

# HYVAR<sup>®</sup> X CROP

## HERBICIDE

Wettable Powder

### Active Ingredient

Bromacil (5-bromo-3-sec-butyl-6-methyluracil) ..... 80%

**Other Ingredients** ..... 20%

TOTAL ..... 100%

EPA Reg. No. 5481-632

EPA Est. No. \_\_\_\_\_

Nonrefillable Container Net: \_\_\_\_\_

**KEEP OUT OF REACH OF CHILDREN**

### CAUTION

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.)

FIRST AID	
<b>IF IN EYES:</b>	<ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li><li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>IF SWALLOWED:</b>	<ul style="list-style-type: none"><li>• Call a poison control center or doctor immediately for treatment advice.</li><li>• Have person sip a glass of water if able to swallow.</li><li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li><li>• Do not give anything by mouth to an unconscious person</li></ul>
<b>IF ON SKIN OR CLOTHING:</b>	<ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
For medical emergencies involving this product, call toll free .....1-888-681-4261	
For product information, call AMVAC <sup>®</sup> .....1-888-462-6822	



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## **PRECAUTIONARY STATEMENTS**

### **HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

CAUTION: Harmful if swallowed or absorbed through skin. Causes moderate eye irritation. Avoid contact with eyes, skin, 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 A on an EPA chemical resistance category selection chart.

#### **Applicators and other handlers must wear:**

Long-sleeved shirt and long pants.

Shoes plus socks.

Chemical resistant gloves made of any waterproof material such as polyethylene or polyvinylchloride.

#### **Mixers and Loaders must also wear:**

A non-powered air purifying respirator equipped with a N, R, or P series filter (NIOSH approved number prefix 84A) for mixing and loading.

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

### **ENGINEERING CONTROL STATEMENT**

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.

### **USER SAFETY RECOMMENDATIONS**

Users should: Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

### **ENVIRONMENTAL HAZARDS**

Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate.

Bromacil is known to leach through soil and has been found in ground water as a result of normal field use. Users are advised not to apply in areas where soils are permeable, particularly where ground water is used for drinking water. Consult with the pesticide state lead agency for information regarding soil permeability and aquifer vulnerability in your area.

## PRODUCT INFORMATION

HYVAR® X CROP HERBICIDE is a wettable powder to be mixed in water and applied as a spray for selective weed control in certain crops. HYVAR® X CROP HERBICIDE is an effective general herbicide that controls many annual weeds at lower rates and perennial weeds and brush at the highest rates allowed by this label. It is particularly useful for the control of perennial grasses.

Moisture is necessary to move the herbicide into the root zone of weeds. Best results are obtained if treatment is made to moist soil, and moisture is supplied by rainfall or sprinkler irrigation within two weeks after application.

Weed control symptoms are slow to appear and may not become apparent until the herbicide has been carried into the root zone of the weeds by moisture. The degree and duration of control will vary with the amount of herbicide applied, soil texture, rainfall, and other soil and water management practices.

## USE PRECAUTIONS AND RESTRICTIONS

HYVAR® X CROP HERBICIDE is not to be used in any recreational areas or in or around homes.

Injury to or loss of desirable trees or other plants may result from failure to observe the following: Do not apply (except as specified for crop use), or drain or flush equipment on or near desirable trees or other plants, or on areas where their roots may extend, or in locations where the chemical may be washed or moved into contact with their roots. Do not use on lawns, walks, driveways, tennis courts, or similar areas. Prevent drift of dry powder or spray to desirable plants. Keep from contact with fertilizers, insecticides, fungicides, and seeds. Thoroughly clean all traces of HYVAR® X CROP HERBICIDE from application equipment immediately after use. Flush tank, pump, hoses, and boom with several changes of water after removing nozzle tips and screens (clean these parts separately).

Do not apply this product through any type of irrigation system.

Do not graze cattle in treated areas.

Treated areas may be planted to citrus or pineapple one year after last application. Do not replant to other crops within two years after last application as injury may result.

### Note:

- Calibrate sprayers only with clean water away from the well site.
- Make scheduled checks of spray equipment.
- Assure accurate measurement of pesticides by all operation employees.
- Mix only enough product for the job at hand.
- Avoid over-filling of spray tank.
- Do not discharge excess material on the soil at a single spot in the field/grove or mixing/loading station.
- Dilute and agitate excess solution and apply at labeled rates/uses.
- Avoid storage of pesticides near well sites.

## **TANK MIXTURES**

HYVAR® X CROP HERBICIDE may be tank mixed with other suitable herbicides registered for agricultural use. Refer to the tank mixture partner label(s) for any additional use information or restrictions. Follow the label guidelines that are the most restrictive.

NOTE: HYVAR® X CROP HERBICIDE is a wettable powder formulation and care must be taken to ensure the product is fully suspended in the spray tank carrier (water, liquid fertilizer) before adding any other herbicide or spray adjuvant. If there is no prior use experience with the tank mixture combination, a small compatibility test should be performed prior to adding the products into the spray tank. See ADDITIONAL INSTRUCTIONS FOR AG USE section of the label for further information.

When using HYVAR® X CROP HERBICIDE alone or in combination, thoroughly re-agitate the spray tank contents if allowed to settle.

## **CROP ROTATION BIOASSAY**

In arid climates (10 inches of rainfall or less) or areas where drought conditions have prevailed for one or more years, a field bioassay should be completed prior to planting any desired crop(s). The results from this bioassay may require the two-year crop rotation interval to be extended. A successful field bioassay means growing to maturity a test strip of the crop(s) intended for production. The test strip should cross the entire field including knolls and low areas.

## **RESISTANCE**

When herbicides that affect the same biological site of action are used repeatedly over several years to control the same weed species in the same field, naturally- occurring resistant biotypes may survive a correctly applied herbicide treatment, propagate, and become dominant in that field. Adequate control of these resistant weed biotypes cannot be expected. If weed control is unsatisfactory, it may be necessary to re-treat the problem area using a product affecting a different site of action.

To better manage herbicide resistance through delaying the proliferation and possible dominance of herbicide resistant weed biotypes, it may be necessary to change cultural practices within and between crop seasons such as using a combination of tillage, re-treatment, tank-mix partners and/or sequential herbicide applications that have a different site of action. Weed escapes that are allowed to go to seed will promote the spread of resistant biotypes.

It is advisable to keep accurate records of pesticides applied to individual fields to help obtain information on the spread and dispersal of resistant biotypes. Consult your agricultural dealer, consultant, applicator, and/or appropriate state agricultural extension service representative for specific alternative cultural practices or herbicide recommendations available in your area.

## **INTEGRATED PEST MANAGEMENT**

This product may be used as part of an Integrated Pest Management (IPM) program that can include biological, cultural, and genetic practices aimed at preventing economic pest damage. IPM principles and practices include field scouting or other detection methods, correct target pest identification, population monitoring, and treating when target pest populations reach locally determined action thresholds. Consult your state cooperative extension service, professional consultants or other qualified authorities

to determine appropriate action treatment threshold levels for treating specific pest/crop systems in your area.

#### **DIRECTIONS FOR USE**

It is a violation of federal law to use this product in a manner inconsistent with its labeling. HYVAR® X CROP HERBICIDE must only be used in accordance with directions on this label. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

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.

#### **AGRICULTURAL USES**

##### **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 12 hours.

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 made of any waterproof material.

Shoes plus socks.

##### **APPLICATION INFORMATION**

Apply HYVAR® X CROP HERBICIDE using a properly calibrated fixed-boom power sprayer. All use rates of HYVAR® X CROP HERBICIDE are expressed for broadcast treatments. For band treatments, use proportionately less.

Use sufficient spray volume (minimum of 10 gallons per acre) to provide uniform coverage of the treated area and to allow proper dispersion and suspension of the product in the spray tank. Continuous agitation in the spray tank is required to keep the product in suspension. Agitate spray tank contents by mechanical or hydraulic means. If a by-pass or return line is used, it should terminate at a bottom of tank to minimize foaming. Do not use air agitation.

Spray booms must be shut off while starting, turning, slowing or stopping as injury to the crop or successive crops may result. Nozzle screens should be 50 mesh or larger.

## WEEDS CONTROLLED (annuals)

Barnyardgrass	<i>Echinochloa crus-galli</i>
Crabgrass	<i>Digitaria</i> spp.
Crowfootgrass	<i>Dactyloctenium aegyptium</i>
Henbit	<i>Lamium amplexicaule</i>
Lambsquarter, common	<i>Chenopodium album</i>
Mullien, turkey	<i>Eremocarpus setigerus</i>
Mustard	<i>Brassica</i> spp.
Natalgrass (red top)	<i>Rhynchelytrum repens</i>
Panicum, Texas	<i>Panicum texanum</i>
Puncturevine, common	<i>Tribulus terrestris</i>
Purslane, common	<i>Portulaca oleracea</i>
Purslane, horse	<i>Trianthema portulacastrum</i>
Pusley, Florida	<i>Richardia scraba</i>
Sandbur (sandspur)	<i>Cenchrus</i> spp.
Sedge, annual	<i>Cyperus compressus</i>
Sprangletop	<i>Leptochloa</i> spp.

## WEEDS CONTROLLED (perennials)

Bahiagrass	<i>Paspalum notatum</i>
Bermudagrass	<i>Cynodon dactylon</i>
Johnsongrass	<i>Sorghum halepense</i>
Nutsedge	<i>Cyperus</i> spp.
Pangolagrass	<i>Digitaria decumbens</i>
Paragrass	<i>Panicum purpurascens</i>
Torpedograss	<i>Panicum repens</i>

**NOTE:** Partial control of perennials usually occurs with a single treatment; repeat applications are required to control perennials. Control of perennials may be improved by cultivation prior to treatment; otherwise, avoid working the soil as long as weed control continues or else effectiveness of the treatment may be reduced.

## CITRUS

Apply HYVAR® X CROP HERBICIDE as a band or broadcast treatment beneath and/or between trees. Avoid contact of foliage and fruit with spray or mist.

Temporary yellowing of citrus leaves may occur following treatment. As injury to citrus trees may result, do not use on soils with less than 1% organic matter. Do not use on poorly drained soils, gravelly soils or thinly covered or exposed sub- soils.

Do not treat trees planted in irrigation furrows. Do not treat diseased or stressed trees. Do not use in citrus groves inter- planted with other desirable trees or plants or in areas where roots of desirable trees or plants may extend as injury to desirable trees or plants may result. Do not use in home citrus plantings.

Do not apply more than 8 pounds per acre per year.

When making multiple applications, do not apply at less than 60 day intervals.

## **FLORIDA**

HYVAR® X CROP HERBICIDE controls many annual weeds, and at the highest rates allowed on this label, it controls certain perennial weeds. It is particularly useful for control of perennial grasses.

Apply HYVAR® X CROP HERBICIDE any time of the year provided rainfall or overhead irrigation is available to activate the herbicide, preferably just before or just after weeds have germinated. Weed control symptoms are slow to appear and may not become apparent until the chemical has been carried into the root zone of the weeds by moisture. Best results are obtained if moisture is supplied by rainfall or sprinkler irrigation within two weeks after application.

Multiple applications may improve control of “hard-to-kill” weeds. The degree and duration of control will vary with the amount of herbicide applied, soil texture, rainfall and other conditions. It is non-corrosive to equipment, non- flammable and non-volatile.

## **PRECAUTIONS AND USE RESTRICTIONS**

The use of HYVAR® X CROP HERBICIDE (bromacil) is prohibited for weed control in non-bedded citrus groves located on any permeable, better drained soil identified in the intended site of application. Permeable, better drained soils which occur in citrus producing areas of the state include soils unnamed and characteristic of quartzipsamments, and the following soil series classifications:

Adamsville  
Archbold  
Astatula  
Bahiahonda  
Broward  
Canaveral  
Candler  
Cocoa  
Dade  
Florahome  
Fort Meade  
Gainesville  
Lake  
Lakewood  
Neilhurst  
Orlando  
Orsino  
Palm Beach  
Paola  
Satellite  
St. Augustine  
St. Lucie  
Tavares

Do not use HYVAR® X CROP HERBICIDE in recreational areas or around homes. Prevent drift of dry powder or spray to desirable plants.

Injury to or loss of desirable trees or other plants may result from failure to observe the following: Do not apply (except as specified for crop use), drain or flush equipment on or near desirable trees or other plants, or on areas where their roots may extend, or in locations where the chemical may be washed or moved into contact with their roots.

Do not use on lawns, walks, driveways, tennis courts, or similar areas. Do not apply directly to water, or to areas where surface water is present, or to inter-tidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash water. Keep from contact with fertilizer, insecticides, fungicides, and seeds. Thoroughly clean all traces of HYVAR® X CROP HERBICIDE from application equipment immediately after use. Flush tank, pump, hoses and boom with several changes of water after removing nozzle tips and screens (clean these parts separately.)

Temporary yellowing of citrus leaves may occur following treatment. Because injury to citrus trees may result, do not use on soils with less than 1.0% organic matter or on poorly drained soils.

Do not treat trees planted in irrigation furrows.

Do not treat diseased or stressed trees.

Do not use in citrus groves inter-planted with other desirable trees or plants, or in areas where roots of desirable trees or plants may extend, as injury to desirable trees or plants may result.

Do not use in home citrus plantings.

Do not apply this product through any type of irrigation system.

In areas where drought conditions have prevailed for one or more years, a field bioassay should be completed prior to planting any desired crop(s). The results from this bioassay may require the two-year crop rotation interval to be extended. A successful field bioassay means growing to maturity a test strip of the crop(s) intended for production. The test strip should cross the entire field including knolls and low areas.

#### **APPLICATION INSTRUCTIONS**

Apply HYVAR® X CROP HERBICIDE as a band treatment only using a properly calibrated fixed-boom power sprayer. **Do not use Trunk to Trunk.** All use rates of HYVAR® X CROP HERBICIDE are expressed for broadcast treatments. For band treatments, use proportionately less.

Use sufficient spray volume (minimum of 10 gallons per acre) to provide uniform coverage of the treated area and to allow proper dispersion and suspension of the product in the spray tank. Continuous agitation in the spray tank is required to keep the product in suspension.

Because injury to citrus trees may result, do not use on soils low in organic matter (less than 1%).

Avoid contact of foliage and fruit with spray or mist. Do not apply more than 8 pounds product (6.4 pounds active ingredient) per treated acre per year. The maximum allowable use rate for bromacil is 6.4 pounds active ingredient per treated acre per year inclusive of all bromacil formulations.



Treated areas may be planted to citrus trees one year after the last HYVAR® X CROP HERBICIDE application. Do not replant to other crops within two years after the last HYVAR® X CROP HERBICIDE application as plant injury may result.

Allow an interval of 60 days between application of HYVAR® X CROP HERBICIDE.

Do not graze cattle in treated areas.

**Trees Established Up to Three Years:** For control of annual weeds, apply 2-3 pounds of HYVAR® X CROP HERBICIDE per treated acre as needed to maintain weed control. Do not apply more than 6 pounds per treated acre within any 6 month period, or more than 8 pounds per treated acre per year.

**Trees Established Three or More Years:** For control of annual weeds, apply 2-4 pounds of HYVAR® X CROP HERBICIDE per treated acre as needed to maintain weed control. Do not apply more than 4 pounds per treated acre in any one application. Do not use more than 8 pounds per treated acre per year.

#### **WEEDS CONTROLLED (Annuals)**

Barnyardgrass  
Crabgrass  
Crowfootgrass  
Florida pusley  
Henbit  
Lambsquarter  
Mustard  
Natalgrass (red top)  
Puncturevine  
Purslane  
Sandspur  
Sedge (annual)  
Sprangletop  
Texas panicum  
Turkey mullein

#### **WEEDS CONTROLLED (Perennials)**

Bahiagrass  
Bermudagrass  
Johnsongrass  
Nutsedge  
Pangolagrass  
Paragrass  
Torpedograss

**NOTE:** Use the highest rates allowed by this label for best control of perennial weeds listed on this label. Partial control of perennial weeds can result with only a single treatment of HYVAR® X CROP HERBICIDE. Repeat applications are required (in season and/or annually) for best control of the perennial weeds on this label. Control of perennials may be improved by cultivation prior to treatment, otherwise, avoid working the soil as long as weed control continues or else effectiveness of the treatment may be reduced.

## TEXAS

For the control of the annual weeds listed above, apply 2-3 pounds of HYVAR® X CROP HERBICIDE per acre. Use the lower rate for 1 to 2 year old trees and the higher rate for trees more than 2 years old. Do not apply more than 3 pounds HYVAR® X CROP HERBICIDE per acre per year.

### U.S. (EXCEPT FLORIDA and TEXAS)

#### Trees Established for Four Years or More

**Annual Weeds**--Including barnyardgrass (watergrass), crabgrass, crowfootgrass, Florida pusley, henbit, lambsquarters, mustard, natalgrass (red top), puncturevine, purslane, sandspur, sedge (annual), sprangletop, Texas panicum (Colorado grass), and turkey mullein, apply 2 to 4 pounds per acre. Apply anytime of the year, preferably shortly before or after weed growth begins when adequate moisture is available.

**Perennial Weeds**--Best results are obtained if application is made shortly before or shortly after weed growth begins; if dense growth is present, remove tops and spray the ground. Effects on perennial weeds are slow to appear, usually progressing over a period of several months.

Make a single application per year during the period from winter to early summer; use at the following rates:

<u>Soil Texture</u>	<u>Pounds HYVAR® X CROP HERBICIDE Per Acre</u>
Sand, loamy sand	4 to 5
Sandy loam	5 to 6
Silt loam, clay loam	6 to 8

Alternatively, except for Texas make two applications of 3 to 4 pounds HYVAR® X CROP HERBICIDE per acre per year. In Texas and Louisiana, apply in spring and summer; in California and Arizona, apply in fall and spring.

**Note:** Partial control usually occurs with a single treatment; repeat applications are required to control perennials.

HYVAR® X CROP HERBICIDE controls the following:

Bermudagrass	All areas U.S.
Johnsongrass	Texas
Nutsedge	Texas, California

Control of perennials may be improved by cultivation prior to treatment; otherwise, avoid working the soil as long as weed control continues or else effectiveness of the treatment may be reduced.

## PINEAPPLE

Treated areas may be planted to citrus or pineapple one year after last application. Do not replant to other crops within two years after last application as injury may result.

When making multiple applications, do not apply at less than 60 day intervals.

**Hawaii and Florida**--For control of seedling weeds such as amaranthus, balsamapple, chloris, crabgrass, Floras paintbrush, foxtail, goosegrass (wiregrass), and Hialoa, apply 2 to 6 pounds per acre broadcast before the planting material begins to grow. Use the lower rates in low rainfall areas (5 to 10 inches annually) and on clean- culture fields; use the higher rates in high rainfall areas (above 10 inches annually) and for trashmulch fields.

Follow with either 2 to 4 pounds per acre as a directed interline spray as needed prior to differentiation or apply 2 pounds per acre broadcast as needed up to differentiation. Do not apply more than 10 pounds total per acre per plant crop.

For ratoon crop, apply 1 to 4 pounds per acre broadcast after harvesting plant crop but before differentiation. Do not apply more than 4 pounds total per acre per ratoon crop.

**Puerto Rico**--For control of seedling weeds such as crabgrass, goosegrass, jungle rice, pigweed, and purslane, apply 2 to 4 pounds per acre broadcast immediately after planting and before planting material begins to grow.

#### **ADDITIONAL INSTRUCTIONS FOR AG USES**

##### **SPRAY PREPARATION**

**Mixing in water** - Fill tank 1/2 full with water. Start agitation system, add HYVAR® X CROP HERBICIDE and continue adding water. Add separately each additional component of any tank-mix while adding water. Continue agitation throughout.

**Mixing in liquid fertilizer (citrus only)** - A fertilizer solution may be used in the spray mixture. Small quantities should be tested for compatibility by the following procedures before full scale mixing.

1. Put 1 pint fertilizer solution in a quart jar.
2. Mix 2 teaspoons HYVAR® X CROP HERBICIDE with 2 tablespoonfuls of water; mix thoroughly and add to fertilizer solution.
3. Close jar and shake well.
4. If other herbicides are used in the mixture, premix 2 teaspoonfuls of dry materials or 1 teaspoonful of liquids with 2 tablespoons of water; add to HYVAR® X CROP HERBICIDE/ fertilizer solution mixture.
5. Close jar and shake well.
6. Watch mixture for several seconds; check again in 30 minutes.
7. If mixture does not separate, foam, gel or become lumpy, it may be used.

Provided the above procedure shows the mixture to be compatible, prepare the tank mixture as follows: add the fertilizer solution to the spray tank first, mix the required amount of HYVAR® X CROP HERBICIDE with water to form a slurry, with the agitator running, slowly add the slurry and mix thoroughly.

**Mixing with other herbicides:** Determine the tank mixture partner(s) compatibility with HYVAR® X CROP HERBICIDE by following the directions above. For Step 1 above, use 1 pint of water instead of the liquid fertilizer. Provided the above procedure shows the mixture to be compatible, HYVAR® X CROP HERBICIDE may be used in this tank mixture.

## SPRAY DRIFT MANAGEMENT

The interaction of many equipment and weather-related factors determines the potential for spray drift. The applicator is responsible for considering all these factors when making application decisions.

AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR.

### IMPORTANCE OF DROPLET SIZE

The most effective way to reduce drift potential is to apply large droplets (>150 - 200 microns). The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. The presence of sensitive species nearby, the environmental conditions, and pest pressure may affect how an applicator balances drift control and coverage. 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 **Surface Temperature Inversions** sections of this label.

#### Controlling Droplet Size - General Techniques

- **Volume** - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure** - Use the lower spray pressures specified for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. WHEN HIGHER FLOW RATES ARE NEEDED, USE A HIGHER- CAPACITY NOZZLE INSTEAD OF INCREASING PRESSURE.
- **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.
- **Boom Height (ground)** Setting the boom at the lowest height which provides uniform coverage reduces the exposure of droplets to evaporation and wind. The boom should remain level with the crop and have minimal bounce.

## WIND

Drift potential increases at wind speeds of less than 3 mph (due to variable direction and inversion potential) or more than 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given wind speed. AVOID APPLICATIONS DURING GUSTY OR WINDLESS CONDITIONS.

**Note:** Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they effect spray drift.

## TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, set up equipment to produce larger droplets to reduce effects of evaporation.

## SURFACE TEMPERATURE INVERSIONS

Drift potential is high during a surface temperature inversion. Surface inversions restrict vertical air mixing, which causes small suspended droplets to remain close to the ground and move laterally in a concentrated cloud. Surface inversions are characterized by increasing temperature with altitude 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. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates a surface inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

### **SHIELDED SPRAYERS**

Shielding the boom or individual nozzles can reduce the effects of wind. However, it is the responsibility of the applicator to verify that the shields are preventing drift and not interfering with uniform deposition of the product.

### **SENSITIVE AREAS**

The pesticide should only be applied when the potential for drift to adjacent sensitive areas (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).

### **SPRAY TANK CLEAN OUT**

Thoroughly clean all traces of HYVAR® X CROP HERBICIDE from application equipment immediately after use. Flush the tank, pump, hoses, and boom with several changes of water after removing nozzle tips and screens (clean these parts separately). Dispose of the equipment wash water by applying it to a use-site listed on this label.

## **STORAGE AND DISPOSAL**

Do not contaminate water, food, or feed by storage or disposal.

**PESTICIDE STORAGE:** Store product in original container only. Store in a cool, dry place.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

**CONTAINER HANDLING:** Refer to the Net Contents section of this product's labeling for the applicable "Nonrefillable Container" designation.

**Nonrefillable Paper or Plastic Bags, Fiber Sacks including Flexible Intermediate Bulk Containers (FIBC), or Fiber Drums With Liners:**

Nonrefillable container. Do not reuse or refill this container. Completely empty paper or plastic bag, fiber sack, or drum liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. Then offer for recycling if available, or dispose of empty paper or plastic bag, fiber sack or fiber drum and liner in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances.

Do not transport if this container is damaged or leaking. If the container is damaged, leaking or obsolete, or in the event of a major spill, fire or other emergency, contact CHEMTREC® at 1-800-424-9300, day or night.

## LIMITED WARRANTY AND DISCLAIMER

The manufacturer warrants (a) that this product conforms to the chemical description on the label; and (b) that the directions, warnings, and other statements on this label are based upon responsible experts' evaluations of reasonable tests of effectiveness, of toxicity to laboratory animals and to plants and residues on food crops, and upon reports of field experience. Tests have not been made on all varieties of food crops and plants, or in all states or under all conditions. THIS WARRANTY DOES NOT EXTEND TO THE USE OF THIS PRODUCT CONTRARY TO LABEL INSTRUCTIONS, OR UNDER CONDITIONS NOT REASONABLY FORESEEABLE.

**THERE ARE NO EXPRESS WARRANTIES OTHER THAN THOSE SET FORTH HEREIN. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW THE MANUFACTURER NEITHER MAKES NOR INTENDS, NOR DOES IT AUTHORIZE ANY AGENT OR REPRESENTATIVE, TO MAKE ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, AND IT EXPRESSLY EXCLUDES AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY OF FITNESS FOR A PARTICULAR PURPOSE, OR ANY WARRANTY OF QUALITY OR PERFORMANCE. THIS WARRANTY DOES NOT EXTEND TO, AND THE BUYER SHALL BE SOLELY RESPONSIBLE FOR, ANY AND ALL LOSS OR DAMAGE WHICH RESULTS FROM THE USE OF THIS PRODUCT IN ANY MANNER WHICH IS INCONSISTENT WITH THE LABEL DIRECTIONS, WARNINGS OR CAUTIONS.**

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