

100-1173

10/3/2008

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OCT 3 2008

OFFICE OF  
PREVENTION, PESTICIDES  
AND TOXIC SUBSTANCES

Tamara Murphy  
Syngenta Crop Protection  
P.O. Box 18300  
Greensboro, NC 27419-8300

Dear Ms. Murphy:

Subject: NAFTA Base and U.S. Label and Revised Labeling  
Discover NG Herbicide  
EPA Registration No. 100-1173  
Your Submission Dated August 27, 2008 and e-Mail Dated September 24, 2008

The amendment referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended is acceptable provided that you submit one (1) copy of your final printed labeling before you release the product for shipment.

A stamped copy of the labeling is enclosed for your records. The amended labeling will supersede all previously accepted ones.

All subsequent amendments to the base label must be submitted to Canada and the United States at the same time for joint review.

Sincerely yours,

Joanne I. Miller  
Product Manager (23)  
Herbicide Branch  
Registration Division (7505P)

Enclosure

cc: Kathy Monk  
Registration Division (7505P)

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**IMPORTANT NOTICE**  
 This product is registered in both the U.S. and Canada.  
 It has **BOTH** U.S. and Canadian Labeling.

You must follow **ONLY** the U.S. label **WHEN USING THIS**  
 product in the U.S.  
 You must follow **ONLY** the Canadian label **WHEN USING**  
 THIS product in Canada.

# DISCOVER NG<sup>†</sup>/HORIZON NG<sup>††</sup>

**GROUP 1 HERBICIDE**

**HERBICIDE**  
Emulsifiable Concentrate

**READ THE LABEL AND ATTACHED  
BOOKLET BEFORE USING  
KEEP OUT OF REACH OF CHILDREN**

**ACTIVE INGREDIENT/GUARANTEE:**

Clodinafop-propargyl*	6.4%
Other Ingredients:	93.6%
Total:	100.0%

\*CAS No. 105512-06-9

Equivalent to 0.5 pounds per gallon or 60 grams per liter of clodinafop-propargyl active ingredient.

Attention: Contains the allergen soy.

<sup>†</sup>Discover NG - Identical chemical composition to Horizon NG (PCPA Reg. No. 29089)  
<sup>††</sup>Horizon NG - Identical chemical composition to Discover NG (EPA Reg. No. 100-1173)

## CAUTION

**Skin Irritant**

Syngenta Crop Protection, Inc./Syngenta Crop Protection Canada, Inc.  
PO Box 18300 / 140 Research Lane, Research Park  
Greensboro, NC 27409 / Guelph, ON N1G 4Z3 Telephone (Canada):  
1-877-964-3682

**IN CASE OF EMERGENCY INVOLVING A MAJOR SPILL,  
FIRE OR POISONING CALL 1-800-888-8372 (in the U.S.) or  
1-800-327-8633 (FASTMED) (in Canada)**

**NET CONTENTS: 2.5 Gallons/9.46 or 15 L-Bulk**  
EPA Reg. No. 100-1173 / EPA Est. 71478-CAN-001  
REGISTRATION NO. 29089 PEST CONTROL PRODUCTS  
ACT

### FIRST AID

**If swallowed:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

**If on skin or clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

**If inhaled:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

**If in eyes:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

**IN CASE OF POISONING,** contact a physician or a poison control center **IMMEDIATELY.** When seeking medical attention, take the container label if at all possible. If not, take information which identifies the product, that is, the product name and registration numbers.

**Use this product only in accordance with its labeling and with the Worker Protection Standard, 40CFR Part 170. Refer to supplemental labeling under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.**

### STORAGE

Store the product in closed original container in a well-ventilated room. Keep out of reach of children, unauthorized persons and animals. To prevent contamination store this product away from food and feed.

**In the United States: It is a violation of United States law to use this product without having obtained the United States label at the time of purchase and following the United States label at the time of application.**

**In Canada: NOTICE TO USER: This pest control product is to be used only in accordance with the directions for use on the label. It is an offense under the Pest Control Products Act to use this product in a way that is inconsistent with the directions for use on the label. The user assumes the risk to persons or property that arises from any such use of this product.**

**Refer to country specific label booklet for additional information including precautions, protective clothing and equipment, user safety recommendations, environmental hazards, storage and disposal directions and warranty information.**

Product of Switzerland



Discover NG, Horizon NG and the Syngenta logo are trademarks of a Syngenta Group Company

**ACCEPTED**

OCT 3 2008

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

100-1173

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**IMPORTANT NOTICE**  
**U.S. LABEL – It is a violation of United States law to use this product in the United States in a manner inconsistent with its United States labeling**

Discover® NG

GROUP **1** HERBICIDE

Herbicide

A single pass liquid postemergence herbicide for control of grass weeds in wheat (including Durum)

Active Ingredient/Guarantee:	
Clodinafop-propargyl (CAS No. 105512-06-9) .....	6.435%
Other Ingredients:	93.65%
Total:	100.00%

~~This product contains petroleum distillates, xylene, or xylene range aromatic solvent.~~

Discover NG Herbicide contains 0.5 lbs. of clodinafop-propargyl active ingredient per gallon.

**KEEP OUT OF REACH OF CHILDREN.**

**CAUTION**

**Skin Irritant**

See additional precautionary statements and directions for use inside booklet.

EPA Reg. No. 100-1173

EPA Est. 71478-CAN-001

Product of Switzerland

SCP 1173A

2.5 gallons/9.46 Liters

\_\_\_\_\_gallons  
Net Contents

\_\_\_\_\_gallons [Bulk]  
Net Contents

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<b>FIRST AID</b>	
<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 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 swallowed</b>	<ul style="list-style-type: none"> <li>• <u>Immediately call a poison control center or doctor immediately for treatment advice.</u></li> <li>• <u>Have person sip a glass of water if able to swallow.</u></li> <li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>• <del>Do not give any liquid to the person.</del></li> <li>• Do not give anything by mouth to an unconscious person.</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> <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.	
<b>Note to Physician</b>	
<del>Contains petroleum distillates - vomiting may cause aspiration pneumonia.</del>	
<b>HOT LINE NUMBER</b>	
For 24 Hour Medical Emergency Assistance (Human or Animal) or Chemical Emergency Assistance (Spill, Leak, Fire, or Accident) Call <b>1-800-888-8372</b>	

**PRECAUTIONARY STATEMENTS**

**Hazards to Humans and Domestic Animals**

**CAUTION**

~~Harmful if swallowed. Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing. Harmful if inhaled. Avoid breathing vapor or spray mist.~~

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## **Personal Protective Equipment (PPE)**

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

- Long-sleeved shirt and long pants
- Chemical-resistant gloves such as nitrile or butyl rubber
- Shoes plus socks

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 Statements**

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.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

## **Environmental Hazards**

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

## **Physical or Chemical Hazards**

Do not use or store near heat or open flame.

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**CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY**

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**NOTICE:** Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of SYNGENTA CROP PROTECTION, Inc. or Seller. To the extent permitted by applicable law, Buyer and User agree to hold SYNGENTA and Seller harmless for any claims relating to such factors.

SYNGENTA warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. To the extent permitted by applicable law: (1) this warranty does not extend to the use of the product contrary to label instructions or under conditions not reasonably foreseeable to or beyond the control of Seller or SYNGENTA, and (2) Buyer and User assume the risk of any such use. To the extent permitted by applicable law, SYNGENTA MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS WARRANTED BY THIS LABEL.

To the extent permitted by applicable law, In no event shall SYNGENTA be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **TO THE EXTENT PERMITTED BY APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF SYNGENTA AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF SYNGENTA OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

SYNGENTA and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of SYNGENTA.

## DIRECTIONS FOR USE

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

Discover NG Herbicide should be used only in accordance with recommendations on this label or in separately published EPA accepted supplemental labeling recommendations for this product.

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 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, such as nitrile rubber or butyl rubber
- Shoes plus socks

**FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN CROP INJURY AND/OR POOR WEED CONTROL.**

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### GENERAL INFORMATION

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Discover NG Herbicide controls several grass weed species in all types of wheat (including Durum).

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Applied postemergence, Discover NG Herbicide is rapidly absorbed by weed foliage and translocated to the growing points where it inhibits the acetyl CoA carboxylase (ACCCase) enzyme. Susceptible weed species generally stop growing within 48 hours, turn yellow within one to three weeks, and are completely controlled within three to five weeks. Level and rate of control depend on weed species, growing conditions, crop competition, and coverage. Thorough coverage of the plants is essential for consistent control.

**ROTATIONAL CROP RESTRICTIONS**

The following crops may be planted at the specified interval following application of Discover NG Herbicide.

Crop	Rotational Interval
Wheat (including Durum)	0 days
All other crops	30 days

**WEEDS CONTROLLED**

Discover NG Herbicide controls wild oat, volunteer oat, green foxtail, yellow foxtail, giant foxtail, barnyardgrass, canarygrass, Persian dandelion, volunteer corn, and Italian (annual) ryegrass.

Although Discover NG Herbicide does not control broadleaf weeds, it can be tank mixed with a wide range of broadleaf herbicides to provide broad spectrum one-pass weed control. See the section entitled **Tank Mixes of Discover NG Herbicide with Broadleaf Weed Herbicides**. Herbicides not approved on this label for tank mixing with Discover NG Herbicide may be applied sequentially. Always apply Discover NG Herbicide first and allow at least 4 days after application of Discover NG Herbicide before applying these herbicides sequentially.

**MANAGEMENT OF RESISTANT WEEDS**

Discover NG Herbicide is a Group 1 Herbicide (ACCCase mode of action). Some naturally occurring populations of wild oat, green foxtail and Italian (annual) ryegrass have been identified as resistant to herbicides with the ACCCase mode of action (herbicides with the same mode of action as Discover NG Herbicide, such as: Achieve®, Assure® II, Axial®, Fusilade®, Fusion®, Hoelon®, Poast®, Prism®, Puma®, and Select®). Selection of resistant biotypes, through repeated use of these herbicides in the same field, may result in control failures. A resistant biotype may be present if poor performance cannot be attributed to adverse weather conditions or improper application methods. If resistance is suspected, contact your local Syngenta representative for assistance.

The following practices will delay selection for resistant populations of weeds:



- Apply postemergence herbicides to small, actively growing weeds.
- Ensure that good spray coverage is achieved with proper spray volumes and calibrated equipment.
- Use the full label rate of product.
- Avoid tank mixes that may cause antagonism and reduced weed control.
- Where possible, avoid the repeated use of herbicides with the same mode of action (i.e., same group number) in successive seasons either in cereal crops or rotational crops.
- Use a diverse crop/fallow rotation to extend the range of available herbicides and agronomic practices.
- Use cultivation, fertilizer regimens, seeding rates and row widths that enhance crop competitiveness.
- Prevent weed escapes from producing seed either in the crop or during fallow periods.

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## APPLICATION PROCEDURES

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### TIMING OF APPLICATION

Apply Discover NG Herbicide to all types of wheat (including Durum) from the 2-leaf stage to pre-boot stage. Do not make an application to winter wheat in the fall. Refer to the **Crop Use Directions** section for grazing and harvest restrictions.

For optimum results, apply Discover NG Herbicide to actively growing weeds. Weed control can be reduced or delayed under conditions of stress, such as drought, heat, insufficient fertility, flooding, and prolonged cool temperatures. Grass escapes or re-tillering may occur if application is made during prolonged conditions of stress. Optimum weed control will be obtained if application of Discover NG Herbicide is delayed until the conditions of stress have ended and weeds are once again actively growing. An early application will maximize crop yields by reducing weed competition. Weeds emerging after application will not be controlled.

*Precaution: Do not apply to a crop that is stressed by conditions such as frost, low fertility, drought, flooding, disease damage, or insect damage, as crop injury may result. Wheat is more susceptible to injury when exposed to temperatures below 40°F during the period 48 hours before or after Discover NG Herbicide application.*

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**TIMING OF APPLICATION TO WEEDS**

<b>Weed</b>	<b>Leaves on Main Stem</b>	<b>Tillers</b>
Wild Oat Volunteer Oat Canarygrass	1 to 6-leaf stage on main stem	Prior to emergence of the 4 <sup>th</sup> tiller.
Green Foxtail Yellow Foxtail Giant Foxtail	1 to 5-leaf stage on main stem	For optimum control, apply prior to emergence of the 3 <sup>rd</sup> tiller and while weeds are actively growing.
Persian Darnel Italian (Annual) Ryegrass Barnyardgrass Volunteer Corn	1 to 5-leaf stage on main stem	For optimum control, apply before tillering and while weeds are actively growing.

**Use Rates**

Apply the recommended rate of Discover NG Herbicide using ground equipment, in a minimum of 5 gals. of water per acre, or apply aerially in a minimum of 3 gals. of water per acre (see **Application Procedures and Spray Equipment** sections for exceptions).

**RAINFASTNESS**

Discover NG Herbicide applied alone is rainfast 30 minutes after application.

**PRODUCT USE RATES\***

<b>To Control:</b>  Wild Oat Volunteer (Tame) Oat Green Foxtail Yellow Foxtail Barnyardgrass Canarygrass Volunteer Corn	<b>To Control:</b>  Giant Foxtail Persian Darnel Italian (Annual) Ryegrass
<b>Apply:</b>  12.8 oz./A of Discover NG Herbicide	<b>Apply:</b>  16 oz./A of Discover NG Herbicide

\*See Tables 1 and 2 for Discover NG Herbicide use rate in a tank mix with broadleaf weed herbicides.

**Note:** One case (2 X 2.5 gal.) of Discover NG Herbicide treats 40 acres at the 16 oz./A rate and 50 acres at the 12.8 oz./A rate.

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## **SPRAY ADJUVANTS**

**Methylated Seed Oil:** A non-phytotoxic methylated seed oil (MSO) (approved for use on growing crops) may be used at the rate of 0.25% v/v (2 pts./100 gals.) of spray volume mixture. MSO can enhance weed control under low moisture or high temperature stress conditions or when spray volumes exceed 10 gallons of water per acre.

## **GROUND AND AERIAL APPLICATION PROCEDURES**

For best accuracy, calibrate the sprayer before use.

### **Ground Applications**

**Spray Nozzles** – 80° or 110° flat fan nozzles are recommended for optimum spray coverage. Nozzles must be uniformly spaced along the boom to provide accurate and uniform coverage. Point the nozzles forward in the direction of travel at an angle of 45° for optimum coverage of grass weeds. Follow the nozzle manufacturer's recommendations for pressure and screens. Do not use flood or hollow cone type nozzles.

**Pump** – Must have capacity to maintain pressure (35-40 psi) and to maintain the product suspension through tank agitation. A centrifugal pump is recommended with an agitation rate of 20 gals./minute/100 gals. tank size. Agitation must be maintained during mixing and spraying.

**Screens** – Use a screen or strainer with 16-mesh or coarser on the suction side of the pump. Do not place a screen in the recirculation line unless using a roller or piston pump. Use 50-mesh or coarser screens between the pump and boom, and at the nozzles.

**Water Volume** – Use an application rate of 5-10 gals. of water per acre. Use 10 gals. of water per acre under dry conditions or dense weed populations and when treating Persian darnel or Italian (annual) ryegrass. Application rates of greater than 10 gals. of water per acre should be avoided as reduced grass control may occur.

**Pressure** – 35-40 psi at the nozzles. Lower pressure may be used with extended range or low pressure nozzles.

Good weed coverage with the spray mixture is essential for optimum weed control results. Observe sprayer nozzles frequently during the spraying operation to ensure that the spray pattern is uniform. Avoid large spray overlaps which result in excessive rates in the overlap areas. Also, avoid application under conditions when uniform coverage cannot be obtained or when excessive spray drift may occur. To reduce spray drift, do not apply under windy conditions. Allow adequate distance between target area and desirable

vegetation to prevent drift to nontarget areas. Boom height for broadcast over-the-top application should be based upon the free-standing height of the crop, not height above the soil surface, and should be at least 12 inches above the crop.

### **Aerial Applications**

Apply Discover NG Herbicide in water using a minimum spray volume of 3 gals./A. Use a minimum of 5 gals./A under dry conditions or dense weed populations and when treating Persian dandelion or Italian (annual) ryegrass. Avoid application under conditions where uniform coverage cannot be obtained or where excessive spray drift may occur. Make applications at a maximum height of 10 ft. above the crop with low-drift nozzles at a maximum pressure of 40 psi and wind speed not exceeding 10 mph to help assure accurate application within the target area.

### **RECOMMENDATIONS TO AVOID SPRAY DRIFT**

#### **Aerial Drift Management**

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 outermost nozzles on the boom must not exceed  $\frac{3}{4}$  the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downward 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**.

#### **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  $\frac{3}{4}$  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 ft. above the top of the largest plants, unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

### **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, including 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 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 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 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).

Avoid all direct or indirect contact (such as spray drift) of Discover NG Herbicide with crops other than those recommended for treatment on this label, since injury may occur.

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

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## MIXING PROCEDURES

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### MIXING INSTRUCTIONS

1. Clean spray tank and half fill with clean water. Start agitation or bypass system.
2. If a broadleaf herbicide is to be used, add the product **FIRST**, prior to adding Discover NG Herbicide and agitate for 2-3 minutes.
3. Add correct amount of Discover NG Herbicide.
4. Agitate for 2-3 minutes.
5. Add spray adjuvant (if used).
6. Agitate for 1-2 minutes before adding remainder of water and then maintain constant agitation.
7. After any break in spraying operations, agitate thoroughly before spraying again.
8. **Use the spray suspension as soon as it is prepared.**
9. If an oily film starts to build up in the tank, drain tank and then clean with a detergent.

### SPRAYER CLEANUP

Thoroughly clean application equipment immediately after spraying. Ensure that all traces of the product are removed. The following recommendations are provided:

1. Drain and flush tank walls, boom, and all hoses for 10 minutes with clean water. **Do not** clean the sprayer near desirable vegetation, wells, or other water sources.
2. Remove the nozzles and screens and wash separately.
3. Dispose of all rinsates in accordance with state and local regulations.
4. If a tank mix partner is used, always check tank mix partner label for any additional cleanup procedures.

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## CROP USE DIRECTIONS

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### WHEAT (INCLUDING DURUM)

Discover NG Herbicide can be used on all types of wheat (including Durum). Do not allow spray to drift to adjacent fields seeded to crops other than wheat. Do not treat wheat underseeded to forages.

To avoid possible illegal residues:

- Do not graze livestock or feed forage from treated areas for a minimum of 30 days following application.
- Do not feed hay for 30 days following application.
- Do not harvest grain for 60 days following application.
- Make only one application per crop season.

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- Do not make an application to winter wheat in the fall.

**TANK MIXES OF DISCOVER NG HERBICIDE WITH BROADLEAF WEED HERBICIDES**

For broad spectrum control of annual grass and broadleaf weeds, tank mix Discover NG Herbicide with one of the broadleaf herbicides or broadleaf herbicide combinations listed in the following tables. Consult the label of the tank mix partner for a list of broadleaf weeds controlled, rates, timing, recropping restrictions, grazing interval restrictions, recommendations for specific weeds, directions for use, and precautions. Use in accordance with the most restrictive of label limitations and precautions. No label dosage rates should be exceeded. This product cannot be mixed with any other product whose label prohibits such a mixture.

**Note:** When tank mixing, always add the broadleaf herbicides to the spray tank first. Follow with Discover NG Herbicide.



**Table 1. Weeds Controlled by Discover NG Herbicide Applied at 12.8 oz./A**

For control of annual grasses listed in the following table and broadleaf weeds (refer to tank mix partner label for specific weeds controlled), use Discover NG Herbicide at 12.8 oz./A plus only one of the following single or two-way broadleaf herbicide combinations. Broadleaf herbicide combinations other than those listed in the table below are not recommended.

**SELECT ONLY ONE BROADLEAF HERBICIDE TANK MIX COMBINATION LISTED IN THE TABLE BELOW**

Broadleaf Herbicide	Rate	Weeds Controlled by Discover NG Herbicide Applied at 12.8 oz./A*						
		Wild Oat	Volunteer Oat	Green Foxtail	Yellow Foxtail	Barnyard-grass	Canary-grass	Volunteer Corn
2,4-D Amine (assume 4 lbs./gal.)	0.5-0.75 pt./A	C	C	S	S	-	C	-
Affinity™ TankMix + MCPA Ester (assume 4 lb./gal.)	0.6 oz./A + 0.5-0.75 pt./A	C	C	-	-	-	-	-
Affinity TankMix + Starane™	0.6 oz./A + 0.33-0.67 pt./A	C	C	-	-	-	-	-
Ally® Extra <sup>1</sup>	0.2-0.4 oz./A	C	C	S	S	-	C	-
Ally® <sup>1,5</sup>	0.1 oz./A	C	C	C	S	-	C	-
Amber® <sup>1</sup>	0.28-0.47 oz./A	C	C	C	S	-	C	-
Banvel® <sup>4</sup>	2-3 oz./A	C	C	S	S	-	C	-
Banvel <sup>4</sup> + MCPA Ester	2 oz./A + 0.5-0.75 pt./A	C	C	S	-	-	-	-
Banvel® SGF	4-6 oz./A	C	C	S	S	-	C	-
Bronate® Advanced <sup>2</sup>	0.8-1.2 pts./A	C	C	C	C	C	C	C
Buctril® <sup>3</sup>	0.75-1.5 pt./A	C	C	C	C	C	C	C
Buctril <sup>3</sup> + MCPA Ester (assume 4 lbs./gal.)	0.75-1.5 pt./A + 0.5-0.75 pt./A	C	C	C	C	C	C	C
Chiptox® MCPA	1-1.5 pts. A	C	C	-	-	-	-	-
Clarity®	2-3 oz./A	C	C	S	S	-	C	-
Clarity + MCPA Ester	2 oz./A + 0.5-0.75 pt./A	C	C	S	-	-	-	-
Curtail™	2-2.67 pt./A	C	C	S	-	-	C	-
Curtail™ M	1.75 pt./A	C	C	C	C	-	C	-
Double Up® B+D	0.75-1 pt./A	C	C	-	-	-	-	-
Express® <sup>1,6</sup>	0.17-0.33 oz./A	C	C	S	-	-	C	-
Finesse® <sup>1</sup>	0.2-0.4 oz./A	C	C	S	S	-	C	-
Glean®	0.17-0.33 oz./A	C	C	S	-	-	C	-
Harmony® Extra <sup>1,7</sup>	0.3-0.6 oz./A	C	C	S	S	-	C	-
Harmony Extra <sup>1,7</sup> + Bronate Advanced <sup>2</sup>	0.3-0.6 oz./A + 0.6-1.2 pts./A	S	S	-	-	-	-	-
Harmony Extra <sup>1,7</sup> + Buctril <sup>3</sup>	0.3-0.6 oz./A + 0.75-1.5 pt./A	C	C	-	-	-	-	-
Harmony Extra <sup>1,7</sup> + MCPA Amine (assume 4 lbs./gal.)	0.3-0.6 oz./A + 0.5-0.75 pt./A	S	S	-	-	-	-	-
Harmony Extra <sup>1,7</sup> + MCPA Ester (assume 4 lbs./gal.)	0.3-0.6 oz./A + 0.5-0.75 pt./A	C	C	-	-	-	-	-
Harmony® GT <sup>1,8</sup>	0.3-0.6 oz./A	C	C	C	S	C	C	C
Harmony GT <sup>1,8</sup> + Buctril <sup>3</sup>	0.3-0.6 oz./A + 0.75-1.5 pt./A	C	C	S	-	-	-	-
Harmony GT <sup>1,8</sup> + MCPA Amine	0.3 oz./A + 0.5-0.75 pt./A	C	C	S	-	-	-	-
Harmony GT <sup>1,8</sup> + MCPA Ester (assume 4 lbs./gal.)	0.3-0.6 oz./A + 0.5-0.75 pt./A	C	C	S	S	-	C	-
Maestro™ D	0.75-1 pt./A	C	C	-	-	-	-	-
MCPA Amine (assume 4 lbs./gal.)	0.5-0.75 pt./A	C	C	S	S	-	C	-

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Broadleaf Herbicide	Rate	Weeds Controlled by Discover NG Herbicide Applied at 12.8 oz./A*						
		Wild Oat	Volunteer Oat	Green Foxtail	Yellow Foxtail	Barnyard-grass	Canary-grass	Volunteer Corn
MCPA Ester (assume 4 lbs./gal.)	0.5-0.75 pt./A	C	C	C	C	C	C	C
Peak®	0.25-0.5 oz./A	C	C	C	C	C	C	C
Peak <sup>1</sup> + Bronate Advanced <sup>2</sup>	0.25-0.5 oz./A + 0.6-1.2 pts./A	C	C	-	-	-	-	-
Peak <sup>1</sup> + Buctril <sup>3</sup>	0.25-0.5 oz./A + 0.75-1.5 pt./A	C	C	-	-	-	-	-
Peak <sup>1</sup> + Chiptox MCPA	0.25-0.5 oz./A + 1-1.5 pt./A	C	C	-	-	-	-	-
Peak <sup>1</sup> + Curtail M	0.25-0.5 oz./A + 1.75 pt./A	C	C	S	-	-	-	-
Peak <sup>1</sup> + MCPA Amine (assume 4 lbs./gal.)	0.25-0.5 oz./A + 0.5-0.75 pt./A	C	C	S	S	-	-	-
Peak <sup>1</sup> + MCPA Ester (assume 4 lbs./gal.)	0.25-0.5 oz./A + 0.5-0.75 pt./A	C	C	C	-	-	C	-
Rhino™	16 oz./A	C	C	-	-	-	-	-
Starane	0.67 pt./A	C	C	C	S	-	C	-
Starane + Bronate Advanced <sup>2</sup>	0.67 pt./A + 0.6-1.2 pts./A	C	C	C	S	-	-	-
Starane + Curtail M	0.67 pt./A + 1.75 pt./A	C	C	C	S	-	-	-
Starane + Harmony Extra <sup>1,7</sup>	0.67 pt./A + 0.3 oz./A	C	C	S	-	-	-	-
Starane + Harmony GT <sup>1,8</sup>	0.67 pt./A + 0.3-0.6 oz./A	C	C	C	-	-	-	-
Starane + Peak <sup>1</sup>	0.67 pt./A + 0.25-0.5 oz./A	C	C	-	-	-	-	-
Starane + Sword®	1.5 pt./A	C	C	-	-	-	C	-
Starane + Sword + Harmony GT <sup>1,8</sup>	1.5 pt./A + 0.3-0.6 oz./A	C	C	-	-	-	-	-
Starane + Sword + Peak <sup>1</sup>	1.5 pt./A + 0.25-0.5 oz./A	C	C	-	-	-	-	-
Stinger	0.25-0.33 pt./A	C	C	C	-	-	C	-
WECO MAX™	16 oz./A	C	C	-	-	-	-	-
WideMatch™	1 pt./A	C	C	C	C	C	C	C
WideMatch + Harmony® GT <sup>5</sup>	1 pt./A + 0.08-0.3 oz./A	C	C	C	C	C	C	C
WideMatch + MCPA ester (assume 4 lb./gal.)	1 pt./A + 0.5-0.75 pt./A	C	C	C	C	C	C	C

\*C = Control; S = Suppression (indicates "Partial Control" which means significant activity but not always at a level generally considered acceptable for commercial weed control).

<sup>1</sup>Addition of surfactants is not required.

<sup>2</sup>Other equivalent products containing the active ingredients bromoxynil/MCPA esters may be used. Consult the specific product label for recommended rates.

<sup>3</sup>Other equivalent products containing the active ingredient bromoxynil may be used. Consult the specific product label for recommended rates.

<sup>4</sup>Other equivalent products containing the active ingredient dicamba may be used. Consult the specific product label for recommended rates.

<sup>5</sup>Ally XP may be used.

<sup>6</sup>Express XP may be used.

<sup>7</sup>Harmony Extra XP may be used.

<sup>8</sup>Harmony GT XP may be used.

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**Table 2. Weeds Controlled by Discover NG Herbicide Applied at 16 oz./A**

For control of annual grasses listed in the following table and broadleaf weeds (refer to tank mix partner label for specific weeds controlled), use Discover NG Herbicide at 16 oz./A plus only one of the following single or two-way broadleaf herbicide combinations. Broadleaf herbicide combinations other than those listed in the table below are not recommended.

**SELECT ONLY ONE BROADLEAF HERBICIDE TANK MIX COMBINATION LISTED IN THE TABLE BELOW**

Broadleaf Herbicide	Rate	Weeds Controlled by Discover NG Herbicide Applied at 16 oz./A*									
		Wild Oat	Volunteer Oat	Green Foxtail	Yellow Foxtail	Giant Foxtail	Barnyard-grass	Canary-grass	Persian Darnel	Volunteer Corn	Italian Ryegrass
2,4-D Amine (assume 4 lbs./gal.)	0.5-0.75 pt./A	C	C	C	C	-	-	C	-	-	-
Affinity TankMix + MCPA Ester (assume 4 lb./gal.)	0.6 oz./A + 0.5-0.75 pt./A	C	C	-	-	-	-	-	-	-	-
Affinity TankMix + Starane	0.6 oz./A + 0.33-0.67 pt./A	C	C	-	-	-	-	-	-	-	-
Ally Extra <sup>1</sup>	0.2-0.4 oz./A	C	C	C	S	-	-	C	-	-	-
Ally <sup>1,5</sup>	0.1 oz./A	C	C	C	S	-	-	C	-	-	-
Amber <sup>1</sup>	0.28-0.47 oz./A	C	C	C	S	-	-	C	-	-	-
Banvel <sup>4</sup>	2-3 oz./A	C	C	C	C	-	-	C	-	-	-
Banvel <sup>4</sup> + MCPA Ester (assume 4 lbs./gal.)	2 oz./A + 0.5-0.75 pt./A	C	C	S	-	-	-	-	-	-	-
Banvel SGF	4-6 oz./A	C	C	C	C	-	-	C	-	-	-
Bronate Advanced <sup>2</sup>	0.8-1.2 pts./A	C	C	C	C	C	C	C	C	C	C
Buctril <sup>3</sup>	0.75-1.5 pt./A	C	C	C	C	C	C	C	C	C	C
Buctril <sup>3</sup> + MCPA Ester (assume 4 lbs./gal.)	0.75-1.5 pt./A + 0.5-0.75 pt./A	C	C	C	C	C	C	C	C	C	C
Chiptox <sup>6</sup> MCPA	1-1.5 pts./A	C	C	-	-	-	-	-	-	-	-
Clarity	2-3 oz./A	C	C	C	C	-	-	C	-	-	-
Clarity + MCPA Ester (assume 4 lbs./gal.)	2 oz./A + 0.5-0.75 pt./A	C	C	S	-	-	-	-	-	-	-
Curtail	2-2.67 pt./A	C	C	C	S	-	-	C	-	-	-
Curtail + Harmony GT <sup>1,8</sup>	2-2.67 pt./A + 0.3-0.6 oz./A	C	C	-	-	-	-	-	-	-	-
Curtail M	1.75 pt./A	C	C	C	C	-	-	C	-	-	-
Double Up B+D	0.75-1 pt./A	C	C	-	-	-	-	-	-	-	-
Express <sup>1,5</sup>	0.17-0.33 oz./A	C	C	C	S	-	-	C	-	-	-





Broadleaf Herbicide	Rate	Weeds Controlled by Discover NG Herbicide Applied at 16 oz./A <sup>1</sup>									
		Wild Oat	Volunteer Oat	Green Foxtail	Yellow Foxtail	Giant Foxtail	Barnyard-grass	Canary-grass	Persian Darnel	Volunteer Corn	Italian Ryegrass
WideMatch + MCPA Ester (assume 4 lb./gal.)	1 pt./A + 0.5-0.75 pt./A	C	C	C	C	C	C	C	C	C	C

\*C = Control; S = Suppression (indicates "Partial Control" which means significant activity but not always at a level generally considered acceptable for commercial weed control).

<sup>1</sup>Addition of surfactants is not required.

<sup>2</sup>Other equivalent products containing the active ingredients bromoxynil/MCPA esters may be used. Consult the specific product label for recommended rates.

<sup>3</sup>Other equivalent products containing the active ingredient bromoxynil may be used. Consult the specific product label for recommended rates.

<sup>4</sup>Other equivalent products containing the active ingredient dicamba may be used. Consult the specific product label for recommended rates.

<sup>5</sup>Ally XP may be used.

<sup>6</sup>Express XP may be used.

<sup>7</sup>Harmony Extra XP may be used.

<sup>8</sup>Harmony GT XP may be used.

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*Precaution: Temporary crop injury may occur with tank mixes under extreme weather conditions or when the crop is suffering from stress due to inadequate or abnormally high moisture levels or extreme temperatures.*

**Note:** Tank mixing is not recommended with any chemical additives, pesticides, or fertilizers that are not recommended on this label, or other Syngenta labeling or recommendations made by Syngenta as reduced annual grass control (antagonism) and/or crop injury may occur. Herbicides not approved for tank mixing on this Discover NG label, or other Syngenta labeling or recommendations made by Syngenta for tank mixing with Discover NG Herbicide may be applied sequentially. Always apply Discover NG Herbicide first and allow at least 4 days after application of Discover NG Herbicide before applying these herbicides sequentially.

#### **TANK MIX APPLICATION WITH QUILT® FUNGICIDE**

Discover NG Herbicide at 12.8-16 oz./A may be tank mixed with Quilt Fungicide at 7 oz./A for annual grass control and early season disease suppression in wheat including durum. Add Quilt Fungicide to the spray tank first followed by Discover NG Herbicide. Refer to the Quilt Fungicide label for additional use directions, precautions, restrictions and diseases suppressed and/or controlled. **Note:** Under certain environmental conditions, tank mixes of Quilt Fungicide plus herbicides may cause crop injury.

#### **TANK MIX APPLICATION WITH TILT® FUNGICIDE**

Discover NG Herbicide may be applied in combination with Tilt Fungicide for weed and disease control. Apply Discover NG Herbicide at 12.8-16 oz./A in a tank mix with Tilt at recommended use rates. Add Tilt to the tank first, followed by Discover NG Herbicide. Refer to the Tilt label for specific use directions, application rates, restrictions, and a list of diseases controlled.

#### **TANK MIX APPLICATION WITH WARRIOR® INSECTICIDE**

Discover NG Herbicide may be applied in combination with Warrior Insecticide for weed and insect control. Apply Discover NG Herbicide at 12.8-16 oz./A in a tank mix with Warrior Insecticide at recommended use rates. Add Warrior to the tank first, followed by Discover NG Herbicide. Refer to the Warrior label for specific use directions, application rates, restrictions, and a list of insects controlled.

#### **TANK MIXTURES WITH LIQUID NITROGEN FERTILIZERS**

Discover NG Herbicide may be mixed in a spray solution containing up to 50% liquid nitrogen fertilizer. Add Discover NG Herbicide to the water first. Mix thoroughly, then add the liquid nitrogen fertilizer in an amount no greater than 50% of the final volume.

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**Note:** Under certain environmental conditions, mixtures of liquid nitrogen fertilizers as a partial carrier may cause crop burn.

When using Discover NG Herbicide with approved herbicide tank mix partners, consult the label of the partner product and follow any additional instructions or restrictions on that label which relate to mixtures with liquid nitrogen fertilizers.

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## **STORAGE AND DISPOSAL**

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Do not contaminate water, food, or feed by storage or disposal. Do not use in animal feeds.

### **Pesticide Storage**

Store in a cool, dry place.

### **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 (\_\_\_\_\_ gallons)**

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

### **~~Recyclable/Refillable Containers (Bulk/Mini-Bulk)~~**

~~Before refilling, inspect thoroughly for damage, such as cracks, punctures, bulges, dents, abrasions and damaged or worn threads on closure devices. After filling and before transporting, check for leaks. Do not refill or transport damaged or leaking containers.~~

### **~~Container Disposal (Bulk/Mini-Bulk)~~**

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


For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during



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cleanup procedures and disposal of wastes. In the event of a major spill, fire, or other emergency, call 1-800-888-8372, day or night.

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