



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

March 28, 2022

Karina Castro  
Federal Regulatory Manager  
Makhteshim Agan of North America, Inc. (d/b/a ADAMA)  
3120 Highwoods Blvd., Suite 100  
Raleigh, NC 27604

Subject: Registration Review Label Mitigation for Bromacil  
Product Name: BROMACIL 80WDG  
EPA Registration Number: 66222-174  
Application Date: October 26, 2020  
Decision Number: 582714

Dear Ms. Castro:

The Agency, in accordance with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, has completed reviewing all the information submitted with your application to support the Registration Review of the above referenced product in connection with the Bromacil Interim Decision, and has concluded that your submission is acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 12 months from the date of this letter. After 12 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

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If you have any questions about this letter, please contact Marisa Wright by phone at 202-566-2335, or via email at [wright.marisa@epa.gov](mailto:wright.marisa@epa.gov).

Sincerely,

A handwritten signature in blue ink, appearing to read "Linda Arrington".

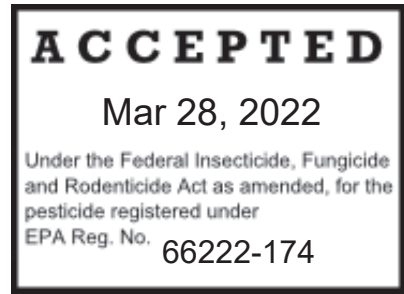
Linda Arrington, Branch Chief  
Risk Management and Implementation Branch 4  
Pesticide Re-Evaluation Division  
Office of Pesticide Programs

Enclosure

[Note to reviewer: [Text] in brackets indicates optional text].

# BROMACIL

## 80WDG Herbicide



<b>ACTIVE INGREDIENT:</b>	
Bromacil: 5-bromo-3-sec-butyl-6-methyluracil .....	80.0%
<b>OTHER INGREDIENTS:</b> .....	20.0%
	<b>TOTAL 100.0%</b>

Manufactured by:  
Makhteshim Agan of North America (d/b/a ADAMA)  
3120 Highwoods Blvd., Suite 100  
Raleigh, NC 27604

**How can we help? 1-866-406-6262**

EPA Reg. No. 66222-174

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

NET WEIGHT: \_\_\_\_\_

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## KEEP OUT OF REACH OF CHILDREN CAUTION/PRECAUCION

FIRST AID	
<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 a 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>
<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 INHALED:</b>	<ul style="list-style-type: none"> <li>Move person to fresh air.</li> <li>If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.</li> </ul>
<p>Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-877-250-9291 for emergency medical treatment information.</p>	

In case of spills, fire, leaks or accident, call 1-800-535-5053.

[Optional Text: See inside label booklet for additional Precautionary Statements and Directions for Use.]

### PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS & 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.

**Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves
- Shoes plus socks

**Mixers and loaders must 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, use detergent and hot water. Keep and wash PPE separately from other laundry.

**ENGINEERING CONTROL STATEMENT**

When handlers use closed systems, or enclosed cabs, 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 thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing 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. 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.

**NON-TARGET ORGANISM ADVISORY:** This product is toxic to plants and may adversely impact the forage and habit of non-target organisms, including pollinators, in areas adjacent to the treated site. Protect the forage and habitat of non-target organisms by following label directions intended to minimize spray drift.

**GENERAL INFORMATION**

Bromacil 80WDG is formulated as a wettable dispersal granule to be mixed in water. It is to be sprayed on noncropland areas for non-selective control of weeds and brush and for selective control of weeds in citrus and pineapple. Bromacil 80WDG controls many annual weeds at the lower label rates and many perennial weeds and brush at the highest label rates. Perennial grass control with Bromacil 80WDG is a key strength of the product.

Moisture is necessary to move Bromacil 80WDG into the root zone of susceptible weeds and brush. Application to moist soil or to soil where moisture is supplied from rainfall or sprinkler irrigation within 14 days of application will provide the best control. Symptoms of control will be slow to appear because the product must first move into the root zone of the susceptible plants. The level and length of weed and brush control will be dependent upon the amount of herbicide applied, soil texture, amount of moisture applied and other soil and water management practices.

**USE PRECAUTIONS AND RESTRICTIONS**

If you plan to use Bromacil 80WDG for selective weed control in citrus and pineapple or for non-selective weed and brush control in non-crop areas, adhere to the following:

1. **DO NOT** use in any recreational areas or around homes.
2. To prevent injury or loss to desirable plants and trees:

- a. **DO NOT** apply except as recommended by this label.
  - b. Thoroughly clean all traces of Bromacil 80WDG from application equipment - tank, pump, hoses, etc. - immediately after use by thoroughly washing/rinsing with several changes of water immediately after use.
  - c. Remove nozzle tips and screens and clean these parts separately.
  - d. **DO NOT** drain or clean equipment near desirable trees or other plants, or onto areas where roots of desirable trees and plants may extend, or onto areas where Bromacil 80WDG may be washed or moved into contact with roots of desirable trees and plants.
  - e. **DO NOT** use on lawns, walks, driveways, tennis courts, or similar areas.
  - f. Prevent spray drift and Wettable Dispersal Granule from contacting desirable plants as injury may occur.
  - g. **DO NOT** store and handle Bromacil 80WDG around fertilizers, insecticides, fungicides, or seeds.
3. **DO NOT** apply Bromacil 80WDG through any type of irrigation system.
  4. **DO NOT** graze cattle in treated areas.
  5. Only citrus and pineapple may be planted into treated areas and only after one year of the last application.
  6. Other crops may not be planted until 2 years after the last application.

### **MIXING**

Sprayers should be properly calibrated with clean water only and checked regularly during operation.

It is important to accurately measure Bromacil 80WDG and to only mix enough spray mixture for job at hand. The spray tank should not be over-filled. Excess spray mixture should be diluted and applied at labeled rates/uses. It should never be discharged at a single location in the field/grove or at the mixing/loading location. **DO NOT** store or mix near well site.

### **TANK MIXTURES**

Bromacil 80WDG may be tank mixed with other suitable herbicides registered for agricultural and non-agricultural use. Refer to the tank mixture partner label(s) for any additional use information or restrictions. Follow the label guidelines that are most restrictive.

**NOTE:** Be sure that Bromacil 80WDG is fully suspended in the spray tank carrier (water, liquid fertilizer) before other herbicides or adjuvants are added. A compatibility test should be performed if the applicator has no prior experience with the particular tank-mix combination. Additional instructions are provided in the label section ADDITIONAL INSTRUCTIONS FOR AG AND NON-AG USES. When using Bromacil 80WDG alone or in combination, thoroughly agitate and re-suspend the 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.

### **WEED RESISTANCE MANAGEMENT**

For resistance management, please note that Bromacil80WDG contains a Group 5/Bromacil . Any weed population may contain plants naturally resistant to Group 5 herbicides. The resistant individuals may dominate the weed population if these herbicides are used repeatedly in the same use site. Appropriate resistance-management strategies should be followed. To delay herbicide resistance take one or more of the following steps:

- Avoid the consecutive use of Bromacil80WDG or other target site of action Group 5 herbicides that might have a similar target site of action, on the same weed species.
- Use tank mixtures or premixes with herbicides from different target site of action Groups as long as the involved products are all registered for the same use, have different sites of action and are both effective at the tank mix or prepack rate on the weed(s) of concern. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.
- Base herbicide use on a comprehensive Integrated Pest Management (IPM) program.

- Scout fields prior to application to identify the weed species present and their growth state to determine if the intended application will be effective.
- Scout fields after application to verify that the treatment was effective and to monitor weed populations for early signs of resistance development.
- Contact your local extension specialist, certified crop advisors and/or manufacturer for herbicide resistance management and/or integrated weed management recommendations for specific crops and resistant weed biotypes.

Suspected herbicide-resistant weeds may be identified by these indicators:

- Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
- A spreading patch of non-controlled plants of a particular weed species; and
- Surviving plants mixed with controlled individuals of the same species.

Report any incidence of non-performance of this product against a particular weed species to your Makhteshim Agan of North America (d/b/a ADAMA) retailer or representative. If resistance is suspected, treat weed escapes with an herbicide having a different mechanism of action and/or use non-chemicals means to remove escapes, as practical, with the goal of preventing further seed production

### **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 pestcrop 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. Bromacil 80WDG should only be used in accordance with recommendations on this label. **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 regulation.

### **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
- Shoes plus socks

### **APPLICATION INFORMATION**

Apply Bromacil 80WDG using a properly calibrated fixed-boom power sprayer. All use rates of Bromacil 80WDG 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 the bottom of the 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 spp.</i>
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 spp.</i>
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 spp.</i>
Sedge, annual	<i>Cyperus compressus</i>
Sprangletop	<i>Leptochloa spp.</i>

#### WEEDS CONTROLLED (perennials)

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

**NOTE:** Repeat applications of Bromacil 80WDG are usually necessary to control perennials. To improve control of perennials, cultivate prior to treatment. After treatment with Bromacil 80WDG, avoid cultivation as long as weed control is holding.

#### CITRUS

Bromacil 80WDG may be used in citrus for control of annual and perennial weeds. Applications can be made at 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. Best results are obtained if moisture is supplied by rainfall or sprinkler irrigation within 14 days 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.

Apply Bromacil 80WDG 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.

- a. **DO NOT** use on soils with less than 1 % organic matter.
- b. **DO NOT** use on poorly drained soils, gravelly soils or thinly covered or exposed subsoils.
- c. **DO NOT** treat trees planted in irrigation furrows.
- d. **DO NOT** treat diseased or stressed trees.
- e. **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.
- f. **DO NOT** use in home citrus plantings.
- g. **DO NOT** apply more than 8 pounds (6.4 pounds active ingredient) per acre per year inclusive of all bromacil

formulations.

- h. **DO NOT** apply at less than 60 day intervals when making multiple applications.
- i. **DO NOT** graze cattle in treated areas.
- j. **DO NOT** allow spray to contact citrus foliage or fruit.
- k. **DO NOT** harvest citrus until 7 days after the last application.
- l. Mechanically-pressurized handgun application of this product on citrus is prohibited.
- m. Aerial application is prohibited.

## FLORIDA

Apply Bromacil 80WDG as a band treatment only in Florida citrus groves. **DO NOT** apply trunk to trunk. The use of Bromacil 80WDG 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	Gainseville
Lake	Lakewood	Neilhurst
Orlando	Orsino	Palm Beach
Paola	Satellite	St. Augustine
St. Lucie	Tavares	

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. Treated areas may be planted to citrus trees one year after the last Bromacil 80WDG application. **DO NOT** replant to other crops within two years after the last Bromacil 80WDG application as plant injury may result.

**Trees Established up to Three Years:** For control of annual weeds, apply 2-3 pounds of Bromacil 80WDG per treated acre as needed to maintain weed control. **DO NOT** apply more than 6 pounds per treated acre per year 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 Bromacil 80WDG per treated acre as needed to maintain weed control. **DO NOT** apply more than 4 pounds per treated acre in anyone application. **DO NOT** use more than 8 pounds per treated acre per year.

**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 Bromacil 80WDG. 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 to 3 pounds of Bromacil 80WDG 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 Bromacil 80WDG per acre per year.

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

### Trees Established for Four Years or More

**Annual Weeds:** Apply Bromacil 80WDG at 2 to 4 pounds per acre any time of year when there is adequate moisture available. Time treatment to just before or just after weed growth begins. Weeds controlled include: 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.



**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:

Soil Texture	Pounds of Bromacil 80 WDG Per Acre
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 Bromacil 80WDG 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. Bromacil 80WDG 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

Bromacil 80WDG may be applied to pineapple grown in Hawaii, Florida, and Puerto Rico for control of seedling weeds.

**Hawaii and Florida:** For control of seedling weeds such as amaranthus, balsam apple, 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 materials begin to grow.

## OTHER USE RESTRICTIONS:

1. Treated areas may be planted to citrus or pineapple one year after the last application.
2. **DO NOT** replant to other crops within two years after the last application or injury may occur.
3. **DO NOT** apply at less than 60 day intervals when making multiple applications.
4. **DO NOT** harvest pineapple within 125 days after the last application.
5. Mechanically-pressurized handgun application of this product on pineapple is prohibited.
6. Aerial application is prohibited.

## NON-AGRICULTURAL USES

### NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Non-crop weed and brush control are not within the scope of the Worker Protection Standard.

**DO NOT** enter or allow others to enter the treated area until sprays have dried.

## USE RESTRICTIONS - STATE OF FLORIDA

In the state of Florida, the use of Bromacil 80WDG is prohibited in the counties of Hardee, Highland, Polk, Orange, and Lake. For Non-Agricultural Usage in all other areas of the state, **DO NOT** apply more than 8 pounds per acre per year of Bromacil 80WDG. This amount corresponds to 6.4 pounds of bromacil, the active ingredient in Bromacil

80WDG. The maximum allowable use rate for bromacil is 6.4 pounds per acre per year inclusive of all bromacil formulations.

### APPLICATION INFORMATION

Use Bromacil 80WDG for residual control of undesirable vegetation in non-crop areas such as but not limited to airports, railroads, highway, pipeline and utility rights-of-way, petroleum tank farms, lumberyards, storage areas, industrial sites, farmyards and fence rows. **DO NOT** apply Bromacil 80WDG to open water (such as lakes, reservoirs, rivers, streams, creeks, salt water bays or estuaries), fresh water wetlands while water is present (such as marshes, swamps, bogs or potholes), salt water marshes within tidal areas, ditches, banks along waterways or impervious substrates, or to areas near desirable plants where roots of these plants may extend. Applications should be made using sufficient spray volume to provide uniform coverage of the treated area and to allow proper dispersal and suspension of the product in the spray tank. Use a calibrated fixed-boom power sprayer with nozzles equipped with 50 mesh or larger screens to apply Bromacil 80WDG. Use rates provided below for Bromacil 80WDG are expressed for broadcast treatments. If band treatments are applied, then proportionately less Bromacil 80WDG should be used.

**NOTE:** Use a spray volume of at least 40 gallons per acre to insure uniform coverage.

### APPLICATION TIMING AND RATES

Bromacil 80WDG should be applied as a preemergence spray prior to or during the rainy season when weeds are actively germinating or growing and there is plenty of moisture to move the product into the root zone of the weeds. For best preemergence weed control, apply Bromacil 80WDG prior to rainfall and weed germination. Apply Bromacil 80WDG at the rates provided below according to weed type. Short-term control of weeds can be expected with the lower rates of Bromacil 80WDG while higher rates provide longer-term control.

### WEEDS CONTROLLED

Bromacil 80WDG effectively controls the following broadleaf weeds and grasses when applied at the rates shown.

#### Annual Broadleaf Weeds and Grasses: 3-6 pounds per acre

Brome, downy	<i>Bromus tectorum</i>
Cheat	<i>Bromus secalinus</i>
Crabgrass	<i>Digitaria spp.</i>
Foxtails	<i>Setaria spp.</i>
Lambsquarter, common	<i>Chenopodium album</i>
Mullein, turkey	<i>Eremocarpus setigerus</i>
Oat, wild	<i>Avena fatua</i>
Puncturevine, common	<i>Tribulus terrestris</i>
Ragweed, common	<i>Ambrosia artemisifolia</i>
Ryegrass, Italian	<i>Lolium multiflorum</i>

When applied just prior to or just after emergence of annuals, rates as low as 2 pounds per acre control many annual weeds and grass in low rainfall areas and gives short-term control in higher rainfall areas.

#### Perennial Broadleaf Weeds and Grasses: 7-15 pounds

Bahiagrass	<i>Paspalum notatum</i>
Bermudagrass	<i>Cynodon dactylon</i>
Bluegrass	<i>Poa spp.</i>
Brome, smooth	<i>Bromus inermis</i>
Broomsedge	<i>Andropogon virginicus</i>
Carrot, wild	<i>Caudus carota</i>
Dandelion, common	<i>Taraxacum officinale</i>
Dogfennel	<i>Eupatorium capillifolium</i>
Goldenrod	<i>Solidago spp.</i>
Johnsongrass	<i>Sorghum halepense</i>
Natalgrass (redtop)	<i>Rhynchelytrum repens</i>
Nutsedge	<i>Cyperus spp.</i>
Plantain	<i>Plantago spp.</i>
Purpletop	<i>Verbena bonariensis</i>

Quackgrass	<i>Agropyron repens</i>
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In low rainfall areas, rates as low as 5 pounds per acre control many perennial weeds and grasses. Where limited rainfall (usually less than 4 inches) occurs during the active growth period, such as some areas of the West, Bromacil 80WDG, usually will not provide satisfactory control of hard-to-kill, deep-rooted perennial weeds such as johnsongrass.

**NOTE:** Use the higher label rates on adsorptive soils (those high in organic matter or carbon).

**Retreating:** If annual weeds and grasses re-establish on treated areas and retreatment is necessary, use 2 to 6 pounds of Bromacil 80WDG per acre. Multiple applications are allowed as long as there is an interval of 60 days between applications and no more than 15 pounds of Bromacil 80WDG area applied per acre per location.

**Small Areas:** % cupful of Bromacil 80WDG per 200 sq. ft. is approximately 15 pounds per acre.

**BRUSH CONTROL:** Apply Bromacil 80WDG in spring or summer as broadcast or basal (spot) treatment to control undesirable woody plants (brush) on non-cropland areas. **DO NOT** use where marketable timber or other desirable trees or shrubs are immediately adjacent to the treated area. For broadcast treatments, apply 7 to 15 pounds per acre to control plants such as oak, pine, sweet gum, and willow. The higher rates should be used on soils high in organic matter or carbon. For basal (spot) treatments mix 2 Y2 pounds in 5 gallons of water and apply at the rate of 1 to 2 fl oz per stem 2" to 4" in basal diameter; wet the base of the stem to run-off. Bromacil 80WDG applied in this manner will control cottonwood, hackberry, maple, oak, poplar, red bud, sweet gum, wild cherry, willow, and winged elm.

## SPECIAL USES

### UNDER ASPHALT AND CONCRETE PAVEMENT

#### APPLICATION INFORMATION

Bromacil 80WDG may be used in combination with Oust® XP to control weeds under asphalt and concrete pavement, such as that used in parking lots, highway shoulders, median strips, roadways, and other industrial sites. Bromacil 80WDG should only be used in an area that has been prepared according to good construction practices. Use sufficient water to insure uniform coverage, generally 100 gal. per acre. Agitate the tank continuously to keep Bromacil 80WDG in suspension.

#### APPLICATION TIMING AND RATES

Apply Bromacil 80WDG immediately before paving at 6 to 15 pounds per acre. The higher rate should be used for hard to control weeds and for longer residual control. Be sure that paving occurs soon after treatment so that there is no soil movement off target from rainfall or mechanical means. Important Precautions: Under Asphalt Only

- **DO NOT** use Bromacil 80WDG under pavement in residential properties such as driveways, or in recreational areas, including jogging or bike paths, tennis courts, or golf cart paths.
- Desirable plants may be injured if their roots extend into treated areas or if planted in treated areas.

#### TANK MIXTURES

To control a broader spectrum of weeds, or for an extended period of weed control, a tank mixture of Bromacil 80WDG at 6 to 15 pounds per acre plus OUST® or OUST®XP at 4 to 8 ounces per acre may be used.

#### ADDITIONAL INSTRUCTIONS FOR AG AND NON-AG USES

##### SPRAY PREPARATION

**Mixing in water:** Fill tank Y2 full with water. Start agitation system, add Bromacil 80WDG 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 Bromacil 80WDG with 2 tablespoons 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 Bromacil 80WDG 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 Bromacil 80WDG 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 Bromacil 80WDG 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, Bromacil 80WDG may be used in this tank mixture.

## SPRAY DRIFT MANAGEMENT

### MANDATORY SPRAY DRIFT MANAGEMENT

Ground Boom Applications:

- User must only apply with nozzle height recommended by the manufacturer, but no more than 4 feet above the ground or target vegetation.
- Applicators are required to use a coarse or coarser droplet size (ASABE S572.1).
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply when wind speeds exceed 15 miles per hour at the application site for pineapple fields in Hawaii and Puerto Rico.
- Do not apply during temperature inversions.

Boom-less Ground Applications:

- Applicators are required to use a coarse or coarser droplet size (ASABE S572.1) for all applications. • Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

## SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

### IMPORTANCE OF DROPLET SIZE

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

#### Controlling Droplet Size - Ground Boom

- Volume - Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure - Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle - Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

#### BOOM HEIGHT - Ground Boom

For ground equipment, the boom should remain level with the crop and have minimal bounce.

#### SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

## TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

## TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or 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. Avoid applications during temperature inversions.

## WIND

Drift potential generally increases with wind speed. **AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.** Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

- Boom-less Ground Applications: Setting nozzles at the lowest effective height will help to reduce the potential for spray drift

## STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Store product in original container only. Avoid storage of pesticides near well sites.

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

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

## LIMITATION OF WARRANTY AND LIABILITY

Read the entire Directions for Use, Conditions of Warranties and Limitations of Liability before using this product. If terms are not acceptable, return the unopened product container at once. By using this product, user or buyer accepts the following Conditions, Disclaimer of Warranties and Limitations of Liability.

**CONDITIONS:** The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of ADAMA. All such risks shall be assumed by the user or buyer.

**DISCLAIMER OF WARRANTIES:** To the extent consistent with applicable law, ADAMA makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond the statements made on this label. No agent of ADAMA is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. To the extent consistent with applicable law, ADAMA disclaims any liability whatsoever for special, incidental or consequential damages resulting from the use or handling of this product.

**LIMITATIONS OF LIABILITY:** To the extent consistent with applicable law, the exclusive remedy of the user or buyer for any and all losses, injuries or damages resulting from the use or handling of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid or at ADAMA's election, the replacement of product.

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