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Systems Integration Group, Inc.

PM 25

68156-6

5-27-99

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U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (H7505C)
401 "M" St., S.W.
Washington, D.C. 20460

EPA Reg. Number:
68156-6

Date of Issuance:
27 May 1999

NOTICE OF PESTICIDE:
 Registration
 Reregistration

Term of Issuance: Conditional

Name of Pesticide Product:
Ipimethalin-L

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

Dr. Richard F. Bing, Director
Global Research and Development
Dintec Agrichemicals
9330 Zionsville Road
Indianapolis, IN 46268-1054

Note: Changes in labeling 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 EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the 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.

This product is conditionally registered in accordance with FIFRA sec. 3(c)(7)(A) provided that you:

1. Submit and/or cite all data required for registration of your product under FIFRA sec. 3(c)(5) when the Agency requires all registrants of similar products to submit such data; and submit acceptable responses required for reregistration of your product under FIFRA section 4.
2. Make the following changes to the attached label which is stamped "Accepted with Comments":
 - a. Page 5: First Aid statements: Replace the existing statement "IF SWALLOWED: DO NOT induce vomiting. Call a physician or Poison Control Center immediately." with "IF SWALLOWED: Call a doctor or get medical attention. Do not induce vomiting. Do not give anything by mouth to an unconscious person. Avoid alcohol."
 - b. Page 5: First Aid statements: Remove the words "if irritation persists" from the statement beginning "IF ON SKIN:"
 - c. Page 5: Under the subheading "Engineering Controls", omit the sentences "Discard clothing or other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them."
 - d. Page 19: In the Tank Mix Use Directions column for Atrazine mixes, the Culti-spray subheading text says "Refer to page 30 for application directions." Culti-spray application directions are on page 22. This page number needs changed.
 - e. Page 41: Item 3 under Delayed (Late) Pre-emergence Applications twice refers to "Spraying Directions on page 55." Spraying directions are on page 42. This page number needs changed.
3. Submit two copies of the revised final printed label for the record.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 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.

Signature of Approving Official:

Date:

May 28, 1999

20/67

IPIMETHALIN-L

HERBICIDE

For Use In Selected Crops

ACTIVE INGREDIENT:

Pendimethalin (N-(1-ethylpropyl)-3,4-dimethyl-2,6-dinitrobenzenamine).....	37.4%
INERT INGREDIENTS*	62.6%
TOTAL.....	100.0%

(1 gallon contains 3.3 pounds of pendimethalin)
*Contains aromatic naphtha

EPA Reg. No. 68156-____
EPA Est. No. _____

KEEP OUT OF REACH OF CHILDREN

CAUTION!/PRECAUCION!

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.
(If you do not understand this label, find someone to explain it to you in detail).

See Directions For Use Inside Booklet
See Additional Precautionary Statements Inside Booklet

In case of emergency call: _____

DINTEC AGRICHEMICALS
9330 Zionsville Road
Indianapolis IN 46268

Net Contents: _____

**ACCEPTED
with COMMENTS
In EPA Letter Dated:
MAY 27 1999**

**Under the Federal Insecticide,
Fungicide, and Rodenticide Act,
as amended, for the pesticide
registered under EPA Reg. No.**

68156-6

30467

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IPIMETHALIN-L

For Use on Cotton, Dry Bulb Onions, Dry Bulb Shallots, Edible Beans, Field Corn, Forage Legumes, Garlic, Grain Sorghum, Landscape and Grounds Maintenance Programs, Nonbearing Fruit and Nut Crops and Vineyards, Noncropland areas (including tree plantations), Ornamentals, Peanuts, Potatoes, Rice, Soybeans, Sugarcane, Sunflowers, Sweet Corn, Sweet Lupines, Tobacco, Turfgrasses and Total Vegetative Control.

For Control of Most Annual Grasses and Certain Broadleaf Weeds

Ipimethalin-L should be used in accordance with the directions in this booklet and in supplemental labels (for those registered uses that are not included in this booklet) which are available through local Agricenter™ dealers. Read all directions carefully before using.

Read all information on pages 6-23 before referring to specific crop use.

FIRST AID

IF SWALLOWED, DO NOT induce vomiting. Call a physician or Poison Control Center immediately.

IF IN EYES, flush eyes with plenty of water. Call a physician if irritation persists.

IF ON SKIN, wash with plenty of soap and water. Get medical attention if irritation persists.

NOTE TO PHYSICIAN: Because of increased risk of chemical pneumonia or pulmonary edema caused by aspiration of the hydrocarbon solvent, vomiting should be induced only under professional supervision.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Harmful if swallowed or absorbed through the skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing.

Personal Protective Equipment (PPE):

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category G on an EPA chemical resistance category selection chart.

Applicators and other handlers must wear:

- * Long-sleeved shirt and long pants
- * Chemical-resistant gloves, such as Barrier Laminate or Viton \geq 14 mils
- * Shoes plus socks

Engineering Controls

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240)(d)(4-6), the handler PPE requirements may be reduced or modified as specified in the WPS.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing or other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

User Safety Recommendations:

Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
Users should remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
Users should remove PPE immediately after handling this product. Washing the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This product is toxic to fish. DO NOT apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent aquatic sites. DO NOT contaminate water when disposing of equipment washwaters.

8/2/07

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. This label must be in the possession of the user at the time of pesticide application.

Observe all cautions and limitations in this label and the labels of products used in combination with IPIMETHALIN-L. The use of IPIMETHALIN-L not consistent with this label can result in injury to crops, animals, or persons. Keep containers closed to avoid spills and contamination.

DO NOT apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide protection.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours.

Exception: If the product is soil injected or soil incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- * Coveralls
- * Chemical resistant gloves, such as Barrier Laminate or Viton \geq 14 mils
- * Shoes plus socks

STORAGE AND DISPOSAL

DO NOT contaminate water, food, or feed by storage or disposal.

STORAGE:

DO NOT STORE BELOW 40°F. Extended storage at temperatures below 40°F can result in the formation of crystals on the bottom of the container. If crystallization does occur, store the container on its side at room temperature (70°F) and rock occasionally until crystals re-dissolve.

PESTICIDE DISPOSAL:

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

CONTAINER DISPOSAL:

For Five Gallons and Under: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

For Bulk and Mini-Bulk: Return empty container to point of purchase for repackaging or recycling.

USES WITH OTHER PRODUCTS (TANK MIXES)

When tank mixing this product with other herbicides, all applicable directions, restrictions, and precautions for the additional herbicides must be followed. Use the most restrictive limitations stated on the product labels. Before initiating full tank mix application, the physical compatibility of the proposed mixture should be evaluated on a small scale of recommended spray mixture concentrations. Also, such mixtures should be evaluated for vegetation control before expanding commercial use.

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LIMITATIONS OF LIABILITY AND DAMAGES

The liability of Dintec Agrichemicals and any other seller for any loss or injury, whether based on negligence, breach of warranty, strict liability in tort, or any other cause of action, shall be limited to the purchase price of the product. Prompt notice of any claim must be given by the buyer to Dintec Agrichemicals within ninety days after the application of the product or ninety days after the first planting, whichever is later. Notification to Dintec Agrichemicals should be at this address: Dintec Agrichemicals, 9330 Zionsville Road Indianapolis, IN 46268

Dintec Agrichemicals and any other seller of the product shall not be liable, and any and all claims against Dintec Agrichemicals and any other seller are waived, for special, indirect, incidental, or consequential damages or expenses of any nature, including, but not limited to, loss of profits or income, and crop or property loss or damage, whether or not based on negligence, breach of warranty, strict liability in tort or any other cause of action.

Dintec Agrichemicals OFFERS THIS PRODUCT AND THE BUYER AND USER ACCEPT IT SUBJECT TO THE FOREGOING CONDITIONS OF SALE AND LIMITATIONS OR WARRANTY, LIABILITY AND DAMAGES, WHICH MAY BE VARIED ONLY BY AGREEMENT IN WRITING SIGNED BY A DULY AUTHORIZED REPRESENTATIVE OF Dintec Agrichemicals

GENERAL INFORMATION

SPECIAL PRECAUTIONS

IPIMETHALIN-L herbicide provides control of most annual grasses and certain broadleaf weeds as they germinate. IPIMETHALIN-L does not control established weeds. Before applying IPIMETHALIN-L, destroy all existing weeds (except as recommended in specific postemergence combination treatments). Certain weather conditions such as unusually cold, excessively wet, or extremely hot or dry conditions that can delay germination or extend germination over a long period of time may also reduce weed control.

When applied according to label directions and under normal growing conditions, IPIMETHALIN-L or IPIMETHALIN-L tank-mix combinations will not cause crop injury. Over-application, however, may cause crop stand loss, crop injury, or soil residues.

Uneven application or improper soil incorporation can reduce weed control or cause crop injury. Soil incorporation deeper than the recommended levels can reduce weed control.

An increased possibility of crop damage and weakened seedlings and plants from IPIMETHALIN-L can result from seedling diseases, cold weather, excessive moisture, shallow or deep planting, low or high soil pH, high soil salt concentration, or drought. Under these conditions, crop yields can be reduced.

Using IPIMETHALIN-L herbicide in accordance with label directions should produce normal growth of rotational crops in most situations. However, various environmental and agronomic factors make it impossible to eliminate all risks associated with the use of this product and, therefore, rotational crop injury is always a possibility.

Naturally occurring biotypes* of some of the weeds listed on this label may not be effectively controlled by this and/or other products with the mitotic inhibiting mode of action. Other herbicides with the mitotic inhibiting mode of action include other dinitroaniline herbicides such as Treflan¹¹, TRI-4[®] herbicide and Sonolan¹¹. If naturally occurring mitotic inhibiting resistant biotypes are present in a field, IPIMETHALIN-L and/or another mitotic inhibiting mode of action herbicide should be tank-mixed or applied sequentially with an appropriate registered herbicide that has a different mode of action to ensure control.

* A weed biotype is a naturally occurring plant within a given species that has a slightly different, but distinct, genetic makeup from other plants.

See your technical representative for additional information.

MIXING DIRECTIONS

1. Fill tank one-half to three-quarters full with clean water or liquid fertilizer. Agitate. Before mixing IPIMETHALIN-L or IPIMETHALIN-L tank mixtures with liquid fertilizer, refer to appropriate label sections (see table of contents for page number) for recommended uses with liquid fertilizer, application directions, and compatibility determinations.
2. IPIMETHALIN-L Alone

When using IPIMETHALIN-L alone, while agitating add IPIMETHALIN-L to the partially-filled tank. Then fill the rest of the tank with water or liquid fertilizer.

3. IPIMETHALIN-L Tank Mixtures

Add the tank mixture ingredients in the order listed below before adding IPIMETHALIN-L. (For tank mixtures with Butyrac⁴ 200, Gramoxone Extra⁶ or Roundup⁵, refer to mixing directions at the end of this section):

(a) Wettable powder formulations

Make a slurry of the wettable powder in water (1 part WP + 2 parts water). While agitating add the slurry slowly to the partially-filled tank. If tank mixing more than one wettable powder formulation, while agitating, add the first one. Continue agitation and only after complete mixing of the first wettable powder has occurred add second wettable powder.

(b) Dry flowable/water dispersible granule formulations

While agitating, add the granules to the partially filled tank. Make a slurry of the granules in water before adding to liquid fertilizer.

(c) Flowable formulations

While agitating, add the flowable to the partially filled tank.

(d) Water soluble concentrate formulations

While agitating, add the water soluble concentrate to the partially filled tank.

(e) Emulsifiable concentrate formulations

While agitating, add the emulsifiable concentrate to the partially filled tank.

After complete mixing, add IPIMETHALIN-L to the tank.

(f) NOTE (For tank mixes that contain Butyrac⁴, Gramoxone⁶ Extra or Roundup⁵):

After complete mixing of IPIMETHALIN-L, continue filling the sprayer with water and add Butyrac⁴ or Gramoxone Extra⁶ or Roundup⁵ to the tank near the end of the filling process.

If Gramoxone Extra⁶ is included in the tank mixture, add 8 oz. of Ortho X-77 spreader or similar non-ionic surfactant per 100 gallons of total spray mixture as the last ingredient in the tank.

While agitating, fill the remainder of the tank with water or liquid fertilizer.

4. CONTINUOUS AGITATION MUST BE MAINTAINED WHILE ADDING HERBICIDES AND UNTIL SPRAYING IS COMPLETED. If the spray mixture is permitted to settle for any period of time, thorough agitation is necessary to resuspend the mixture before spraying is resumed. Continue agitation while spraying.

GENERAL APPLICATION DIRECTIONS

With Ground Equipment: Uniformly apply recommended IPIMETHALIN-L or IPIMETHALIN-L tank mixture treatments in 10 or more gallons of water or 20 or more gallons of liquid fertilizer per acre. Use higher gallonage for fields that have heavy weed infestations or excessive crop residues. Refer to Applications with Liquid Fertilizers section (see table of contents for page number) for liquid fertilizer recommended uses, application directions and compatibility determinations. With aircraft: Apply in 5 or more gallons of water per acre. Refer to Spraying Directions section (see table of contents for page number) for detailed instructions about aerial and ground spray application methods. Refer to Applications with Dry Bulk Fertilizers section (see table of contents for page number) for complete IPIMETHALIN-L /dry bulk fertilizer impregnation and application instructions.

RATES

Follow all recommendations in the crop-specific use directions of this label regarding rates per acre of IPIMETHALIN-L and herbicides used in combination with IPIMETHALIN-L. Unless otherwise indicated in the crop-specific use directions, when a rate range is recommended, the high rate of the range should be used if heavy weed populations are expected or if extensive crop residues were present before seedbed preparation.

SOIL TEXTURES

The rate tables for the recommended crop-specific IPIMETHALIN-L treatments refer to coarse, medium, and fine soils. Soil type should be determined because the use rates for IPIMETHALIN-L treatments vary with soil texture. The following

table lists soil types for fine, medium and coarse soils:

FINE	MEDIUM	COARSE
silty clay loams* silty clays clay loams clays	sandy clay loams* sandy clays loams silt loams silts	sands loamy sands sandy loams

*Sometimes considered transitional soils and may be classified as either medium or fine textured soils.

IPIMETHALIN-L is not recommended for use on peat or muck soils, unless otherwise specified.

CHEMIGATION

IPIMETHALIN-L may be applied through sprinkler irrigation systems in cotton, field corn, grain sorghum, peanuts, potatoes, soybeans and sunflowers. Follow all label recommendations for these crops regarding rates per acre, timing of application, special directions, and precautions.

Apply this product only through a sprinkler, including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move irrigation systems. Do not apply this product through any other type of irrigation system.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water.

The system must be properly calibrated (with water only) to ensure that the amount of IPIMETHALIN-L applied corresponds to the recommended rate.

Apply IPIMETHALIN-L in 1/2 to 3/4 inches of water during the first sprinkler set. When application is complete, flush the system with water.

If you have any questions about calibration, you should contact State Extension Service specialists, equipment manufacturers, or other experts.

Special Precautions for Chemigation

1. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.
2. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.
3. The system must be free of leaks and clogged nozzles.
4. The pesticide must be supplied continuously for the duration of the aqueous application. An uneven pesticide application may cause injury to the crop or poor weed control.
5. Agitation must be maintained in the nurse tank.
6. The sprinkler-chemigation system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
7. The pesticide injection pipeline must contain a functional, automatic, quick closing check valve to prevent the flow of fluid back toward the injection pump.
8. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
9. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
10. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
11. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
12. Do not apply when wind speed favors drift beyond the area intended for treatment.

Chemigation Systems Connected to Public Water Systems

1. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
2. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
3. All chemigation systems connected to public water systems must also follow restrictions listed in the preceding section titled "CHEMIGATION".

WEEDS CONTROLLED

IPIMETHALIN-L treatments control the following grasses and broadleaf weeds in all registered crops at the rates recommended for each soil texture in the respective crop-specific use directions:

Grasses Controlled

- Barnyard grass
- Crabgrass
- Crowfootgrass
- Field Sandbur
- Foxtail (giant)
- Foxtail (green)
- Foxtail (yellow)
- Goosegrass
- Johnsongrass, seedling
- Panicum, fall
- Panicum, Texas (Buffalograss)
- Signalgrass¹
- Witchgrass

Broadleaf Weeds Controlled

- Bugloss, small
- Carpetweed
- Florida pusley
- Kochia
- Lambsquarters, common
- Lambsquarters, slimleaf
- Pigweed (*Amaranthus* spp.)
- Purslane
- Smartweed, Pennsylvania²
- Spurge, annual
- Velvetleaf²

¹In cotton and soybeans, effective management is achieved by using a program that involves an IPIMETHALIN-L preplant incorporated treatment followed by a labeled postemergence grass product. For effective control, signalgrass populations should be managed in all crop rotations.

²Reduced competition only

In addition to controlling the weeds listed above, IPIMETHALIN-L (when applied as directed) will control the weeds in the crops listed in the following table:

WEEDS CONTROLLED – Grasses	CROP
Bluegrass, annual	Nonbearing fruit and nuts and vineyards
Guineagrass	Sugarcane
Itchgrass (Raouigrass)	Soybeans ¹ Sugarcane ² (not Hawaii)
Johnsongrass, rhizome	Cotton Soybeans ¹
Junglerice	Nonbearing fruit and nuts and vineyards Rice Sugarcane
Lovegrass	Nonbearing fruit and nuts and vineyards
Panicum, Browntop	Nonbearing fruit and nuts and vineyards Sugarcane
Red Rice	Soybeans ¹
Shattercane	Field Corn ³ Grain Sorghum ³ Soybeans ¹
Sprangletop (<i>Leptochloa</i> spp.)	Rice Nonbearing fruit and nuts and vineyards
Swollen fingergrass	Sugarcane

Volunteer Sorghum	Cotton ⁵
Wild Proso Millet	Field ⁴ and Sweet Corn Grain Sorghum ³
Woolly cupgrass	Field ⁵ and Sweet Corn Nonbearing fruit and nuts and vineyards Soybeans ¹
WEEDS CONTROLLED - Broadleaves	CROP
Carpetweed	Sunflowers, no-till
Chickweed, common	Nonbearing fruit and nuts and vineyards
Fiddleneck	Nonbearing fruit and nuts and vineyards
Henbit	Nonbearing fruit and nuts and vineyards
Knotweed, prostrate	Nonbearing fruit and nuts and vineyards
London rocket	Nonbearing fruit and nuts and vineyards
Smartweed, Pennsylvania	Field and Sweet Corn Nonbearing fruit and nuts and vineyards
Puncturevine	Nonbearing fruit and nuts and vineyards
Sheperdspurse	Nonbearing fruit and nuts and vineyards
Stinging nettle	Potatoes
Velvetleaf	Field and Sweet Corn Nonbearing fruit and nuts and vineyards

¹ Control or reduced competition (refer to appropriate section for use directions (see table of contents for page number).

² IPIMETHALIN-L must be applied at the 7.2 pint/acre broadcast rates for itchgrass control. Surface application (no mechanical incorporation) will provide partial itchgrass control. An additional application of 4.8 to 7.2 pints/acre may be made at layby.

³ Control with CULTI-SPRAY applications only. Refer to appropriate section for use directions (see table of contents for page number).

⁴ IPIMETHALIN-L controls wild proso millet when applied as a CULTI-SPRAY application. IPIMETHALIN-L reduces the competition of wild proso millet when applied preemergence. Effective management of wild proso millet can be achieved with a program that involves herbicide applications and mechanical cultivation to eliminate weed escapes. IPIMETHALIN-L plus Accent SP, Bladex or Extrazine II applied early postemergence (no later than when corn is in the 4-leaf stage) treatments have provided the most consistent suppression of wild proso millet because of the following: (1) early postemergence treatments provide a burn-down of the initial germination flush of wild proso millet; and, (2) early postemergence treatments provide residual activity later during the growing season.

⁵ Effective management of woolly cupgrass can be achieved with a program that involves herbicide applications and mechanical cultivation to eliminate weed escapes. IPIMETHALIN-L plus Accent, Bladex or Extrazine II applied early postemergence (no later than when corn is in the 4-leaf stage) treatments have provided the most consistent control of woolly cupgrass because of the following: (1) early postemergence treatments provide a burn-down of the initial germination flush of woolly cupgrass; and, (2) early postemergence treatments provide residual activity later during the growing season.

⁶ Use the high rate for each soil texture. Apply broadcast to flat land and mechanically incorporate (two passes at an angle to one another) prior to bedding up.

SPRAYING DIRECTIONS

GROUND APPLICATIONS

Use sprayers with appropriate nozzles that provide uniform spray distribution and minimize drift. Keep the bypass line on or near the bottom of the tank to minimize foaming. Nozzle and in-line screens must be no finer than 50 mesh. DO NOT apply IPIMETHALIN-L during periods of gusty winds. As with all herbicides, windy conditions can cause uneven applications.

BROADCAST TREATMENT: Uniformly apply in 10 or more gallons of water or 20 or more gallons of liquid fertilizer as specified in the appropriate sections of this booklet.

BAND TREATMENT: Uniformly apply the broadcast equivalent rate and volume per acre. To determine these, use the following calculations:

$$\frac{\text{Band width (in inches)} \times \text{Broadcast RATE}}{\text{Row width (in inches)}} = \text{Band RATE per acre}$$

$$\frac{\text{Band width (in inches)} \times \text{Broadcast VOLUME}}{\text{Row width (in inches)}} = \text{Band VOLUME per acre}$$

AERIAL APPLICATIONS

Uniformly apply in 5 or more gallons of water per acre. Use caution to minimize drift. DO NOT apply during periods of gusty winds or when wind conditions favor drift. Spray drift can cause injury to sensitive crops. Use a flagman or an automatic mechanical flagging unit on the aircraft to avoid overlap and possible crop injury.

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-and-weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

1. The distance of the outer most nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Where states have more stringent regulations, they should be observed.

The applicator should be familiar with and take into account the information covered in the Aerial Drift Reduction Advisory Information.

INFORMATION ON DROPLET SIZE

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see Wind, Temperature and Humidity, and Temperature Inversions).

CONTROLLING DROPLET SIZE

- Volume – Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- Pressure – Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- Number of nozzles – Use the minimum number of nozzles that provide uniform coverage.
- Nozzle Orientation – Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- Nozzle Type - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

BOOM LENGTH

For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

APPLICATION HEIGHT

Applications should not be made at a height greater than 10 feet above the top of the largest plant unless greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

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SWATH ADJUSTMENT

When applications are made with a crosswind, the swath will be displaced downward. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.)

WIND

Drift potential is lowest between wind speeds of 2-10 mph. However, many factors include droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

TEMPERATURE AND HUMIDITY

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

TEMPERATURE INVERSIONS

Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitudes and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

SENSITIVE AREAS

The pesticide should only be applied when the potential for drift to adjacent sensitive area (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

INCORPORATION DIRECTIONS

Break up soil clods before a preplant incorporated application.

1. Flat-Planted Crop

IPIMETHALIN-L should be incorporated prior to planting and within 7 days of application. When IPIMETHALIN-L is applied to flat land that will not be bedded, it should be mechanically incorporated into the top 1 or 2 inches of soil. Mechanical incorporation of IPIMETHALIN-L into the top 1 or 2 inches of soil can be achieved by the following methods:

- (a) Disk harrow set to cut 3 to 4 inches deep and operated in two different directions at 4 to 6 mph. The second pass should be made at an angle to the first.
- (b) PTO-driven equipment, such as tillers, cultivators and hoes, set to cut 2 inches deep and operated one time at 4 mph or less.
- (c) Rolling cultivator set to cut 2 to 3 inches deep and operated two times at 6 to 8 mph. The second pass should be made at an angle to the first. Use only on coarse and medium textured soils.
- (d) Field cultivator set to cut 3 inches deep operated two times at more than 5 mph. The second pass should be made at an angle to the first. Equipment must have 3 or 4 rows of sweeps, spaced at intervals of 7 inches or less and staggered so that no soil remains unturned. Do not use chisel points.
- (e) LELY-ROTERRA¹² set and operated according to the manufacturer's directions to thoroughly incorporate IPIMETHALIN-L to a depth of 1 to 2 inches.
- (f) Do-All set and operated according to the manufacturer's directions to thoroughly incorporate IPIMETHALIN-L to a depth of 1 to 2 inches.

NOTE: IPIMETHALIN-L can be incorporated in a single pass when the soil is of good tilth with moderate moisture and is relatively free of clods and trash. Equipment must be properly set up to thoroughly incorporate IPIMETHALIN-L into the

top 1 or 2 inches of soil. Recommended equipment includes the following: (1) C-shank or S-shank field cultivators equipped with flextime drag or rolling basket attachment and (2) the combination disk/field cultivator implement equipped with flextime drag or rolling basket attachment. Field cultivators must have 3 or 4 rows of sweeps, spaced at intervals of 7 inches or less and staggered so that no soil remains unturned. Equipment must be operated at 6 to 8 miles per hour and set to cut 3 to 4 inches deep.

2. Bedded Crop: Application Over Beds

IPIMETHALIN-L is to be incorporated prior to planting and within 7 days of application. When IPIMETHALIN-L is applied over beds, it should be mechanically incorporated into the top 1 or 2 inches of soil. Mechanical incorporation of IPIMETHALIN-L into the top 1 or 2 inches of soil can be achieved by the following methods:

- (a) Rolling cultivator set to cut 2 to 3 inches deep and operated two times at 6 to 8 mph. Use only on coarse and medium textured soils.
- (b) PTO-driven equipment, such as tillers, cultivators and hoes, set to cut 2 inches deep and operated one time at 4 mph or less.
- (c) Bed conditioner set to cut 2 to 3 inches deep and operated one time at 4 to 6 mph.

During planting, or if beds will be reshaped prior to planting, avoid tillage that brings untreated soil to the surface or exposes untreated soil in the seedbed or in the furrow.

3. Bedded Crop: Application Prior to Bedding

IPIMETHALIN-L is to be incorporated prior to planting and within 7 days of application. When IPIMETHALIN-L is applied to flat land prior to bedding, it should be mechanically incorporated at a sufficient depth so that bedding does not bring up untreated soil. Mechanical incorporation of IPIMETHALIN-L can be achieved by the following methods:

- (a) Disk harrow set to cut 4 to 6 inches deep and operated in two different directions at 4 to 6 mph. The second pass should be made at an angle to the first.
- (b) PTO-driven equipment, such as tillers, cultivators and hoes, set to cut 3 to 4 inches deep and operated one time at 4 mph or less. During planting, or if beds must be reshaped prior to planting, avoid tillage that brings untreated soil to the surface or exposes untreated soil on the seedbed or in the furrow.

APPLICATIONS WITH LIQUID FERTILIZERS

IPIMETHALIN-L alone or in tank mix combinations with wettable powders (WP), dry flowables (DF), flowables (F), water soluble concentrates (S) or emulsifiable concentrates (EC) may not combine properly with some liquid fertilizer materials. Always test small quantities before full scale mixing. To determine compatibility and if a compatibility agent is needed, follow the testing procedure provided below.

Follow all IPIMETHALIN-L label recommendations regarding registered crops, use rates per acre, application timing, special directions and precautions. Apply treatments in 20 or more gallons of liquid fertilizer per acre with ground equipment. DO NOT apply IPIMETHALIN-L postemergence in liquid fertilizers.

All individual state regulations relating to fluid fertilizer mixing, registration, labeling and application are the responsibility of the individual and/or company selling the IPIMETHALIN-L / liquid fertilizer mixture.

LIQUID FERTILIZER COMPATIBILITY DETERMINATIONS

If liquid fertilizer/herbicide(s) mixture separates in the spray tank, clogged equipment and uneven application can result, which can cause crop injury and poor weed control. Always predetermine the compatibility of IPIMETHALIN-L alone or with other herbicides in the specific liquid fertilizer to be used according to the following directions:

- 1. Add 1 pint of fertilizer to a quart jar.
- 2. Add 1 to 4 teaspoon(s) of the DF, WP, AS, F or L formulation (depending on mixing ratio required) to the liquid fertilizer. The number of teaspoons of the formulation to be added can be determined by the following formula:

$$\frac{\text{lbs. or pts. of product/acre}}{\text{Gallons of fertilizer/acre}} \times 11.4 = \text{number of teaspoons of herbicide to add to 1 pint of fertilizer.}$$

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3. Close the jar and agitate until the herbicide(s) are evenly dispersed in the liquid fertilizer. If the materials do not disperse well, it may be necessary to slurry the chemicals in water before adding to the fertilizer.
4. After dispersing the materials (step 2) add appropriate number of teaspoons of IPIMETHALIN-L (see formula in step 2) to the jar and shake well. Add water soluble concentrate herbicides to the mixture last and agitate. Let the mixture stand for 30 minutes and then observe the results. Look for signs of separation, an oily layer or globules, sludge, flakes or other precipitates.
5. Determine compatibility.
 - (a) If the herbicide(s) and liquid fertilizer mixture does not separate, use this mixture in your spray tank.
 - (b) If the mixture separates, but mixes readily with shaking, the mixture can be used if good agitation is maintained in the spray tank.
 - (c) If separation of the mixture occurs and agitation does not correct this problem, a compatibility agent* is needed.
6. If the need for a compatibility agent* is demonstrated, follow this procedure: Use a clean quart jar and repeat step one above. Add 1/2 teaspoon of the compatibility agent to the liquid fertilizer. Mix well and repeat steps 2, 3 and 4. If separation or precipitation occurs with the compatibility agent, DO NOT use IPIMETHALIN-L with that specific liquid fertilizer.

An effective compatibility agent will cause the mixture to remain uniformly dispersed with little or no separation (oil rising to the surface) for one half hour or longer. If slight separation occurs, 2 to 3 inversions of the jar should be sufficient to redisperse the mixture uniformly.

Use a clean jar for each test. A compatible mixture will have a uniform appearance, and it will be relatively easy to redisperse with gentle agitation of the jar.

*Compex-Kalo Laboratories Incorporated, Kansas City, MO; Sponto 168-D-Witco Chemical Company, Houston, TX; Unite-Hopkins Agricultural Chemical Company, Madison, WI, or other comparable adjuvants.

APPLICATIONS WITH DRY BULK FERTILIZERS

IPIMETHALIN-L may be impregnated on dry bulk fertilizers. When applied as directed, IPIMETHALIN-L/dry bulk fertilizer mixtures provide weed control equal to that provided by the same rates of IPIMETHALIN-L applied in water.

Follow all IPIMETHALIN-L label recommendations regarding rates per acre, registered crops, incorporation, special directions and precautions. IPIMETHALIN-L/dry bulk fertilizer mixtures should only be applied with ground equipment.

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 IPIMETHALIN-L/dry bulk fertilizer mixture.

A minimum of 200 pounds of dry bulk fertilizer impregnated with the recommended amount of IPIMETHALIN-L must be applied per acre.

DO NOT impregnate IPIMETHALIN-L onto coated ammonium nitrate or limestone because these materials do not absorb the herbicide. Dry fertilizer blends containing mixtures of ammonium nitrate or limestone may be impregnated with IPIMETHALIN-L. A minimum of 200 pounds of impregnated dry bulk fertilizer, excluding the weight of ammonium nitrate or limestone, must be applied per acre.

Refer to appropriate crop-specific use directions in the IPIMETHALIN-L herbicide booklet to determine the rate of IPIMETHALIN-L per acre. Use the following table to determine the amount of IPIMETHALIN-L to be impregnated on a ton of dry bulk fertilizer based on the rate of fertilizer that will be applied per acre.

**Rate Chart for Impregnation of Dry Bulk Fertilizers with IPIMETHALIN-L
(Pints of IPIMETHALIN-L per Ton of Fertilizer)**

Fertilizer Rate (lbs./acre)	IPIMETHALIN-L Rate Per Acre (Recommended Rate For Crop And Soil Texture)				
	1.2 pints	1.8 pints	2.4 pints	3.0 pints	3.6 pints
200	12 pts./ton	18 pts./ton	24 pts./ton	30 pts./ton	36 pts./ton
250	9.6 pts./ton	14.4 pts./ton	19.2 pts./ton	24 pts./ton	28.8 pts./ton
300	8 pts./ton	12 pts./ton	16 pts./ton	20 pts./ton	24 pts./ton
350	6.9 pts./ton	10.3 pts./ton	13.7 pts./ton	17.1 pts./ton	20.6 pts./ton

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Fertilizer Rate (lbs./acre)	IPIMETHALIN-L Rate Per Acre (Recommended Rate For Crop And Soil Texture)				
	1.2 pints	1.8 pints	2.4 pints	3.0 pints	3.6 pints
400	6 pts./ton	9 pts./ton	12 pts./ton	15 pts./ton	18 pts./ton
450	5.33 pts./ton	8 pts./ton	10.66 pts./ton	13.33 pts./ton	16 pts./ton

For rates not listed in the table, use the following formula to calculate the pints of IPIMETHALIN-L to be impregnated on a ton of dry bulk fertilizer:

$$\frac{2000}{\text{Pounds of dry fertilizer per acre}} \times \text{Pints of IPIMETHALIN-L per acre (recommended rate for crop and soil texture)} = \text{pints of IPIMETHALIN-L per ton of fertilizer}$$

To impregnate IPIMETHALIN-L on bulk fertilizer, use a closed rotary-drum mixer or other commonly used dry bulk fertilizer blender equipped with suitable spray equipment. Spray nozzles must be placed to provide uniform coverage of IPIMETHALIN-L onto the fertilizer during mixing.

Apply the IPIMETHALIN-L/dry bulk fertilizer mixture with an accurately calibrated dry fertilizer spreader. The IPIMETHALIN-L/dry bulk fertilizer mixture must be spread uniformly on the soil surface. Uneven spreading can result in crop injury and poor weed control.

Refer to Incorporation Directions section (see table of contents for page number) for incorporation directions.

CULTURAL PRACTICES FOLLOWING APPLICATION

If weeds develop, a shallow cultivation or rotary hoeing will generally result in better weed control. IPIMETHALIN-L treatments may be followed by any registered herbicide to control weeds that are not listed on the IPIMETHALIN-L label.

FOLLOW CROP RESTRICTIONS

- Land that has been treated with IPIMETHALIN-L may be planted with other crops the following year. Note the restrictions given below for sugar beets, red beets, and spinach.
- Winter wheat and winter barley
 Winter wheat and winter barley may be planted in the fall 4 months after IPIMETHALIN-L application to any registered crop. Winter wheat and winter barley may be planted in the fall 3 months after an IPIMETHALIN-L CULTI-SPRAY application in irrigated field corn or grain sorghum. The treated crop must grow to maturity and be harvested before planting wheat or barley.
 In areas where irrigation is necessary to produce the crop treated with IPIMETHALIN-L, DO NOT plant winter wheat or winter barley as follow crops if crop failure and/or destruction occurs and land is fallowed during the summer, otherwise crop injury may result.
 DO NOT plant winter wheat or winter barley as follow crops until the next growing season in treated land if IPIMETHALIN-L is applied at 4.8 pints or higher.
 DO NOT feed forage or graze livestock for 75 days after planting wheat or barley in treated land.
- Sugar beets, red beets and spinach
 To prevent crop injury, do not plant sugar beets, red beets or spinach for 12 months following an IPIMETHALIN-L application. To insure thorough mixing of soil, land should be plowed using a moldboard plow to a depth of 12 inches prior to planting these crops.
- When IPIMETHALIN-L is used in tank-mix or sequential combinations, refer to the label(s) of other herbicides for additional follow crop restrictions.
 Use of IPIMETHALIN-L herbicide in accordance with label directions is expected to result in normal growth of rotational crops in most situations; however, various environmental and agronomic factors make it impossible to eliminate all risks associated with the use of this product and, as a result, rotational crop injury is always a possibility.

FIELD CORN

GENERAL DIRECTIONS AND PRECAUTIONS

IPIMETHALIN-L may be applied in conventional, minimum or no-till systems as a preemergence, early postemergence or CULTI-SPRAY (postemergence incorporated) treatment in field corn.

DO NOT APPLY AS A PREPLANT INCORPORATED TREATMENT or serious corn injury can occur.

DO NOT apply IPIMETHALIN-L in no-till systems in California.

With the exception of minimum or no-tillage systems (see below) plant into a firm seed bed that is free of clods and trash. Use only where adequate tillage is practiced to provide good soil coverage of the corn seed. **PLANT CORN AT LEAST 1.5 INCHES DEEP. COMPLETELY COVER CORN SEED WITH SOIL.**

IPIMETHALIN-L or IPIMETHALIN-L tank mix combination treatments will control weeds most effectively when adequate rainfall or overhead irrigation is received within 7 days after application. If cultivation is necessary because of soil crusting, soil compaction or weed germination before rain or irrigation, use shallow tillage (such as rotary hoe), and confirm that corn seeds are below the tilled area.

If IPIMETHALIN-L is used alone and corn loss occurs as a result of weather conditions, corn or any crop registered for IPIMETHALIN-L preplant incorporated use can be replanted the same year without adverse effects. If corn is replanted, seeding depth must be below retilled area or crop injury may occur.

DO NOT exceed the maximum labeled rate for any soil type.

IPIMETHALIN-L is not recommended for use on peat or muck soils.

Field Corn Grown in Minimum or No-Tillage Systems

IPIMETHALIN-L alone and IPIMETHALIN-L tank mixtures may be used in field corn in minimum or no-tillage systems. **PLANT CORN AT LEAST 1.5 INCHES DEEP. COMPLETELY COVER CORN SEED WITH SOIL.** Using no-till planters under conditions that do not allow good soil coverage of the corn seed can result in reduced crop stand or injury if IPIMETHALIN-L comes into contact with the germinating corn seed. Check equipment to ensure good seed coverage.

USE METHODS AND TIMINGS

Preemergence Application: Apply IPIMETHALIN-L after planting, but before weeds and crop emerge. Apply IPIMETHALIN-L tank mixes and sequential programs as specified under the tank mix section.

Early Postemergence Application: Apply IPIMETHALIN-L tank mixes postemergence according to corn height and weed size specified under the tank mix section. IPIMETHALIN-L alone will not control emerged weeds. For maximum effectiveness, wait at least 7-10 days before cultivating early postemergence treatments

CULTI-SPRAY (postemergence incorporated) Application: Apply IPIMETHALIN-L alone or IPIMETHALIN-L plus atrazine when corn is at least 4 inches tall until layby (last cultivation). Refer to CULTI-SPRAY (POSTEMERGENCE INCORPORATED TREATMENT) directions (see page 29).

DO NOT APPLY AS A PREPLANT INCORPORATED TREATMENT or serious corn injury can occur.

IPIMETHALIN-L USE RATES IN FIELD CORN

Use rates recommended for IPIMETHALIN-L alone and in tank mix or sequential applications are given in the following table.

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Broadcast Application Rate¹ per Acre of IPIMETHALIN-L (Pints per Acre) Preemergence or Early Postemergence in Field Corn

Soil Texture	<1.5 % Organic Matter	1.5 - 3.0% Organic Matter	>3.0% Organic Matter
Fine	2.4 to 3.6 pints	3.6 to 4.8 pints	3.6 to 4.8 pints
Medium	2.4 to 3.6 pints	3.6 pints	3.6 to 4.8 pints
Coarse	1.8 to 2.4 pints	2.4 to 3.6 pints	3.6 pints

¹ Use the high rate for each soil classification when using IPIMETHALIN-L alone.

IPIMETHALIN-L TANK MIXES AND SEQUENTIAL PROGRAMS IN FIELD CORN

IPIMETHALIN-L may be applied in a tank mix with Accent or Accent SP, Accent or Accent SP plus Beacon, atrazine, atrazine plus Bladex, Banvel, Banvel plus Bladex, Beacon, Bicep, Bicep II, Bladex, Buctril plus atrazine, Bullet, Dual, Dual II, Dual plus Bladex, Extrazine II, Frontier, Guardsman, Harness, Harness Xtra, Lariat, Lasso, Marksman, Marksman plus Bladex, Surpass or Surpass 100. Refer to the companion label(s) for weeds controlled in addition to IPIMETHALIN-L alone.

When using tank mixtures or sequential applications with IPIMETHALIN-L, always read the companion product label(s) to determine the specific use rates by soil types, weed species, and weed or crop growth stage. In addition, follow all precautions and restrictions including state and local use restrictions that may apply to specific products. Always follow the most restrictive label directions.

RESTRICTIONS FOR EARLY POSTEMERGENCE APPLICATIONS

To avoid serious crop injury with early postemergence applications observe the following restrictions:

- DO NOT apply IPIMETHALIN-L plus Bladex 90DF or IPIMETHALIN-L plus Extrazine II DF if a 5th corn leaf is visible.
- DO NOT use Bladex 4L or Extrazine II 4L as a postemergence treatment on corn.
- DO NOT apply IPIMETHALIN-L plus Bladex 90DF or IPIMETHALIN-L plus Extrazine II DF under extended cold (below 50°F), wet weather conditions, or when cold, wet conditions are predicted, because Bladex or Extrazine injury can occur under these conditions.
- DO NOT apply in liquid fertilizer.

Follow additional use directions in this table for IPIMETHALIN-L tank mixes.

[Refer to application rate table "Broadcast Application Rate¹ per Acre of IPIMETHALIN-L (Pints per Acre) Preemergence or Early Postemergence in Field Corn" to determine the appropriate IPIMETHALIN-L use rate.]

IPIMETHALIN-L alone or IPIMETHALIN-L tank mixes may be used with Gramoxone Extra or Roundup herbicides, after planting but before crop emergence, to kill existing vegetation. Refer to these labels for specific use recommendations, rates and weeds controlled.

IPIMETHALIN-L Plus:	Tank Mix Use Directions
Accent or Accent SP (1/3 to 2/3 oz./Acre)	<p><u>Preemergence Application Followed By Early Postemergence Application</u> Apply IPIMETHALIN-L after planting, but before weeds or crops emerge. Apply Accent early postemergence at 1/3 to 1/2 ounce per acre to corn up through the 6-leaf (4th collared leaf) stage and before barnyardgrass, giant foxtail, green foxtail, seedling johnsongrass, shattercane and wild proso millet exceed a height of 3 inches. Or apply at 2/3 ounce per acre before the corn exceeds 24 inches tall and weeds exceed the height on the Accent label.</p> <p><u>Early Postemergence Application</u> Apply tank mix at 1/3 to 1/2 ounce per acre of Accent to corn through the 6-leaf (4th collared leaf) stage and before barnyardgrass, giant foxtail, green foxtail, seedling johnsongrass, shattercane, and wild proso millet exceed a height of 3 inches. Or apply at 2/3 ounce per acre of Accent to 6-leaf (4th collared leaf) stage corn and before weeds exceed the height recommended on the Accent label.</p> <p>Read and strictly follow all precautions and directions on the Accent label. Barnyardgrass, giant Foxtail, green foxtail, seedling johnsongrass, shattercane, and wild proso millet are the only weeds controlled early postemergence by Accent when applied at 1/3 to 1/2 ounce per acre and before the weeds exceed a height of 3 inches.</p> <p>Atrazine, Banvel, Buctril, Buctril + atrazine, Clarity³, Exceed², Marksman, Permit⁵, or Scorpion III¹¹ herbicides may be tank mixed with IPIMETHALIN-L plus Accent for improved broadleaf weed control.</p>

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IPIMETHALIN-L Plus:	Tank Mix Use Directions																								
	<p>For early postemergence applications of Accent or IPIMETHALIN-L plus Accent, add a non-ionic surfactant (NIS) at 0.25% vol/vol (1 quart per 100 gallons of spray solution) or a Crop Oil Concentrate (COC) at 1.0% vol/vol (1 gallon per 100 gallons of spray solution). The addition of a liquid nitrogen fertilizer solution (28% nitrogen at 2 - 4 quarts/acre) or spray grade ammonium sulfate (2-4 lbs/acre) may improve the weed control of certain emerged species by Accent. When used with an additional broadleaf herbicide, select adjuvants based on the adjuvant limitations of the herbicide.</p> <p>Banded applications of COUNTER CR[®] systemic insecticide-nematicide can be used with IPIMETHALIN-L and Accent treatments. Refer to the COUNTER CR[®] and Accent labels for use directions, precautions and restrictions.</p> <p>DO NOT apply Accent through any type of irrigation system.</p>																								
<p>Accent or Accent SP (1/3 oz/Acre) plus Beacon (0.38 oz/Acre)</p> <p>DO NOT use in California</p>	<p><u>Preemergence Application Followed By Early Postemergence Application</u> Apply IPIMETHALIN-L after planting, but before weeds or crops emerge. Apply Accent plus Beacon postemergence before the corn exceeds 20 inches in height and the weeds exceed the height limitations given below.</p> <p><u>Early Postemergence Application</u> Apply tank mix to corn through the 6-leaf (4th collared leaf) stage and before weeds exceed the height limitations given below.</p> <p>Read and strictly follow all precautions and directions on the Accent and Beacon labels.</p> <p>Weeds Controlled and height (inches):</p> <table border="0"> <tr> <td>Fall Panicum (2-4)</td> <td>Shattercane (4-12)</td> <td>Giant ragweed (2-6)</td> </tr> <tr> <td>Giant foxtail (2-4)</td> <td>Sorghum Alumum (4-12)</td> <td>Jimsonweed (1-4)</td> </tr> <tr> <td>Green foxtail (1-4)</td> <td>Cocklebur (1-4)</td> <td>P. Smartweed (1-2)</td> </tr> <tr> <td>Quackgrass (4-8)</td> <td>Common ragweed (2-6)</td> <td>Redroot pigweed (1-4)</td> </tr> <tr> <td>S. johnsongrass (4-12)</td> <td>Eastern black nightshade (1-4)</td> <td>Sunflowers (1-4)</td> </tr> </table> <p>Weeds Suppressed and height (inches):</p> <table border="0"> <tr> <td>Lambsquarters (<1.5)</td> <td>Velvetleaf (1-4)</td> <td>Woolly cupgrass (1-4)</td> </tr> <tr> <td>Morningglory (<1.5)</td> <td>Wild proso millet (1-4)</td> <td>Yellow foxtail (1-4)</td> </tr> <tr> <td>Sandbur (1-3)</td> <td></td> <td></td> </tr> </table> <p>If application is made during cool (<50° F), dry weather or to weeds hardened by cold or drought, the "controlled weeds" may only be suppressed. Banvel, Buctril or Clarity herbicides may be tank mixed with IPIMETHALIN-L plus Accent plus Beacon for improved broadleaf weed control.</p> <p>For early postemergence applications of Accent plus Beacon or IPIMETHALIN-L plus Accent plus Beacon, add a non-ionic surfactant (NIS) at 0.25% vol/vol (1 quart per 100 gallons of spray solution) or a Crop Oil Concentrate (COC) at 1.0% vol/vol (1 gallon per 100 gallons of spray solution). The addition of a liquid nitrogen fertilizer solution (28% nitrogen at 2-4 quarts/acre) or spray grade ammonium sulfate (2-4 lbs acre) may improve the weed control of certain emerged species by Accent plus Beacon. When used with an additional broadleaf herbicide, select adjuvants based on the adjuvant limitations of the herbicide.</p> <p>Mixing order: Add the ingredients to water in the following order with the agitator running: Accent, Beacon, IPIMETHALIN-L and adjuvant(s). Thoroughly mix each ingredient before adding another.</p> <p>DO NOT apply Accent or Beacon through any type of irrigation system.</p>	Fall Panicum (2-4)	Shattercane (4-12)	Giant ragweed (2-6)	Giant foxtail (2-4)	Sorghum Alumum (4-12)	Jimsonweed (1-4)	Green foxtail (1-4)	Cocklebur (1-4)	P. Smartweed (1-2)	Quackgrass (4-8)	Common ragweed (2-6)	Redroot pigweed (1-4)	S. johnsongrass (4-12)	Eastern black nightshade (1-4)	Sunflowers (1-4)	Lambsquarters (<1.5)	Velvetleaf (1-4)	Woolly cupgrass (1-4)	Morningglory (<1.5)	Wild proso millet (1-4)	Yellow foxtail (1-4)	Sandbur (1-3)		
Fall Panicum (2-4)	Shattercane (4-12)	Giant ragweed (2-6)																							
Giant foxtail (2-4)	Sorghum Alumum (4-12)	Jimsonweed (1-4)																							
Green foxtail (1-4)	Cocklebur (1-4)	P. Smartweed (1-2)																							
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Lambsquarters (<1.5)	Velvetleaf (1-4)	Woolly cupgrass (1-4)																							
Morningglory (<1.5)	Wild proso millet (1-4)	Yellow foxtail (1-4)																							
Sandbur (1-3)																									
<p>Atrazine (1.0 to 2.0 lbs. A.I./Acre)</p>	<p><u>Preemergence Application</u> Apply after planting, but before weeds or crops emerge.</p> <p><u>Early Postemergence Application</u> Apply from spike through the 4-leaf (2nd collared leaf) stage and before weeds exceed one inch in height (except for Texas panicum, which must be no larger than the 2-leaf stage).</p> <p><u>Culti-Spray (Postemergence Incorporated) Application</u> Refer to page 30 for application directions.</p> <p>Read and strictly follow all precautions and directions on the atrazine label. DO NOT exceed 1.2 pounds of A.I. per acre of atrazine for Culti-Spray applications.</p>																								
<p>Atrazine (0.4 to 0.8 lbs. A.I./Acre) plus Bladex 90DF (0.45 to 1.78 lbs./Acre) or Bladex 4L (0.4 to 1.6 qts./Acre)</p>	<p><u>Preemergence Application</u> Apply after planting, but before weeds or crops emerge.</p> <p><u>Early Postemergence Application</u> Apply from spike through the 4-leaf (2nd collared leaf) stage and before weeds exceed one inch in height (except for Texas panicum, which must be no larger than the 2-leaf stage).</p> <p>Read and strictly follow all precautions and directions on the atrazine and Bladex labels. DO NOT apply tank mixture postemergence under extended cold (<50°F), wet weather conditions, or when cold, wet conditions are predicted because Bladex injury can occur under these conditions. DO NOT use this combination on sands or loamy sands with less than 1% organic matter. DO NOT apply Bladex 4L postemergence. DO NOT apply Bladex by air.</p>																								

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IPIMETHALIN-L Plus:	Tank Mix Use Directions
<p>Banvel (0.5 to 0.75 pts./Acre)</p>	<p><u>Preemergence Application</u> Apply after planting but before weeds or crops emerge. When applying this tank mixture at planting, the spray nozzles must be far enough behind the planter to avoid contact of the spray mixture with the seeds to avoid crop injury. DO NOT use on furrow irrigated corn.</p> <p><u>Early Postemergence Application</u> Apply from spike through the 4-leaf (2nd collared leaf) stage and before weeds exceed one inch in height. This tank mix will not control emerged grasses.</p> <p>Read and strictly follow all precautions and directions on the Banvel label. Apply only on level planted corn. DO NOT use on sands, loamy sands, or sandy loams. DO NOT use on medium or fine textured soils containing less than 2% organic matter. Apply in water with ground equipment only. AVOID drift of this mixture to soybeans or other sensitive crops. DO NOT apply this tank mixture by aircraft.</p>
<p>Banvel (0.5 to 1.0 pts./Acre) plus Bladex 90DF (1.0 to 2.22 lbs./Acre) or Bladex 4L (1.0 to 2.0 qts./Acre)</p>	<p><u>Preemergence Application</u> Apply after planting, but before weeds or crops emerge. DO NOT use on furrow irrigated corn.</p> <p><u>Early Postemergence Application</u> Apply from spike through the 4-leaf (2nd collared leaf) stage and before weeds exceed one inch in height (except for Texas panicum, which must be no larger than the 2-leaf stage).</p> <p>Read and strictly follow all precautions and directions on the Banvel and Bladex labels. Apply only on level planted corn. DO NOT apply this tank mixture preemergence on any soils with less than 2% organic matter. DO NOT apply this tank mixture postemergence on any soils with less than 1% organic matter. DO NOT apply this tank mixture by air. Avoid drift of this mixture to soybeans or other sensitive crops. DO NOT apply postemergence under extended cold (<50° F) and wet weather conditions, or when cold, wet conditions are predicted or serious crop injury can result. Bladex injury can occur under these conditions. DO NOT apply through any type of irrigation system. DO NOT apply Bladex 4L postemergence on corn.</p>
<p>Beacon (0.38 or 0.76 oz./Acre)</p> <p>DO NOT use in California</p>	<p><u>Preemergence Application Followed By Early Postemergence Application</u> Apply IPIMETHALIN-L after planting, before weeds or crops emerge. Apply Beacon postemergence before corn exceeds 20 inches in height and the weeds exceed the height limitations on the Beacon label.</p> <p><u>Early Postemergence Application</u> Apply tank mix to corn through the 6-leaf (4th collared leaf) stage and before weeds exceed the height recommended on the Beacon label.</p> <p>Read and strictly follow all precautions and directions on the Beacon label. Banvel, Buctril, Clarity or 2,4-D may be tank mixed with IPIMETHALIN-L plus Beacon for improved broadleaf weed control. For early Postemergence applications of Beacon or IPIMETHALIN-L plus Beacon, add a non-ionic surfactant (NIS) at 0.25% vol/vol (1 quart per 100 gallons of spray solution) or a Crop Oil Concentrate (COC) at 1.0% vol/vol (1 gallon per 100 gallons of spray solution). With NIS, the addition of a liquid nitrogen fertilizer solution (28% nitrogen at 2-4 quarts/acre) or spray grade ammonium sulfate (2-4 lbs/acre) may improve the weed control of certain emerged species by Beacon. DO NOT use COC in combination with liquid fertilizer or ammonium sulfate. When used with an additional herbicide, select adjuvants based on the adjuvant limitations of the herbicide. DO NOT apply Beacon through any type of irrigation system.</p>
<p>Bicep or Bicep II (1.5 to 3.0 qts./Acre)</p> <p>DO NOT use in California.</p>	<p><u>Preemergence Application</u> Apply after planting, but before weeds or crops emerge. Preemergence applications may be made through center pivot irrigation systems.</p> <p><u>Early Postemergence Application</u> Apply from spike through the 4-leaf (2nd collared leaf) stage and when weeds are no larger than the 1-2 leaf growth stage. For best results, destroy emerged weeds by cultivation prior to application. DO NOT apply Bicep II postemergence.</p> <p>Read and strictly follow all precautions and directions on the Bicep label. Add IPIMETHALIN-L to the spray tank prior to the addition of Bicep.</p>
<p>Bladex 90DF (1.11 to 2.67 lbs./Acre) or Bladex 4L (1.0 to 2.4 qts./Acre)</p>	<p><u>Preemergence Application</u> Apply after planting, but before weeds or crops emerge.</p> <p><u>Early Postemergence Application</u> Apply from spike through the 4-leaf (2nd collared leaf) stage and before weeds exceed one inch in height (except for Texas panicum, which must be no larger than the 2-leaf stage).</p> <p>Read and strictly follow all precautions and directions on the Bladex label. DO NOT apply tank mixture postemergence under extended cold (<50°F), wet weather conditions, or when cold, wet conditions are predicted because Bladex injury can occur under these conditions. DO NOT use this combination on sands or loamy sands with less than 1% organic matter. DO NOT apply Bladex 4L postemergence</p>

IPIMETHALIN-L Plus:	Tank Mix Use Directions
	<p>DO NOT apply Bladex by air. The maximum rate for Bladex 90DF for early postemergence applications is 2.2 lbs. of product per acre.</p>
<p>Buctril + Atrazine (1.5 to 2.0 pts./Acre) DO NOT use in California.</p>	<p><u>Early Postemergence Application</u> Apply from spike through the 4-leaf (2nd collared leaf) stage and before weeds exceed the height on the Buctril + atrazine label. This tank mix will not effectively control emerged grasses. Read and strictly follow all precautions and directions on the Buctril + atrazine label.</p>
<p>Dual or Dual II (1.25 to 2.5 pts./Acre) DO NOT use in California.</p>	<p><u>Preemergence Application</u> Apply after planting, but before weeds or crops emerge. Preemergence applications may be made through center pivot irrigation systems. Read and strictly follow all precautions and directions on the Dual label.</p>
<p>Dual or Dual II (1.25 to 2.5 pts./Acre) plus Bladex 90DF (1.0 to 2.22 lbs./Acre) or Bladex 4L (1.0 to 2.0 qts./Acre) DO NOT use in California.</p>	<p><u>Preemergence Application</u> Apply after planting, but before weeds or crops emerge. <u>Early Postemergence Application</u> Apply from spike through the 4-leaf (2nd collared leaf) stage and before weeds exceed one inch in height (except for Texas panicum, which must be no larger than the 2-leaf stage). Read and strictly follow all precautions and directions on the Bladex and Dual labels. DO NOT apply tank mixture postemergence under extended cold (<50°F), wet weather conditions, or when cold, wet conditions are predicted. Bladex injury can occur under these conditions. DO NOT use this combination on sands or loamy sands with less than 1% organic matter. DO NOT apply either Bladex 4L or Dual II postemergence. DO NOT apply Bladex by air. The maximum rate for Bladex 90DF for early postemergence applications is 2.2 lbs. of product per acre.</p>
<p>Extrazine II DF (0.8 to 3.3 lbs./Acre) or Extrazine II 4L (0.75 to 3.0 qts./Acre) DO NOT use in California.</p>	<p><u>Preemergence Application</u> Apply after planting, but before weeds or crops emerge. <u>Early Postemergence Application</u> Apply from spike through the 4-leaf (2nd collared leaf) stage and before weeds exceed one inch in height (except for Texas panicum, which must be no larger than the 2-leaf stage). Read and strictly follow all precautions and directions on the Extrazine label. DO NOT apply tank mixture postemergence under extended cold (<50°F), wet weather conditions, or when cold, wet conditions are predicted. Extrazine injury can occur under these conditions. DO NOT use this combination on sand or loamy sands with less than 1% organic matter. DO NOT apply Extrazine II 4L postemergence. DO NOT apply this tank mix by air. The maximum rate for Extrazine II DF for early postemergence applications is 2.2 pounds per acre.</p>
<p>Frontier (13 to 25 oz./Acre) DO NOT use in California.</p>	<p><u>Preemergence Application</u> Apply after planting, but before weeds or crops emerge. <u>Early Postemergence Application</u> Apply after corn emergence but before corn exceeds 3 inches in height. This tank mix will not control emerged weeds. Read and strictly follow all precautions and directions on the Frontier label.</p>
<p>Guardsman (2.5 to 5.0 pts./Acre) DO NOT use in California.</p>	<p><u>Preemergence Application</u> Apply after planting, but before weeds or crops emerge. <u>Early Postemergence Application</u> Apply to corn up to 3 inches in height but before weeds exceed 1.5 inches in height. Read and strictly follow all precautions and directions on the Guardsman label.</p>
<p>Harness (1.25 to 3.0 pts./Acre) DO NOT use in California.</p>	<p><u>Preemergence Application</u> Apply after planting, but before weeds or crops emerge. Apply within 5 days of last preplant tillage operation. Read and strictly follow all precautions and directions on the Harness label.</p>
<p>Harness Xtra (1.8 to 2.3 qts./Acre) DO NOT use in California.</p>	<p><u>Preemergence Application</u> Apply after planting, but before weeds or crops emerge. Apply within 5 days of last preplant tillage operation. Read and strictly follow all precautions and directions on the Harness Xtra label.</p>
<p>Lariat (2.0 to 4.5 qts./Acre) or Bullet (2.0 to 4.5 qts./Acre) DO NOT use in California.</p>	<p><u>Preemergence Application</u> Apply after planting, but before weeds or crops emerge. Preemergence applications may be made through center pivot irrigation systems. <u>Early Postemergence Application</u> Apply from spike through the 4-leaf (2nd collared leaf) stage and when weeds are no larger than 2-leaf (no collared leaves) growth stage. Apply with ground equipment in water only. Read and strictly follow all precautions and directions on the Lariat and Bullet labels.</p>

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IPIMETHALIN-L Plus:	Tank Mix Use Directions
<p>Lasso (1.5 to 4.0 qts./Acre)</p>	<p>DO NOT graze treated area or feed treated forage to livestock for 21 days following application.</p> <p><u>Preemergence Application</u> Apply after planting, but before weeds or crops emerge. This treatment must be applied within 5 days of the last preplant tillage operation. Preemergence applications may be made through center pivot irrigation systems.</p> <p><u>Early Postemergence Application</u> Apply after corn emergence, but before corn exceeds 5 inches in height. This tank mix will not control emerged weeds.</p> <p>Read and strictly follow all precautions and directions on the Lasso label.</p>
<p>Marksman (2.0 to 3.5 pts./Acre)</p> <p>DO NOT use in California.</p>	<p><u>Preemergence Application</u> Apply after planting, but before weeds or crops emerge. DO NOT use on furrow irrigated corn.</p> <p><u>Early Postemergence Application</u> Apply after corn emergence but no later than when corn is in the 2-leaf (no collared leaves) stage of growth and weeds are no larger than one inch in height.</p> <p>Read and strictly follow all precautions and directions on the Marksman label. Apply only on level planted corn. DO NOT apply preemergence on any soils with less than 2.0% organic matter. AVOID drift to soy beans or other sensitive crops.</p>
<p>Marksman (2.0 to 3.5 pts./Acre) plus Bladex 90DF (1.0 to 2.22 lbs. A./Acre) or Bladex 4L (1.0 to 2.0 qts./Acre)</p> <p>DO NOT use in California.</p>	<p><u>Preemergence Application</u> Apply after planting, but before weeds or crops emerge. DO NOT use on furrow irrigated corn.</p> <p><u>Early Postemergence Application</u> Apply after corn emergence but no later than when corn is in the 2-leaf (no collared leaves) stage of growth and weeds are no larger than one inch tall.</p> <p>Read and strictly follow all precautions and directions on the Marksman and Bladex label. Apply only on level planted corn DO NOT apply tank mixture postemergence under extended cold (<50°F), wet weather conditions, or when cold, wet conditions are predicted. Bladex injury can occur under these conditions. DO NOT apply preemergence on any soils with less than 2% organic matter. DO NOT use this tank mixture postemergence on any soils with less than 1% organic matter. AVOID drift to soybeans or other sensitive crops. DO NOT apply Bladex 4L postemergence. DO NOT apply Bladex by air.</p>
<p>Surpass (1.0 to 3.75 pts./Acre)</p> <p>DO NOT use in California.</p>	<p><u>Preemergence Application</u> Apply after planting, but before weeds or crops emerge.</p> <p>Read and strictly follow all precautions and directions on the Surpass label.</p>
<p>Surpass 100 (1.6 to 3.3 qts./Acre)</p> <p>DO NOT use in California.</p>	<p><u>Preemergence Application</u> Apply after planting, but before weeds or crops emerge.</p> <p>Read and strictly follow all precautions and directions on the Surpass 100 label.</p>

Directions for use on SR Sethoxydim-resistant Field Corn:

IPIMETHALIN-L Plus:	Tank Mix Use Directions
<p>Poast¹ Plus (12 to 24 oz./Acre)</p>	<p><u>Early Postemergence Application</u> Apply after corn emergence but no later than when corn is in the 6-leaf (4 collared leaves) stage of growth. Refer to Poast Plus label for specific weed height, rate recommendations, and postemergence broadleaf tank-mix partners.</p> <p>Only SR corn hybrids are tolerant to Poast Plus applications. Severe crop injury will occur to corn hybrids not labeled as SR corn. A nonphytotoxic Crop Oil Concentrate (COC) should be used at a concentration of 1.0% vol/vol (2 pints per acre maximum) or as recommended by the manufacturer (if recommendation is less than 1.0%). DO NOT apply if rainfall is expected within 1 hour following application or unsatisfactory weed control may result.</p> <p>Read and follow all precautions and directions on the Poast Plus label.</p>

CULTI-SPRAY (POSTEMERGENCE INCORPORATED TREATMENT)

GENERAL DIRECTIONS

IPIMETHALIN-L or IPIMETHALIN-L plus atrazine tank mixtures applied as a CULTI-SPRAY (postemergence incorporated) treatment will control most late season annual grasses and certain broadleaf weeds in field corn. IPIMETHALIN-L treatments can be applied from the 4-inch growth stage to as late as the last cultivation (layby) of field corn. IPIMETHALIN-L plus atrazine must be applied before the field corn reaches 12 inches in height. IPIMETHALIN-L

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treatments will not control established weeds. DESTROY EMERGED WEEDS BY CULTIVATION BEFORE APPLYING IPIMETHALIN-L.

CULTI-SPRAY (postemergence incorporated) applications of IPIMETHALIN-L or IPIMETHALIN-L plus atrazine tank mixture can be applied in field corn that was previously treated with herbicides registered for use in field corn. Refer to the labels of those herbicides for suggested treatments, rates to be used, and precautions or restrictions for use in field corn and for Follow Crop Restrictions.

**CULTI-SPRAY (POSTEMERGENCE INCORPORATED) APPLICATIONS
IPIMETHALIN-L alone or IPIMETHALIN-L plus Atrazine**

1. Cultivate with a sweep-type or rolling cultivator operated at sufficient speed to throw at least one inch of soil over the bases of the field corn plants. This will kill any small weed seedlings that are growing in the field corn row, and it will prevent direct contact of the zone of brace root formation by IPIMETHALIN-L during application.
2. Apply broadcast with a ground sprayer when corn is at least 4 inches tall up to layby (last cultivation). Use drop nozzles if crop foliage will prevent uniform coverage of the soil surface within the rows.
3. Uniformly and thoroughly incorporate IPIMETHALIN-L treatments into the soil (1) with a sweep-type or rolling cultivator set to provide thorough incorporation in the top 1 inch of soil OR (2) with adequate irrigation water or rainfall. For best results, incorporate IPIMETHALIN-L treatments as soon as possible after application. Incorporation must be concluded within 7 days after application. If adequate moisture is not received within 7 days after application, incorporate IPIMETHALIN-L with a sweep-type or rolling cultivator.

In situations such as, low rainfall or soil moisture, when deep germinating weeds such as shattercane or field sandbur are anticipated, mechanical incorporation will provide best results.

If cultivation is needed after application and incorporation of IPIMETHALIN-L, the depth of cut should be no deeper than the depth of cut used to incorporate.

Broadcast Application Rate Per Acre of IPIMETHALIN-L CULTI-SPRAY (Pints per Acre) (Postemergence Incorporated Treatment) in Field Corn

Soil Texture	Southern States ¹	Northern States ¹
Fine	1.8 to 3.6 pints	2.4 to 3.6 pints
Medium	1.8 to 2.4 pints	2.4 to 3.6 pints
Coarse	1.2 to 1.8 pints	1.8 to 2.4 pints

¹ See map at end of this label for specific states.

For IPIMETHALIN-L plus atrazine tank mixtures, do not exceed 1.2 pounds of active ingredient per acre of atrazine.

NOTE: Livestock can graze or be fed forage from treated field corn after 21 days following application.

SWEET CORN

For use on sweet corn in Alabama, Arizona, Idaho, California, Florida, Georgia, Illinois, Minnesota, Montana, Oregon, New York, Texas, Washington and Wisconsin.

GENERAL DIRECTIONS AND PRECAUTIONS

IPIMETHALIN-L herbicide may be applied as a preemergence treatment only in sweet corn (all varieties) in Arizona, California, Montana, and Texas.

IPIMETHALIN-L may be applied as a preemergence or early postemergence treatment in sweet corn (processing varieties only) in Idaho, Illinois, Minnesota, New York, Oregon, Washington, and Wisconsin.

IPIMETHALIN-L may be applied as an early postemergence treatment only in sweet corn in Alabama, Florida and Georgia. IPIMETHALIN-L can only be applied as an early postemergence treatment with atrazine. DO NOT apply IPIMETHALIN-L alone or with any other product in these states.

DO NOT APPLY AS A PREPLANT INCORPORATED TREATMENT or serious corn injury can occur.

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Plant into a firm seed bed that is free of clods and trash. Use only where adequate tillage is practiced to provide good soil coverage of the corn seed. PLANT CORN AT LEAST 1.5 INCHES DEEP. COMPLETELY COVER CORN SEED WITH SOIL.

IPIMETHALIN-L or IPIMETHALIN-L tank-mix combination treatments control weeds most effectively when adequate rainfall or overhead irrigation is received within 7 days after application. If cultivation is necessary because of soil crusting, soil compaction or weed germination before rain or irrigation, use shallow tillage (such as rotary hoe), and make certain corn seeds are below the tilled area.

If IPIMETHALIN-L is used alone and corn loss occurs as a result of weather conditions, corn or any crop registered for IPIMETHALIN-L preplant incorporated use can be replanted the same year with no adverse effects. If corn is replanted, make sure seeding depth is below refilled area, or crop injury may occur.

IPIMETHALIN-L is not recommended for use on peat or muck soils.

USE METHODS AND TIMINGS

Preemergence Application: Apply IPIMETHALIN-L after planting, but before weeds and crop emerge. Apply IPIMETHALIN-L tank mixes as specified under the tank mix section.

Early Postemergence Application: Apply IPIMETHALIN-L tank mixes postemergence according to corn height and weed size specified under the tank mix section. IPIMETHALIN-L alone will not control emerged weeds. Wait at least 7-10 days before cultivating early postemergence treatments for maximum effectiveness.

IPIMETHALIN-L may only be applied as a postemergence treatment to sweet corn in Alabama, Florida, Georgia, Illinois, Minnesota, New York, and Wisconsin. DO NOT apply as a postemergence treatment to sweet corn in Arizona, California, Idaho, Montana, Oregon, Texas, and Washington.

DO NOT APPLY AS A PREPLANT INCORPORATED TREATMENT or serious corn injury can occur.

IPIMETHALIN-L USE RATES IN SWEET CORN

Use rates recommended for IPIMETHALIN-L alone and in tank mix applications are given in the following table.

Broadcast Application Rate¹ per Acre of IPIMETHALIN-L (Pints per Acre) Preemergence and Early Postemergence in Sweet Corn

Soil Texture	<1.5 %	1.5-3.0 %	>3.0 %
	Organic Matter	Organic Matter	Organic Matter
Fine	2.4 to 3.6 pints	3.6 to 4.8 pints	3.6 to 4.8 pints
Medium	2.4 to 3.6 pints	3.6 pints	3.6 to 4.8 pints
Coarse	1.8 to 2.4 pints	2.4 to 3.6 pints	3.6 pints

¹When using IPIMETHALIN-L alone, use the high rate for each soil classification.

IPIMETHALIN-L TANK MIXES IN SWEET CORN

IPIMETHALIN-L may be applied in a tank mix with atrazine, Bicep, Bicep II, Dual, Dual II, Lariat or Bullet, or Lasso. Refer to the companion label(s) for weeds controlled in addition to IPIMETHALIN-L alone.

When using tank mixtures with IPIMETHALIN-L, always read the companion product label(s) to determine the specific use rates by soil types, weed species, and weed or crop growth stage. Also follow precautions and restrictions, including state and local use restrictions, that may apply to specific products. Always follow the most restrictive label directions.

RESTRICTIONS FOR EARLY POSTEMERGENCE APPLICATIONS

Observe the following restrictions to avoid serious crop injury with early postemergence applications:

- DO NOT apply following IPIMETHALIN-L preemergence applications.
- DO NOT apply in liquid fertilizer.

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Follow additional use directions in this table for IPIMETHALIN-L tank mixes.

[Refer to application rate table "Broadcast Application Rate¹ per Acre of IPIMETHALIN-L (Pints per Acre) Preemergence and Early Postemergence in Sweet Corn" to determine the appropriate IPIMETHALIN-L use rate]

IPIMETHALIN-L Plus:	Tank Mix Use Directions
Atrazine (1.0 to 2.0 lbs. A.I./Acre)	<p><u>Preemergence Application</u> Apply after planting, but before weeds or crops emerge.</p> <p><u>Early Postemergence Application</u> Apply from spike through the 4-leaf stage but before weeds exceed one inch in height (except for Texas panicum, which must be no larger than the 2-leaf stage).</p> <p>Read and strictly follow all precautions and directions on the atrazine label. In Alabama, Florida and Georgia, IPIMETHALIN-L can only be applied with atrazine early postemergence. DO NOT apply IPIMETHALIN-L alone or with any other product in these states.</p>
Bicep or Bicep II (1.5 to 3.0 qts./Acre) DO NOT use in California.	<p><u>Preemergence Application</u> Apply after planting, but before weeds or crops emerge.</p> <p><u>Early Postemergence Application</u> Apply from spike through the 4-leaf stage, and when weeds are no larger than the 1-2 leaf growth stage. For best results, destroy emerged weeds by cultivation prior to application. DO NOT apply Bicep II postemergence.</p> <p>Read and strictly follow all precautions and directions on the Bicep label. Add IPIMETHALIN-L to the spray tank prior to the addition of Bicep.</p>
Dual or Dual II (1.25 to 2.5 pts./Acre) DO NOT use in California.	<p><u>Preemergence Application</u> Apply after planting, but before weeds or crops emerge.</p> <p>Read and strictly follow all precautions and directions on the Dual label.</p>
Lariat (2.0 to 4.5 qts./Acre) or Bullet (2.0 to 4.5 qts./Acre) DO NOT use in California.	<p><u>Preemergence Application</u> Apply after planting, but before weeds or crops emerge.</p> <p>Read and strictly follow all precautions and directions on the Lariat or Bullet label. DO NOT graze treated area or feed treated forage to livestock for 21 days following application.</p>
Lasso (1.5 to 4.0 qts./Acre)	<p><u>Preemergence Application</u> Apply after planting, but before weeds or crops emerge. This treatment must be applied within 5 days of the last preplant tillage.</p> <p><u>Early Postemergence Application</u> Apply after planting but before corn exceeds 5 inches in height. Apply in ground equipment with water only. This tank mix will not control emerged weeds.</p> <p>Read and strictly follow all precautions and directions on the Lasso label.</p>

COTTON

GENERAL DIRECTIONS AND PRECAUTIONS

IPIMETHALIN-L may be applied in the following ways in cotton: conventional, minimum, stale seedbed or no-till as a preplant surface, preplant incorporated, or preemergence application.

DO NOT use in no-till cotton in California.

Preplant surface and preemergence treatments control weeds most effectively when adequate rainfall or overhead irrigation is received within 7 days after application. A shallow cultivation is recommended if soil crusting or soil compaction occurs. If weeds begin to germinate or adequate moisture is not received within 7 days after application, use shallow tillage, such as rotary hoe or light harrow, and make sure cotton seeds are below tilled area. Otherwise, the use of a postemergence herbicide treatment may be required to control weed escapes at planting or following cotton emergence.

If crop loss occurs as a result of weather conditions, cotton or any crop registered for IPIMETHALIN-L preplant incorporated application can be replanted without adverse effects the same year. If replanting is necessary, DO NOT rework the soil deeper than the treated zone.

DO NOT feed forage or graze livestock in treated cotton fields.

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IPIMETHALIN-L is not recommended for use on peat or muck soils.

USE METHODS AND TIMINGS

Preplant Surface Application: Apply IPIMETHALIN-L up to 15 days before planting. Apply IPIMETHALIN-L tank mixes and sequential programs as specified under the tank mix section.

Preplant Incorporated Application: Apply IPIMETHALIN-L up to 60 days before planting and incorporate within 7 days of application. Apply IPIMETHALIN-L tank mixes and sequential programs as specified under the tank mix section.

Preemergence Application: Apply IPIMETHALIN-L at planting or up to 2 days after planting. Apply to a firm seedbed that is free of clods. Apply IPIMETHALIN-L tank mixes and sequential programs as specified under the tank mix section.

Preplant Incorporated Application followed by Preemergence Application: Apply IPIMETHALIN-L up to 60 days before planting and incorporate within 7 days of application. Apply overlay application of IPIMETHALIN-L at planting or up to 2 days after planting. Total amount of IPIMETHALIN-L applied per acre cannot exceed the highest labeled rate for a given soil type. Preplant incorporated and preemergence applications of IPIMETHALIN-L may be applied with labeled tank mix herbicide(s).

Fall Application: IPIMETHALIN-L may be applied for weed control in cotton in the fall, after October 15th (up to 140 days before planting cotton) in Arizona, California Louisiana, New Mexico, Mississippi, Oklahoma and Texas. Apply IPIMETHALIN-L at the broadcast rate of 1.8 pints on coarse soils, 2.4 pints on medium soils and 3.6 pints on fine soils.

IPIMETHALIN-L USE RATES IN COTTON

Use rates recommended for IPIMETHALIN-L alone and in tank mix or sequential applications are given in the following table.

Broadcast Application Rate per Acre of IPIMETHALIN-L (Pints per Acre) in Cotton

Soil Texture	Conventional or Minimum Tillage	No-Tillage ²
Fine	2.4 to 3.6 pints	3.6 to 4.8 pints
Medium	1.8 to 2.4 pints	2.4 to 3.6 pints
Coarse	1.2 to 2.4 pints	1.8 to 2.4 pints

¹ DO NOT exceed 1.8 pints per acre on coarse soils in California.

² This use is not recommended for soils with more than 3% organic matter.

For heavy clay soils, apply IPIMETHALIN-L at the broadcast rate of 3.6 pints per acre.

The high rates for each soil texture above should be used if heavy weed populations are anticipated, extensive crop residues were present before seedbed preparation, or in no-till.

IPIMETHALIN-L TANK MIXES AND SEQUENTIAL PROGRAMS IN COTTON

IPIMETHALIN-L may be applied in a tank mix with fluometuron (i.e. Cotoran), prometryn (i.e. Caparol), and Zorial. IPIMETHALIN-L may be applied in a sequential application with fluometuron, diuron (i.e. Karmex) or Zorial. Refer to the companion label(s) for weeds controlled in addition to IPIMETHALIN-L alone.

When using tank mixtures or sequential applications with IPIMETHALIN-L, always read the companion product label(s) to determine the specific use rates by soil types, weed species, and weed or crop growth stage. In addition, follow all precautions and restrictions, including state and local use restrictions, that may apply to specific products. Always follow the most restrictive label directions.

Follow additional use directions in this table for IPIMETHALIN-L tank mixes. [Refer to the application rate table "Broadcast Application Rate per Acre of IPIMETHALIN-L (Pints per Acre) in Cotton" to determine IPIMETHALIN-L use rates.]

For no-till: IPIMETHALIN-L alone or IPIMETHALIN-L tank mixes may be used with Gramoxone Extra or Roundup herbicides to kill any existing vegetation that is present before planting. Refer to these labels for specific use recommendations, rates, and weeds controlled.

IPIMETHALIN-L Plus:	Tank Mix Use Directions
fluometuron (i.e. Cotoran) (0.8 to 2.0 lbs A.I./Acre)	Preplant Incorporated Application Followed By Preemergence Application Apply IPIMETHALIN-L up to 60 days before planting and incorporate within 7 days of application. Apply fluometuron as an overlay preemergence application as directed on the fluometuron label (use the preemergence rates for fluometuron alone).

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IPIMETHALIN-L Plus:	Tank Mix Use Directions
	<p><u>Preemergence Application</u> Apply immediately after planting or crop injury may result. Apply in water or nitrogen solution with ground equipment only. DO NOT apply tank mix preemergence in Arizona, California, Oklahoma, New Mexico and West Texas.</p> <p>Read and strictly follow all precautions and directions on the fluometuron label. Plant cotton seeds 1 inch or deeper below the soil surface. The use of fluometuron as a preemergence application following the use of a systemic insecticide at planting, may result in crop injury. DO NOT plant crops other than cotton within 6 months of the last application of fluometuron or injury may result. Maintain good agitation at all times until spraying is completed. DO NOT feed livestock foliage from treated cotton plants or gin trash.</p>
<p>prometryn (i.e. Caparol) (1.2 to 2.4 lbs. A./Acre)</p> <p>For use in Arizona, California, New Mexico, and the Upper and Lower El Paso Valley of Texas.</p>	<p><u>Preplant Incorporated Application</u> Apply with ground equipment prior to listing or over partially finished or finished beds. Incorporate immediately after application.</p> <p>Read and strictly follow all precautions and directions on the prometryn label. DO NOT use on sands or loamy sands. DO NOT use this tank mix in cut areas of newly leveled fields, in areas of excess salt, or in areas where flooding over the bed is likely to occur or crop injury may result. Cotton should not be planted in tractor wheel depressions or crop injury may result. DO NOT use this tank mixture when cotton is irrigated up or crop injury may result. On mulch planted cotton, water back only after cotton seedlings are well established. Maintain good agitation at all times until spraying is completed to keep the material in suspension. Mechanical agitation should be used in Arizona and California. Do not rework the soil if replanting is necessary.</p>
<p>prometryn (i.e. Caparol) (1.2 to 2.4 lbs. A./Acre)</p> <p>For use in specified areas of Oklahoma and Texas.</p>	<p><u>Preplant Surface Application</u> Apply up to 15 days before planting.</p> <p><u>Preemergence Application</u> Apply at planting or up to 2 days after planting before weeds and crops emerge.</p> <p>Read and strictly follow all precautions and directions on the prometryn label. See the prometryn label for use rates and specified areas of Oklahoma and Texas.</p>
<p>diuron (i.e. Karmex) (0.5 to 1.6 lbs A./Acre)</p>	<p><u>Preplant Incorporated Application Followed By Preemergence Application</u> Apply IPIMETHALIN-L up to 60 days prior to planting and incorporate within 7 days of application. Apply diuron as an overlay preemergence application as directed on the diuron label (use the preemergence rates for diuron alone).</p> <p>Read and strictly follow all precautions and directions on the diuron label. The use of diuron as a preemergence application following the use of a systemic insecticide at planting may cause injury to cotton.</p>
<p>Zorial Rapid 80 or 80WP (1.25 to 2.5 lbs./Acre)</p> <p>DO NOT use in Arizona, California, New Mexico, Oklahoma and Texas.</p>	<p><u>Preplant Surface Application</u> Apply up to 15 days before planting.</p> <p><u>Preplant Incorporated Application</u> Apply up to 30 days before planting and incorporate within 7 days of application. DO NOT incorporate deeper than 2-3 inches with commonly used equipment.</p> <p><u>Preemergence Application</u> Apply tank mix with ground equipment immediately after planting or crop injury may result. Be sure that cotton seeds are planted one inch or deeper below soil surface.</p> <p><u>Preplant Incorporated Followed By Preemergence</u> Apply IPIMETHALIN-L up to 60 days before planting and incorporate within 7 days of application. Apply Zorial as an overlay preemergence application as directed on the Zorial label (use the preemergence rates for Zorial alone).</p> <p>Read and strictly follow all precautions and directions on the Zorial label. If cotton plants undergo stress during early development, application of IPIMETHALIN-L plus Zorial at the label rate may cause temporary bleaching or chlorosis of the leaves, from which the plants will recover. Maintain good agitation at all times until application is complete.</p>

PREPLANT INCORPORATED APPLICATION OF IPIMETHALIN-L FOR CONTROL OF RHIZOME JOHNSONGRASS

Applying IPIMETHALIN-L as a preplant incorporated treatment for two consecutive years will control rhizome johnsongrass (*Sorghum halepense*) in cotton at the rates recommended for soil textures listed below. This use is not recommended for Arizona, New Mexico, and California. Rhizome johnsongrass will be suppressed after the first year and controlled after the second year.

Before application, use a chisel plow or similar equipment to bring johnsongrass rhizomes to the surface. Chop rhizomes

into small pieces with a disk harrow set to cut 4 to 6 inches deep and operated in two different directions at 4 to 6 mph.

IPIMETHALIN-L is to be incorporated into the soil within 7 days after application before planting. For maximum control of rhizome johnsongrass, incorporate IPIMETHALIN-L as soon as possible after application. To control rhizome johnsongrass, deep and thorough incorporation of IPIMETHALIN-L is necessary. Mechanical incorporation can be achieved by the following methods:

- a) Disk harrow set to cut 4 to 6 inches deep and operated in two different directions at 4 to 6 mph.
- b) PTO-driven equipment, such as tillers, cultivators, and hoes, set to cut 3 to 4 inches deep and operated one time at 4 mph or less.

For johnsongrass escapes during the crop season, cultivation and/or application of registered postemergence herbicides is recommended. Follow the directions for use on the labels of the respective herbicides.

Broadcast Application Rate Per Acre of IPIMETHALIN-L (Pints per Acre) Preplant Incorporated for Control of Rhizome Johnsongrass in Cotton (APPLY FOR TWO CONSECUTIVE YEARS)

Soil Texture (Up to 3% organic matter ¹)	IPIMETHALIN-L
Coarse	2.4 pints
Medium	3.6 pints
Fine	4.8 pints

¹ This use is not recommended for soils with more than 3% organic matter.

NOTE: DO NOT feed forage or graze livestock in treated cotton fields.

If cotton crop loss occurs as a result of weather conditions, cotton or soybeans can be replanted the same year into treated soil without adverse effects. DO NOT rework the soil deeper than the treated zone if replanting is necessary.

EDIBLE BEANS [Dry, Lima, Snap, Chickpeas (Garbanzo beans), Southern Peas (Cowpeas) and Sweet Lupines]

GENERAL DIRECTIONS AND PRECAUTIONS

IPIMETHALIN-L may only be applied as a preplant incorporated treatment in chickpeas (garbanzo beans), dry beans (such as navy, great northern, red kidney, black turtle, cranberry and small white type), lima beans, snap beans and southern peas (cowpeas).

IPIMETHALIN-L may be applied as a preplant incorporated treatment or preemergence treatment in sweet lupines.

DO NOT feed lupine hay and forage or graze livestock in treated lupine fields.

If crop loss occurs as a result of weather conditions, beans or any crop registered for IPIMETHALIN-L preplant incorporated use can be replanted without adverse effects the same year. DO NOT rework the soil deeper than the treated zone if replanting is necessary.

IPIMETHALIN-L is not recommended for use on peat or muck soils.

USE METHODS AND TIMINGS

Preplant Incorporated Application: Apply IPIMETHALIN-L up to 60 days before planting and incorporate within 7 days of application. Apply IPIMETHALIN-L tank mixes as specified under the tank mix section.

Preemergence Application: Apply IPIMETHALIN-L to sweet lupines only at planting or up to 2 days after planting. Apply to a firm seedbed that is free of clods. DO NOT APPLY IPIMETHALIN-L PREEMERGENCE (surface treatments) to chickpeas, dry beans, lima beans, snap beans and southern peas (cowpeas) after planting or serious crop injury can occur.

IPIMETHALIN-L USE RATES IN EDIBLE BEANS

Use rates recommended for IPIMETHALIN-L alone and in tank mix applications are given in the following table.

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Broadcast Application Rate per Acre of IPIMETHALIN-L (Pints per Acre) in Edible Beans

Soil Texture	Southern States ¹		Northern States ¹	
		<3% Organic Matter	>3 % Organic Matter	
Fine	1.8 to 3.6 pints	2.4 to 3.6 pints	3.6 pints	
Medium	1.8 to 2.4 pints	1.8 to 3.0 pints	3.0 to 3.6 pints	
Coarse	1.2 to 1.8 pints	1.2 to 2.4 pints	2.4 pints	

¹ See map at the end of this label for specific states.

Use the 3.6 pint rate for heavy clay soils.

IPIMETHALIN-L TANK MIXES IN EDIBLE BEANS

IPIMETHALIN-L may be applied in a tank mix with Dual, Eptam, Lasso or Micro-Tech. Refer to the companion label for weeds controlled in addition to IPIMETHALIN-L alone.

When using tank mixtures with IPIMETHALIN-L, always read the companion product label(s) to determine the specific use rates by soil types, weed species, and weed or crop growth stage. In addition, follow all precautions and restrictions, including state and local use restrictions, that may apply to specific products. Always follow the most restrictive label.

Follow additional use directions in this table for IPIMETHALIN-L tank mixes. [Refer to application rate table "Broadcast Application Rate per Acre of IPIMETHALIN-L (Pints per Acre) in Edible Beans" to determine the appropriate IPIMETHALIN-L use rate.]

IPIMETHALIN-L Plus:	Tank Mix Use Directions
Dual (1.5 to 3.0 pts./Acre) For use in dry, lima or snap beans, chickpeas, and southern peas.	<u>Preplant Incorporated Application</u> Apply up to 14 days before planting and incorporate within 7 days of application. Read and strictly follow all precautions and directions on the Dual label. DO NOT apply preemergence to dry, lima or snap beans, chickpeas or southern peas. DO NOT graze or feed forage or fodder. DO NOT apply to sweet lupines.
Eptam (2.5 to 4.5 pts./Acre) For use in dry and snap beans only.	<u>Preplant Incorporated Application</u> Apply with ground sprayer up to 2 days before planting. Incorporate immediately (within minutes) after application to prevent loss of Eptam. Whenever possible, application and incorporation should be done in the same application. Read and strictly follow all precautions and directions on the Eptam label. <u>Incorporation Directions</u> Use power driven cultivation equipment set to cut to a depth of 2 to 3 inches or tandem disks set to cut to a depth of 4 to 6 inches, operated at 4 to 6 mph. Follow with a spike-toothed harrow or some other leveling device that extends beyond the ends of the disks. For thorough mixing, disk in two different directions (cross disk). DO NOT exceed 3.5 pints Eptam per acre on small white beans on coarse-textured soils. DO NOT use this tank mixture on Adzuki beans, chickpeas, southern peas (cowpeas, including blackeye peas, blackeye beans), soybeans, lima beans or other flat podded beans. DO NOT feed bean hay, vines and forage, or graze livestock in treated bean fields. For nutsedge control, use 4.5 pints of Eptam per acre.
Lasso or Micro-Tech (2.5 to 3.0 qts./Acre) or Partner WDG (3.8 to 4.8 lbs./Acre) For use only in dry beans west of the Mississippi river. DO NOT use in California.	<u>Preplant Incorporated Application</u> Apply within 7 days before planting and incorporate within 7 days of application. Read and strictly follow all precautions and directions on the Lasso, Micro-Tech or Partner WDG labels. Apply in water with ground equipment only. This tank mixture may delay crop maturity and/or decrease crop yield if cold, wet soil conditions occur after planting.

FORAGE LEGUMES

GENERAL DIRECTIONS AND PRECAUTIONS

IPIMETHALIN-L may be used in FORAGE LEGUMES USED AS A COVER CROP IN FEDERAL SET-ASIDE OR

CONSERVATION RESERVE PROGRAM AREAS.

Some stand reduction of the legume cover crop may result from this use. Consult your local county extension service or your local ASC committee for recommended cover crops.

If loss of cover crop occurs as a result of adverse weather conditions, any crop registered for IPIMETHALIN-L preplant incorporated use can be replanted the same year into IPIMETHALIN-L treated soil without adverse effects. If replanting is necessary, DO NOT rework the soil deeper than the IPIMETHALIN-L treated zone.

DO NOT feed or graze legume cover crops established following IPIMETHALIN-L application.

The cover crop residue should ultimately be destroyed by tillage, or it should be left on the surface to retard erosion or as directed by your local ASC committee.

USE METHODS AND TIMINGS

IPIMETHALIN-L may be applied as a preplant incorporated treatment or preemergence treatment to control weeds in legume cover crops. Refer to Mixing, Application and Incorporation Directions, Weeds Controlled and Follow Crop Restrictions sections (see table of contents for page numbers).

IPIMETHALIN-L USE RATES IN FORAGE LEGUMES

Use rates recommended for IPIMETHALIN-L alone are given in the following table.

**Broadcast Application Rate Per Acre of IPIMETHALIN-L(Pints per Acre)
Preplant Incorporated in Forage Legumes**

Soil Texture	Rate
Fine	2.4 to 3.0 pints
Medium	1.8 to 2.4 pints
Coarse	1.2 to 1.8 pints

GARLIC, DRY BULB SHALLOTS, AND DIRECT-SEEDED AND TRANSPLANTED DRY BULB ONIONS

GENERAL DIRECTIONS AND PRECAUTIONS

Application with ground equipment: Uniformly apply in 10 or more gallons of water per acre.

Application with aircraft: Uniformly apply in 5 or more gallons of water per acre.

CHEMIGATION: Apply IPIMETHALIN-L only through center pivot, solid set or hand move irrigation in onions. DO NOT apply through other irrigation systems. Apply IPIMETHALIN-L between the 2 to 9 true leaf stage (2 to 6 true leaf stage in California) only. DO NOT irrigate in excess of 0.5 inches of water. Refer to page 13 for CHEMIGATION directions

IPIMETHALIN-L treatments are most effective when adequate rainfall or overhead irrigation is received within 7 days after application.

DO NOT mechanically incorporate except as specified for use on dry bulb onions in Colorado and the Texas High Plains.

DO NOT apply to green (bunching) onions or leeks.

USE DIRECTIONS FOR MINERAL SOILS

**Broadcast Application Rate per Acre of IPIMETHALIN-L (Pints per Acre)
For Use on Mineral Soils in All States**

Soil Texture	Rate
Fine	1.8 to 3.6 pints
Medium	1.8 to 2.4 pints
Coarse	1.2 to 1.8 pints

DO NOT exceed 3.6 pints per acre per crop (except Idaho, Oregon and Washington). DO NOT apply within 60 days of harvest in California and within 45 days of harvest in all other states. DO NOT feed or graze these crops.

If loss of treated crop occurs as a result of adverse weather conditions, any crop registered for preplant incorporated use of IPIMETHALIN-L can be replanted the same year. If replanting is necessary, DO NOT rework the soil deeper than 2 inches.

GARLIC

IPIMETHALIN-L may be applied to garlic in the following ways:

1. Preemergence after planting but before crop and weeds emerge.
2. Postemergence to garlic at the 1 to 5 true leaf growth stage.
3. As a split application, apply at both preemergence and postemergence timings.

DRY BULB SHALLOTS AND DIRECT-SEEDED AND TRANSPLANTED DRY BULB ONIONS

In all states **except California**, apply IPIMETHALIN-L as a broadcast treatment when onions or shallots have 2 to 9 true leaves.

Additional Use in Colorado, Kansas and Nebraska: In seeded onions, IPIMETHALIN-L may be applied sequentially. First application of IPIMETHALIN-L should be applied at loop stage. Apply sequential application of IPIMETHALIN-L early postemergence (2 to 9 true leaf stage). DO NOT exceed the maximum labeled rate for a given soil texture. DO NOT apply IPIMETHALIN-L at loop stage through the 9 true leaf stage if heavy rains are expected or severe crop injury may result.

Additional Use in Colorado and the Texas High Plains: For transplanted onions only, apply and shallow incorporate (less than 2" deep) IPIMETHALIN-L into preformed beds before transplanting.

Additional Use in Idaho, Oregon, and Washington: For dodder control on medium and fine textured soils, IPIMETHALIN-L may be used at 3.6 to 4.8 pints per acre. DO NOT use chemigation to apply IPIMETHALIN-L at the dodder control rate.

IPIMETHALIN-L may be applied in the fall or spring to the furrow area of land bedded in the fall in preparation for planting seed of dry bulb onions the following spring. Apply IPIMETHALIN-L as a banded application using rates based on appropriate soil texture. Band width should be approximately 1/2 the width of the row spacing. Keep IPIMETHALIN-L away from the area where onion seed will be planted. Before planting onions, harrow-off tops of beds following IPIMETHALIN-L furrow applications. For selective weed control in the onion row, apply IPIMETHALIN-L as a banded postemergence application to flag leaf onions at the labeled rates based on soil texture. Apply IPIMETHALIN-L only once to the furrow area and once to the onion row as a postemergence application.

Additional Use in Michigan: For mineral soils containing >10% organic matter, follow the directions for muck soils (see below).

In California: IPIMETHALIN-L may only be applied as a single application when onions or shallots have 2 to 6 true leaves.

USE DIRECTIONS FOR MUCK SOILS (ONIONS ONLY)

On MUCK SOILS in all states **except California**, IPIMETHALIN-L may be applied sequentially to ONIONS ONLY on muck soils by following the given rates and application timings indicated below:

Broadcast Application Rate per Acre and Application Timing of IPIMETHALIN-L (Pints per Acre) for Muck Soils

Application Timing and Growth Stage	Rate
Preemergence through loop Stage	2.4 to 4.8 pints
Early Postemergence (2 to 6 true leaf stage)	3.6 to 4.8 pints
Late Postemergence (6 to 9 true leaf stage)	3.6 to 4.8 pints

DO NOT apply more than 14.4 pints of IPIMETHALIN-L per acre per growing season on muck soils. To maximize crop

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safety, ensure good soil coverage during planting or transplanting. In addition, delay preemergence applications to the loop stage if possible.

DO NOT apply IPIMETHALIN-L preemergence through the loop stage if heavy rains are expected or severe crop injury may result. DO NOT irrigate in excess of 0.5 inches of water if irrigating immediately after IPIMETHALIN-L application at the preemergence through loop stage.

DO NOT apply within 45 days of harvest.

DO NOT plant sugar beets, red beets, spinach, winter wheat, or winter barley as rotational crops on muck soils for 12 months from the time of last application if more than 3.6 pints per acre of IPIMETHALIN-L are applied to the onion crop. See the IPIMETHALIN-L leaflet label for additional follow crop restrictions.

If loss of onion crop occurs as a result of adverse weather conditions, DO NOT replant any crop other than onions in muck soil during the same cropping year. DO NOT rework the soil deeper than 2 inches.

DO NOT use on muck soils in California.

GRAIN SORGHUM

IPIMETHALIN-L or IPIMETHALIN-L plus atrazine may be applied as a CULTI-SPRAY (post emergence incorporated) application in grain sorghum grown in all states.

In addition, IPIMETHALIN-L plus atrazine may be applied as an early postemergence treatment in grain sorghum grown in states east of the Mississippi River and in Arkansas, East Texas, Louisiana, and the Missouri "bootheel".

CULTI-SPRAY (POSTEMERGENCE INCORPORATED) FOR USE IN ALL STATES.

GENERAL DIRECTIONS AND PRECAUTIONS

IPIMETHALIN-L or IPIMETHALIN-L plus atrazine tank mixtures applied as a CULTI-SPRAY (postemergence incorporated) treatment will provide control of most late season annual grasses and certain broadleaf weeds in grain sorghum.

IPIMETHALIN-L treatments can be applied from the 4-inch growth stage until the last cultivation (layby) of grain sorghum.

IPIMETHALIN-L plus atrazine must be applied before the grain sorghum reaches 12 inches in height.

IPIMETHALIN-L treatments will not control established weeds. **DESTROY EMERGED WEEDS BY CULTIVATION PRIOR TO IPIMETHALIN-L APPLICATION.**

CULTI SPRAY (postemergence incorporated) applications of IPIMETHALIN-L or IPIMETHALIN-L plus atrazine tank mixture can be applied in grain sorghum previously treated with herbicides registered for use in grain sorghum. Consult the labels of those herbicides for suggested treatments, rates to be used, and precautions or restrictions for use in grain sorghum and for Follow Crop Restrictions.

DO NOT APPLY IPIMETHALIN-L in grain sorghum as a preplant incorporated treatment or preemergence treatment because serious crop injury can occur.

DO NOT APPLY IPIMETHALIN-L in grain sorghum that is planted in double row beds because this cultural practice does not allow adequate soil coverage of the bases of the grain sorghum plants with cultivation.

CULTI-SPRAY (POSTEMERGENCE INCORPORATED) APPLICATIONS: IPIMETHALIN-L ALONE OR IPIMETHALIN-L PLUS ATRAZINE TANK MIXTURES

1. Cultivate using a sweep-type or rolling cultivator operated at a speed that will throw at least one inch of soil over the bases of the grain sorghum plants. This will kill small weed seedlings growing in the grain sorghum row, and it will prevent direct contact of the zone of brace root formation by IPIMETHALIN-L during application.
2. Apply broadcast with a ground sprayer when grain sorghum is at least 4 inches in height until layby or last cultivation (atrazine must be applied before grain sorghum reaches 12 inches in height). Use drop nozzles if crop foliage will prevent uniform coverage of the soil surface within the rows.

3. Uniformly and thoroughly incorporate IPIMETHALIN-L treatments into the soil (1) with a sweep-type or rolling cultivator set to provide thorough incorporation in the top one inch of soil OR (2) with adequate irrigation (water or rainfall). For best results, incorporate IPIMETHALIN-L treatments as soon as possible after application. Incorporation must be completed within 7 days after application. If adequate moisture is not received within 7 days after application, incorporate IPIMETHALIN-L with a sweep-type or rolling cultivator.

Under situations of low rainfall or soil moisture, when deep germinating weeds such as shattercane or field sandbur are anticipated, mechanical incorporation will provide the best results.

If cultivation is needed after application and incorporation of IPIMETHALIN-L, the depth of cut should be no deeper than the depth of cut used to incorporate.

DO NOT APPLY IPIMETHALIN-L in grain sorghum more than one time per crop season.

**Broadcast Application Rate Per Acre of IPIMETHALIN-L CULTI-SPRAY (Pints per Acre)
(Postemergence incorporated) in Grain Sorghum**

Soil Texture	Southern States ¹	Northern States ¹
Fine	1.8 to 3.6 pints	2.4 to 3.6 pints
Medium	1.8 to 2.4 pints	2.4 to 3.6 pints
Coarse	1.2 to 1.8 pints	1.8 to 2.4 pints

¹ See map at end of this label for specific states.

For IPIMETHALIN-L plus atrazine tank mixtures, apply 1.0 pound active ingredient per acre of atrazine. DO NOT apply tank mixture on coarse soils.

NOTE: Livestock can graze or be fed forage from treated grain sorghum after 21 days following application. Observe all precautions, limitations, and follow crop restrictions on atrazine labels.

EARLY POSTEMERGENCE

For use in states east of the Mississippi River, in addition to Arkansas, East Texas, Louisiana, and the Missouri "bootheel" only.

APPLICATION DIRECTIONS

The seedbed should be firm and free of clods and trash. To provide good seed coverage, use only where adequate tillage is practiced. Plant grain sorghum AT LEAST 1.5 inches deep to ensure good seed coverage.

Uniformly apply IPIMETHALIN-L plus atrazine tank mix treatment in water by ground equipment or by aircraft. Apply IPIMETHALIN-L plus atrazine tank mixture only after grain sorghum has reached the 2-leaf stage, and when weeds are no more than one inch tall.

DO NOT APPLY IPIMETHALIN-L in grain sorghum as a preplant incorporated treatment or preemergence treatment because serious crop injury can occur.

DO NOT apply in liquid fertilizer.

IPIMETHALIN-L plus atrazine treatments control weeds most effectively when adequate rainfall or overhead irrigation is received within 7 days after application. If cultivation is necessary due to soil crusting, soil compaction, or weed germination before rain or irrigation, use shallow tillage (such as a rotary hoe), and make certain grain sorghum seeds are below the tilled area. Wait 7 to 10 days after application before cultivating.

**Broadcast Application Rate per Acre for Early Postemergence
Application of IPIMETHALIN-L Plus Atrazine in Grain Sorghum**

Soil Texture	IPIMETHALIN-L + Atrazine
Fine	2.4 pints + 1.0 to 1.2 pounds A.I.
Medium	1.8 to 2.4 pints + 1.0 to 1.2 pounds A.I.
Coarse	DO NOT USE

The high rate for each soil texture listed above should be used if heavy weed populations are expected.

NOTE: DO NOT replant grain sorghum if crop loss occurs as a result of weather conditions. Observe all precautions,

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limitations and follow crop restrictions on atrazine labels. Livestock can graze or be fed forage from IPIMETHALIN-L plus atrazine treated grain sorghum fields after 21 days following application.

NONBEARING FRUIT AND NUT CROPS AND VINEYARDS

GENERAL DIRECTIONS AND PRECAUTIONS

IPIMETHALIN-L may be applied for preemergence control of certain broadleaf weeds and most annual grasses in various nonbearing fruit and nut crops and vineyards. IPIMETHALIN-L may be used on the following nonbearing crops: Almond, Apple, Apricot, Cherry, Citrus, English walnut, Fig, Grape, Nectarine, Olive, Peach, Pear, Pecan, Pistachio, Plum and Prune.

IPIMETHALIN-L treatments control weeds most effectively when adequate rainfall or irrigation is received within 21 days after application.

Apply the spray directly to the ground under trees or vines. DO NOT apply above trees or vines with leaves or buds. Contact with leaves, shoots or buds by the spray mixture may cause plant tissues to become malformed.

Be sure soil and/or planting mixes have settled completely after transplanting so that no cracks are present that would allow IPIMETHALIN-L to come into direct contact with roots. Effective weed control and plant tolerance will result from directed sprays where soil and media surfaces are uniformly covered. DO NOT apply to newly transplanted trees or vines until ground has settled and no cracks are present.

DO NOT feed forage or graze livestock in treated fields.

FOR NEWLY TRANSPLANTED AND ONE YEAR OLD GRAPEVINES: Apply only to dormant grapevines. If buds have started to swell, DO NOT apply. Leaf distortion may result if applied after the buds have started to swell.

IPIMETHALIN-L may be used where fruit, vine, nut, or ornamental plant roots are present in a treatable area.

USE METHODS AND TIMINGS

Preemergence Application: Uniformly apply in 20 or more gallons of water per acre (broadcast basis) with ground equipment. Applications may be band or broadcast.

IPIMETHALIN-L Use Rates in Nonbearing Fruit and Nut Crops and Vineyards

Use rates recommended for IPIMETHALIN-L alone and in tank mix applications are given in the following table.

Broadcast Application Rate Per Acre and Per 1000 Square Feet of IPIMETHALIN-L Preemergence in Nonbearing Fruit and Nut Crops and Vineyards

	Quarts per Acre	Ounces per 1000 Square Feet
Short-term control (2-4 Months)	2.4 quarts	1.8 oz
Long-term control (6-8 months)	4.8 quarts	3.6 oz

IPIMETHALIN-L TANK MIXES IN NONBEARING FRUIT AND NUT CROPS AND VINEYARDS

IPIMETHALIN-L may be used in combination with a contact herbicide registered for use in the specific nonbearing crop to remove existing vegetation. Refer to contact herbicide label for all directions, precautions and restrictions.

PEANUTS

GENERAL DIRECTIONS AND PRECAUTIONS

IPIMETHALIN-L may be applied as a preplant incorporated treatment in peanuts.

DO NOT use in California.

If crop loss occurs as a result of weather conditions, peanuts or any crop registered for IPIMETHALIN-L preplant incorporated use can be replanted without adverse effects during the same year. If replanting is necessary, DO NOT

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rework the soil deeper than the treated zone.

USE METHODS AND TIMINGS

Preplant Incorporated Application: Apply IPIMETHALIN-L up to 60 days before planting and incorporate within 7 days of application. Apply IPIMETHALIN-L tank mixes as specified under the tank mix section.

IPIMETHALIN-L USE RATES IN PEANUTS

Use rates recommended for IPIMETHALIN-L alone and in tank mix applications are provided in the following table.

Broadcast Application Rate per Acre of IPIMETHALIN-L (Pints per Acre) in Peanuts

Region	Rate
Texas, Oklahoma and New Mexico	1.2 to 2.4 pints
Other peanut growing states	1.8 to 2.4 pints

In Alabama, Georgia or Florida, up to 3.6 pints of IPIMETHALIN-L can be used for heavy weed infestations, especially of Texas panicum.

IPIMETHALIN-L TANK MIXES IN PEANUTS

IPIMETHALIN-L may be applied in a tank mix with PURSUIT, Dual or Vernam. Refer to the companion label for weeds controlled in addition to IPIMETHALIN-L alone.

When using IPIMETHALIN-L with tank mixtures, always read the companion product label(s) to determine the specific use rates by soil types, weed species, and weed or crop growth stage. In addition, follow all precautions and restrictions, including state and local use restrictions, that may apply to specific products. Always follow the most restrictive label directions.

Follow additional use directions in this table for IPIMETHALIN-L tank mixes.
[Refer to application rate table "Broadcast Application Rate per Acre of IPIMETHALIN-L (Pints per Acre) in Peanuts" to determine the appropriate IPIMETHALIN-L use rate]

IPIMETHALIN-L Plus:	Tank Mix Use Directions
PURSUIT (4 oz./Acre) or PURSUIT DG (1.4 oz./Acre)	<u>Preplant Incorporated Application</u> Apply by ground equipment only up to 45 days before planting and incorporate within 7 days of application. Apply and incorporate after bed formation if crop will be planted on beds. Read and strictly follow all precautions and directions on the PURSUIT label. DO NOT apply tank mix preplant incorporated in West Texas, New Mexico and Arizona.
Dual (1.25 to 2.0 pts./Acre)	<u>Preplant Incorporated Application</u> Apply up to 14 days before planting and incorporate within 7 days of application. Apply and incorporate after bed formation if crop will be planted on beds. Read and strictly follow all precautions and directions on the Dual label.
Vernam 7E (2.33 to 3.0 pts./Acre)	<u>Preplant Incorporated Application</u> Apply with ground sprayer only up to 10 days before planting. Incorporate IMMEDIATELY (within minutes) after application to prevent loss of Vernam herbicide. Whenever possible, application and incorporation should be done during the same operation. <u>Incorporation Instructions</u> Use power driven cultivation equipment set to cut to a depth of 2 to 3 inches or tandem disks set to cut to a depth of 4 to 6 inches, operated at 4 to 6 mph, followed by a spike-toothed harrow or some other leveling device that extends beyond the ends of the disks. For thorough mixing, disk in two different directions (cross disk). Before the second disking, raise the disk to avoid cutting deeper than 4 to 6 inches. Read and strictly follow all precautions and directions on the Vernam label. DO NOT plant seed deeper than 2 inches.

POTATOES

GENERAL DIRECTIONS AND PRECAUTIONS

IPIMETHALIN-L may be applied as a preemergence treatment, preemergence incorporated treatment or early postemergence treatment in potatoes. DO NOT apply to sweet potatoes or yams. Apply to a firm seedbed that is free of

clods and trash.

DO NOT apply before planting crop.

IPIMETHALIN-L treatments control weeds most effectively when adequate rainfall or irrigation is received within 7 days of application.

DO NOT make more than one application of IPIMETHALIN-L per season.

If crop loss occurs as a result of weather conditions, any crop registered for IPIMETHALIN-L preplant incorporated use can be replanted without adverse effects the same year. DO NOT rework the soil deeper than the treated zone if replanting is necessary.

IPIMETHALIN-L is not recommended for use on peat or muck soils.

USE METHODS AND TIMINGS

Preemergence Application: Apply IPIMETHALIN-L after planting but before potatoes and weeds emerge or after dragoff where this operation is practiced. Apply IPIMETHALIN-L tank mixes as specified under the tank mix section.

Preemergence Incorporated Application: Apply IPIMETHALIN-L and incorporate after planting but before potatoes and weeds emerge. Where drag-off is practiced, apply IPIMETHALIN-L and incorporate before, at, or after drag-off, but before potatoes and weeds emerge. Incorporate IPIMETHALIN-L within 7 days of application. Apply IPIMETHALIN-L tank mixes as specified under the tank mix section.

IPIMETHALIN-L must be uniformly and thoroughly incorporated into the top 1 to 2 inches of soil. Use care to ensure that incorporation equipment does not damage seed pieces or elongating sprouts.

Mechanical incorporation is not required if adequate rainfall for good crop and weed emergence occurs or irrigation is received within 7 days after application.

Early Postemergence Application: Apply IPIMETHALIN-L from crop emergence until the 6-inch stage of growth. DO NOT apply IPIMETHALIN-L postemergence if potatoes are under stress from cold/wet or hot/dry conditions or crop injury may occur. IPIMETHALIN-L treatments will not control established weeds. Emerged weeds must be destroyed before application. Apply IPIMETHALIN-L tank mixes as specified under the tank mix section.

Sprinkler Irrigation System Application: Apply IPIMETHALIN-L alone as a preemergence treatment after planting, but before potatoes and weeds have emerged, or after drag-off where this operation is practiced, or early postemergence through sprinkler irrigation systems. See Chemigation section for complete directions (see table of contents for page number).

IPIMETHALIN-L USE RATES IN POTATOES

Use rates recommended for IPIMETHALIN-L alone and in tank mix applications are given in the following table.

Broadcast Application Rate¹ per Acre of IPIMETHALIN-L (Pints per Acre) in Potatoes

Soil Texture	<3% Organic Matter	>3 % Organic Matter
Fine	2.4 to 3.6 pints	3.6 pints
Medium	1.8 to 2.4 pints	2.4 to 3.6 pints
Coarse	1.2 to 1.8 pints	1.2 to 1.8 pints

¹When using IPIMETHALIN-L alone, use the high rate for each soil classification.

IPIMETHALIN-L TANK MIXES IN POTATOES

IPIMETHALIN-L may be applied in a tank mix with Eptam, Lorox, Sencor/Lexone, Eptam plus Sencor/Lexone, Eptam plus metribuzin or Matrix. Refer to the companion label(s) for weeds controlled in addition to IPIMETHALIN-L alone.

When using tank mixtures with IPIMETHALIN-L, always read the companion product label(s) to determine the specific use rates by soil types, weed species, and weed or crop growth stage. In addition, follow all precautions and restrictions including state and local use restrictions that may apply to specific products. Always follow the most restrictive label directions.

Follow additional use directions in this table for IPIMETHALIN-L tank mixes.

[Refer to application rate table "Broadcast Application Rate¹ per Acre of IPIMETHALIN-L (Pints per Acre) in Potatoes" to determine the appropriate IPIMETHALIN-L use rate]

IPIMETHALIN-L Plus:	Tank Mix Use Directions
<p>Eptam (3.0 to 3.5 pts./Acre)</p>	<p><u>Preemergence Incorporated Application</u> Apply and incorporate after planting but before potatoes and weeds emerge. In areas where potatoes are normally dragged-off, apply and incorporate following drag-off, but before potatoes and weeds emerge. Incorporate immediately after application.</p> <p>Incorporation Directions: Uniformly and thoroughly incorporate into the top 1 or 2 inches of soil. Whenever possible, application and incorporation should be done in the same operation. Use care to ensure that incorporation equipment does not damage seed pieces or elongating sprouts.</p> <p><u>Early Postemergence Application</u> Apply through SPRINKLER IRRIGATION SYSTEMS ONLY from crop emergence to the 6-inch stage of growth. IPIMETHALIN-L plus Eptam will not control established weeds. EMERGED WEEDS MUST BE DESTROYED PRIOR TO APPLICATION. DO NOT apply if potatoes are under stress from cold/wet or hot/dry conditions or crop injury may occur.</p> <p>Read and strictly follow all precautions and directions on the Eptam label. The Superior variety potato is sensitive to Eptam and early season stunting may occur under stress conditions. For nutsedge control, use 4.5 to 7.0 pints of Eptam per acre.</p>
<p>Lorox L (1.5 to 4.0 lbs./Acre) or Lorox DF (1.5 to 4.0 lbs./Acre)</p> <p>For use on potatoes grown East of the Rocky Mountains only</p>	<p><u>Preemergence Application</u> Apply after planting but before potatoes and weeds emerge or after drag-off or hilling where these operations are practiced.</p> <p>Read and strictly follow all precautions and directions on the Lorox label. Plant seed pieces at least two inches deep. DO NOT use on sands and loamy sands (except in Wisconsin-Central Sands Area), gravelly soils or exposed subsoils, or on soils containing less than 1% organic matter because injury to the treated crop or subsequent crops may occur. Wisconsin-Central Sands Area Only: IPIMETHALIN-L plus Lorox tank mixture may be used on sands and loamy sands. Sands - apply 1.2 to 1.8 pints of IPIMETHALIN-L plus 1 pound of Lorox DF or 1 pint of Lorox L per acre. Loamy sand - apply 1.2 to 1.8 pints of IPIMETHALIN-L plus 2 pounds of Lorox DF or 2 pints of Lorox L per acre.</p>
<p>Sencor DF/Lexone DF (0.33 to 0.67 lbs./Acre) or Sencor F (0.5 to 1.0 pt./Acre)</p>	<p><u>Preemergence Application</u> Apply after planting but before potatoes and weeds emerge or after drag-off where this operation is practiced.</p> <p><u>Early Postemergence Application</u> Apply from crop emergence to the 6-inch stage of growth. For optimum weed control, apply before weeds are one inch tall. DO NOT apply within 24 hours of applying other pesticides. DO NOT apply within three days after periods of cool, wet or cloudy weather or crop injury may occur. DO NOT use on early maturing, smooth-skinned white or red-skinned potato varieties.</p> <p>Read and strictly follow all precautions and directions on the Sencor or Lexone label. Observe organic matter restrictions on the labels. This combination may be applied through sprinkler irrigation systems.</p>
<p>Eptam (3.0 to 3.5 pts./Acre) plus Sencor/Lexone DF (0.33 to 0.67 lbs./Acre) or Sencor F (0.5 to 1.0 pt./Acre)</p> <p>DO NOT use in California</p>	<p><u>Early Postemergence Application</u> Apply through SPRINKLER IRRIGATION SYSTEMS ONLY from crop emergence to the 6-inch stage of growth. For optimum weed control, apply before weeds are one inch tall.</p> <p>Read and strictly follow all precautions and directions on the Eptam and Sencor/Lexone labels. Observe organic matter restrictions on the Sencor/Lexone labels. DO NOT apply within 24 hours of applying other pesticides. DO NOT apply within three days after periods of cool, wet or cloudy weather or crop injury may occur. DO NOT use on early maturing, smooth-skinned white or red-skinned potato varieties. The Superior variety potato is sensitive to Eptam and early season stunting may occur under stress conditions. DO NOT apply within 60 days of potato harvest. For nutsedge control, use 4.5 to 7.0 pints of Eptam per acre.</p>
<p>Eptam (3.0 to 3.5 pts./Acre) plus Sencor/Lexone DF</p>	<p><u>Preemergence Application</u> Apply with GROUND EQUIPMENT ONLY after planting but before potatoes and weeds emerge.</p> <p>Read and strictly follow all precautions and directions on the Sencor or Lexone label. Observe organic</p>

IPIMETHALIN-L Plus:	Tank Mix Use Directions
(0.33 to 0.67 lbs./Acre) or Sencor F (0.5 to 1.0 pts./Acre) For use in Idaho, Oregon and Washington only	matter restrictions on the labels. The Superior variety potato is sensitive to Eptam and early season stunting may occur under stress conditions. DO NOT make more than one application per season.
Eptam (3.0 to 3.5 pts./Acre) plus metribuzin (0.33 to 0.67 lbs./Acre) For use in Idaho, Oregon and Washington only	<u>Preemergence Application</u> Apply through SPRINKLER IRRIGATION SYSTEMS after planting before potatoes and weeds emerge. Read and strictly follow all precautions and directions on the metribuzin label. Observe organic matter and variety restrictions on the label. Add metribuzin first and mix thoroughly before adding Eptam. After mixing is complete add IPIMETHALIN-L. Maintain continuous agitation while adding herbicides and until spraying is completed. The Superior variety potato is sensitive to Eptam and early season stunting may occur under stress conditions. DO NOT make more than one application per season.
Matrix (1.0 to 1.5 oz/Acre)	<u>Preemergence Application</u> Apply after planting but before potatoes and weeds emerge or after drag-off where this operation is still practiced. DO NOT apply by air. DO NOT use on potatoes grown for seed. Use the most restrictive rotational crop interval. To avoid injury to desirable crops, follow "Sprayer Tank Cleanout" directions on the Matrix label. Read and follow all precautions on the Matrix label.

RICE

GENERAL DIRECTIONS AND PRECAUTIONS

Applications of IPIMETHALIN-L plus Facet 75 DF, propanil (or Arrosolo) or propanil plus Londax may be used as an early postemergence treatment in dry-seeded rice.

Applications IPIMETHALIN-L alone or in a tank mix with Facet 75 DF, Bolero 8 EC or glyphosate may be used as a delayed preemergence treatment in drilled, dry-seeded rice.

DO NOT use in California.

DO NOT use on water seeded rice, except as specified in other Dintec Agrichemicals labeling.

This pesticide is toxic to fish and aquatic organisms. Fish may be killed at the recommended application rates. DO NOT contaminate water by cleaning of equipment or disposal of wastes.

DO NOT apply to rice fields if fields are used for fish production, especially catfish or crayfish farming.

DO NOT exceed the maximum rates listed on the label for any soil type in one season.

DO NOT bale or use rice straw from treated fields for feed or bedding.

DO NOT use water containing IPIMETHALIN-L residues from rice cultivation to irrigate food or feed crops that are not registered for use with IPIMETHALIN-L.

DO NOT plant crops in IPIMETHALIN-L treated fields unless IPIMETHALIN-L is registered for use on those crops.

If crop failure occurs as a result of weather conditions or disease following treatment with IPIMETHALIN-L alone or in a tank mixture, only drilled, dry-seeded rice may be immediately replanted. However, the grower assumes all risks and consequences associated with replanting of rice because there is the potential for stand reduction or stunting. A 10 percent increase in seeding rate is recommended. Replant seed below the herbicide layer because reduced stand or stunting may occur if IPIMETHALIN-L comes into contact with germinating rice seed. DO NOT replant with gibberellic acid-treated seed. DO NOT reapply IPIMETHALIN-L alone or in a tank mixture.

When using tank mixes with IPIMETHALIN-L, always read the companion product label(s) and follow all precautions and restrictions. Always follow the most restrictive label.

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IPIMETHALIN-L is not recommended for use on peat or muck soils.

EARLY POSTEMERGENCE APPLICATIONS IN DRY SEEDED RICE

IPIMETHALIN-L PLUS ARROSOLO OR PROPANIL

IPIMETHALIN-L plus Arrosolo or propanil are postemergence treatments combining the direct contact action of propanil and the residual activity of IPIMETHALIN-L. Since the residual activity of IPIMETHALIN-L provides preemergence control of certain annual grasses that can germinate after this tank-mix treatment is applied, flooding after application can be delayed.

For maximum weed control, it is important to carefully follow the directions below for (1) adequate spray coverage of weeds and soil and (2) proper timing of application, which is when barnyardgrass (watergrass) is in the 1 to 3 leaf stage of growth with an occasional 4 leaf plant. Make application when sprangletop is less than 0.5 inch in height.

The seedbed should be firm and free of clods and trash. The seedbed must be prepared to allow for good seed coverage. Before planting rice, previous crop residues should be thoroughly mixed into the soil to a depth of 4 to 6 inches by plowing or disking.

By aircraft or ground equipment, uniformly apply recommended IPIMETHALIN-L plus Arrosolo or IPIMETHALIN-L plus propanil treatment after rice emergence, according to Spraying Directions on page 55. This is when barnyardgrass is in the 1 to 3 leaf growth stage with an occasional 4 leaf plant. Make application when sprangletop is less than 1/2 inch. THE GROWER SHOULD INSPECT FIELDS FREQUENTLY TO CHECK GROWTH OF BARNYARDGRASS AND/OR SPRANGLETOP TO DETERMINE PROPER APPLICATION TIMING. Application timing should be based on the growth stage of barnyardgrass and/or sprangletop and not on the growth stage of rice. If rice is too small to maintain a flood on the field, the treatment can still be applied because flooding can be delayed due to the residual activity of IPIMETHALIN-L.

While the residual activity of IPIMETHALIN-L allows flooding to be delayed, proper water management practices must be followed for normal rice growth. If weeds begin to develop after application, flooding should not be delayed. No flood water should be on the field at time of application because soil and weeds must be completely exposed to spray coverage. If necessary, fields may be flushed prior to treatment to produce vigorous rice and weed growth.

Since moisture activates the residual activity of IPIMETHALIN-L, IPIMETHALIN-L controls emerging weeds most effectively when adequate rainfall or irrigation (flush) is received within 7 days after application.

For maximum direct contact activity of propanil or Arrosolo, delay application if there is a chance of rain within 6 to 8 hours.

DO NOT apply this tank mixture within 14 days before or after insecticide applications because serious damage to rice may occur.

Broadcast Application Rate per Acre of IPIMETHALIN-L plus Arrosolo or Propanil Tank Mixtures in Rice (Pints per Acre)

Soil Texture	IPIMETHALIN-L	Arrosolo or propanil ¹
Fine	1.8 to 2.4 pints	6.0 to 8.0 pints
Medium	1.8 to 2.4 pints	6.0 to 8.0 pints
Coarse	1.8 pints	6.0 to 8.0 pints

¹Based on 4 pounds of active ingredient per gallon

Use the high rate of Arrosolo or propanil if the following situations exist at the time of application: (1) unseasonably cool weather, (2) barnyardgrass has progressed to predominantly the 3 to 4 leaf stage, or (3) emerged sprangletop (less than 0.5 inch) is present.

IPIMETHALIN-L PLUS PROPANIL (OR ARROSOLO) PLUS LONDAX

Preflood Application: IPIMETHALIN-L plus propanil (or Arrosolo) may be tank mixed with Londax for early postemergence weed control. Londax provides improved control of certain broadleaves and sedges when applied as a preflood postemergence application. Refer to the Londax label for specific weeds controlled. Apply Londax at 0.75 to 1.0 oz per acre with IPIMETHALIN-L plus propanil (or Arrosolo) 1 to 7 days before establishment of the permanent flood. At the time of application, weeds should be actively growing.

Preflood Sequential Applications: IPIMETHALIN-L plus propanil (or Arrosolo) plus Londax may be applied in a sequential application with Londax plus propanil (or Arrosolo). Apply Londax at 0.50 to 0.75 oz per acre with IPIMETHALIN-L plus propanil when broadleaf weeds are in the cotyledon to 4-leaf stage and the sedges are 3 to 6 inches tall. If needed, apply the second application of Londax plus propanil (or Arrosolo) 1 to 7 days before establishment of the permanent flood.

IPIMETHALIN-L PLUS FACET 75 DF

IPIMETHALIN-L plus Facet 75 DF herbicides may be tank mixed for early postemergence weed control in dry-seeded rice. This mixture provides broad spectrum grass and certain broadleaf weed control, especially where sprangletop (*Leptochloa* spp.) is a problem.

Facet 75 DF controls the emerged grasses and broadleaves listed on its label. Refer to the Facet 75 DF label for weed size limitations. IPIMETHALIN-L provides residual control of labeled grass weeds that can germinate after this tank mixture is applied and that Facet 75 DF does not control.

For maximum weed control, it is important to carefully follow the directions below for (1) adequate spray coverage of weeds and soil and (2) proper timing of application. IPIMETHALIN-L will not control emerged weeds. Facet 75 DF does not control sprangletop. Therefore, schedule spraying before sprangletop emergence.

IPIMETHALIN-L plus Facet 75 DF tank mixture may be applied early postemergence as follows:

1. Treatments may be applied to conventional, reduced or minimum tillage, and no-till (stale seed-bed) rice. The seedbed should be firm and free of clods. The seedbed must be prepared to allow for complete soil coverage of the rice seed. Using a planter under conditions that prevent good soil coverage of the rice seed can cause reduced stand or stunting if IPIMETHALIN-L comes into contact with germinating rice seed.
2. Apply when soil surface is dry, moist, or wet without standing water. Fields may be flushed prior to treatment to produce vigorous rice and weed growth, if necessary. No flood water should be on the field at time of application because soil and weeds must be completely exposed to spray coverage. Soil clods or standing water (puddles) at the time of application, or cracks in the soil that form after application may result in reduced weed control.
3. Uniformly apply the recommended IPIMETHALIN-L plus Facet 75 DF treatment after rice emergence (spiking) and at the correct timing for Facet 75 DF, by aircraft or ground equipment according to spraying directions on page 55. Refer to timing directions and illustrations in the Facet 75 DF label. **THE GROWER SHOULD INSPECT FIELDS FREQUENTLY TO CHECK GROWTH OF SPRANGLETOP, OTHER LABELED WEEDS, AND RICE TO DETERMINE PROPER APPLICATION TIMING.**
4. For maximum direct contact activity of Facet 75 DF, delay application of the tank mix if there is a chance of rain within 6 to 8 hours.
5. Because the residual activity of the IPIMETHALIN-L plus Facet 75 DF treatment allows for delayed flooding, it may be applied even when rice is too small to maintain a flood on the field for weed control. However, for normal rice growth and activity of IPIMETHALIN-L and Facet 75 DF, proper water management practices must be followed. Refer to the Water Management section of the Facet 75 DF label. If weeds begin to develop after application, flooding should not be delayed.

Since moisture activates the residual activity of IPIMETHALIN-L and Facet 75 DF, the tank mix is most effective in controlling emerging weeds when adequate rainfall or irrigation (flush) is received within 3-7 days after application or when new grasses/weeds have emerged and are less than one inch in height.

Broadcast Application¹ Rate per Acre of IPIMETHALIN-L plus Facet 75 DF Early Postemergence Tank Mixture in Rice

Soil Texture	IPIMETHALIN-L	Facet 75 DF
Fine	1.8 to 2.4 pints	0.50 pounds
Medium	1.8 to 2.4 pints	0.50 pounds
Coarse	1.8 pints	0.50 pounds

¹ Use the higher rate of IPIMETHALIN-L for each soil texture if heavy weed populations are anticipated

MIXING DIRECTIONS

Refer to the Facet 75 DF label for sections on mixing/spraying and on adjuvant for postemergence application. **ADDITION OF CROP OIL CONCENTRATE IS REQUIRED WITH FACET 75 DF APPLICATION. DO NOT use liquid**

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fertilizer solution. Add Facet 75 DF to a half-full spray tank of clean water with agitation running. After the Facet 75 DF is thoroughly mixed, add IPIMETHALIN-L. Mix thoroughly. Then, add the recommended amount of crop oil concentrate (see Facet 75 DF label) and remaining volume of water. Agitate constantly during the application process.

DELAYED (LATE) PREEMERGENCE APPLICATIONS

IPIMETHALIN-L herbicide alone, or a tank mixture of IPIMETHALIN-L plus Roundup (glyphosate), Facet 75 DF or Bolero 8 EC herbicides may be applied for delayed (late) preemergence weed control in grain-drilled, dry-seeded rice.

The tank mixtures will provide broad spectrum grass and certain broadleaf weed control. Tank mixtures are especially effective where sprangletop (*Leptochloa* spp.) is a problem. IPIMETHALIN-L alone will not control broadleaf weeds. A postemergence application of propanil (or Arrosolo), Bolero, Facet 75 DF or Londax herbicide may be necessary to control weeds during the entire season.

Glyphosate or Facet 75 DF will control the emerged grasses and broadleaves listed on their label. IPIMETHALIN-L will provide residual control of labeled grass weeds that can germinate after the tank mixture has been applied and that Facet 75 DF does not control. IPIMETHALIN-L will not control emerged weeds. Facet 75 DF does not control sprangletop. Accordingly, schedule spraying before sprangletop emergence.

For maximum weed control and rice stand, it is important to carefully follow the directions below for (1) adequate spray coverage of soil and (2) proper application timing:

1. Treatments may be applied to conventional, reduced or minimum tillage, and no-till (stale seed-bed) rice. The seedbed should be firm and free of clods, and must be prepared to allow for good seed coverage. Plant rice with a grain drill at a depth that provides complete soil coverage of the rice seed. Using a planter under conditions that prevent good soil coverage of the rice seed can cause reduced stand or stunting if IPIMETHALIN-L comes into contact with germinating rice seed.

2. Apply IPIMETHALIN-L alone or in tank mixture to levees after the levees are pulled and planted. Exposed seeds may be injured if they come in contact with IPIMETHALIN-L or Facet 75 DF.

3. Uniformly apply the recommended IPIMETHALIN-L plus glyphosate after rice planting (as described below) and before rice emergence (spiking), by aircraft or ground equipment according to Spraying Directions on page 55. **THE GROWER SHOULD INSPECT FIELDS FREQUENTLY TO CHECK GROWTH OF RICE TO DETERMINE PROPER APPLICATION TIMING.**

Uniformly apply the recommended rate of IPIMETHALIN-L alone, IPIMETHALIN-L plus Facet 75 DF or IPIMETHALIN-L plus Bolero 8 EC after rice planting (as described below) and before rice and weed emergence (spiking), by aircraft or ground equipment according to Spraying Directions on page 55. **THE GROWER SHOULD INSPECT FIELDS FREQUENTLY TO CHECK GROWTH OF RICE AND WEEDS TO DETERMINE PROPER APPLICATION TIMING**

4. Apply ONLY when growing conditions favor vigorous rice growth. The seedbed should have adequate moisture for seed germination. If there is insufficient moisture, flushing is recommended before IPIMETHALIN-L application to supply moisture for root (radicle) initiation and for vigorous rice and weed growth.

DO NOT apply IPIMETHALIN-L and then flush for germination. **DO NOT** apply to stressed rice. Stress factors include cold or hot temperature extremes, excessive moisture or drought, problem soils, poor field drainage or deep water after application. **DO NOT** apply early preemergence or preplant incorporated because severe rice injury is possible.

5. Apply when soil surface is dry, moist, or wet without standing water. No flood water should be on the field at time of application since soil and weeds (only for glyphosate) must be completely exposed to spray coverage. Soil clods, standing water (puddles) at the time of application, or cracks in the soil that form after application may result in reduced weed control.

6. Apply after the rice seed has absorbed water and germinated and after the soil has been previously sealed over the seed by at least one inch of rainfall or by irrigation (flush). If the soil has not been sealed by rain or flush, apply when 80 percent of germinated seeds have a primary root (radicle) or a shoot at least 0.5 inch long.

If applied to soil before these conditions, or if applied to cracked soil, then stand reduction or stunting of rice may occur. Facet 75 DF may cause buggyywhipping. Under some conditions, when using gibberellic acid-treated seed, heavy rainfall after application, or flushing after application may result in herbicide injury to rice. With appropriate cultural practices, rice can overcome moderate injury.

7. For maximum direct contact activity of glyphosate, delay application of the tank mix if there is a chance of rain within 6 or 8

hours.

8. Because the residual activity of IPIMETHALIN-L alone, IPIMETHALIN-L plus Facet 75 DF or IPIMETHALIN-L plus Bolero 8 EC tank mix allows for delayed flooding. This treatment may be applied if rice is too small to maintain a flood on the field for weed control. However, proper water management practices must be followed for normal rice growth and activity of IPIMETHALIN-L, Facet 75 DF or Bolero 8 EC. Refer to the Water Management section of the Facet 75 DF label. If weeds begin to develop after application, flooding should not be delayed.

Residual activity of IPIMETHALIN-L, Facet 75DF and Bolero 8 EC is most effective when applied to moist soil. Soil should be kept moist after application and not be allowed to crust or crack.

Broadcast Application Rate¹ per Acre of IPIMETHALIN-L Alone, IPIMETHALIN-L plus Facet 75 DF, IPIMETHALIN-L plus Bolero 8 EC or IPIMETHALIN-L plus Glyphosate² Tank Mixture for Delayed Preemergence Application in Rice

Soil Texture	IPIMETHALIN-L	Facet 75 DF	Bolero 8 EC
Sands, loamy sands	DO NOT USE	DO NOT USE	DO NOT USE
Sandy loams	1.8 pints	0.33 to 0.44 pounds	2 to 3 pints
Loams, silt loams, silts, sandy clay loams	1.8 to 2.4 pints	0.44 to 0.5 pounds	3 to 4 pints
Silty clay loams, clay loams, sandy clays, silty clays, clays	1.8 to 2.4 pints	0.5 to 0.67 pounds	3 to 4 pints

¹ Use the higher rate of IPIMETHALIN-L for each soil texture if heavy weed populations are anticipated.

² See the glyphosate label for recommended rates.

MIXING DIRECTIONS

IPIMETHALIN-L PLUS GLYPHOSATE TANK MIX

Refer to Mixing directions in the IPIMETHALIN-L leaflet label and to Mixing, Additives, and Application directions on the glyphosate label. ADDITION OF NONIONIC SURFACTANT MAY BE REQUIRED WITH GLYPHOSATE APPLICATION (see product label) and use of ammonium sulfate may increase performance.

IPIMETHALIN-L PLUS FACET 75 DF TANK MIX

Refer to the IPIMETHALIN-L and Facet 75 DF labels for sections on mixing and spraying. DO NOT use liquid fertilizer solution. Add Facet 75 DF to a half-full spray tank of clean water with agitation running. After the Facet 75 DF is thoroughly mixed, add IPIMETHALIN-L. Mix thoroughly and then add the remaining volume of water. Agitate constantly during application.

IPIMETHALIN-L PLUS BOLERO 8 EC TANK MIX

Add IPIMETHALIN-L to the half-full spray tank of clean water with agitator running. After IPIMETHALIN-L is thoroughly mixed, add Bolero 8 EC and mix thoroughly. Then add the remaining volume of water. Agitate constantly during application.

SPRAYING DIRECTIONS

Spray drift can cause injury to sensitive crops. See the propanil (or Arrosolo), Facet 75 DF, Bolero 8 EC and glyphosate labels for sensitive crops, and follow all recommendations to minimize drift.

DO NOT apply IPIMETHALIN-L through any type of irrigation system.
DO NOT apply in liquid fertilizer.

For Aerial Applications: To ensure adequate coverage, apply the recommended rate in 5 to 10 [10 to 12 for propanil (or Arrosolo)] gallons of water per acre. To minimize drift, DO NOT apply during periods of gusty winds or when wind conditions favor drift. It is recommended that a flagman or an automatic mechanical flagging unit on the aircraft be used to prevent overlap and possible crop injury.

For Ground Equipment Applications: To ensure adequate coverage, apply the recommended rate in 10 to 20 (15 to 25 for propanil and Arrosolo) gallons of water per acre. Use a properly calibrated low-pressure (20 to 40 psi) sprayer equipped with 8002 or larger size Tee-Jet or comparable nozzles for uniform spray distribution and to minimize drift. Keep the bypass line on or near the bottom of the tank to minimize foaming. Nozzle screens must be no finer than 50

mesh. DO NOT apply IPIMETHALIN-L during periods of gusty winds or when wind velocity is greater than 20 mph.

SOYBEANS

GENERAL DIRECTIONS AND PRECAUTIONS

IPIMETHALIN-L may be applied in conventional, minimum, or no-till systems as a preplant surface, preplant incorporated or preemergence application in soybeans.

DO NOT APPLY POSTEMERGENCE because serious crop injury can occur.

DO NOT make applications of IPIMETHALIN-L preemergence north of Interstate 80, except as specified in other supplemental Dintec Agrichemicals labeling.

DO NOT use IPIMETHALIN-L in soybeans in California.

Preplant surface and preemergence treatments control weeds most effectively when adequate rainfall or overhead irrigation is received within 7 days after application. If moisture is insufficient to activate IPIMETHALIN-L, a shallow cultivation (preferably with a rotary hoe) should be made after emergence of soybeans, but while weeds are small enough to be controlled by mechanical cultivation. Otherwise, a postemergence herbicide treatment may be required to control weed escapes at planting or following soybean emergence.

If crop loss occurs as a result of weather conditions, soybeans or any crop registered for preplant incorporated use can be replanted without adverse effects the same year. If replanting is necessary, DO NOT rework the soil deeper than the treated zone.

Livestock can graze or be fed forage from treated soybean fields.

IPIMETHALIN-L is not recommended for use on peat or muck soils.

USE METHODS AND TIMINGS

Preplant Surface Application: Apply IPIMETHALIN-L up to 15 days before planting. IPIMETHALIN-L may be applied up to 45 days before planting when used in a tank mix or applied sequentially with PURSUIT or SCEPTER herbicides. Preplant surface applications of IPIMETHALIN-L alone should be followed by a postemergence program using PURSUIT herbicide. Apply IPIMETHALIN-L tank mixes and sequential programs as specified under the tank mix section.

Preplant Incorporated Application: Apply IPIMETHALIN-L up to 60 days before planting and incorporate within 7 days of application. Apply IPIMETHALIN-L tank mixes and sequential programs as specified under the tank mix section.

Preemergence Application: Apply IPIMETHALIN-L at planting or up to 2 days after planting. Apply to a firm seedbed that is free of clods. DO NOT make applications of IPIMETHALIN-L preemergence north of Interstate 80, except as specified in other supplemental Dintec Agrichemicals labeling. Apply IPIMETHALIN-L tank mixes and sequential programs as specified under the tank mix section.

DO NOT apply IPIMETHALIN-L as a postemergence treatment because serious crop injury can occur.

IPIMETHALIN-L USE RATES IN SOYBEANS

Use rates recommended for IPIMETHALIN-L alone and in tank mix combinations or sequential applications with other herbicides are given in the following tables.

Broadcast Application Rate Per Acre of IPIMETHALIN-L (Pints per Acre) Preplant Surface or Preplant Incorporated in Soybeans

Soil Texture	<3% Organic Matter	>3% Organic Matter
Fine	2.4 to 3.6 pints	3.6 pints
Medium	1.8 to 3.0 pints	3.0 to 3.6 pints
Coarse	1.2 to 1.8 pints	2.4 pints

Do not exceed 2.4 pints/acre for Southern states. See map at the end of this label for specific states.

For heavy clay soils, apply IPIMETHALIN-L at the broadcast application rate of 3.6 pints per acre.

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The high rates for each soil texture above should be used if heavy weed populations are anticipated, extensive crop residues were present prior to seedbed preparation, or in no-till systems.

Broadcast Application Rate Per Acre of IPIMETHALIN-L (Pints per Acre) Preemergence in Soybeans

Soil Texture	<3% Organic Matter	>3 % Organic Matter
Fine	1.8 to 2.4 pints	2.4 to 3.0 pints
Medium	1.8 to 2.4 pints	1.8 to 2.4 pints
Coarse	1.2 to 1.8 pints	1.8 pints

The high rates for each soil texture above should be used if heavy weed populations are anticipated, extensive crop residues were present prior to seedbed preparation or in no-till systems.

IPIMETHALIN-L TANK MIXES AND SEQUENTIAL PROGRAMS IN SOYBEANS

IPIMETHALIN-L may be applied in a tank mix with PURSUIT, SCEPTER, Command, Canopy, Dual, Lasso, Lorox, Lorox Plus, Preview, and Sencor/Lexone. IPIMETHALIN-L may be applied in a sequential application with PURSUIT, SCEPTER, SCEPTER O.T., Lorox and Sencor/Lexone. Refer to the companion label(s) for weeds controlled in addition to IPIMETHALIN-L alone.

When using tank mixtures or sequential applications with IPIMETHALIN-L, always read the companion product label(s) to determine the specific use rates by soil types, weed species, and weed or crop growth stage. In addition, follow all precautions and restrictions including state and local use restrictions that may apply to specific products. Always follow the most restrictive label directions.

For no-till, IPIMETHALIN-L alone or IPIMETHALIN-L tank mixes may be used with Gramoxone Extra, Roundup, 2-4,D or Butyrac 200 (2,4-DB) to kill existing vegetation that may be present prior to planting. Refer to these labels for specific use recommendations, restrictions, rates, and weeds controlled. IPIMETHALIN-L alone will control weeds as they germinate, but it will not control emerged weeds.

Follow additional use directions in this table for IPIMETHALIN-L Tank Mixes

[Refer to application rate tables "Broadcast Application Rate Per Acre of IPIMETHALIN-L (Pints per Acre) Preplant Surface or Preplant Incorporated in Soybeans" and "Broadcast Application Rate Per Acre of IPIMETHALIN-L (Pints per Acre) Preemergence in Soybeans "to determine the appropriate IPIMETHALIN-L use rate]

IPIMETHALIN-L Plus:	Tank Mix Use Directions
PURSUIT (4 oz./Acre) or PURSUIT DG (1.4 oz./Acre)	<p><u>Preplant Surface Application</u> Apply up to 45 days before planting.</p> <p><u>Preplant Incorporated Application</u> Apply up to 45 days before planting and incorporate within 7 days of application.</p> <p><u>Preemergence Application</u> Apply at planting or up to 2 days after planting before weeds and crops emerge.</p> <p><u>Preplant Surface Application, Preplant Incorporated Application Or Preemergence Followed By Early Postemergence Application</u> Apply IPIMETHALIN-L as described above. Follow with an early Postemergence treatment of PURSUIT as directed on the PURSUIT label.</p> <p>Read and strictly follow all precautions and directions on the PURSUIT label. Preplant surface applications of IPIMETHALIN-L alone should be followed by a postemergence program using PURSUIT herbicide. DO NOT graze or feed treated soybean forage, hay or straw to livestock.</p>
SCEPTER (0.67 pts./Acre) or SCEPTER 70DG (2.8 oz./Acre)	<p><u>Preplant Surface Application</u> Apply up to 45 days before planting.</p> <p><u>Preplant Incorporated Application</u> Apply up to 45 days before planting (30 days in Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee and Texas) and incorporate within 7 days of application.</p> <p><u>Preemergence Application</u> Apply at planting or up to 2 days after planting before weeds and crops emerge.</p> <p><u>Preplant Surface Application, Preplant Incorporated Application Or Preemergence Followed By Early</u></p>

	<p><u>Postemergence Application</u> Apply IPIMETHALIN-L as described above. Follow with an early Postemergence treatment of SCEPTER as directed on the SCEPTER label.</p> <p>Read and strictly follow all precautions and directions on the SCEPTER label. DO NOT graze or feed treated soybean forage, hay or straw to livestock.</p>
<p>Command 4EC (0.75 to 1.5 pts./Acre)</p>	<p><u>Preplant Incorporated Application</u> Apply to the soil surface and uniformly incorporate. See the Command label for incorporation requirements and directions.</p> <p>Read and strictly follow all precautions and directions on the Command label. Apply with calibrated ground equipment in 10 to 40 gallons of water per acre. The use of an agriculturally approved drift reduction agent is required at finished spray volumes of 10 to 15 gallons per acre. Do not apply this tank mix to overly moist or wet soils. Command is a volatile compound. Off-site movement of spray drift or vapors of Command can cause foliar whitening or yellowing of some plant parts. DO NOT allow livestock to graze on soybean vines or use the vines for feed. Cover crops may be planted anytime, but stand reductions may occur. DO NOT graze or use the cover crop for feed.</p>
<p>Canopy (6 to 12 oz./Acre)</p>	<p><u>Preplant Surface Application</u> Apply up to 30 days before planting.</p> <p><u>Preplant Incorporated Application</u> Apply up to 14 days before planting and incorporate within 7 days of application.</p> <p><u>Preemergence Application</u> Apply at planting or up to 2 days after planting before weeds and crops emerge.</p> <p>Read and strictly follow all precautions and directions on the Canopy label. Observe all soil type, soil pH, and soybean variety restrictions. DO NOT apply to soils with less than 0.5% organic matter. Continuous agitation in the spray tank is required to keep the material in suspension. Avoid overlap, and shut off spray booms while starting, turning, slowing or stopping, otherwise crop injury may occur.</p>
<p>Dual (1.5 to 3.0 pts./Acre)</p>	<p><u>Preplant Surface Application</u> Apply up to 15 days before planting.</p> <p><u>Preplant Incorporated Application</u> Apply up to 14 days before planting and incorporate within 7 days of application. Use a preplant incorporated application if furrow irrigation is used or after application when a period of dry weather is expected. If soybeans are planted on beds, apply and incorporate after bed formation.</p> <p><u>Preemergence Application</u> Apply at planting or up to 2 days after planting before weeds and crops emerge.</p> <p>Read and strictly follow all precautions and directions on the Dual label.</p>
<p>Lasso (2.5 to 4.0 qts./Acre)</p>	<p><u>Preplant Surface Application</u> Apply up to 15 days before planting.</p> <p><u>Preplant Incorporated Application</u> Apply up to 7 days before planting and incorporate within 7 days of application.</p> <p><u>Preemergence Application</u> Apply at planting or up to 2 days after planting before weeds and crops emerge. This treatment must be applied within 5 days of the last preplant tillage.</p> <p>Read and strictly follow all precautions and directions on the Lasso label. Apply with ground equipment. Incorporation on coarse soils may reduce length of control as a result of leaching of Lasso with rainfall or irrigation. Incorporation is not recommended on coarse soils in the Southeastern States. High intensity or excessive rainfall or excessive irrigation after preemergence application may reduce weed control.</p>
<p>Lorox DF (1.0 to 2.5 lbs./Acre) or Lorox L (1.0 to 2.5 pts./Acre)</p>	<p><u>Preplant Surface Application</u> Apply up to 15 days before planting.</p> <p><u>Preplant Incorporated Followed By Preemergence Application</u> Apply IPIMETHALIN-L up to 60 days before planting and incorporate within 7 days of application. Follow with a preemergence treatment of Lorox as directed on the Lorox label.</p> <p><u>Preemergence Application</u></p>

	<p>Apply at planting or up to 2 days after planting before weeds and crops emerge.</p> <p>Read and strictly follow all precautions and directions on the Lorox label. Do not use on sands, loamy sands, gravelly soils or soils containing less than 0.5 % organic matter.</p>
Lorox Plus (12 to 18 oz./Acre)	<p><u>Preplant Surface Application</u> Apply up to 30 days before planting.</p> <p><u>Preplant Incorporated Application</u> Apply up to 30 days before planting and incorporate within 7 days of application.</p> <p><u>Preemergence Application</u> Apply at planting or up to 2 days after planting before weeds and crops emerge.</p> <p>Read and strictly follow all precautions and directions on the Lorox Plus label. Observe all soil type, soil pH and soybean variety restrictions. DO NOT apply to soils with less than 0.5% organic matter. Continuous agitation in the spray tank is required to keep the material in suspension. Avoid overlap and shut off spray booms while starting, turning, slowing or stopping, otherwise crop injury may occur.</p>
Preview (6 to 10 oz./Acre)	<p><u>Preplant Surface Application</u> Apply up to 30 days before planting.</p> <p><u>Preplant Incorporated Application</u> Apply up to 14 days before planting and incorporate within 7 days of application.</p> <p><u>Preemergence Application</u> Apply at planting or up to 2 days after planting before weeds and crops emerge.</p> <p>Read and strictly follow all precautions and directions on the Preview label. Observe all soil type, soil pH and soybean variety restrictions. DO NOT apply to soils with less than 0.5% organic matter. Continuous agitation in the spray tank is required to keep the material in suspension. Avoid overlap and shut off spray booms while starting, turning, slowing or stopping, otherwise crop injury may occur.</p>
Sencor/Lexone DF (0.33 to 0.67 lbs./Acre) or Sencor F (0.5 to 1.0 pt./Acre)	<p><u>Preplant Surface Application</u> Apply up to 15 days before planting.</p> <p><u>Preplant Incorporated Application</u> Apply up to 7 days before planting and incorporate within 7 days of application.</p> <p><u>Preplant Incorporated Application Followed By Preemergence Application</u> Apply IPIMETHALIN-L up to 60 days prior to planting and incorporate within 7 days of application. Follow with a preemergence treatment of Sencor/Lexone as directed on the Sencor or Lexone label.</p> <p><u>Preemergence Application</u> Apply at planting or up to 2 days after planting before weeds and crops emerge.</p> <p>Read and strictly follow all precautions and directions on the Sencor/Lexone label. Observe all soil type, soil pH, soybean variety and incorporation restrictions. DO NOT use on sands. DO NOT use on loamy sands or on sandy loams that contain less than 0.5% organic matter as crop injury may occur. This tank mixture is not recommended for use on soils with less than 2% organic matter in the Coastal Plain of New Jersey or the Delmarva Peninsula. Soybean seed should be planted at least 1.5 inches below the soil surface. If replanting is necessary, DO NOT rework the soil.</p>

IPIMETHALIN-L Followed By:	Sequential Application Use Directions
SCEPTER O.T. (1.0 pt./Acre)	<p><u>Preplant Surface Application Followed By Early Postemergence Application</u> Apply IPIMETHALIN-L up to 15 days before planting. Follow with an early Postemergence treatment of SCEPTER O.T. as directed on the SCEPTER O.T. label.</p> <p><u>Preplant Incorporated Application Followed By Early Postemergence Application</u> Apply IPIMETHALIN-L up to 60 days before planting and incorporate within 7 days of application. Follow with an early Postemergence treatment of SCEPTER O.T. as directed on the SCEPTER O.T. label.</p> <p><u>Preemergence Application Followed By Early Postemergence Application</u> Apply IPIMETHALIN-L at planting or up to 2 days after planting. Follow with a Postemergence treatment of SCEPTER O.T. as directed on the SCEPTER O.T. label.</p> <p>Read and strictly follow all precautions and directions on the SCEPTER O.T. label.</p>

SPECIAL WEEDS

SHATTERCANE AND WOOLLY CUPGRASS

Preplant incorporated treatments of IPIMETHALIN-L alone, IPIMETHALIN-L plus SCEPTER or IPIMETHALIN-L plus Sencor/Lexone preplant incorporated tank mixtures, or preplant incorporated IPIMETHALIN-L applications followed by registered sequential preemergence or postemergence herbicides will control shattercane (wild cane) (*Sorghum bicolor*).

Woolly cupgrass (*Eriochloa villosa*) will be controlled by the following: Preplant incorporated treatments of IPIMETHALIN-L plus PURSUIT®; preplant incorporated IPIMETHALIN-L applications followed by an early postemergence application of PURSUIT herbicide; or, other registered sequential preemergence or postemergence herbicides.

Shattercane and woolly cupgrass are difficult to control in many soybean growing areas because they can germinate from a greater depth in the soil than most other weeds. Shattercane and woolly cupgrass can emerge at any time during the growing season, depending on soil temperature, moisture, and seed dormancy.

Thoroughly mix previous crop residues into the soil and destroy any existing vegetation before applying herbicide. Apply IPIMETHALIN-L or IPIMETHALIN-L combinations at the recommended rates listed in following tables. See Incorporation Directions section (see table of contents for page number) for incorporation directions. Thoroughly and uniformly mechanically incorporate IPIMETHALIN-L into the TOP 2 INCHES of soil. Acceptable results CANNOT be expected if IPIMETHALIN-L is applied preemergence. Cultivation may be necessary to control escapes and late germinating shattercane or woolly cupgrass during the crop season.

**Broadcast Application Rate Per Acre of IPIMETHALIN-L (Pints per Acre)
Preplant Incorporated for Control of Shattercane or Woolly Cupgrass in Soybeans**

Soil Texture	<3% Organic Matter	>3 % Organic Matter
Fine	3.6 pints	3.6 pints
Medium	3.0 pints	3.6 pints
Coarse	2.4 pints	2.4 pints

**Broadcast Application Rate Per Acre of IPIMETHALIN-L Plus Sencor/Lexone²
Preplant Incorporated Tank Mixture for Control of Shattercane in Soybeans¹**

Soil Texture ¹	IPIMETHALIN-L + Sencor/Lexone ² DF 0.5% to 3% Organic Matter	IPIMETHALIN-L + Sencor/Lexone ² DF >3% Organic Matter
Fine	2.4 pints + 0.5 to 0.67 pounds	3.0 pints + 0.67 pounds
Medium	2.4 pints + 0.5 pounds	2.4 pints + 0.5 to 0.67 pounds
Coarse	1.8 pints + 0.5 pounds	1.8 pints + 0.5 pounds

DO NOT USE on sands. DO NOT USE on loamy sands or on sandy loams that contain less than 1% organic matter, or on other soils with less than 0.5% organic matter because crop injury may occur.

² Read and strictly follow all precautions and directions on the Sencor/Lexone label. Observe all soil type, soil pH and soybean variety restrictions.

RED RICE AND ITCHGRASS

IPIMETHALIN-L applied as a preplant incorporated treatment will control red rice (*Oryza sativa*), and will help control and reduce competition from itchgrass (*Rottboellia exaltata*) at the rates listed in the following table:

**Broadcast Application Rate Per Acre of IPIMETHALIN-L (Pints per Acre)
Preplant Incorporated For Control of Red Rice and Suppression of Itchgrass in Soybeans**

Soil Texture	≤ 3% Organic Matter ¹
Fine	4.8 pints
Medium	3.6 pints
Coarse	2.4 to 3.6 ² pints

¹ This use is not recommended for soils with more than 3% organic matter.

² The higher rate should be used if heavy red rice or itchgrass population are anticipated.

NOTE: Livestock can graze or be fed forage from treated soybean fields. If soybean crop loss occurs as a result of weather conditions, cotton or soybeans can be replanted the same year into treated soil without adverse effects. If replanting is necessary, DO NOT rework the soil deeper than the treated zone.

RHIZOME JOHNSONGRASS

IPIMETHALIN-L applied as a preplant incorporated treatment for two consecutive years will control rhizome johnsongrass (*Sorghum halepense*) in soybeans at the rates recommended for soil textures listed in the following table. This use is not recommended for Arizona, New Mexico and California. Rhizome johnsongrass will be suppressed after the first year and controlled after the second year.

Before application, use a chisel plow or similar equipment to bring johnsongrass rhizomes to the surface. Chop rhizomes into small pieces with a disk harrow set to cut 4 to 6 inches deep and operated in two different directions at 4 to 6 mph.

IPIMETHALIN-L should be incorporated into the soil within 7 days after application before planting. For maximum control of rhizome johnsongrass, incorporate IPIMETHALIN-L as soon as possible after application. Deep and thorough incorporation of IPIMETHALIN-L is necessary for control of rhizome johnsongrass. Mechanical incorporation can be achieved by the following methods:

- (a) Disk harrow set to cut 4 to 6 inches deep and operated in two different directions at 4 to 6 mph.
- (b) PTO-driven equipment, such as tillers cultivators and hoes, set to cut 3 to 4 inches deep and operated one time at 4 mph or less.

For johnsongrass escapes during the crop season, cultivation and/or application of registered postemergence herbicides are recommended. Follow the directions for use on the labels of the respective herbicides.

**Broadcast Application Rate Per Acre of IPIMETHALIN-L (Pints per Acre)
Preplant Incorporated for Control of Rhizome Johnsongrass
(APPLY FOR TWO CONSECUTIVE YEARS)**

Soil Texture	≤ 3% Organic Matter ¹
Fine	4.8 pints
Medium	3.6 pints
Coarse	2.4 pints

¹This use is not recommended for soils with more than 3% organic matter.

SUGARCANE (Except Hawaii)

GENERAL DIRECTIONS AND PRECAUTIONS

IPIMETHALIN-L may be applied to newly planted or ratoon sugarcane as a preemergence treatment through layby and, again in late summer or early fall to the newly planted sugarcane.

DO NOT apply on sugarcane through irrigation systems.

DO NOT make aerial applications at close-in because complete and uniform coverage cannot be obtained.

DO NOT apply more than 14.4 pints per acre of IPIMETHALIN-L during one growing season.

IPIMETHALIN-L is not recommended for use on peat or muck soils.

DO NOT apply within 90 days of harvest.

DO NOT graze treated fields or feed treated forage or fodder to livestock.

USE METHODS AND TIMINGS

Apply IPIMETHALIN-L as a preemergence treatment through layby to newly planted or ratoon sugarcane, and again in late summer or early fall to the newly planted sugarcane. Applications may be made band or broadcast. Although there may be adequate crop tolerance for postemergence applications at layby, in order to obtain effective weed control the spray must be directed under the sugarcane canopy.

IPIMETHALIN-L USE RATES IN SUGARCANE (EXCEPT HAWAII)

**Broadcast Application Rate Per Acre of IPIMETHALIN-L (Pints per Acre)
For Use in Sugarcane (except Hawaii)**

Apply 4.8 to 7.2 pints of IPIMETHALIN-L but DO NOT exceed 14.4 pints per acre in one growing season. See spraying directions to calculate the band treatment rate.

Use the 7.2 pint rate under the following conditions:

- heavy clay soils;
- no mechanical incorporation is planned;
- heavy weed populations are expected;
- itchgrass infestation is expected; or,
- no shaving is planned.

INCORPORATION DIRECTIONS

IPIMETHALIN-L must be uniformly and thoroughly incorporated into the soil with either (1) mechanical incorporation equipment as outlined below, or (2) with rainfall or irrigation, as long as rainfall or irrigation is adequate for good crop and weed emergence and is received within 7 days after application. If rainfall or irrigation is not obtained, IPIMETHALIN-L should be mechanically incorporated.

Mechanical Incorporation: Apply IPIMETHALIN-L to loosened beds and incorporate into the top 1 to 2 inches of soil within 7 days after application. Ratoon sugarcane must be lightly shaved during the early spring to remove the old stubble before incorporation over the line of sugarcane is possible. Carefully adjust equipment to incorporate without causing excessive damage to emerging shoots. Mechanical incorporation can be achieved by the following:

- a) Rolling cultivator (Lilliston type - Lely Roterra) set to cut 2 or 3 inches deep and operated two times at 6 to 8 mph. This technique may be used with all application timings.
- b) Rolling disc cultivator (Hipper) set to cut 2 to 3 inches deep and operated two times at 6 to 8 mph. This technique may be used to incorporate between sugarcane lines (rows) at layby only.

IPIMETHALIN-L TANK MIXES IN SUGARCANE (EXCEPT HAWAII)

IPIMETHALIN-L may be used in combination with any herbicide registered for use on sugarcane (except Hawaii). Refer to label(s) for all directions, precautions and restrictions. Always check compatibility when applying in a tank mix and follow the most restrictive label directions.

SUGARCANE (For Use In Hawaii)

GENERAL DIRECTIONS AND PRECAUTIONS

IPIMETHALIN-L may be applied preemergence through layby in plant or ratoon sugarcane.

DO NOT apply to sugarcane through irrigation systems.

DO NOT make aerial applications at close-in because complete and uniform coverage cannot be obtained.

DO NOT apply more than 14.4 pints per acre of IPIMETHALIN-L during one growing season.

IPIMETHALIN-L is not recommended for use on peat or muck soils.

DO NOT apply within 90 days of harvest.

DO NOT graze treated fields or feed treated forage or fodder to livestock.

USE METHODS AND TIMINGS

IPIMETHALIN-L may be applied twice per season, as a preemergence treatment through layby, in plant or ratoon sugarcane. Band or broadcast applications may be made. Although there may be adequate crop tolerance for postemergence applications at layby, in order to obtain effective weed control the spray must be directed under the sugarcane canopy.

IPIMETHALIN-L USE RATES IN SUGARCANE (FOR USE IN HAWAII)

Broadcast Application Rate Per Acre of IPIMETHALIN-L (Pints per Acre) For Use in Sugarcane Grown in Hawaii

Apply 4.8 to 9.7 pints per acre of IPIMETHALIN-L, but DO NOT exceed 14.4 pints per acre in one growing season. See spraying directions to calculate the band treatment rate.

Use the higher rates under the following conditions:

- for dark clay soils;
- no mechanical incorporation is planned;
- heavy weed populations are expected; or,
- no shaving is planned.

IPIMETHALIN-L TANK MIXES IN SUGARCANE (FOR USE IN HAWAII)

IPIMETHALIN-L may be used in combination with any herbicide registered for use on sugarcane in Hawaii. Refer to label(s) for all directions, precautions and restrictions. Always check compatibility when applying in a tank mix and follow the most restrictive label directions.

SUNFLOWERS

GENERAL DIRECTIONS AND PRECAUTIONS

IPIMETHALIN-L may be applied as a preplant incorporated treatment in the spring in sunflowers in all states.

IPIMETHALIN-L alone may be applied as a preplant incorporated treatment in the fall in sunflowers in the states of North Dakota, South Dakota, and Minnesota only.

IPIMETHALIN-L plus Eptam tank mixture may be applied as a preplant incorporated treatment in the fall in sunflowers in the states of North Dakota and Minnesota only.

IPIMETHALIN-L may be applied as preplant surface or preemergence application in no-till sunflowers in Colorado, Kansas, Minnesota, Nebraska, and North and South Dakota.

If crop loss occurs as a result of weather conditions, sunflowers or any crop registered for IPIMETHALIN-L preplant incorporated use can be replanted without adverse effects the same year. DO NOT rework the soil deeper than the treated zone if replanting is necessary.

DO NOT feed forage or graze livestock in treated sunflower fields.

IPIMETHALIN-L is not recommended for use on peat or muck soils.

USE METHODS AND TIMINGS

Preplant Incorporated (Spring) Application: Apply IPIMETHALIN-L up to 60 days before planting and incorporate within 7 days of application.

Preplant Incorporated (Fall) Application: Apply IPIMETHALIN-L or IPIMETHALIN-L plus Eptam and immediately incorporate in late fall before planting sunflowers the following spring. Refer to Incorporation Directions section (see table of contents for page number) and the Eptam label for incorporation directions. Destroy existing weeds before applying IPIMETHALIN-L or IPIMETHALIN-L tank mixture. The soil should be dry enough to allow good incorporation.

DO NOT apply IPIMETHALIN-L plus Eptam tank mixture by air.

Apply IPIMETHALIN-L or IPIMETHALIN-L plus EPTAM tank mixture in the late fall when soil temperatures are 45°F or below, but before the ground freezes. DO NOT apply when the air temperature is below 45°F.

Before planting sunflowers in the spring, fields treated with IPIMETHALIN-L or IPIMETHALIN-L plus Eptam 7E should receive at least one additional shallow incorporation. Spring incorporation should be made at an angle to the last tillage operation.

IPIMETHALIN-L USE RATES IN SUNFLOWERS

Recommended use rates for IPIMETHALIN-L are given in the following tables.

Broadcast Application Rate per Acre of IPIMETHALIN-L (Pints per Acre) for Spring Preplant Incorporated in Sunflowers

Soil Texture	Southern States ¹	Northern States ¹	
		<3.0 % Organic Matter	>3.0 % Organic Matter
Fine	1.8 to 3.6 pints	2.4 to 3.6 pints	3.6 pints
Medium	1.8 to 2.4 pints	1.8 to 3.0 pints	3.0 to 3.6 pints
Coarse	1.2 to 1.8 pints	1.2 to 2.4 pints	2.4 pints

¹ See map at the end of this label for specific states.

Use the 3.6 pint broadcast application rate for heavy clay soils.

Broadcast Application Rate per Acre of IPIMETHALIN-L (Pints per Acre) for Fall Preplant Incorporated Application in Sunflowers¹

Soil Texture	<3% Organic Matter	>3 % Organic Matter
Fine	3.0 to 4.2 pints	4.2 pints
Medium	2.4 to 3.6 pints	3.6 to 4.2 pints
Coarse	1.8 to 3.0 pints	3.0 pints

¹ For use in North Dakota, South Dakota and Minnesota only

Use the high application rate for each soil texture if heavy weed pressure is anticipated.

Broadcast Application Rate per Acre of IPIMETHALIN-L Plus Eptam 7E (Pints per Acre) for Fall Preplant Incorporated Tank Mixture Application in Sunflowers¹

Soil Texture	IPIMETHALIN-L plus Eptam 7E	
	<3% Organic Matter	>3 % Organic Matter
Fine	2.4 to 3.6 + 2.25 pints	3.6 + 2.25 pints
Medium	2.8 to 3.0 + 2.25 pints	3.0 to 3.6 + 2.25 pints
Coarse	1.2 to 2.4 + 2.25 pints	2.4 + 2.25 pints

¹ For use in North Dakota and Minnesota only.

Use the high application rate for each soil texture if heavy weed pressure is anticipated.

Read and strictly follow all precautions and directions on the Eptam label.

NO-TILL SUNFLOWERS (FOR USE IN COLORADO, KANSAS, MINNESOTA, NEBRASKA, AND NORTH AND SOUTH DAKOTA)

IPIMETHALIN-L may be applied immediately after planting, or up to 30 days before planting. DO NOT apply IPIMETHALIN-L postemergence because sunflowers exposed at the time of application will be killed. IPIMETHALIN-L controls weeds most effectively when adequate rainfall or irrigation is received within 7 days after application. Otherwise, treatment with a registered postemergence grass herbicide may be required.

If the field has a history of heavy weed infestations or contains excessive crop residues, uniformly apply IPIMETHALIN-L alone or in combination with other herbicides registered for gallonage.

Existing living vegetation must be controlled at or before the application of IPIMETHALIN-L.

A registered contact herbicide for use in sunflowers may be applied sequentially or in a tank mix with IPIMETHALIN-L. Consult the contact herbicide label for all directions, precautions and restrictions.

Broadcast Rate per Acre of IPIMETHALIN-L (Pints per Acre) Applied Preplant Surface or Preemergence in No-Till Sunflowers

Soil Texture	<3% Organic Matter	>3 % Organic Matter
Fine	3.6 pints	DO NOT USE
Medium	3.6 pints	3.6 pints
Coarse	3.0 to 3.6 pints	3.6 pints

TOBACCO

GENERAL DIRECTIONS AND PRECAUTIONS

IPIMETHALIN-L may be applied as a preplant incorporated treatment or as a layby application in transplanted tobacco.

If crop loss occurs as a result of weather conditions, transplanted tobacco or any crop registered for IPIMETHALIN-L preplant incorporated use can be replanted without adverse effects the same year. If replanting is necessary, DO NOT rework the soil deeper than the treated zone.

IPIMETHALIN-L is not recommended for use on peat or muck soils.

USE METHODS AND TIMINGS

Preplant Incorporated Application: Apply IPIMETHALIN-L with ground sprayer up to 60 days before transplanting tobacco and incorporate within 7 days of application.

IPIMETHALIN-L will not harm transplanted tobacco when applied according to directions and under normal growing conditions. Under stressful plant growth conditions, such as cold/wet or hot/dry weather, IPIMETHALIN-L may induce a temporary retardation of tobacco development.

Layby Application: IPIMETHALIN-L may be applied as a directed spray following the last normal cultivation (layby), usually 4 to 6 weeks after transplanting tobacco. Apply IPIMETHALIN-L in a 16 to 24-inch band in the middle of the row between the crop rows. The spray should not come into contact with tobacco plants. If the spray nozzles on the ends of the spray boom pass over the same row middle twice, use nozzles that apply one-half (1/2) the normal number of gallons per acre to prevent over application.

Layby applications can be applied to tobacco previously treated with herbicides registered for use in tobacco. Consult the labels of those herbicides for suggested treatments, rates to be used, and precautions or restrictions for use in tobacco and for follow crop restrictions.

IPIMETHALIN-L controls weeds most effectively when adequate rainfall or irrigation is received within 7 days after application.

IPIMETHALIN-L will not control established weeds. DESTROY EMERGED WEEDS BEFORE APPLICATION.

DO NOT APPLY AS A BROADCAST SPRAY OVER TOP OF TOBACCO LEAF. CONTACT MAY CAUSE MALFORMED LEAVES.

IPIMETHALIN-L USE RATES IN TRANSPLANTED TOBACCO

Recommended use rates for IPIMETHALIN-L alone is given in the following table.

Broadcast Application Rate¹ per Acre of IPIMETHALIN-L (Pints per Acre) Preplant incorporated in Transplanted Tobacco

REGION	SOIL TEXTURE	IPIMETHALIN-L
Maryland, Virginia, North Carolina, South Carolina, Georgia, Florida	COARSE	1.8 to 2.4 pints
	MEDIUM: sandy clay loams, loams	1.8 to 2.4 pints
	MEDIUM: silt loams, silts	2.4 to 3.0 pints
	FINE	2.4 to 3.0 pints
Other tobacco- growing states	COARSE	1.8 to 2.4 pints
	MEDIUM	3.0 to 3.6 pints
	FINE	3.0 to 3.6 pints

Broadcast Application Rate¹ per Acre of IPIMETHALIN-L (Pints per Acre) Layby Application in Transplanted Tobacco

Soil Texture	Rate ²
Fine	1.8 to 2.4 pints
Medium	1.8 to 2.4 pints
Coarse	1.2 to 1.8 pints

¹ To calculate the band treatment rate, see Spraying Directions section (see table of contents for page number).

² The high rate for each soil texture above should be used if a registered herbicide treatment was not applied prior to layby.

GENERAL INFORMATION FOR USE IN TURFGRASSES, ORNAMENTALS, LANDSCAPE AND GROUNDS MAINTENANCE PROGRAMS, NONCROPLAND AREAS AND TOTAL VEGETATIVE CONTROL

IPIMETHALIN-L will provide pre-emergence control of most annual grasses and certain broadleaf weeds in turfgrass sites, including lawns, sod, and turf areas. These turfgrass sites include, but are not limited to airports, athletic fields, cemeteries, golf courses, grounds or lawns around residential and commercial establishments, houses of worship, multi-family dwellings, military and other institutions, parks, picnic grounds, prairie grass areas, roadsides, schools, and sod farms.

IPIMETHALIN-L may also be applied in and around field, liner, and container grown ornamental nurseries; established landscape ornamentals and ornamental gardens, listed groundcovers, nonbearing fruit and nut trees, conifer and hardwood seedling nurseries, and for tree plantation site preparation and maintenance.

IPIMETHALIN-L may be used in general grounds maintenance programs in and around areas such as alleyways, bike and jogging paths, buildings, driveways and roadsides, markers and fence lines, mulch beds, parking lots, vacant lots, stone gardens and gravel yards and other similar areas. IPIMETHALIN-L may also be used under concrete or asphalt treatments in conjunction with a site preparation program.

IPIMETHALIN-L may be used for pre-emergence control of most annual grasses and certain broadleaf weeds as they germinate in noncropland areas such as railroad, utility, highway, and pipeline rights-of-way, highway guardrails, delineators, and sign posts, bridge abutments and approaches, utility substations, petroleum tank farms, pumping installations, storage areas, fence rows, windbreaks and shelterbelts, paved or gravel surfaces, and other similar areas.

IPIMETHALIN-L herbicide controls weeds as they germinate, but does not control established weeds. Established weeds should first be removed from areas to be treated. To control of established weeds, IPIMETHALIN-L herbicide may be used in conjunction with herbicides registered for post-emergence use. Consult the labels of post-emergence herbicides for use rates, timings, precautions and restrictions.

Usually cold, excessively wet, or hot and dry conditions that can delay germination or extend germination over a long period of time may reduce weed control. To improve the efficacy of IPIMETHALIN-L, applications should be followed by one-half inch of rainfall or its equivalent in sprinkler irrigation. Erratic weed control can occur if IPIMETHALIN-L is not activated by rainfall or irrigation within 30 days.

IPIMETHALIN-L alone or IPIMETHALIN-L tank-mix combinations will not cause crop injury if applied according to label directions and under normal growing conditions. Over-application may cause crop injury, crop stand loss, or soil residues. Decreased weed control or cause crop injury may result from uneven application.

Cold weather, excessive moisture, drought, high soil pH, high soil salt concentration, or seedling diseases may weaken seedlings and plants, and increase the potential for plant injury from IPIMETHALIN-L application.

Temporary discoloration of sprayed surfaces may be caused by IPIMETHALIN-L application. Immediately rinse all surfaces to avoid staining. Add spray colorants or dyes to alter the color of the spray solution so that it matches the treated surfaces.

MIXING DIRECTIONS

This section of this label defines the respective recommended IPIMETHALIN-L or IPIMETHALIN-L tank-mix treatments.

GROUND DRIVEN SPRAYER

1. Fill the tank one-half to three-quarters full with clean water.
2. While agitating add IPIMETHALIN-L to the partially filled tank. Then fill the rest of the tank with water.
3. CONTINUOUS AGITATION MUST BE MAINTAINED WHILE ADDING IPIMETHALIN-L AND UNTIL SPRAYING IS COMPLETED. If the spray mixture is permitted to settle for any period of time, thorough agitation is necessary before spraying is resumed. Continue agitation while spraying.
4. When using IPIMETHALIN-L -L in tank mixtures with other registered herbicides, follow the directions on the labels of those products recommended for tank mixing.

BACKPACK SPRAYER

Start with a clean spray tank. Fill the spray tank to one-half full with clean water. Add the required amount of IPIMETHALIN-L herbicide to the partially filled spray tank. Cap the spray tank and agitate for thorough mixing. Uncap the

spray tank and then fill the tank to the desired level. Cap the spray tank and continue agitation. Continue to agitate the mixture on occasion during application for thorough mixing. If the spray mixture is permitted to settle for any period of time, thorough agitation is necessary before spraying is resumed.

LIQUID FERTILIZERS

Before mixing IPIMETHALIN-L with liquid fertilizers, small quantities should first be tested using a simple jar test. While agitating, add the required amount of IPIMETHALIN-L herbicide to the half filled spray tank. Then add the liquid fertilizer. Finish by filling the spray tank to the desired level.

DRY BULK FERTILIZERS

IPIMETHALIN-L can be impregnated on dry bulk fertilizers. When applied as directed, IPIMETHALIN-L herbicide/Dry Bulk Fertilizer mixtures will provide weed control equal to that provided by the same rates of IPIMETHALIN-L herbicide applied in water.

SPRAYING DIRECTIONS

IPIMETHALIN-L and IPIMETHALIN-L tank mixtures should be applied with properly calibrated ground equipment in enough water per acre so that uniform spray distribution (at least 40 gallons of water per are) is achieved. Low pressure (e.g. 20-40 psi) sprayers are recommended. Continuous agitation should be maintained while spraying using good mechanical or bypass agitation. Check spray equipment on a routine basis to ensure proper calibration. Overlapping spray should be avoided, especially if it will increase rates above those recommended. Application should be avoided when winds may cause drift. Avoid letting spray solution come into contact with driveways, stone, wood or other porous surfaces. If contact occurs, rinse immediately to avoid staining.

WEED SPECIES CONTROLLED

Apply IPIMETHALIN-L for preemergence control of the weed species listed in the following tables. Applications may be made around and over the top of the ornamentals and to the sites listed on this label.

Grasses:

Common Name	Scientific Name
Barnyardgrass	<i>Echinochloa crus-galli</i>
Bluegrass, Annual	<i>Poa annua</i>
Crabgrass	<i>Digitaria spp.</i>
Crowfootgrass	<i>Dactyloctenium aegyptium</i>
Foxtail, Giant	<i>Setaria faberi</i>
Foxtail, Green	<i>Setaria viridis</i>
Foxtail, Yellow	<i>Setaria glauca</i>
Goosegrass	<i>Eleusine indica</i>
Itchgrass	<i>Rottboellia exaltata</i>
Johnsongrass (from seed)	<i>Sorghum halepense</i>
Jungle rice	<i>Echinochloa colona</i>
Lovegrass (from seed)	<i>Eragrostis spp.</i>
Panicum, Browntop	<i>Panicum fasciculatum</i>
Panicum, Fall	<i>Panicum dichotomiflorum</i>
Panicum, Texas	<i>Panicum texanum</i>
Sandbur, Field	<i>Cenchrus incertus</i>
Signalgrass	<i>Brachiaria platyphylla</i>
Sprangletop, Mexican	<i>Leptochloa uninervis</i>
Sprangletop, Red	<i>Leptochloa filiformis</i>
Witchgrass	<i>Panicum capillare</i>
Woolly Cupgrass	<i>Eriochloa villosa</i>

Broadleaf Weeds:

Common Name	Scientific Name
Burweed, Lawn	<i>Soliva pterosperma</i>
Carpetweed	<i>Mollugo verticillata</i>
Chickweed, Common	<i>Stellaria media</i>
Chickweed, Mouseear	<i>Cerastium vulgatum</i>
Clover, Hop	<i>Trifolium procumbens</i>
Cudweed	<i>Gnaphalium spp.</i>
Eveningprimrose	<i>Oenothera biennis</i>
Fiddleneck	<i>Amisnckia intermedia</i>

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Filaree	<i>Erodium</i> spp.
Henbit	<i>Lamium amplexicaule</i>
Knotweed, Prostrate	<i>Polygonum aviculare</i>
Kochia	<i>Kochia scoparia</i>
Lambsquarters	<i>Chemopodium album</i>
Pigweed	<i>Amaranthus</i> spp.
Puncturevine	<i>Tribulus terrestris</i>
Purslane	<i>Portulaca oleracea</i>
Pusley, Florida	<i>Richardia scabra</i>
Rocket, London	<i>Sisymbrium ino</i>
Shepherdspurse	<i>Capsella bursa-pastoris</i>
Smartweed, Pennsylvania	<i>Polygonum pennsylvanicum</i>
Speedwell, Corn	<i>Veronica arvensis</i>
Spurge, Annual	<i>Euphorbia</i> spp.
Spurge, Prostrate	<i>Euphorbia humistrata</i>
Woodsorrel, Yellow	<i>Oxalis stricta</i>
Velvetleaf (Buttonweed)	<i>Abutilon theophrasti</i>

LANDSCAPE AND GROUNDS MAINTENANCE PROGRAMS

GENERAL DIRECTIONS AND PRECAUTIONS

IPIMETHALIN-L may be used in landscape and grounds maintenance programs for extended pre-emergence control of most annual grasses and certain broadleaf weeds.

Areas to be treated (including beds, parking areas and roadsides fencelines and borders, around statuary or monuments, and similar areas) should be free of emerged weeds prior to applying IPIMETHALIN-L. Remove emerged weeds by cultivation or tank mixing with a post-emergence product labeled for such use.

Avoid letting spray solution contact stone, wood, or other porous surfaces because staining may occur. If contact occurs, rinse immediately to avoid staining.

USE METHODS AND TIMINGS

For pre-emergence control of the weed species listed using broadcast spray equipment, apply IPIMETHALIN-L herbicide at the recommended rates indicated in the application rate table for landscape and grounds maintenance programs to determine the appropriate amount of IPIMETHALIN-L to be applied per acre.

When applying IPIMETHALIN-L using hand-held spray equipment, refer to the application rate table for landscape and grounds maintenance programs to determine the appropriate amount of IPIMETHALIN-L to be applied per 1000 square feet. Although the amount of water used to apply IPIMETHALIN-L is not critical, be sure to use enough water to provide thorough coverage without causing runoff. Calibration of backpack or other hand-held equipment will vary with each operator. Determine the amount of water needed to treat 1000 square feet before mixing the spray solution. Follow the mixing instructions provided in the general MIXING DIRECTIONS section of this label.

To improve the efficacy of IPIMETHALIN-L, applications should be followed by one-half inch of rainfall or its equivalent in sprinkler irrigation. Erratic weed control may occur if IPIMETHALIN-L is not activated by rainfall or irrigation within 30 days.

IPIMETHALIN-L does not provide control of established weeds.

Weeds that develop before IPIMETHALIN-L is activated should be destroyed by shallow cultivation or remove by hand where possible. Use IPIMETHALIN-L in conjunction with herbicides registered for post-emergence use (i.e. Roundup⁵ or Finale¹³) to control established weeds. Do not apply sprays containing Roundup or Finale over the top of desirable plants. Follow IPIMETHALIN-L application with any registered herbicide to control weeds not listed on this label.

IPIMETHALIN-L USE RATES IN LANDSCAPE AND GROUNDS MAINTENANCE PROGRAMS

Use rates recommended for IPIMETHALIN-L alone and in tank mix applications are provided in the following table.

Broadcast Application Rate Per Acre and Per 1000 Square Feet For Preemergence Application of IPIMETHALIN-L in Landscape And Grounds Maintenance Programs

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	Quarts per Acre	Ounces per 1000 Square Feet
Short-term control (2-4 Months)	2.4 quarts	1.8 oz
Long-term control (6-8 months)	4.8 quarts	3.6 oz

NON-CROPLAND AREAS (INCLUDING TREE PLANTATIONS)

GENERAL DIRECTIONS AND PRECAUTIONS

IPIMETHALIN-L may be applied as a grounds maintenance treatment in noncropland areas for pre-emergence control of weed species found in and around pulpwood and fiber farms, established tree plantations (including Christmas trees), established ornamentals planted in non-cropland areas (including utility substations and highway rights-of-way). IPIMETHALIN-L may also be used in conjunction with hardwood and conifer regeneration on conservation reserve program land or similar areas.

Apply IPIMETHALIN-L either at planting or to established trees. If application of IPIMETHALIN-L is made at planting, be sure that slit closure has been completed to ensure that IPIMETHALIN-L does NOT come into direct contact with tree roots or washed into the root zone through the open slit; otherwise, root stunting may occur.

USE METHODS AND TIMINGS

For pre-emergence control of the weed species listed using broadcast spray equipment, apply IPIMETHALIN-L herbicide at the recommended rates indicated in the application rate table for noncropland areas (including tree plantations) to determine the appropriate amount of IPIMETHALIN-L to be applied per acre.

When applying IPIMETHALIN-L using hand-held spray equipment, refer to the application rate table for noncropland areas (including tree plantations) to determine the appropriate amount of IPIMETHALIN-L to be applied per 1000 square feet. Although the amount of water used to apply IPIMETHALIN-L is not critical, be sure to use enough water to provide thorough coverage without causing runoff. Calibration of backpack or other hand-held equipment will vary with each operator. Determine the amount of water needed to treat 1000 square feet before mixing the spray solution. Follow the mixing instructions provided in the general MIXING DIRECTIONS section of this label.

To improve the efficacy of IPIMETHALIN-L, applications should be followed by one-half inch of rainfall or its equivalent in sprinkler irrigation. Erratic weed control may occur if IPIMETHALIN-L is not activated by rainfall or irrigation within 30 days.

IPIMETHALIN-L does not provide control of established weeds.

Weeds that develop before IPIMETHALIN-L is activated should be destroyed by shallow cultivation or remove by hand where possible. Use IPIMETHALIN-L in conjunction with herbicides registered for post-emergence use (i.e. Roundup⁵ or Finale¹³) to control established weeds. Do not apply sprays containing Roundup⁵ or Finale¹³ over the top of desirable plants. Follow IPIMETHALIN-L application with any registered herbicide to control weeds not listed on this label.

IPIMETHALIN-L USE RATES IN NONCROPLAND AREAS (INCLUDING TREE PLANTATIONS)

Use rates recommended for IPIMETHALIN-L alone and in tank mix applications are provided in the following table.

Broadcast Application Rate Per Acre and Per 1000 Square Feet For Preemergence Application of IPIMETHALIN-L in Noncropland Areas (Including Tree Plantations)

	Quarts per Acre	Ounces per 1000 Square Feet
Short-term control (2-4 Months)	2.4 quarts	1.8 oz
Long-term control (6-8 months)	4.8 quarts	3.6 oz

IPIMETHALIN-L TANK MIXES IN NONCROPLAND AREAS (INCLUDING TREE PLANTATIONS)

IPIMETHALIN-L may be applied in tank mixes with post-emergence herbicides to control emerged weeds in noncropland areas (including tree plantations). To control emerged weeds in noncropland areas (including tree plantations), IPIMETHALIN-L may be applied with Roundup⁵, Finale¹³, and other similar products. Refer to the companion product label(s) labeling for species recommendations. When using tank mixtures with IPIMETHALIN-L, always read the companion product label(s) to determine the specific use rates by soil types, weed species, and weed or crop growth

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stage. In addition, follow all precautions and restrictions including state and local use restrictions that may apply to specific products. Always follow the most restrictive label directions.

Be sure to prevent combination sprays from coming into direct contact with desirable foliage, otherwise plant injury may occur. Combining IPIMETHALIN-L with diuron or simazine may expand the weed control spectrum, but the use of such combinations may restrict IPIMETHALIN-L application in sensitive areas.

ORNAMENTALS

GENERAL DIRECTIONS AND PRECAUTIONS

IPIMETHALIN-L may be applied to established plantings in ornamentals for preemergent weed control. Application of IPIMETHALIN-L to seedbeds, transplant beds, or liners should be DELAYED until plants have become well-rooted.

Be sure soil and/or planting mixes have settled completely after transplanting so that no cracks are present that would allow IPIMETHALIN-L to come into direct contact with roots. Effective weed control and ornamental tolerance will result from directed sprays where soil and media surfaces are uniformly covered.

Plant only desirable plant species listed on this label into soil that has been treated with IPIMETHALIN-L during the previous season; otherwise, plant injury may occur.

DELAY first IPIMETHALIN-L application to bare root liners for 2-4 weeks in container-grown ornamentals.

DO NOT treat plants grown for food or feed.

DO NOT use treated plants for food or feed.

RECOMMENDED ORNAMENTAL SPECIES

IPIMETHALIN-L sprays may be applied around and over the top of established plants listed in the following tables, but not all of the varieties or strains of the listed plants have been tested. Adverse effects such as crop injury may occur due to environmental or growth factors, use methods or application conditions. Spray only a few plants to test for plant damage before treating a large number of plants or full-scale application.

Although IPIMETHALIN-L may be used on plant species not listed in the following tables, the compatibility should be tested by treating a small number of such plants at the recommended rates. Treated plants should be monitored for 1 - 2 months after treatment to determine the possibility for injury.

USERS WILL ASSUME RESPONSIBILITY FOR ANY CROP DAMAGE OR OTHER LIABILITY.

Trees:

Common Name	Scientific Name
Alder, European black	<i>Ainus glutinosa</i>
Apple	<i>Malus spp.</i>
Arborvitae, American	<i>Thuja occidentalis</i>
Arbutus	<i>Arbutus spp</i>
Ash, Red	<i>Fraxinus pennsylvanica</i>
Ash, White	<i>Fraxinus americana</i>
Aspen, Bigtooth	<i>Populus grandidentata</i>
Aspen, Quaking	<i>Populus tremuloides</i>
Basswood	<i>Tilia spp.</i>
Birch, European Weeping	<i>Betula pendula</i>
Birch, River	<i>Betula nigra</i>
Buckeye, Red	<i>Aesculus pavia</i>
Cedar, White	<i>Thuja occidentalis</i>
Chamaecyparis, Boulevard	<i>Chamaecyparis pisifera</i>
Cherry, Black	<i>Prunus serotina</i>
Cherry, Choke	<i>Prunus virginiana</i>
Cherry, Kwanzan	<i>Prunus serrulata</i>
Cherry, Nanking	<i>Prunus tomentosa</i>
Cottonwood	<i>Populus deltoides</i>
Crabapple	<i>Malus spp.</i>
Crepe myrtle	<i>Lagerstroemia indica</i>

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Common Name	Scientific Name
Cryptomeria, Japanese Cedar	<i>Cryptomeria japonica</i>
Cypress, Bald	<i>Taxodium distichum</i>
Cypress, Leyland	<i>Cupressocyparis leylandii</i>
Dogwood, Flowering	<i>Cornus florida</i>
Dogwood, Korean	<i>Cornus kousa</i>
Dogwood, Silky	<i>Cornus amomum</i>
Dogwood, Shrub	<i>Cornus</i> spp.
Elm	<i>Ulmus japonica</i>
Fir, Balsam	<i>Abies balsamae</i>
Fir, Douglas	<i>Pseudotsuga menziesii</i>
Fir, Fraser	<i>Abies fraseri</i>
Fir, White	<i>Abies concolor</i>
Franklinia	<i>Franklinia</i> spp.
Ginkgo	<i>Ginkgo biloba</i>
Gum, Black	<i>Nyssa sylvatica</i>
Gum, Sour	<i>Nyssa sylvatica</i>
Haw. Black	<i>Viburnum prunifolium</i>
Hawthorn	<i>Crataegus</i> spp.
Hemlock, Canada	<i>Tsuga canadensis</i>
Hemlock, Eastern	<i>Tsuga canadensis</i>
Holly, American	<i>Ilex opaca</i>
Honeylocust	<i>Gleditsia triacanthos</i>
Lilac, Common	<i>Syringa vulgaris</i>
Lilac, Japanese Tree	<i>Syringa reticulata</i>
Linden	<i>Tilia</i> spp.
Magnolia, Saucer	<i>Magnolia soulangiana</i>
Magnolia, Southern	<i>Magnolia grandiflora</i>
Magnolia, Star	<i>Magnolia stellata</i>
Maidenhair Tree	<i>Ginkgo biloba</i>
Maple, Norway	<i>Acer platanoides</i>
Maple, Japanese	<i>Acer palmatum</i>
Maple, Red	<i>Acer rubrum</i>
Maple, Sugar	<i>Acer saccharum</i>
Nannyberry, Rusty	<i>Viburnum rufidulum</i>
Oak, Chinquapin	<i>Quercus muehlenbergii</i>
Oak, Live	<i>Quercus virginiana</i>
Oak, Pin	<i>Quercus palustris</i>
Oak, Red	<i>Quercus rubra</i>
Oak, Swamp Chestnut	<i>Quercus michauxii</i>
Oak, Water	<i>Quercus nigra</i>
Oak, White	<i>Quercus alba</i>
Oak, Willow	<i>Quercus phellos</i>
Olive	<i>Olea europaea</i>
Palm, Date	<i>Phoenix</i> spp.
Palm, Fan	<i>Washingtonia</i> spp.
Palm, Pindo	<i>Butia</i> spp.
Palm, Washington	<i>Washingtonia</i> spp.
Peach	<i>Prunus persica</i>
Pear, Bradford	<i>Pyrus calleryana</i> 'Bradford'
Pecan	<i>Carya illinoensis</i>
Pine, Austrian	<i>Pinus nigra</i>
Pine, Italian Stone	<i>Pinus pinea</i>
Pine, Loblolly	<i>Pinus taeda</i>
Pine, Monterey	<i>Pinus radiata</i>
Pine, Red	<i>Pinus resinosa</i>
Pine, Scotch	<i>Pinus sylvestris</i>
Pine, Slash	<i>Pinus elliottii</i>
Pine, Virginia	<i>Pinus virginiana</i>
Pine, White	<i>Pinus strobus</i>
Plum, Purple Leaf	<i>Prunus cerasifera</i>
Poplar, Black	<i>Populus nigra</i>
Redcedar, Eastern	<i>Juniperus virginiana</i>
Redcedar, Western	<i>Thuja plicata</i>
Red Ironbark	<i>Eucalyptus sideroxylon</i> 'Rosea'
Redwood, Dawn	<i>Metasequoia glyptostroboides</i>
Sequoia, Giant	<i>Sequoiadendron giganteum</i>
Serviceberry	<i>Amelanchier laevis</i>
Sourwood	<i>Oxydendrum arboreum</i>
Spruce, Colorado Blue	<i>Picea pungens</i>

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Common Name	Scientific Name
Spruce, Dwarf Alberta	<i>Picea glauca</i> 'Albertiana'
Spruce, Norway	<i>Picea abies</i>
Spruce, White	<i>Picea glauca</i>
Sweetgum	<i>Liquidambar styraciflua</i>
Sycamore	<i>Platanus occidentalis</i>
Trachycarpus	<i>Trachycarpus</i> spp
Tulip tree	<i>Liriodendron tulipifera</i>
Walnut, Black	<i>Juglans nigra</i>
Willow, Weeping	<i>Salix babylonica</i>
Yellowwood	<i>Cladrastis lutea</i>

Shrubs:

Common Name	Scientific Name
Abelia, Glossy	<i>Abelia grandiflora</i>
Aucuba, Gold	<i>Aucuba japonica</i>
Azalea	<i>Rhododendron</i> spp.
Bamboo, Heavenly	<i>Nandina domestica</i>
Barberry	<i>Berberis gladywensis</i>
Barberry, Japanese	<i>Berberis thunbergii</i>
Blue Indigo Bush	<i>Dalea gregii</i>
Bottlebrush, Lemon	<i>Callistemon citrinus</i>
Boxwood, Common	<i>Buxus sempervirens</i>
Boxwood, Japanese	<i>Buxus microphylla</i>
Camellia	<i>Camellia japonica</i>
Cape jasmine	<i>Gardenia jasminoides</i>
Cordyline	<i>Cordyline</i> spp.
Correa	<i>Correa</i> spp.
Cotoneaster	<i>Cotoneaster apiculatus</i>
Cotoneaster, Bearberry	<i>Cotoneaster dammeri</i>
Cotoneaster, Rock	<i>Cotoneaster horizontalis</i>
Cypress, Italian	<i>Cupressus sempervirens</i>
Cypress, Leyland	<i>Cupressocyparis leylandii</i>
Deutzia, Slender	<i>Deutzia gracilis</i>
Dogwood, Red Twig	<i>Comus sericea</i>
Elaeagnus	<i>Elaeagnus ebbingei</i>
Escallonia	<i>Escallonia fradesii</i>
Euonymus	<i>Euonymus fortunei</i>
Euonymus, Golden	<i>Euonymus japonica</i>
Euonymus, Winged	<i>Euonymus alata</i>
Firethorn	<i>Pyracantha coccinea</i>
Forsythia, Border	<i>Forsythia intermedia</i>
Fragrant Olive	<i>Osmanthus fragrans</i>
Fuschia, California	<i>Zauschneria californica</i>
Gardenia	<i>Gardenia jasminoides</i>
Hawthorne, Indian	<i>Raphiolepis indica</i>
Hibiscus	<i>Hibiscus syriacus</i>
Holly, Chinese	<i>Ilex cornuta</i>
Holly, Japanese	<i>Ilex crenata</i>
Holly, Fosters	<i>Ilex attenuata</i> 'Fosteri'
Holly, Savannah	<i>Ilex attenuata</i>
Holly, Yaupon	<i>Ilex vomitoria</i>
Honeysuckle, Bush	<i>Diervilla lonicera</i>
Juniper	<i>Juniperus</i> spp.
Juniper, Chinese	<i>Juniperus chinensis</i> v. <i>pfitzer</i>
Juniper, Shore	<i>Juniperus conferta</i>
Juniper, Trailing	<i>Juniperus horizontalis</i>
Laurel, Cherry	<i>Prunus laurocerasus</i>
Laurel, Mountain	<i>Kalmia latifolia</i>
Laurel, Otto Luyken	<i>Prunus laurocerasus</i>
Laurel, Schipka	<i>Prunus schipkanensis</i>
Laurustinus	<i>Viburnum tinus</i>
Lavender, English	<i>Lavandula angustifolia</i>
Leucothoe	<i>Leucothoe fontanesiana</i>
Leucothoe, Coast	<i>Leucothoe axillaris</i>
Lilac, Cut-Leaf	<i>Syringa laciniata</i>
Lily-of-the-Nile	<i>Agapanthus africanus</i>
Mahonia	<i>Mahonia aquifolium</i>
Mock Orange	<i>Pittosporum tobira</i>

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Common Name	Scientific Name
Myrtle, Compact	<i>Myrtus communis</i>
Myrtle, Wax	<i>Myrica cerifera</i>
Nandina	<i>Nandina domestica</i>
Oleander	<i>Nerium oleander</i>
Oregon Grape	<i>Mahonia aquifolium</i>
Osmanthus	<i>Osmanthus fragrans</i>
Palm, European Fan	<i>Chamaerops humilis</i>
Palm, Mediterranean Fan	<i>Chamaerops</i> spp.
Phlox, Prickly	<i>Leptodactylon californicum</i>
Photinia, Fraser	<i>Photinia X Fraseri</i>
Pieris, Japanese	<i>Pieris japonica</i>
Pine, Mugo	<i>Pinus mugo</i>
Plum, Natal	<i>Carissa grandiflora</i>
Privet, California	<i>Ligustrum ovalifolium</i>
Privet, Glossy	<i>Ligustrum lucidum</i>
Privet, Variegated	<i>Ligustrum sinensis</i>
Privet, Waxleaf	<i>Ligustrum japonicum</i>
Pyracantha	<i>Pyracantha coccinea</i>
Quince, Flowering	<i>Chaenomeles japonica</i>
Ranger, Texas	<i>Leucophyllum frutescens</i>
Redroot	<i>Ceanothus</i> spp.
Rhododendron	<i>Rhododendron</i> spp.
Robira	<i>Pittosporum tobira</i>
Spice Plant	<i>Illicium parviflorum</i>
Spiraea	<i>Spiraea vanhouttei</i>
Spiraea, Anthony Waterer	<i>Spiraea X bumalda</i>
Spiraea, Japanese	<i>Spiraea japonica</i>
Sweet Bay	<i>Laurus nobilis</i>
Trumpet Bush	<i>Tecoma stans</i>
Verbena, Lemon	<i>Aloysia triphylla</i>
Viburnum	<i>Viburnum suspensum</i>
Vitex	<i>Vitex</i> spp.
Weigela	<i>Weigela florida</i>
Wild Lilac	<i>Ceanothus</i> spp.
Xylosma	<i>Xylosma congestum</i>
Yellowbells	<i>Tecoma stans</i>
Yew	<i>Taxus media</i>
Yew, Japanese	<i>Taxus cuspidata</i>
Yew, Southern	<i>Podocarpus macrophyllus</i>
Yucca, Adam's	<i>Yucca filamentosa</i>
Yucca, Weeping	<i>Yucca pendula</i>

Ground Covers:

Common Name	Scientific Name
Ajuga	<i>Ajuga reptans</i>
Capeweed	<i>Arctotheca calendula</i>
Cinquefoil, Spring	<i>Potentilla verna</i>
Daisy, Trailing African	<i>Osteospermum fruticosum</i>
Gazania	<i>Gazania splendens</i>
Iceplant, Large Leaf	<i>Carpobrotus edulis</i>
Ivy, English	<i>Hedera helix</i>
Ivy, Geranium	<i>Pelargonium peltatum</i>
Jasmine, Asiatic	<i>Trachelospermum asiaticum</i>
Jasmine, Primrose	<i>Jasminum mesnyi</i>
Mondoegrass	<i>Ophiopogon japonica</i>
Myoporum	<i>Myoporum parvifolium</i>
Pachysandra	<i>Pachysandra terminalis</i>
Potentilla	<i>Potentilla fruticosa</i>
Rose-of-Sharon	<i>Hypericum calycinum</i>
Wintercreeper	<i>Euonymus fortunei</i>

Perennials:

Common Name	Scientific Name
Bleeding Heart	<i>Dicentra spectabilis</i>
Calla lily	<i>Zantedeschia aethiopica</i>
Canna, Common Garden	<i>Canna generalis 'Lucifer'</i>

Common Name	Scientific Name
Chincherinchee	<i>Ornithogalum thyrsoides</i>
Crinum Lily	<i>Crinum</i> spp.
Fern, Asparagus	<i>Asparagus officinalis</i>
Fern, Leatherleaf	<i>Rumohra adiantiformis</i>
Freesia	<i>Freesia X hybrida</i>
Heather, Dwarf	<i>Calluna vulgaris</i>
Hosta	<i>Hosta</i> spp.
Lily	<i>Lillium</i> spp.
Liriope, Creeping	<i>Liriope spicata</i>
Liriope, Variegated	<i>Liriope muscari</i>
Montbretia	<i>Crocsmia crocosmiiflora</i>
Orchid, Peacock	<i>Acidanthera bicolor</i>
Peony, Chinese	<i>Paeonia lactiflora</i>
Wisteria	<i>Wisteria</i> spp.
Zephyr Lily	<i>Zephyranthes</i> spp.

Ornamental Grasses:

Common Name	Scientific Name
Beach Grass	<i>Ammophila breviligulata</i>
Fescue, Blue	<i>Festuca ovina</i>
Fescue, Sheep	<i>Festuca ovina</i>
Fountain Grass	<i>Pennisetum setaceum</i>
Pampas Grass	<i>Cortaderia selloana</i>
Reed Canary Grass	<i>Phalaris arundinacea</i>
Reed, Giant	<i>Arundo</i> spp.
Ribbon Grass	<i>Phalaris arundinacea</i>
Tufted Hair Grass	<i>Deschampsia caespitosa</i>

USE METHODS AND TIMINGS

For pre-emergence control of the weed species listed using broadcast spray equipment, apply IPIMETHALIN-L herbicide at the recommended rates indicated in the application rate table for ornamentals to determine the appropriate amount of IPIMETHALIN-L to be applied per acre.

When applying IPIMETHALIN-L using hand-held spray equipment, refer to the application rate table for ornamentals to determine the appropriate amount of IPIMETHALIN-L to be applied per 1000 square feet. Although the amount of water used to apply IPIMETHALIN-L is not critical, be sure to use enough water to provide thorough coverage without causing runoff. Calibration of backpack or other hand-held equipment will vary with each operator. Determine the amount of water needed to treat 1000 square feet before mixing the spray solution. Follow the mixing instructions provided in the general MIXING DIRECTIONS section of this label.

To improve the efficacy of IPIMETHALIN-L, applications should be followed by one-half inch of rainfall or its equivalent in sprinkler irrigation. Erratic weed control may occur if IPIMETHALIN-L is not activated by rainfall or irrigation within 30 days.

IPIMETHALIN-L does not provide control of established weeds.

Weeds that develop before IPIMETHALIN-L is activated should be destroyed by shallow cultivation or remove by hand where possible. Use IPIMETHALIN-L in conjunction with herbicides registered for post-emergence use (i.e. Roundup⁵ or Finale¹³) to control established weeds. Do not apply sprays containing Roundup⁵ or Finale¹³ over the top of desirable plants. Follow IPIMETHALIN-L application with any registered herbicide to control weeds not listed on this label.

IPIMETHALIN-L USE RATES IN ORNAMENTALS

Use rates recommended for IPIMETHALIN-L alone and in tank mix applications are provided in the following table.

Broadcast Application Rate Per Acre and Per 1000 Square Feet For Preemergence Application of IPIMETHALIN-L in Ornamentals

	Quarts per Acre	Ounces per 1000 Square Feet
Short-term control (2-4 Months)	2.4 quarts	1.8 oz
Long-term control (6-8 months)	4.8 quarts	3.6 oz

IPIMETHALIN-L TANK MIXES IN ORNAMENTALS

IPIMETHALIN-L may be applied in tank mixes with post-emergence herbicides to control emerged weeds in ornamentals. To control emerged weeds in ornamentals, IPIMETHALIN-L may be applied with Roundup⁵, Finale¹³, Ornamec¹⁴, Gallery¹⁶, Princep¹⁷, and other similar products. DO NOT apply tank mix sprays with Roundup⁵ or Finale¹³ over the top of desirable plants.

When using tank mixtures with IPIMETHALIN-L, always read the companion product label(s) to determine the specific use rates by soil types, weed species, and weed or crop growth stage. In addition, follow all precautions and restrictions including state and local use restrictions that may apply to specific products. Always follow the most restrictive label directions.

TURFGRASSES

GENERAL DIRECTIONS AND PRECAUTIONS

Apply IPIMETHALIN-L to well established turfgrass with a dense and uniform stand.

Application should not be made to newly planted areas until the turfgrass has filled in and has been mowed at least four times. Allow for turf recovery before applying IPIMETHALIN-L to turf that has been thinned or damaged due to winter injury, excessive moisture, etc.

DO NOT apply to over-seeded warm-season turfgrasses as thinning or injury of the over-seeded species may result.

DO NOT use on greens as injury may result.

Re-seeding or winter over-seeding of treated turfgrass should be delayed for at least three months after the last IPIMETHALIN-L application. Sprigging turfgrass should be delayed for five months after IPIMETHALIN-L application.

To control weed emergence and ensure effective application rates along lawn edges and similar areas, it may be necessary to overlap the spray three to six inches onto sidewalks or driveways, etc. To avoid temporary discoloration and staining of pavement, rinse immediately.

IPIMETHALIN-L USE RATES IN TURFGRASSES

Use rates recommended for IPIMETHALIN-L alone and in tank mix applications are provided in the following table.

Application Rate Per Acre and Per 1000 Square Feet For Preemergence Application of IPIMETHALIN-L in Turfgrasses

Species	Weeds Controlled	Rate Per Acre	Rate Per 1000 Square Feet	Use Directions
Warm Season Species				
Bahigrass, Bermudagrass, Buffalograss, Centipedegrass, Fescue (tall), St. Augustinegrass, Zoysiagrass	Barnyardgrass, Crabgrass, Evening primrose, Fall panicum, Foxtail, Hop cover, Knotweed, Oxalis, <i>Poa annua</i> , Prostrate spurge, Purslane	3.6 to 7.2 pints	1.3 to 2.6 ounces	Make initial application before weed germination in spring. Make repeat application of 2.5 to 3.6 pts/Acre (1 to 1.3 oz/1000 sq. ft.) after 6-8 weeks if necessary.
	Goosegrass	3.6 to 7.2 pints	1.3 to 2.6 ounces	Make initial application before weed germination in spring, then a second application 6-8 weeks later. An additional application of 3.6 pt/Acre (1.3 oz/1000 sq. ft.) may be made to extend goose-grass control 8 weeks after the second applicaton.
	Chickweed, Corn speedwell, Cudweed, Henbit, Lawn burweed, <i>Poa annua</i>	3.6 to 4.8 pints	1.3 to 1.8 ounces	Make application in late summer or early fall before weed germination.

Cool Season Species				
Bluegrass, Kentucky Fescue, fine Fescue, tall Ryegrass, perennial	Barnyardgrass, Crabgrass, Evening Primrose, Fall Panicum, Foxtail, Hop clover Knotweed, Oxalis, <i>Poa annua</i> , Prostrate spurge, Purslane	3.6 to 4.8 pints	1.3 to 1.8 ounces	Make initial application before weed germination in spring. Make repeat application of 2.5 to 3.6 pts./Acre (1 to 1.3 oz/1000 sq. ft.) after 6-8 weeks for extended control or where heavy weed infestations are expected.
	Goosegrass	3.6 to 7.2 pints	1.3 to 2.6 ounces	Make initial application prior to weed germination in spring. Make repeat application of 3.6 pts./Acre (1.3 oz/100 sq. ft.) if the lower rate was used initially or for extended goosegrass control.
	Chickweed, Corn speedwell, Cudweed Henbit, Lawn burweed, <i>Poa annua</i>	1.3 to 1.8 oz	3.6 to 4.8 pt	Make application in late summer or early fall before weed germination.

The efficacy of IPIMETHALIN-L herbicide will be improved if the applications followed by one-half inch of rainfall or its equivalent in sprinkler irrigation. If IPIMETHALIN-L herbicide is not activated by rainfall or irrigation within 30 days erratic weed control may result.

IPIMETHALIN-L TANK MIXES IN TURFGRASS

IPIMETHALIN-L may be applied in tank mixes with post-emergence herbicides to control emerged weeds in turfgrasses. For annual grass control, IPIMETHALIN-L may be applied with Acclaim Extra¹³ or MSMA. For broadleaf weed control, IPIMETHALIN-L may be applied with Trimec¹⁴, Three-Way¹⁵, 2,4-D, and other similar products.

When using tank mixtures with IPIMETHALIN-L, always read the companion product label(s) to determine the specific use rates by soil types, weed species, and weed or crop growth stage. In addition, follow all precautions and restrictions including state and local use restrictions that may apply to specific products. Always follow the most restrictive label directions.

IPIMETHALIN-L APPLICATION ON INDUSTRIAL (UNIMPROVED) TURF

The spectrum of weeds to be controlled in industrial (unimproved) turf areas may differ from those for fine turf as indicated elsewhere on this label. In addition to the annual grasses and broadleaf weeds listed in the fine turf sections of this label IPIMETHALIN-L herbicide will provide control of the following weeds that may emerge in established grasses in construction sites, lots, parks, rights-of-way, roadsides, substations, or other similar areas:

- | | | |
|--------------------------|------------------------|----------------|
| Annual Spurge | Browntop Panicum | Carpetweed |
| Crowfootgrass | Fiddleneck | Field Sandbur |
| Filaree | Florida Pusley | Itchgrass |
| Johnsongrass (from seed) | Junglerice | Kochia |
| Lambsquarters | London Rocket | Lovegrass |
| Mexican Sprangletop | Pennsylvania Smartweed | Pigweed |
| Puncturevine | Red Sprangletop | Shepherdspurse |
| Signalgrass | Texas Panicum | Velvetleaf |
| Witchgrass | Woolly Cupgrass | |

Apply IPIMETHALIN-L before weed germination. IPIMETHALIN-L may be tank mixed with a post-emergence herbicide such as 2,4-D, MSMA, or similar products to control established weeds.

When using tank mixtures with IPIMETHALIN-L, always read the companion product label(s) to determine the specific use rates by soil types, weed species, and weed or crop growth stage. In addition, follow all precautions and restrictions including state and local use restrictions that may apply to specific products. Always follow the most restrictive label directions.

TOTAL VEGETATIVE CONTROL

GENERAL DIRECTIONS AND PRECAUTIONS

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IPIMETHALIN-L may be applied in tank mixes with Arsenal¹⁸, Plateau¹⁸, Roundup⁵, Karmex¹, Finale¹³, Oust¹, diuron, or similar products to achieve bare ground or total vegetation control. IPIMETHALIN-L can be used to provide greater selectivity in areas where bare ground or total vegetation control is desired. These types of areas may contain roots from desirable trees, landscape vegetation, or ornamentals within the treated zone. When using tank mixtures with IPIMETHALIN-L, always read the companion product label(s) to determine the effects on desirable plants.

DO NOT tank mix with Arsenal¹⁸ in California.

Applications may be made to emerged weeds controlled by the companion product herbicide. Determine recommended rates from the companion product labels prior to us and follow the most restrictive label instructions.

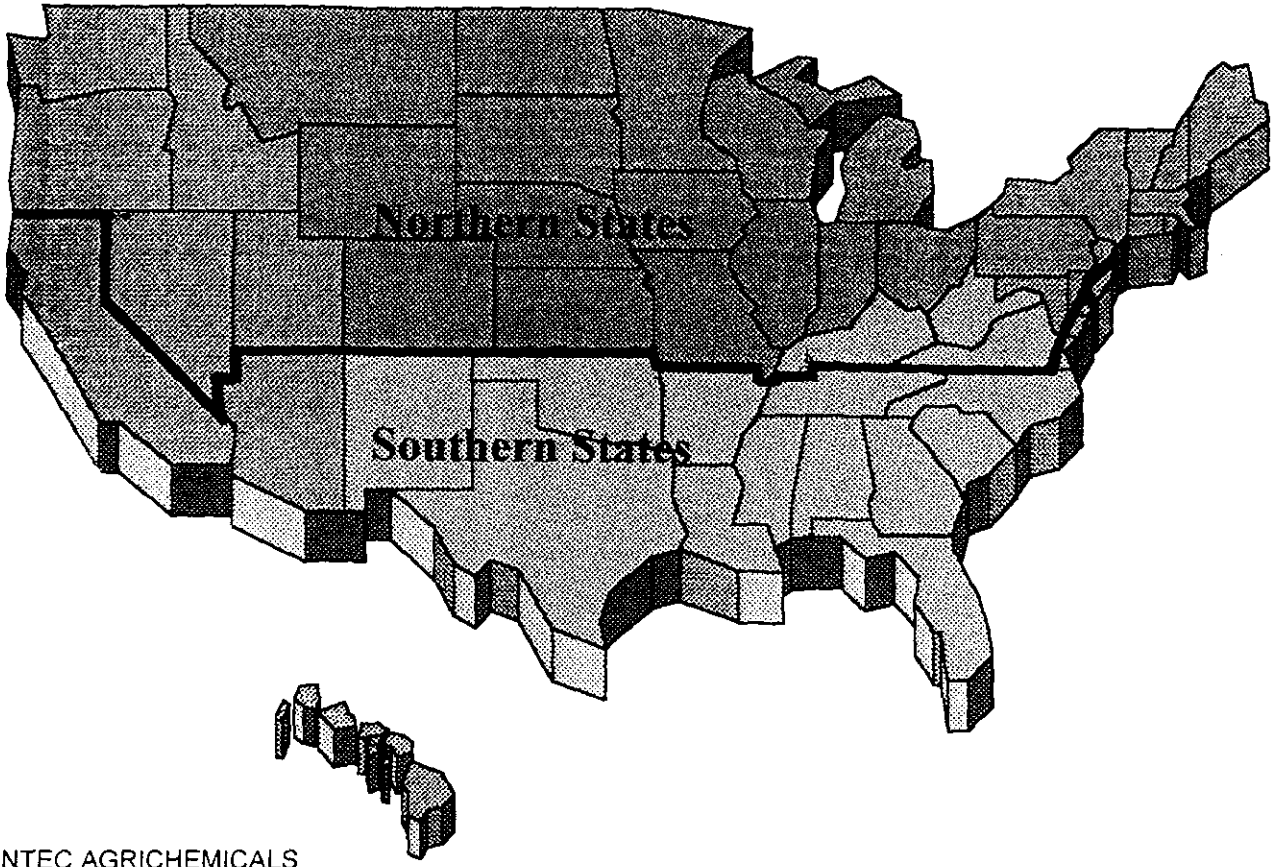
For Kochia, use combinations of IPIMETHALIN-L with Arsenal¹⁸ or diuron if there have been control problems for other herbicides.

Footnotes

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REGIONAL MAP FOR RATE DETERMINATION



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