of 1½ pts on coarse soil, 2 pts on medium soil, 2½ pts on fine soil. ✓

Precautions: do not apply in the fall to soils which are wet or are subject to prolonged periods of flooding. ✓

SOYBEAN

Apply and incorporate before planting at the following:

Broadcast rate/acre

Soil texture	Eastern US	Western US
Coarse	1 pt	1 pt
Medium	1½ pts	1¼ - 1½ pts
Fine	2 pts	1½ pts
2 to 5% organic matter	1½ pts	1½ - 2 pts
5.1 to 10% organic matter	2 - 2½ pts (*)	2 pts

(*) except charcoal soils in Arkansas, Louisiana and Mississippi (see below)

Charcoal soils in Arkansas, Louisiana, Mississippi.

Newly cleared land often contains high organic matter (4 to 10%) and charcoal which result from burning debris. This tends to bind Trifluralin reducing its weed control activity. Higher product rates are therefore necessary, but increased rates can cause crop injury if charcoal or organic matter is not present. ✓
Apply and incorporate at a broadcast rate/acre of 1½ - 2½ pts on coarse soil, 2½ pts on medium soil, 3 pts on fine soil.

Fall application

Apply anytime between October 15 and December 31.

- In Alabama, Arkansas, Northern Florida, Georgia, Louisiana, Mississippi, SE Missouri, Butteel, North Carolina, Oklahoma, South Carolina, Tennessee, Texas: apply and incorporate at a broadcast rate/acre of 2 pts on coarse and medium soils and 2½ pts on fine soil. ✓

- in Eastern United States other than those listed above: apply and incorporate at a broadcast rate/acre of 1 pt on coarse soil, 1½ pts on medium soil and 2 pts on fine soil, 1½ pts on coarse soil with 2 to 5% organic matter, 2 to 2½ pts on soils with 5.1 to 10% organic matter. ✓

Precautions: do not apply to soils which are wet or subject to prolonged periods of flooding or where rice was grown the previous year. ✓

Special applications

- For the control of Fall Panicum in Alabama, Florida, Georgia, North and South Carolina, Virginia: apply at a broadcast rate/acre of 2 pts on both coarse and medium soils.

- For a more complete control of Pigweed and seedling Johnsongrass in Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, SE Missouri, North and South Carolina, Tennessee, S. Virginia: apply at a broadcast rate/acre of 1 - 1½ pts on coarse soil, 1½ - 2 pts on medium soil, 2 pts on fine soil (3 pts in the state of Louisiana).

- For a more complete weed control in the Texas Gulf Coast: apply up to 2 weeks before planting at a broadcast rate/acre of 1½ pts on coarse soil, 2 pts on medium soil, 3 pts on fine soil.

- For suppression or partial control of Red Rice in Arkansas, Louisiana, Mississippi Texas: apply as directed at double the normal rate the first year and at the normal rate the second year. Apply and incorporate anytime in the spring before planting at the following:

Broadcast rate/acre

Soil texture	1st Year	2nd Year
Coarse	2 pts	1 pt
Medium	3 pts	1½ pts
Fine	4 pts	2 pts
2 to 5% organic matter	3 pts	1½ pts
5.1 to 10% organic matter	4 pts	2 - 2½ pts

→ If a combination of high organic matter and charcoal are present apply in the second year the rates labeled for charcoal soils in Louisiana, Arkansas and Mississippi (1½ - 2½ pts on coarse soil, 2½ pts on medium soil, 3 pts on fine soil). ✓

Crop rotation: plant only those crops for which IPITFLUOR 4 EC MG has been registered as a preplant treatment.

Precautions: do not plant rice the second year.

- For the control of Rhizome Johnsongrass in Eastern United States and Texas. Apply in a row for two consecutive years according to the program that best fits your cultural practices:

- as spring application, anytime in spring before planting, OR
- as fall application, between October 15 and December 31, OR
- as split application, directed under both spring and fall applications. ←

Back on application p. 16 Aerts

Broadcast rate/acre

Soil texture	Spring/Fall	Split
Coarse	2 pts ✓	1 pt ✓
Medium	3 pts ✓	1 1/2 pts ✓
Fine	4 pts ✓	2 pts ✓
2 to 5% organic matter	3 pts ✓	1 1/2 pts ✓
5.1 to 10% organic matter	4 pts ✓	2 pts ✓

Coarse soil

Expanded

Proper preparation of the soil before application and deep incorporation are very important for best results. Some Johnsongrass plants may escape. Timely cultivations during the crop season are necessary.

For the control of wild cane (shattercane).

Wild cane can germinate from greater soil depth than most other weed seeds. Several "flushes" or germinating times are common in one season. Commercially acceptable control of wild cane can be obtained with increased rates of 4 EC MG.

Land preparation. Work your land to destroy existing grasses and weeds. Thoroughly mix crop residues into the soil to a depth of 4 to 6 inches.

Application. Apply before planting at a broadcast rate/acre of 1 pt on coarse soil, 2 pts on medium soil, 2 1/2 pts on fine soil.

Incorporation. Deep incorporation is essential to good wild cane control. Incorporate thoroughly with a disc only set to cut 4 to 6 inches deep and operate in 2 different directions at 4 to 6 mph.

Cultivation. Cultivations during the crop season will also contribute to control.

Precautions. plant soybeans after early season adverse weather conditions have passed. Do not plant soybeans deeper than 2 inches. Crop injury in the form of delayed growth may occur under adverse cool, wet weather conditions early in the season when IPIFLUOR 4 EC MG is used according to these recommendations.

IPIFLUOR 4 EC MG / SENCOR^R OR LEXONE^R TANK-MIX

For control of grasses and weeds controlled by IPIFLUOR 4 EC MG alone plus additional weeds listed for the mixture, apply from two weeks before planting up to planting at the following:

Expanded

Broadcast rate/acre

Soil texture	IPIFLUOR 4 EC MG	Lexone 50W/4
Coarse*	1 pt	1/2 lbs/pts
Medium	1 1/2 pts	3/4 lbs/pts
Fine**	2 pts	1 lb/pt

Senacor 50W/4
or

* Do not use on coarse soils with less than 1% organic matter.

OR

Soil texture	IPIFLUOR 4 EC MG	Lexone (dr, flow.)
Coarse*	1 pt	1/3 lbs
Medium	1 1/2 pts	1/2 lbs
Fine**	2 pts	2/3 lbs

Senacor (dr, flow.)
or

* Do not use on coarse soils with less than 1% organic matter.

** *Salty, silty, or sandy soil from such area*
Precautions: do not plant any crop other than soybeans within 4 months after treatment. Over application, uneven application or improper soil incorporation can result in erratic weed control or crop injury. Seedling disease, cold weather, deep planting, excessive moisture, soil pH over 7.5, high salt concentration or droughty may weaken crop seedlings and increase possibility of damage from the application of this tank-mix.

• For the control of Rhizome Johnsongrass.

Apply up to two weeks before planting for two consecutive years at the following:

Broadcast rate/acre

Soil texture	IPIFLUOR 4 EC MG	Senacor 50W/4
Coarse*	2 pts ✓	1/2 lbs/pts ✓
Medium	3 pts ✓	3/4 lbs/pts ✓
Fine	4 pts ✓	1 lb/pt ✓

Senacor 50W/4
or

* Do not use on coarse soils with less than 1% organic matter.

Soil texture	IPIFLUOR 4 EC MG	Sencor (dry flow.) or Lexone (dry flow.)
Coarse	2 pts	$\frac{1}{3}$ lbs
Medium	3 pts	$\frac{1}{2}$ lbs
Fine	4 pts	$\frac{2}{3}$ lbs

* Do not use on coarse soils with less than 1% organic matter.

do not use the foliage from soybeans for feed or forage.

observe all directions, precautions, limitations and mixing procedures on both products labeling.

IPIFLUOR 4 EC MG PREPLANT + SENCOR OR LEXONE OVERLAY

IPIFLUOR 4 EC MG as a preplant incorporated herbicide. As a separate operation make a single application of Sencor or Lexone as either a band or broadcast ray during planting or as a separate operation after planting but before soybeans emerge.

Rates are given according to the use of Sencor or Lexone (respectively).

Broadcast rate/acre

Soil texture	IPIFLUOR 4 EC MG	Sencor 50WP/4 or Lexone 50WP/4L *
** Coarse	1 pt ✓	$\frac{3}{4}$ - 1 or $\frac{3}{4}$ lbs/pts
Medium	1 1/2 pts ✓	$\frac{3}{4}$ - 1 1/2 or $\frac{3}{4}$ - 1 lbs/pts
Fine	2 pts ✓	1 - 1 3/4 or 1 lbs/pts

** Do not apply Sencor to coarse soils (sandy loam and loamy sand) containing less than 2% organic matter.

Do not apply Lexone to sand or soils with less than 1% organic matter.

* Sencor rates for each soil texture are enclosed in brackets.

NO -
DO NOT
BROADCAST

Soil texture	IPIFLUOR 4 EC MG	Sencor (dry flowable) or Lexone (dry flowable) *
** Coarse	1 pt ✓	$\frac{1}{2}$ - $\frac{2}{3}$ or $\frac{1}{2}$ lbs/pts
Medium	1 1/2 pts ✓	$\frac{1}{2}$ - 1 or $\frac{1}{2}$ - $\frac{2}{3}$ lbs/pts
Fine	2 pts ✓	$\frac{2}{3}$ - 1 or $\frac{2}{3}$ lbs/pts

** Do not apply Sencor to coarse soils (sandy loam and loamy sand) containing less than 2% organic matter.

Do not apply Lexone to sand or soils less than 1% organic matter.

* Sencor rates for each soil texture are enclosed in brackets.

Precautions: do not use Lexone or Sencor on Tracy, Semas, Altona, Vansoy or Cweel 102 soybeans being these varieties sensitive to above products. Do not use treated vines for feed or forage. Seed must be planted at least 1 1/2 inches below the soil surface but not more than 2 inches before a Sencor or Lexone application.

✓ Do not apply Sencor or Lexone more than once per season.

Do not replant areas treated with Sencor or Lexone to any crops other than soybean within 4 months after treatment.

Observe all directions, precautions and limitations on all products labeling.

IPIFLUOR 4 EC MG/AMIBEN^R TANK-MIX OR OVERLAY

Tank-mix: apply as a spring preplant incorporated treatment.

Overlay: apply IPIFLUOR 4 EC MG as a preplant incorporated herbicide and then Amiben 2S broadcast or in a band over the soybean row at planting time.

Broadcast rate/acre

Soil texture	IPIFLUOR	4 EC MG	AMIBEN 2S
Coarse	1 pt ✓	✓	4-6 qts *
Medium	1 1/2 pts ✓	✓	4-6 qts
Fine	2 pts ✓	✓	4-6 qts

* Use the higher rates of Amiben 2S where you expect heavy populations of smartweed, velvetleaf, ragweed, wild mustard and blacknightshade. Do not use on muck or charcoal soils. Observe all directions, precautions and limitations on both products labeling.

IPIFLUOR 4 EC MG /VERNAM^R TANK-MIX

Apply up to 10 days prior to planting at the following:

Broadcast rate/acre

Soil texture	IPIFLUOR	EC %	VERNA 7E
Coarse	1 pt ✓		$1\frac{3}{4} - 2\frac{1}{3}$ pts
Medium	$1\frac{1}{2}$ pts ✓		$2\frac{1}{3} - 3$ pts (*)
Fine	2 pts ✓		3 - $3\frac{1}{2}$ pts

(*) Use higher rates for nutsedge, wild cane and velvetleaf control.

Observe all directions, precautions and limitations on both product labeling.

SUGAR BEETS

Apply as a broadcast, overtop spray to plants immediately after blocking or thinning when plants are between 2 and 5 inches tall. Exposed beet roots should be covered with soil prior to application to reduce possibilities of girdling. Care should be taken that incorporation machinery does not damage the sugar beet taproot.

Broadcast rate/acre

Soil texture	Eastern US	Western US
Coarse	1 pt ✓	1 pt ✓
Medium	$1\frac{1}{2}$ pts ✓	$1\frac{1}{4} - 1\frac{1}{2}$ pts ✓
Fine	$1\frac{1}{2}$ pts ✓	$1\frac{1}{2}$ pts ✓

Special application

Incorporation with a tine-tooth harrow in California, Colorado, Idaho, ^{Kansas} Montana, Nebraska, Oregon, Texas, Utah, Washington, Wyoming, only

* Properly operated tine-tooth harrow can provide adequate incorporation of the herbicide for effective weed control in sugar beets.

Operate the tine-tooth harrow two times over the field in opposite directions at a speed of 3 to 6 mph and set the harrow to cut 1 to 2 inches deep.

Care should be taken to insure that the tine-tooth harrow does not damage the sugar beet taproot.

SUGARCANE

Plant cane, (Eastern U S only)

Apply and incorporate twice a year at a broadcast rate/acre of 2 to 4 pts for all soil textures. Make the application in the fall on firmly packed beds immediately after the seed pieces are planted.

Make the application in the spring before or shortly after the cane emerges. Loosen rain-packed beds 2 to 3 inches deep before the spring application. Care should be taken so that incorporation machinery does not damage the seed pieces or emerging shoots.

Plant and Ratoon Cane (grown in Louisiana and Texas only)

Apply and incorporate at a broadcast rate/acre of 2 to 4 for all soil textures. Make application in the spring from before or shortly after the cane emerges up to layby. Make application after the beds have been shaved or false shaved. Loosen rain-packed bed 2 to 3 inches deep before application. Care should be taken so that incorporation machinery does not damage seed pieces or emerging roots.

Post-plant in Hawaii (only for control of most annual grass including guineagrass) Surface apply after planting (for plant cane) or after harvesting (for ratoon cane) before weeds and cane emerge at a broadcast rate/acre of 6 to 8 pts for all soil textures. In plant cane the beds should be formed or rolled before application. In ratoon cane, the crop residue should be removed before application. Apply just before anticipated rainfall or sprinkle irrigate immediately after application.

Itchgrass control (in Louisiana only)

Apply and incorporate on either plant or ratoon cane at a broadcast rate/acre of 4 pts for all soil textures. Apply in the spring from before or shortly after the cane emerges up to layby. Follow directions above for sugarcane layby application in Louisiana and Texas.

SUNFLOWER

Apply and incorporate in the spring or in the fall between October 15 and December 31 at the following:

Broadcast rate/acre

Soil texture	Eastern US	Western US
Coarse	1 pt	1 pt ✓
Medium	$1\frac{1}{2}$ pts	$1\frac{1}{4} - 1\frac{1}{2}$ pts ✓
Fine	2 pts	$1\frac{1}{2}$ pts ✓
2 to 5% organic matter	$1\frac{1}{2} - 2$ pts	$1\frac{1}{2} - 2$ pts
5.1 to 10% organic matter	2 pts	2 pts

1 1/2 - 2
organic matter
5 pts
with

IPIFLUOR 4 EC MG AMIBEN^R TBM-MIX OR OVERLAY

Apply prior to planting.
 Overlay apply AMIBEN 25 in band or broadcast over sunflowers at planting in fields where IPIFLUOR 4 EC MG has been incorporated prior to planting.

broadcast rate/acre

Soil texture	IPIFLUOR 4 EC MG	AMIBEN 25
Coarse	1 pt	4 qts
Medium	1 1/2 pts	4 - 6 qts (*)
Fine	2 pts	4 - 6 qts (*)

(*) use higher rates for best control of Mustard, Common Ragweed or Black Nightshade.

If sufficient rain does not fall within 7 days after a pre-emergence application of AMIBEN, but there is enough soil moisture, a light cultivation with a rotary hoe or similar tool will uproot these small broadleaf weeds and grasses. In coarse soil heavy rains may move incorporated AMIBEN below the weed seed germinating zone; erratic weed control may result.

TOMATOES

For transplant, apply and incorporate before transplanting at the following:

broadcast rate acre

Soil texture	Eastern US	Western US
Coarse	1 pt	1 pt
Medium	1 1/2 pts	1 1/4 - 1 1/2 pts
Fine	2 pts	1 1/2 pts
2 to 5% organic matter	1 1/2 pts	1 1/2 - 2 pts
5.1 to 10% organic matter	2 pts	2 pts

*1/2 - coarse and fine
 2 - fine
 2 all*

For direct seeded tomatoes, apply and incorporate to soil between the rows and beneath the plants and incorporate.

at planting - to use as a directed spray

TREES AND VINEYARDS

EASTERN US

- For new planting of vineyards, citrus and pecan trees, apply and incorporate before planting at the following.

Broadcast rate/acre

Soil texture	Broadcast rate/acre	
Coarse	1 pt	✓
Medium	1 1/2 pts	✓
Fine	2 pts	✓
2 to 5% organic matter	1 1/2 pts	- only fine soil
5.1 to 10% organic matter	2 pts	✓

- For Non-Bearing established plantings of citrus and pecan trees and bearing plantings of grapefruit, lemon, orange, pecan, tangelo, tangerine trees, apply at a broadcast rate/acre of 2 to 4 pts for all soil textures. Apply as directed spray to soil around the trees and use incorporation methods not injurious to the trees. For continued weed control in citrus area, apply twice a year at an interval of approximately 4 to 6 months.

*grapes are planted between trees, in both directions
 for these specific crops, apply to the area between the rows*

WESTERN US

- For new plantings of almond, apricot, citrus, nectarine, peach, pecan, walnut trees, apply and incorporate before planting at the following:

Broadcast rate/acre

Soil texture	Broadcast rate/acre	
Coarse	1 pt	✓
Medium	1 1/4 - 1 1/2 pts	✓
Fine	1 1/2 pts	✓
2 to 5% organic matter	1 - 1 1/2 pts	✓
5.1 to 10% organic matter	2 pts	✓

- For new plantings of vineyards, apply before planting at the following:

broadcast rate/acre	
Soil texture	
Coarse	1 - 1½ pts ✓
Medium	1½ - 3 pts ✓
Fine	3 - 4 pts ✓

2-3% organic matter 3-4 pts

Do not use more than 2 pts/acre on heat-treated vines.

- For post-plant applications on bearing and non-bearing established plantings of vineyards, almonds, apricot, grapefruit, lemon, nectarine, orange, peach, pecan, plum, prune, tangelo, tangerine and walnut trees, apply at a broadcast rate/acre of 2 to 4 pts for all soil textures. Apply as a directed spray to the soil around the trees or vines and use incorporation methods not injurious to the trees or vines.

Do not apply to vineyards within 60 days of harvest.

For continued weed control in citrus trees, apply twice a year at an interval of about 4 to 6 months.

Special application

- For Rhizome Johnsongrass control (western US only)

Commercially acceptable control of Rhizome Johnsongrass can be obtained with post-plant applications in bearing and non-bearing established plantings of vineyards, almonds, apricot, grapefruit, lemon, nectarine, orange, peach, pecan, tangelo, tangerine, walnut trees.

Work the soil thoroughly, to bring the rhizomes nearer the surface. Apply for two years in a row at a broadcast rate/acre of 4 pts on all soil textures each year. Incorporate thoroughly with a disc set to cut 4 to 6 inches deep and operate 2 times at 4 to 6 mph.

Some Johnsongrass plants will escape. Timely cultivations are necessary.

Do not use the 2 qt rate on new plantings; do not interplant orchards or vineyards with other crops; if the treated vineyards and orchards are diverted to other crop uses, plant only those crops for which IPIFLUOR 4 EC MG has been registered as a preplant treatment for the next cropping season.

- For Field Bindweed control in vineyards, almond, apricot, grapefruit, lemon, nectarine, orange, peach, pecan, tangelo, tangerine, walnut trees in California only.

Apply in the spring with a specially designed spray blade which applies at a soil depth of 4 to 6 inches at a broadcast rate/acre of 4 pts on all soil textures in 40-50 gallons of water/acre.

Destroy all weeds and grasses with soil tillage before applying.

Do not
replant
vineyards
or
orchards
for
12 months

Precautions: some soils develop cracks as they dry after rainfall or irrigation and Field Bindweed may emerge. Prevent or eliminate cracks by shallow disking or other tillage.

WHEAT

WINTER WHEAT grown in Idaho, Montana, Oregon and Washington.

Apply any time during a period from 3 weeks up to immediately prior to planting at a broadcast rate/acre of 1½ pts on coarse and medium soils and 2 pts on fine soils.

Incorporate, with a flexible tine-tooth harrow set to cut 1 to 2 inches deep and operate at 3 to 6 mph, one time within 24 hours after application and a second time, in a different direction, prior to planting. *Precaution*

WINTER WHEAT (allow soil application in Washington and Oregon.

Apply any time from May to September prior to the fall planting at a broadcast rate/acre of 1½ pts on coarse and medium soils and 2 pts on fine soil. ✓

Incorporate, with a flexible tine-tooth harrow set to cut 1 to 2 inches deep and operate at 3 to 6 mph, one time within 24 hours after application and a second time, in a different direction, prior to planting. *Precaution*

SPRING WHEAT, DURUM, BARLEY

Apply as a postplant incorporated treatment, after seeding out before the crop emerges, to control foxtail at a broadcast rate/acre of 1 pt on coarse and medium soils and 1½ pts on fine soil. ✓

Incorporate using a flex-tine or diamond harrows operating two times in different directions at 5 mph, 1 to 1½ inches deep. *Precaution*

Fall application - This is separate use description ←
Apply any time between October 15 and December 31 with a double incorporation: the first within 24 hours after application, the second prior to planting at a broadcast rate/acre of 1 pt on coarse and medium soils and 1½ pts on fine soil. ✓

For the incorporation use: chisel plow (for the first pass only) operating at 4 to 6 mph, set to cut at 4-5 inches deep; tandem disc, operating at 4-6 mph, 3-4 inches deep; field cultivator, operating at 5 mph, 3-4 inches deep. ✓

SPECIAL PRECAUTIONS

Applied according to directions and under normal growing conditions IPIFLUOR 4 EC MG will not harm the treated crop. Over application may result in crop injury or a soil residue. Uneven application or improper soil incorporation can result in erratic weed control or crop injury.

Special precautions must be taken.

- In the Western United States (Arizona, Colorado, California, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington and Wyoming) do not plant sugarbeets, red beets or spinach for 12 months after 4 EC MG application or for 14 months after a fall application of the product.

Do not plant ~~soybeans, corn, oats~~ for 14 months after spring application or for 16 months after fall application. If land has not been irrigated, do not plant any of these crops for 18 months after spring application or for 20 months after fall application.

~~In the Western United States (Kansas, Nebraska, North Dakota, Texas in those areas where at least 25 inches of irrigation or rainfall was used to produce the crop). do not plant sorghum or oats for 12 months after the herbicide application. If less than 25 inches of water was used to produce the crop, do not plant sorghum or oats for 18 months after application. Cool, wet weather conditions during the early stage of growth may increase the possibility of injury to sorghum.~~

~~In the Eastern United States: moldboard plow before planting sugarbeets where spring application was made the previous season.~~

~~In Florida only do not plant vegetable crops other than those listed in the label within 5 months following the application of TRIFLURALIN 4 EC MG.~~

Oklahoma - wet weather - cool 20-25 1471-35

prohibited on all areas where necessary to make them > 20" rainfall/year

vegetable growing areas:

NOTICE OF WARRANTY

MPH Handel AG warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for the purposes stated on such label only when used in accordance with the directions under normal use conditions. It is impossible to eliminate all risks inherently associated with the use of the product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use application, all of which are beyond the control of MPH Handel AG.

In no case shall MPH Handel AG be liable for consequential, special or indirect damages resulting from the use or handling of this product. All such risks shall be assumed by the buyer. MPH Handel AG makes no warranties of merchantability, or fitness for a particular purpose nor any other express or implied warranty except as stated above.

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