

100-655
Pm 25
Herb 100-655

Igran® DF

Herbicide

For weed control in winter wheat,
winter barley, grain sorghum, and
noncrop land areas

Net Weight

ACCEPTED
JUN 10 1985
Under the Federal Insecticide,
Fungicide, and Rodenticide Act,
as amended, for the pesticide
registered under
EPA Reg. No. 100-655

Active Ingredients:

| | |
|---|-------------|
| Terbutryn: 2- <u>tert</u> -butylamino-4- ethylamino-6-methylthio- <u>s</u> - triazine | 76% |
| Related compounds | 4% |
| <u>Inert Ingredients:</u> | <u>20%</u> |
| <u>Total:</u> | <u>100%</u> |

EPA Reg. No. 100-
EPA Est. 100-AL-1

Igran DF is a dry flowable formulation

Keep Out of Reach of Children.

CAUTION

See additional precautionary statements on left panel.

See directions for use on panel at right.

CIBA-GEIGY

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DIRECTIONS FOR USE AND CONDITIONS OF SALE AND WARRANTY

IMPORTANT: Read the entire DIRECTIONS FOR USE and the Conditions of Sale and Warranty before using this product.

Conditions of Sale and Warranty

The Directions for Use of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this 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 or application all of which are beyond the control of CIBA-GEIGY or the Seller. All such risks shall be assumed by the Buyer.

CIBA-GEIGY warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the Directions for Use subject to the inherent risks referred to above. CIBA-GEIGY makes no other express or implied warranty of Fitness or Merchantability or any other express or implied warranty. In no case shall CIBA-GEIGY or the Seller be liable for consequential, special, or indirect damages resulting from the use or handling of this product. CIBA-GEIGY and the Seller offer this product, and the Buyer and user accept it, subject to the foregoing Conditions of Sale and Warranty, which may be varied only by agreement in writing signed by a duly authorized representative of CIBA-GEIGY.

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General Information

Igran DF is a selective herbicide for control of many annual broadleaf weeds and grasses. The weeds controlled are as follows:

| Wheat and Barley | Sorghum | Noncrop Areas |
|---|--|---|
| bedstraw blue lips bur buttercup catchweed chickweed (common and umbellate) China lettuce coastal fiddleneck (tarweed) corn gromwell corn spurry cow cockle falseflax (<u>Camelina</u>) field pennycress henbit Jacob's ladder mayweed (dogfennel) miners lettuce Pacific meadow foxtail pineappleweed prickly lettuce prostrate knotweed redstem filaree shepherdspurse speedwell (snow weed) spring beauty Jim Hill mustard* blue mustard* | annual groundcherry carpetweed crabgrass foxtail junglerice kochia lambsquarters morningglory pigweed puncturevine ragweed Russian thistle smartweed velvetleaf barnyardgrass (watergrass) | barnyardgrass blue mustard carpetweed chickweed China lettuce cocklebur dogfennel fiddleneck field pennycress green foxtail* gromwell henbit kochia nightshade pepperweed pigweed purslane tarweed teaweed tumble mustard tumbleweed white sweet clover wild buckwheat* wild mustard |

*Some mustards (Jim Hill and blue mustard) can be effectively controlled if treated while they are very small. However, late germinating mustard seedlings may not be controlled. In fallowed noncrop areas, Igran gives partial control of green foxtail and wild buckwheat.

Following many years of continuous use of this product and chemically related products, biotypes of some of the weeds listed on this label have been reported which cannot be effectively controlled by this and related herbicides. Where this is known or suspected and weeds controlled by this product are expected to be present along with resistant biotypes, we recommend the use of this product in registered combinations or in sequence with other registered herbicides which are not triazines. If only resistant biotypes are expected to be present, use a registered non-triazine herbicide. Consult with your State Agricultural Extension Service for specific recommendations.

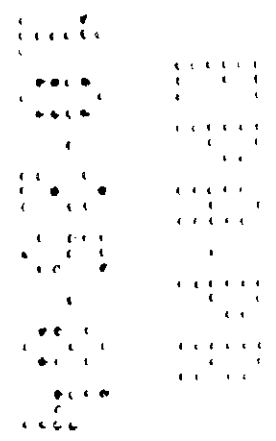
When applied before weeds emerge, Igran DF enters weeds through their roots after germination. Preemergence effectiveness depends, therefore, on rainfall or irrigation to move Igran DF into the soil. Very dry soil conditions may necessitate a shallow cultivation. When applied to emerged weeds, Igran DF provides foliar knockdown of existing weeds and residual control of later germinating weeds.

In each case where a range of rates is given, the lower rate should be used on relatively coarse-textured soils or soils low in organic matter; the higher rate should be used on relatively fine-textured soils or soils high in organic matter.

For Igran alone preemergence on winter wheat or sorghum, nonpressurized liquid fertilizer may replace all or part of the water as carrier for ground application.

To avoid spray drift, do not apply under windy conditions. Avoid spray overlap because crop injury may result.

FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN CROP INJURY, POOR PERFORMANCE, AND/OR ILLEGAL RESIDUES.



Application Procedures

Ground application: Use conventional ground sprayers equipped with nozzles that provide accurate and uniform application. Be certain that nozzles are uniformly spaced and are the same size.

Calibrate sprayer before use and recalibrate at the start of each season and when changing carriers. Unless otherwise specified, use a minimum of 20 gal of spray mixture/A for all preplant incorporated, preplant surface, preemergence, and postemergence applications (with or without oil or surfactant) with ground equipment.

Use a pump with capacity to (1) maintain 35-40 psi at nozzles, and (2) provide sufficient agitation in tank to keep mixture in suspension. Use centrifugal pumps which provide propeller shear action for dispersing and mixing this product. The pump should provide a minimum of 20 gal/minute/100 gal tank size circulated through a correctly positioned sparger tube or jets.

Use screens to protect the pump and to prevent nozzles from clogging. Screens placed on the suction side of the pump should be 16-mesh or coarser. Do not place a screen in the recirculation line. Use 50-mesh or coarser screens between the pump and boom, and where required, at the nozzles. Check nozzle manufacturer's recommendations.

For band applications, calculate amount to be applied per acre as follows:

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

Aerial application: Use aerial application only where broadcast applications are specified. Apply in a minimum of 5 gal of water. Avoid applications under conditions where uniform coverage cannot be obtained or where excessive spray drift may occur. In order to assure that spray will be controllable within the target area when used according to label directions, make applications at a maximum height of 10 ft., using low drift nozzles at a maximum pressure of 40 psi, and restrict application to periods when wind speed does not exceed 10 mph. To assure that spray will not adversely affect adjacent sensitive nontarget plants, apply Igran DF alone, or in combination with Milogard®, by aircraft at a minimum upwind distance of 300 ft. from sensitive plants, or apply Igran DF + AAtrex® and Igran DF + AAtrex® + paraquat at a minimum upwind distance of 500 ft. from sensitive plants. For additional precautions, see Precautionary Statements section at the end of the label.

Avoid application to humans or animals. Flagmen and loaders should avoid inhalation of spray mist and prolonged contact with skin, and should wash thoroughly before eating and at the end of each day's operation.

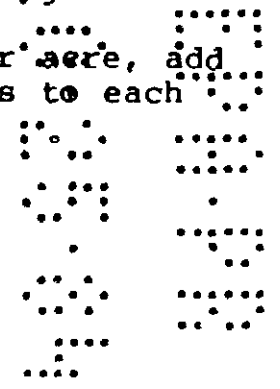
Application in water or liquid fertilizer: Nitrogen solution or complete liquid fertilizer may replace all or part of the water as a carrier for preemergence, preplant incorporated, or preplant surface ground application on corn and sorghum. Check the compatibility of this product with liquid fertilizer and/or nitrogen solution as shown below before use.

Compatibility Test: Since liquid fertilizers can vary, even within the same analysis, always check compatibility with herbicide(s) each time before use. Be especially careful when using complete suspension or fluid fertilizers as serious compatibility problems are more likely to occur. Commercial application equipment may improve compatibility in some instances. The following test assumes a spray volume of 25 gals. per acre. For other spray volumes, make appropriate changes in the ingredients. Check compatibility using this procedure:

- 1) Add 1 pint of fertilizer to each of 2 one-quart jars with tight lids.
- 2) To one of the jars add 1/4 tsp. or 1.2 milliliters of a compatibility agent approved for this use, such as Compex® or Unite® (1/4 tsp. is equivalent to 2 pts. per 100 gals. spray). Shake or stir gently to mix.
- 3) To both jars add the appropriate amount of herbicide(s). If more than one herbicide is used, add them separately with dry herbicides first, flowables next, and emulsifiable concentrates last. After each addition, shake or stir gently to thoroughly mix. The appropriate amount of herbicides for this test follows:

Dry herbicides: For each pound to be applied per acre, add 1.5 level teaspoons to each jar.

Liquid herbicides: For each pint to be applied per acre, add 0.5 teaspoon or 2.5 milliliters to each jar.



- 4) After adding all ingredients, put lids on and tighten, and invert each jar ten times to mix. Let the mixtures stand 15 minutes and then look for separation, large flakes, precipitates, gels, heavy oily film on the jar, or other signs of incompatibility. Determine if the compatibility agent is needed in the spray mixture by comparing the two jars. If either mixture separates, but can be remixed readily, the mixture can be sprayed as long as good agitation is used. If the mixtures are incompatible, test the following methods of improving compatibility: (A) slurry the dry herbicide(s) in water before addition, or (B) add 1/2 of the compatibility agent to the fertilizer and the other 1/2 to the emulsifiable concentrate or flowable herbicide before addition to the mixture. If incompatibility is still observed, do not use the mixture.

Application in water plus emulsifiable oil or oil concentrate:
 Adding emulsifiable oil (petroleum-derived, petroleum-derived oil concentrate, or single or mixed crop-derived oil concentrate) to postemergence water-based sprays in fallow may improve weed control.

Use one of the following properly emulsified:

- 1. A suitable oil concentrate containing at least 1% but not more than 20% suitable emulsifier or surfactant blend.
- 2. Petroleum-derived oil containing at least 1% suitable emulsifier.

Note: In the event of a compatibility problem when mixing oil with Igran DF and water, a compatibility agent such as Compex or Unite should be used. Any of the above oils contaminated with water or other materials can cause compatibility problems.

Mixing procedures - all uses: (1) Be sure sprayer is clean and not contaminated with any other materials, or crop injury or sprayer clogging may result. (2) Fill tank 1/4 full with clean water, nitrogen solution, or complete liquid fertilizer. (3) Start agitation. (4) Be certain that the agitation system is working properly and creates a rippling or rolling action on the liquid surface. (5) Pour product directly from bag into tank. (6) Continue filling tank until 90% full. Increase agitation if necessary to maintain surface action. (7) Add emulsifiable oil, oil concentrate, or tank mix herbicide(s) after this product is thoroughly suspended. (8) Finish filling tank. (9) Empty tank.

as completely as possible before refilling to prevent buildup of oil or emulsifiable concentrate residue. Maintain agitation to avoid separation of materials. (10) If an oil or emulsifiable concentrate film starts to build up in tank, drain it and clean with strong detergent solution or solvent. (11) Clean sprayer thoroughly immediately after use by flushing system with water containing a detergent.

DIRECTIONS FOR USE

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

Winter Wheat

Preemergence (Washington, West of the Cascades Only)

Apply to winter wheat after planting and before emergence.

Igran DF Alone: Apply at rates listed in Table 1.

Table 1

| Lbs. of Igran DF/A* | | |
|------------------------------------|---------------|---------------|
| Soil Texture | Wheat | Barley |
| Sand, loamy sand | DO NOT | DO NOT USE |
| Sandy loam, silts, clay loam | 1.5-2.75 lbs. | 1.5-2.25 lbs. |

*Preemergence applications of Igran DF may be mixed with either water or nonpressurized fertilizer solutions as a carrier on wheat. Nonpressurized liquid fertilizer solutions should not be used as a carrier for Igran DF on barley or injury may occur.

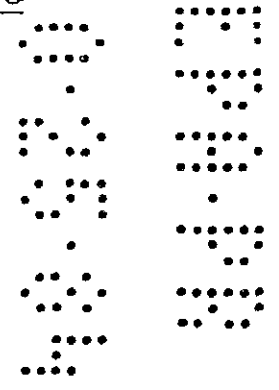
Precautions: 1) To avoid illegal residues or crop injury, fields on which Igran DF has been applied should not be planted to any crop other than wheat or barley for 9 months following application. 2) Wheat growing on thinly covered or exposed subsoil areas (clay knobs), are more susceptible to yellowing from applications of Igran DF. This yellowing is usually temporary.

Note: To avoid illegal residues, do not feed green forage or graze treated areas to livestock for six months following application.

Grain Sorghum

Igran DF may be applied alone or in tank mix combination with either AAtrex or Milogard prior to planting with shallow incorporation, at planting time, or immediately following planting, but before weeds and sorghum emerge. Igran DF may also be applied in tank mix combination with AAtrex and paraquat where grain sorghum will be planted directly into cover crop, established sod, or in previous crop residues. Apply during or after planting, but before sorghum emerges. Do not apply to emerged sorghum. When applying preplant with shallow incorporation, apply within 2 weeks of planting and incorporate into the top 1-2 inches of soil using a rolling cultivator, rotary hoe, spike-tooth harrow, or similar implement. For sorghum planted on beds, apply and incorporate after bed formation.

Precautions: 1) In case of planting failures, sorghum may be replanted into soil previously treated with Igran DF or Igran combinations. 2) Do not apply a second broadcast application, or injury may occur. 3) If Igran DF or Igran combinations are applied in a band, and sorghum is replanted in the untreated row middles, Igran DF or Igran combinations may be applied in a band to the second planting. 4) If irrigation is necessary, irrigate during the first 36 hours after planting or wait until the sorghum is at least two inches tall, or injury may occur.



Igran DF Alone: Apply Igran DF at the rate indicated in Table 2 or 3.

Table 2

Annual Broadleaf and Grass Weed Control

| Region | Soil Texture | Broadcast Rate Per Acre |
|---|--------------------|-------------------------|
| All sorghum growing regions of the U.S.; except states shown below | sand, loamy sand | DO NOT USE |
| | sandy loam to loam | 2.5 lbs. |
| | silt loam to clay | 3 lbs. |
| Eastern Colorado, South Dakota, Illinois, Iowa, Kansas, Minnesota, Missouri, and Nebraska | sand | DO NOT USE |
| | loamy sand | 2-2.5 lbs. |
| | sandy loam to loam | 2.5 lbs. |
| | silt loam to clay | 3 lbs. |

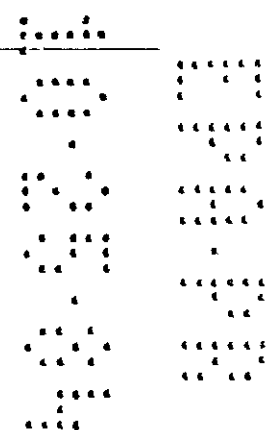


Table 3

Annual Broadleaf Weed Control Only

| Region | Soil Texture | Broadcast Rate Per Acre |
|---|-------------------------|-------------------------|
| Kansas, Oklahoma, New Mexico, Texas, and the desert regions of Arizona and California | sand | 1 lb. |
| | loamy sand | 1.5 lbs. |
| | all other soil textures | 2 lbs. |

Igran DF + Allogard or Igran DF + AAtrex: A tank mixture of Igran DF + Allogard or Igran DF + AAtrex can be used in the regions indicated below, for more consistent weed control than when Igran DF is used alone. Apply the tank mixture at the rate indicated in Table 4. Do not use either combination on sand or loamy sand soils.

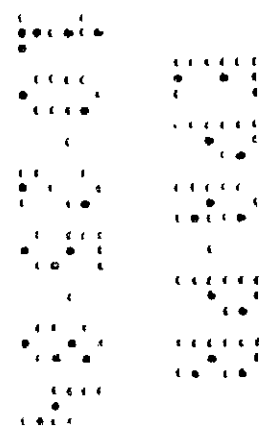


Table 4

Annual Broadleaf and Grass Weed Control

| Region | Soil Texture | Broadcast Rate Per Acre | | |
|---|----------------------|-------------------------|------------------|-----------------|
| | | Igran DF | Milogard Max 90* | AAtrex Nine-O** |
| Illinois, Iowa, Eastern Kansas, Minnesota, Missouri, and Eastern and Central Nebraska, South Dakota | sandy loam | 2 lbs. | 0.45 lb. | DO NOT USE |
| | loam and finer | 2-2.5 lbs. | DO NOT USE | 0.9 lb. |
| Central Kansas, Western Nebraska, Oklahoma, and Texas | sandy loam | 2 lbs. | 0.45 lb. | DO NOT USE |
| | loam and finer | 2-2.5 lbs. | 0.9 lb. | DO NOT USE |
| Eastern Colorado, and Western Kansas | sandy loam and finer | 2 lbs. | 0.45 lb. | DO NOT USE |

*When using Milogard 4L, Milogard 80W, AAtrex 4L, AAtrex 4LC or AAtrex 80W, use equivalent rates. 0.9 lb. of Nine-O or Maxx 90 equals 1 lb. of 80W. 0.9 lb. of Nine-O or Maxx 90 equals 1.6 pts. of 4L or 4LC.

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Igran DF + AAtrex + Paraquat: Apply the tank mixture at the rates indicated in Table 5. Refer to paraquat label concerning directions, limitations, and cautions for use of that product. Apply in 20-40 gals. diluted spray per acre. Add a nonionic surfactant such as X-77® at 1 to 2 pts. per 100 gals. diluted spray. Use only water or nitrogen solutions as a carrier. Add Igran to spray tank first, mixing thoroughly in carrier. Next, add AAtrex, paraquat and X-77. Maintain agitation of carrier at all times.

Table 5

Broadleaf and Grass Control

| Soil Texture | Broadcast Rate Per Acre | | |
|---|-------------------------|-------------------|------------|
| | Igran DF | AAtrex Nine-O* | paraquat |
| COARSE: Sand, loamy sand | DO NOT USE | DO NOT USE | DO NOT USE |
| MEDIUM: Loam, silt loam, silt | 2 lbs. | 0.9 lb. | 1-2 pts. |
| FINE: Silty clay loam, sandy clay loam, clay loam, sandy clay, silty clay, clay | 2.5 lbs. | 1.8 lbs. | 1-2 pts. |

*When using AAtrex 4L, AAtrex 4LC or AAtrex 80W, use equivalent rates. 0.9 lb. of Nine-O equals 1.6 pts. of 4L or 4LC. 0.9 lb. of Nine-O equals 1 lb. of 80W.

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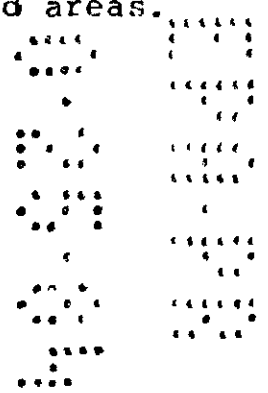
Winter Weed Control in Texas: For postemergence control of winter weeds only, such as henbit (purple top), seedling dock, and annual thistle on fall bedded land in the Texas Gulf Coast and Blacklands of Texas, apply 0.75 to 1 lb. of Igran DF per acre, postemergence to the weeds in the fall or winter to land that will be planted to sorghum the following spring. For best results, add a suitable surfactant, such as X-77, at the rate of 0.5% of the spray volume, an emulsifiable oil at the rate of 1.0% of the spray volume, or an oil concentrate at the rate of 1 qt. per acre.

Normal programs of weed control may be used in the following sorghum crop.

Note: To avoid illegal residues or crop injury, do not plant any crop except grain sorghum the spring following this treatment.

Precautions: Igran DF alone and Igran DF combinations - 1) To avoid crop injury, apply only on sorghum planted after the minimum soil temperature has reached 60°F or more for at least three consecutive days. 2) Do not wait more than two days after planting to apply. Do not apply over emerged sorghum, or crop injury may occur. 3) Rainfall or overhead irrigation at the time of sorghum emergence and until the sorghum is 2 inches tall may cause injury to sorghum. 4) Do not apply to millets, sudan-sorghum hybrids, or sorghum breeding stocks, or injury may occur. 5) Applications may result in crop injury when made to sorghum growing on alkali soils, caliche outcroppings, or where cuts, fills, or erosion have exposed calcareous subsoil. 6) To avoid concentration of herbicide in the seed furrow, do not make a broadcast application to sorghum planted in furrows deeper than two inches. Width of the band should not exceed the width of the bottom of the furrow. 7) Do not apply a second application to the same crop, or injury may occur.

Note (Igran DF alone and Igran DF combinations): To avoid illegal residues, do not graze or feed forage from treated areas.



Suggestions for Crop Rotation:

Following Igran DF Alone:

- 1) Sorghum stubble should be plowed (disk or moldboard) prior to planting the next crop.
- 2) Rotational crops may be planted as follows:
 - 4 months: winter wheat
 - 7 months or longer: all other crops
 following normal agricultural practices and planting dates.

Following Igran DF + AAtrex and Igran DF + AAtrex + paraquat:

- 1) Land treated with Igran DF + AAtrex should not be planted to any crop except corn or sorghum until the following year, or injury may occur.
- 2) If applied after June 10, do not rotate with crops other than corn or sorghum the next year, or injury may occur.
- 3) Injury may occur to soybeans planted in north central and northwest Iowa, south central and southwest Minnesota, southeast South Dakota, and northeast Nebraska the year following an application on soils having a calcareous surface layer.
- 4) Do not plant sugar beets, tobacco, vegetables (including dry beans), spring-seeded legumes, and grasses the following year, or injury may occur.

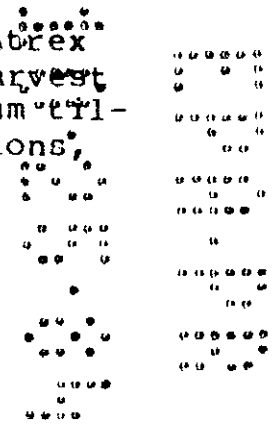
Following Igran DF + Milogard:

Sorghum, cotton, or corn may be planted 12 months after application. All other crops may be planted 18 months after application.

When applying Igran combinations, see the General Information section, caution statements, and precautions listed on the AAtrex and Milogard labels for further information.

Chemical Fallow

Wheat-Sorghum-Fallow: AAtrex 4L (4LC), AAtrex 80W, or AAtrex Nine-O may be used to control annual weeds after wheat harvest and in the following sorghum crop when grown under minimum tillage. Refer to the AAtrex label for directions, precautions, and limitations.



Tank Mixtures for Wheat-Sorghum-Fallow

If weeds are present at time of application (in late July or August following wheat harvest), Igran DF may be tank mixed with AAtrex to control existing annual weeds. Broadcast 2-2.5 lbs. of Igran DF plus 6 pts. of AAtrex 4L (4LC) (or 3.75 lbs. of AAtrex 80W, or 3.3 lbs. of AAtrex Nine-O) per acre. Add 1-2 pts. of a nonionic surfactant (such as X-77) per 100 gals. of spray mixture. Add Igran DF to the spray tank first and thoroughly mix with the water. Then add the AAtrex, followed by the surfactant. Use the 2.5 lb. rate of Igran DF if weeds are 4-6 inches tall. This mixture will not control weeds taller than 6 inches. Plant sorghum into the wheat stubble the following spring with minimum disturbance of the soil. Use a surface planter or a planter leaving a shallow furrow. If weeds are present at the time of sorghum planting, remove them with a sweep plow or other suitable implement before planting. Refer to the AAtrex label for further directions, precautions, and limitations.

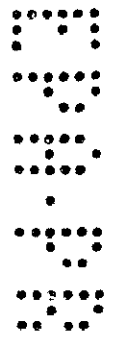
Note: To avoid illegal residues, do not graze or feed forage from treated areas.

Wheat-Corn-Fallow (KS and NE): AAtrex 4L (4LC), AAtrex 80W, or AAtrex Nine-O may be used to control annual weeds after wheat harvest and in the following corn crop when grown under minimum tillage. Refer to the AAtrex label for directions, precautions, and limitations.

Tank Mixtures for Wheat-Corn-Fallow (KS and NE)

If weeds are present at time of application (in late July or August following wheat harvest), Igran DF may be tank mixed with AAtrex and applied to control existing annual weeds. Follow directions for use in the "Wheat-Sorghum-Fallow" section above, substituting corn for references to sorghum.

Wheat-Fallow-Wheat (CO, KS, MT, NE, ID, SD, and WY): AAtrex 4L (4LC), AAtrex 80W, or AAtrex Nine-O may be used for preemergence control of annual weeds during the fallow period of a wheat-fallow-wheat rotation. If AAtrex is applied alone in late summer after wheat harvest, Igran DF may be applied the following spring at 2-2.5 lbs./A to control escaping weeds. Add 1-2 pts. of a nonionic surfactant (such as X-77) per 100 gals. of spray mixture. Use the 2.5 lb. rate if weeds are 4-6 inches tall. Igran DF will not control weeds taller than 6 inches. Treat with Igran DF only once during the same fallow period,



and plant wheat no sooner than 4 months after application of the Igran DF alone and no sooner than 12 months after the AAtrex application. Refer to the AAtrex label for directions, precautions, and limitations.

Tank Mixtures for Wheat-Fallow-Wheat (CO, KS, MT, NE, ND, SD, and WY

If weeds are present at time of application (normally in late July or August following wheat harvest), Igran DF may be tank mixed with AAtrex to control existing annual weeds. Broadcast 2-2.5 lbs. of Igran DF plus 1-2 pts. of AAtrex 4L (4LC) (or 0.6-1.25 lbs. of AAtrex 80W, or 0.5-1.1 lbs. of AAtrex Nine-O) per acre. Add 1-2 pts. of a nonionic surfactant (such as X-77) per 100 gals. of spray mixture. Add Igran DF to the spray tank first and thoroughly mix with the water. Then add the AAtrex, followed by the surfactant. Use the 2.5 lb. rate of Igran DF if weeds are 4-6 inches tall. This mixture will not control weeds taller than 6 inches. Treat with this tank mixture only once during the same fallow period. Use tillage to control weeds which escape during the fallow period. Plant wheat no sooner than 12 months after application. Refer to the AAtrex label for further directions, precautions, and limitations.

Note: To avoid illegal residues, do not feed forage or graze treated areas to livestock for six months following application.

Wheat-Fallow-Wheat, Sorghum-Fallow-Wheat (Great Plains, including OK, N. TX)

Apply Igran DF preemergence or postemergence at 2-2.5 lbs./A in the spring at the start of the fallow period (as soon as possible following harvest in a winter wheat-fallow-wheat rotation). Use the higher rate when weeds are 4-6 inches tall. Igran DF will not control weeds taller than 6 inches. Postemergence weed control is improved by adding a nonionic surfactant, such as X-77 at 1-2 pts. per 100 gals. of spray mixture, an emulsifiable oil at 2-4 qts./A or an oil concentrate at 1-2 pts./A. Treat only once during the fallow period, and do not plant wheat sooner than 4 months after application (2 months in Kansas, Oklahoma, and northern Texas). Shallow cultivation or paraquat at 1-2 pts./A + X-77 surfactant at 1-2 pts. per 100 gals. of spray solution may be used to control weeds which escape or reinfest during the fallow season.

Note: To avoid illegal residues, do not feed green forage or graze treated areas for 6 months following application.

Tank Mixes for Wheat-Fallow-Wheat (Great Plains, including OK, N. TX)

For control of established weeds, tank mix Igran DF with one of the following herbicides, or stubble plow to control large established weeds. The following tank mixes will not control weeds taller than 6 inches. Use the higher rate of each product when weeds are 4-6 inches tall. Treat only once during the fallow period and do not plant wheat sooner than 4 months after application (2 months in Kansas, Oklahoma, and northern Texas). Shallow cultivation may be used to control weeds which escape during the fallow season. A nonionic surfactant, such as X-77 at 1-2 pts. per 100 gals. of spray mixture, should be added to each tank mix.

Note: To avoid illegal residues, do not feed green forage or graze treated areas for 6 months following application.

Paraquat: Apply 1-2 pts./A of paraquat in tank mix with 2-2.5 lbs./A of Igran DF if weeds are present at application. Refer to the paraquat label for further directions, precautions, and wheat rotation restrictions.

2,4-D: To avoid compatibility problems, do not tank mix Igran DF with 2,4-D ester formulations. Tank mix Igran DF with 2,4-D amine formulations registered for use in wheat-fallow-wheat rotations. Apply 0.5 lb. active ingredient per acre of 2,4-D amine in tank mix with 2-2.5 lbs./A of Igran DF. Refer to the 2,4-D amine labels for further directions, precautions, and wheat rotation restrictions.

Bladex® 80W: Apply 2 lbs./A of Bladex 80W in tank mix with 2-2.5 lbs./A of Igran DF. Refer to the Bladex label for further directions, precautions, and wheat rotation restrictions.

Sencor [50WP, 4, DF] (CO, KS, MT, NE, WY only): Apply 0.5-0.67 lbs./A of Sencor DF, 0.75-1 pt./A of Sencor 4, or 0.75-1 lb./A of Sencor 50WP in tank mix with 2-2.5 lbs./A of Igran DF. Do not plant wheat sooner than 4 months after application. Refer to the Sencor labels for further directions, precautions, and wheat rotation restrictions.

Noncrop Land

Igran DF provides weed control on railroad rights-of-way and on other noncrop land sites.

Apply Igran DF to emerged actively growing weeds not more than 6 inches in height at 2.5-3 lbs./A. Apply in at least 20 gals. of water per acre. A surfactant such as X-77, DuPont WK, or Tronic may be added to the spray mixture at the rate of 2 qts./100 gals. of spray (0.5% of spray volume). Cover weeds thoroughly with spray for good control. For extended weed control, Igran DF may be applied in tank mix combination with Atritol® formulations 90 and 80W, and Princep® formulations (4L, 80W, and Caliber® 90). Refer to the Atritol and Princep labels for use instructions for these products.

Precautions: Do not use this product for nonselective weed control on land to be cropped, near adjacent desirable trees, shrubs, or plants, or in greenhouses, or injury may occur.

Note: Agitate Igran and Igran tank mixtures during the tank filling and spraying process. Empty the spray tank during the spraying operation.

Storage and Disposal

Store in a cool, dry place. Do not contaminate water, food, or feed by storage, disposal.

Pesticide: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

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

Precautionary Statements

Hazards to Humans and Domestic Animals

CAUTION

Harmful if swallowed, inhaled or absorbed through the skin. Causes eye irritation. Avoid contact with skin, eyes, or clothing. Avoid breathing dust. Wash thoroughly with soap and water after handling. Remove and wash contaminated clothing before reuse.

Statement of Practical Treatment

If Swallowed: Call a physician or Poison Control Center. Drink one or 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 in Eyes: Immediately flush eyes with plenty of water. Get medical attention if irritation develops or persists.

If on Skin: Wash with plenty of soap and water. Get medical attention if irritation develops or persists.

NOTE TO PHYSICIAN: There is no specific antidote for Igran DF. If this product is ingested, induce emesis or lavage stomach. The use of an aqueous slurry of activated charcoal may be considered.

Atraton® trademark of CIBA-GEIGY

AAtrex® trademark of CIBA-GEIGY for atrazine

Caliber® trademark of CIBA-GEIGY

Igran® trademark of CIBA-GEIGY for terbutryn
U.S. Patent No. 3,634,062

Lexone® trademark of E. I. DuPont de Nemours & Co., Inc. for
metribuzin

Maxx® trademark of CIBA-GEIGY

Milogard® trademark of CIBA-GEIGY for propazine

Nine-O® trademark of CIBA-GEIGY

Princep® trademark of CIBA-GEIGY for simazine

Sencor® trademark of the Parent Company of Farbenfabriken Bayer GmbH, Leverkusen, for metribuzin

X-77® trademark of KALO Agricultural Chemicals, Inc.

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