

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

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

AUG 25 2008

Mr. Edward T. Bockrath
E.I. DuPont De Nemours & Company
DuPont Crop Protection
Stine-Haskell Research Center
P.O. Box 30
Newark, DE 19714-0030

Dear Mr. Bockrath:

Subject: DuPont Harmon y Extra herbicide (with TotalSol soluble granules) (Revise Grazing Based on Recent Tolerances)

EPA Registration No. 352-714

Application Dated May 24, 2008

The amendment referred to above, submitted in connection with registration under Section 3(c) (7)(A) of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), is acceptable provided that you:

- 1. Submit/cite all data required for registration/reregistration of your product when the Agency requires all registrants of similar products to submit such data.
- 2. Make the labeling changes listed below before you release the product for shipment bearing the amended labeling:
- a. On page 2, revise the first beneath the Agricultural Use Requirements box by deleting the word "recommended"
- b. On page 2, revise the second paragraph beneath the Agricultural Use Requirements box to read similar to "DuPont will not be responsible for losses or damages resulting from the use of this product in any manner not **specified** by DuPont.
- c. On page 3, under Weeds Partially Controlled, the second footnote, revise the second sentence to read 'For better results, use the highest **specified** rate of Harmony Extra..."
- d. There are several area of the labels where sentences similar to "Read and follow all manufacturer's label recommendations for any companion herbicide, fungicide, and or insecticides. If these recommendations conflict with this label..." appears. These sentences must be revised by replacing the word "recommendations" and replacing it with the word **instructions**.
- e. There are several areas of your labels where the phrase "local recommendations" appears. This phrase must be modified to read similar to "local guidance".

Page 2 EPA Registration No. 352-714

f. There are several areas of your labels, where the phrase "rotational crop recommendations" appear. Modify this phrase to read "rotational crop intervals".

- g. There are several areas in your tank-mix directions for use, where the sentence "Do not use the tank mix if any restrictions on the (product name of tank-mix product) label conflict with the recommendations on the DuPont herbicide label" appear. Modify these sentences by replacing the word "recommendations" with the **instructions**.
- h. There are several areas of your labels, where the phrase "specific recommendations" appear. Modify these phrases to read "specific instructions".
- i. On page 8, under Spray Equipment, revise the first sentence to read "For specific application equipment, refer to the manufacturer's **instructions** for additional information..."
- j .On page 9, under "After Spraying DuPont Harmony Extra and Before Spraying Crops Other Than Wheat, Barley, Triticale and Oat", revise the first sentence of the paragraph before "Notes;" to read "The rinsate solution may be applied to crop(s) specified on this label.
- 3. Submit one (1) copy of your final printed labeling incorporating these changes, before you release the product for shipment.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6 (e). Your release for shipment of the product bearing amended labeling constitutes acceptance of these conditions.

Amended labeling supersedes all previously approved ones. A stamped copy of labeling is enclosed for your records.

Sincerely,

Vukulc Wallas James A. Tompkins
Product Manger 25
Herbicide Branch
Registration Division (7505P)





## DRAFT LABEL

# $\begin{array}{c} \textbf{DuPont}^{^{\text{\tiny TM}}} \\ \textbf{Harmony}^{^{\text{\tiny R}}} \ \textbf{Extra} \end{array}$

herbicide (with TotalSol® soluble granules)

#### DUPONT™ HARMONY® EXTRA HIGHLIGHTS

- For selective posternergence broadleaf weed control in Wheat (including durum). Barley, Oat, Triticale and Fallow
- Apply at the rate of 0.45 to 0.9 ounce per acre on Wheat, Barley, Triticale and Fallow, 0.45 to 0.6 ounce per acre on Oat (see Application Information).
- Apply after the crop is in the 2-leaf stage, but before the flag leaf is visible on Wheat, Barley, Triticale and Winter Oat. On Spring Oat, apply after the crop is in the 3-leaf stage, but before jointing.
- May be applied by ground or by air.
- Use in tank mixtures with other registered herbicides for broader spectrum weed control (see Tank Mixtures):
- Rotate to Wheat, Barley, Triticale and Oat anytime. Rotate to Cotton after 14 days. Rotate to Sugarbeets, Winter Rape and Canola after 60 days. Rotate to any other crop after 45 days.
- Consult label text for complete instructions.
   Always read and follow label "Directions For Use".

#### TABLE OF CONTENTS

PRECAUTIONARY STATEMENTS	
DIRECTIONS FOR USE	
GENERAL INFORMATION	
Environmental Conditions and Biological Activity	
WEEDS CONTROLLED - ALL USES	
WEEDS PARTIALLY CONTROLLED	
FALLOW	
Application Information	
PREPLANT BURNDOWN	
Application Information	
CEREALS	
Application Information	
SPECIFIC WEED PROBLEMS - CEREALS	4
TANK MIXTURES - CEREALS	4
SPRINKLER CHEMIGATION WITH	
HARMONY® EXTRA AND BRONATE FOR	
POSTEMERGENCE WEED CONTROL IN WINTER & SPRING WHEAT & SPRING	
BARLEY IN IDAHO	7
MIXING INSTRUCTIONS	
PRODUCT MEASUREMENT	
CROP ROTATION - ALL USES	
SURFACTANTS - ALL USES	
GROUND APPLICATIONS - ALL USES	
AERIAL APPLICATION - ALL USES	8
GRAZING	8
SPRAY EQUIPMENT	
SPRAYER CLEANUP	
At the End of the Day	
After Spraying HARMONY® EXTRA	
and Before Spraying Crops Other than	
Wheat, Barley, Triticale and Oat	
SPRAY DRIFT MANAGEMENT	
Importance of Droplet Size	
Boom Height	
Wind	
Temperature and Humidity	
Temperature Inversions	9
Shielded Sprayers	
	10
·	10
	10
	10
	11
I IMITATION OF WADDANTY AND I IADII ITY	12



## **DuPont**<sup>TM</sup> **Harmony**® Extra

## herbicide (with TotalSol® soluble granules)

#### Soluble Granules

For Use on Wheat (including durum), Barley, Oat, Triticale and Fallow

Active Ingredients

By Weight

Thifensulfuron-methyl

Methyl 3-[[[(4-methoxy-6-methyl-1,3,5-

triazin-2-yl) amino]carbonyl]amino] sulfonyl]-2-thiophenecarboxylate

33.33%

Tribenuron-methyl

Methyl 2-[[[[N-(4-methoxy-6-methyl-1,3,5-

triazin-2-yl)methylamino]carbonyl]

amino]sulfonyl]benzoate

16.67%

**Inert Ingredients** 

\_50.00%

TOTAL

with COMMENTS

in EPA Letter Dated:

AUG 25 2008

EPA Reg. No. 352-714

Under the Federal Levertidde, Fungicide, and Redenticide Act, as americal, for the pesticide registered water Rich Reg. No.

## 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**

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 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.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-441-3637 for emergency medical treatment information.

## PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION! Causes moderate eye irritation. Avoid contact with eyes, skin, or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wash thoroughly with soap and water after handling.

#### PERSONAL PROTECTIVE EQUIPMENT

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.

Chemical Resistant Gloves Category A (such as butyl rubber, natural rubber, neoprene rubber or nitrile rubber) >14 mls.

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.

#### **USER SAFETY RECOMMENDATIONS**

**USERS SHOULD:** Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

#### **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.

#### **PESTICIDE HANDLING**

- Calibrate sprayers only with clean water away from the well site.
- · Make scheduled checks of spray equipment.
- Ensure that all operation employees accurately measure pesticides.
- Mix only enough product for the job at hand.
- · Avoid overfilling 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 or uses.
- · Avoid storage of pesticides near well sites.
- When triple-rinsing the pesticide container, be sure to add the rinsate to the spray mix.

#### **DIRECTIONS FOR USE**

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

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 Category A (such as butyl rubber, natural rubber, neoprene rubber or nitrile rubber) ≥14 mls.

Shoes plus socks.

DuPont<sup>TM</sup> HARMONY® EXTRA is recommended for use on wheat, barley, oat, triticale, and fallow in most states, check with your state extension or Dept. of Agriculture before use, to be certain HARMONY® EXTRA is registered in your state.

DuPont will not be responsible for losses or damages resulting from the use of this product in any manner not specifically recommended by DuPont.

#### **GENERAL INFORMATION**

HARMONY® EXTRA herbicide is a water soluble granule that is used for selective postemergence weed control in wheat (including durum), barley, oat, triticale and fallow. The best control is obtained when HARMONY® EXTRA is applied to young, actively growing weeds. The use rate will depend on weed spectrum and size of weed at time of application. The degree and duration of control may depend on the following:

- · weed spectrum and infestation intensity
- weed size at application
- environmental conditions at and following treatment

HARMONY® EXTRA is noncorrosive, nonflammable, nonvolatile, and does not freeze. HARMONY® EXTRA should be mixed, and completely dissolved in water and applied as a uniform broadcast spray.

## ENVIRONMENTAL CONDITIONS AND BIOLOGICAL ACTIVITY

HARMONY® EXTRA is absorbed primarily through the foliage of plants, rapidly inhibiting the growth of susceptible weeds. One to 3 weeks after application to weeds (2 to 5 weeks for wild garlic), leaves of susceptible plants appear chlorotic, and the growing point subsequently dies.

HARMONY® EXTRA provides the best control in vigorously growing crops that shade competitive weeds. Weed control in areas of thin crop stand or seeding skips may not be as satisfactory. However, a crop canopy that is too dense at application can intercept spray and reduce weed control.

The herbicidal action of HARMONY® EXTRA may be affected in crops stressed from adverse environmental conditions (such as extreme temperatures or moisture), abnormal soil conditions, cultural practices, or variations in crop variety. In warm, moist conditions, the expression of herbicide symptoms is accelerated; in cold, dry conditions, expression of herbicide symptoms is delayed. In addition, weeds hardened-off by drought stress are less susceptible to HARMONY® EXTRA.

#### WEEDS CONTROLLED - ALL USES

HARMONY® EXTRA effectively controls the following weeds when used according to label directions:

Marshelder

Annual knawel Annual sowthistle Black mustard Blue/Purple mustard Broadleaf dock Bur buttercup Bushy wallflower/ Treacle mustard Clasping pepperweed Coast fiddleneck Common buckwheat Common chickweed Common cocklebur \* Common groundsel Common lambsquarters Common radish Common ragweed \* Common sunflower Corn chamomile Corn gromwell\* Corn spurry Cowcockle Cress (mouse-ear) Curly dock False chamomile Field chickweed Field pennycress Filaree (redstem, Texas) Flixweed Green smartweed Henbit Kochia ‡ Ladysthumb Lanceleaf sage \* London rocket

Mayweed chamomile Miners lettuce Narrowleaf lambsquarters Nightflowering catchfly Pennsylvania smartweed Pineappleweed Prickly lettuce ‡ Prostrate knotweed Prostrate pigweed Redmaids Redroot pigweed Russian thistle ‡ Scentless chamomile/ mayweed Shepherd's-purse Slimleaf lambsquarters Smallflower buttercup Smallseed falseflax Stinking chickweed Stinking mayweed/ dogfennel Swinecress **Tansymustard** Tarweed fiddleneck Tumble/ Jim Hill mustard Volunteer lentils Volunteer peas Volunteer sunflower Wild buckwheat\* Wild chamomile Wild garlic\* Wild mustard Wild radish\*

#### WEEDS PARTIALLY CONTROLLED\*\*

DuPont<sup>TM</sup> HARMONY® EXTRA partially controls the following weeds when used according to label directions:

Canada thistle\*
Carolina geranium
Catchweed bedstraw
Cutleaf eveningprimrose

Mallow (common, little) Nightshade (cutleaf, hairy) Vetch\* (common, hairy)

- \* See SPECIFIC WEED PROBLEMS for more information.
- \*\*Partial control: A visual reduction of weed population as well as a significant loss of vigor. For better results, use the highest recommended rate of HARMONY® EXTRA per acre and include a tank mix partner such as 2,4-D, MCPA, "Buctril" or "Banvel" Banvel" SGF/"Clarity" (refer to TANK MIXTURES).
- Naturally occurring resistant biotypes of kochia, prickly lettuce and Russian thistle are known to occur. See the Tank Mixtures and Specific Weed Problems sections of this label for additional details.

#### **FALLOW**

## APPLICATION INFORMATION USE RATE

Apply 0.45 to 0.9 oz HARMONY® EXTRA per acre to fallow. Two applications of HARMONY® EXTRA may be made provided the total amount applied does not exceed 1.5 oz per acre per crop season.

HARMONY® EXTRA should be applied in combination with other suitable registered fallow herbicides such as "Landmaster II", "Fallow Master", "Roundup" plus 2,4-D (ester formulations work best), "Roundup" plus "Banvel"/"Banvel" SGF/"Clarity", 2,4-D, "Banvel"/"Banvel" SGF/"Clarity".

#### APPLICATION TIMING

HARMONY® EXTRA may be used as a fallow treatment, in the spring or fall when the majority of weeds have emerged and are actively growing.

#### TANK MIXTURES IN FALLOW

HARMONY® EXTRA may be used as a fallow treatment, and should be tank mixed with other herbicides that are registered for use in fallow.

Read and follow all manufacturer's label recommendations for the companion herbicide. If those recommendations conflict with this label, do not tank mix the herbicide with HARMONY® EXTRA.

## PRE-PLANT BURNDOWN APPLICATION INFORMATION USE RATE

Wheat (including durum), Barley, Triticale and Oat

Apply 0.45 to 0.9 oz HARMONY® EXTRA per acre as a burndown treatment to wheat (including durum), barley, triticale, and oat to control emerged weeds prior to, or shortly after planting (prior to emergence). Make applications when the majority of weeds have emerged and are actively growing.

#### Cotton

Apply 0.45 to 0.75 oz HARMONY® EXTRA per acre as a burndown treatment to cotton. Allow at least 14 days between application of HARMONY® EXTRA and planting

of cotton. Include a nonionic surfactant, petroleum based crop oil concentrate, or vegetable-seed oil-based product (methylated seed oils are considered a vegetable seed-based oil). If another herbicide is tank mixed with HARMONY® EXTRA to increase the broadleaf weed spectrum, select adjuvants based on the adjuvant limitations of the companion herbicide.

#### Sugarbeets, Winter Rape and Canola

Apply 0.45 to 0.9 oz HARMONY® EXTRA per acre as a burndown treatment to sugarbeets, winter rape and canola. Allow at least 60 days between application of HARMONY® EXTRA and planting of sugarbeets, winter rape and canola.

### Any other crop (such as corn, rice, grain sorghum or soybeans)

Apply 0.45 to 0.9 oz HARMONY® EXTRA per acre as a burndown treatment to any other crop (such as corn, rice, grain sorghum or soybeans). Allow at least 45 days between application of HARMONY® EXTRA and planting of any other crop (such as corn, rice, grain sorghum or soybeans).

Sequential treatments of HARMONY® EXTRA may also be made provided the total amount of HARMONY® EXTRA applied during one fallow/pre-plant cropland season does not exceed 1.5 ounce per acre; for example, 0.75 ounce in the fall followed by 0.75 ounce in the spring.

Use the 0.9 ounce per acre rate when weed infestation is heavy and predominantly consists of those weeds listed under PARTIAL CONTROL, or when application timing and environmental conditions are marginal.

(See APPLICATION TIMING Section for restriction on planting intervals.)

## TANK MIXTURES IN PRE-PLANT BURNDOWN

HARMONY® EXTRA may be used as a pre-plant burndown treatment alone or tank mixed with other herbicides that are registered for use as a pre-plant burndown product, such as "Landmaster II", "Fallow Master", "Roundup" plus "Banvel"/"Banvel" SGF/"Clarity", or "Banvel"/"Banvel" SGF/"Clarity" alone.

Read and follow all manufacturer's label recommendations for the companion herbicide. If those recommendations conflict with this label, follow the most restrictive labeling (such as planting interval after application), or do not tank mix the herbicide with HARMONY® EXTRA.

#### CEREALS

## APPLICATION INFORMATION USE RATE

Do not use less than 0.45 ounce HARMONY® EXTRA per acre.

#### Wheat (including Durum), Barley and Triticale

Apply 0.45 to 0.9 oz HARMONY® EXTRA per acre to wheat (including durum), barley or triticale. Two applications of HARMONY® EXTRA may be made provided the total amount applied does not exceed 1.5 oz per acre per crop season.

8/18

Use 0.45 to 0.6 oz DuPont™ HARMONY® EXTRA per acre for light infestation of the weeds listed under Weeds Controlled. Conditions at application should be optimum for effective treatment of these weeds.

Use 0.75 oz HARMONY® EXTRA per acre for heavy infestation of the weeds listed under Weeds Partially Controlled.

Use 0.9 oz HARMONY® EXTRA per acre for heavy infestation of the weeds listed under Weeds Partially Controlled when application timing and environmental conditions are marginal (refer to Environmental Conditions and Biological Activity for best performance).

#### Oat (Spring and Winter)

Apply 0.45 to 0.6 ounce HARMONY® EXTRA per acre for control of the weeds listed in Weeds Controlled table. Do not make more than one application of HARMONY® EXTRA per crop season on oat.

#### APPLICATION TIMING

### Wheat (Including Durum), Barley, Winter Oat and Triticale

Make applications after the crop is in the 2-leaf stage, but before the flag leaf is visible.

#### **Spring Oat**

Make applications after the crop is in the 3 leaf stage, but before jointing.

Do not use on "Ogle", "Porter" or "Premier" varieties as crop injury can occur.

Since HARMONY® EXTRA has very little or no soil activity, it controls only those weeds that have germinated; therefore, apply HARMONY® EXTRA when all or most of the weeds have germinated. Annual broadleaf weeds should be past the cotyledon stage, actively growing, and less than 4" tall or wide. Wild garlic plants should be less than 12" tall with 2" to 4" of new growth. See Specific Weed Problems for more information.

Rainfall immediately after treatment can wash HARMONY® EXTRA off of weed foliage, resulting in reduced weed control. Several hours of dry weather are needed to allow HARMONY® EXTRA to be sufficiently absorbed by weed foliage.

#### SPECIFIC WEED PROBLEMS - CEREALS

Canada thistle: For control in wheat, barley and triticale, use 0.9 oz per acre plus surfactant when all thistles are 4" to 8" with 2" to 6" of new growth. Make the application in the spring. Control will be improved by using HARMONY® EXTRA in combination with 2,4-D (refer to TANK MIXTURES).

For control in oat, use 0.6 ounce HARMONY® EXTRA per acre plus 2,4-D (refer to TANK MIXTURES)

Common cocklebur, Common ragweed, Lanceleaf sage: In wheat, barley and triticale, apply HARMONY® EXTRA at 0.6 to 0.75 ounce per acre in combination with 2, 4-D at rates from 1/4 to 3/8 lb active ingredient (ester formulations work best) when weeds are small and actively growing. When using 1/4 lb active ingredient of 2, 4-D, be sure to add surfactant at the rate of 1/4 to 1/2 quart per 100 gallons of

spray solution (0.06 to 0.125% v/v--use the higher rate under stress conditions).

For control in oat, use 0.6 ounce HARMONY® EXTRA per acre plus 2,4-D. Refer to the Tank Mixtures sections of this label for additional details.

Corn gromwell, Wild buckwheat: For control in wheat, barley and triticale, use 0.75 to 0.9 ounce HARMONY® EXTRA per acre plus surfactant.

For control in oat, use 0.6 ounce HARMONY® EXTRA per acre plus 2,4-D, MCPA or "Buctril" (refer to TANK MIXTURES).

Kochia, Russian thistle, Prickly lettuce: Naturally occurring resistant biotypes of these weeds are known to occur. For best results, use HARMONY® EXTRA in a tank mix with dicamba (such as "Banvel"/"Clarity") and 2, 4-D; or Bromoxynil (such as "Buctril") and 2,4-D (3/4 - 1 pt "Buctril" + 1/4 - 3/8 lb active ingredient 2, 4-D ester). HARMONY® EXTRA should be applied in the spring when weeds are less than 2" tall or 2" across and are actively growing. Refer to the Tank Mixtures section of this label for additional details.

Vetch (common and hairy): For control in wheat, barley and triticale, use 0.75 to 0.9 oz of HARMONY® EXTRA per acre plus surfactant when vetch is less than 6" in length. For severe infestations of vetch, or when vetch is greater than 6" in length, use HARMONY® EXTRA in combination with 2,4-D or MCPA (refer to the Tank Mixtures section of this label).

For control in oat, use 0.6 ounce HARMONY® EXTRA per acre plus 2,4-D or MCPA (refer to TANK MIXTURES).

Wild garlic: For control in wheat, barley and triticale, use 0.75 to 0.9 oz HARMONY® EXTRA per acre plus surfactant when wild garlic plants are less than 12" tall with 2" to 4" of new growth. For severe infestations, use the 0.9 ounce per acre rate of HARMONY® EXTRA. Plants hardened-off by cold weather and/or drought stress may be more difficult to control. Thorough spray coverage of all garlic plants is essential. Typical symptoms of dying garlic plants may not be noticeable for 2 to 5 weeks.

For control in oat, use 0.6 ounce HARMONY® EXTRA per acre plus 2,4-D or MCPA (refer to TANK MIXTURES).

Wild radish: For best results in wheat, barley and triticale, apply 0.6 to 0.9 ounce HARMONY® EXTRA per acre plus surfactant either in the fall or spring to wild radish rosettes less than 6 inches in diameter. Applications made later than 30 days after weed emergence will result in partial control. For increased control of severe wild radish infestations, or wild radish emerged greater than 30 days, apply HARMONY® EXTRA at 0.45 ounce per acre in combination with MCPA at 1/4 lb active ingredient per acre. Surfactant is required when tank mixing with MCPA, add 1 quart per 100 gallons of spray solution (0.25% vol/vol). Fall applications should be made prior to hardening off of plants. For control in oat, use 0.6 ounce HARMONY® EXTRA per

## acre plus 2,4-D or MCPA (refer to TANK MIXTURES). **TANK MIXTURES - CEREALS**

HARMONY® EXTRA may be tank mixed with other suitable registered herbicides to control weeds listed as suppressed, weeds resistant to HARMONY® EXTRA or weeds not listed under **Weeds Controlled**. Read and follow

all manufacturer's label recommendations for the companion herbicide. If those recommendations conflict with this label, do not tank mix the herbicide with DuPont™ HARMONY® FXTR A

HARMONY® EXTRA can also be mixed with registered fungicides, insecticides, or liquid fertilizer for use on wheat, barley, triticale, oat, or fallow.

#### With 2,4-D (amine or ester) or MCPA (amine or ester)

HARMONY® EXTRA may be tank mixed with the amine and ester formulations 2,4-D and MCPA herbicides for use on wheat, barley, triticale and oat.

For best results in the Red River Valley and adjacent areas of North Dakota and Minnesota, add the ester formulations of 2,4-D or MCPA herbicides to the tank at 3/8 lb active ingredient (such as 3/4 pt of a 4 lb/gal product, 1/2 pt of a 6 lb/gal product). No additional surfactant is needed with this mixture.

For best results in other areas, add the ester formulations of 2,4-D or MCPA herbicides to the tank at 1/4 to 3/8 lb active ingredient (such as 1/2 - 3/4 pt of a 4 lb/gal product, 1/3 - 1/2 pt of a 6 lb/gal product). Surfactant may be added to the mixture at 1/2 to 1 qt per 100 gal of spray solution (0.125 to 0.25% v/v); however, adding surfactant may increase the potential for crop injury, especially at the higher phenoxy rates.

Higher rates of 2,4-D or MCPA may be used, but do not exceed the highest rate allowed by those respective labels. Read and follow all label instructions on timing, precautions, and warnings for these herbicides before using these tank mixtures.

#### With dicamba (such as "Banvel"/"Clarity")

HARMONY® EXTRA may be tank mixed with 1/16 to 1/8 lb active ingredient dicamba (such as 2-4 fluid oz "Banvel" or 2-4 fluid oz "Clarity"). Use higher rates when weed infestation is heavy. Surfactant may be added to the mixture at 1/2 to 1 qt per 100 gal of spray solution (0.125 to 0.25% v/v); however, adding surfactant may increase the potential for crop injury. Refer to the specific dicamba label for application timing and restrictions.

Tank mixes of HARMONY® EXTRA plus dicamba may result in reduced control of some broadleaf weeds.

#### With 2,4-D (amine or ester) and "Banvel"/"Clarity"

HARMONY® EXTRA may be applied in a 3-way tank mix with formulations of dicamba and 2,4-D. Make application of HARMONY® EXTRA + 1/16 to 1/8 lb active ingredient dicamba (such as 2-4 fluid oz "Banvel" or 2-4 fluid oz "Clarity") + 1/4 - 3/8 lb active ingredient 2,4-D Ester or Amine per acre. Use higher rates when weed infestation is heavy. Surfactant may be added to the mixture at 1/2 to 1 qt per 100 gal of spray solution (0.125 to 0.25% v/v); however, adding surfactant may increase the potential for crop injury. Consult the specific 2,4-D label, dicamba label, or local recommendations for more information and restrictions.

Apply this 3-way combination to winter wheat and winter oat after the crop is tillering and prior to jointing (first node). In Spring Wheat (including Durum) and Spring Oat, apply after the crop is tillering and before it exceeds the 5-leaf stage.

In Spring Barley, apply after the crop is tillering and before it exceeds the 4-leaf stage.

### With bromoxynil (such as "Buctril", "Bronate", "Bronate Advanced", or "Rhino")

HARMONY® EXTRA may be tank mixed with bromoxynil containing herbicides registered for use on wheat, barley, triticale, or fallow. For best results, add bromoxynil containing herbicides to the tank at 3/16 to 3/8 lb active ingredient per acre (such as "Bronate" or "Buctril" at 3/4 - 1 1/2 pt per acre).

Read and follow all label instructions on timing, precautions, and warnings for these herbicides before using these tank mixtures. Follow the most restrictive labeling. Tank mixes of HARMONY® EXTRA plus "Buctril" may result in reduced control of Canada thistle.

#### With DuPont™ EXPRESS® XP Herbicide

HARMONY® EXTRA may be tank mixed with EXPRESS® or EXPRESS® XP based on local recommendations. Read and follow all label instructions on timing, precautions, and warnings for these herbicides before using this tank mixture.

#### With DuPont<sup>TM</sup> ALLY® XP Herbicide

HARMONY® EXTRA may be tank mixed with ALLY® or ALLY® XP based on local recommendations. Read and follow all label instructions on timing, precautions, and warnings for these herbicides before using this tank mixture.

#### With "Starane", "Starane + Salvo", "Starane + Sword"

For improved control of Kochia (2-4" tall) HARMONY® EXTRA may be tank mixed with 1/3 to 2/3 pint per acre of Starane, 2/3 to 1 1/3 pints per acre of "Starane" + "Salvo", or 3/4 to 1 1/2 pints per acre of "Starane" + "Sword".

2,4-D and MCP herbicides (preferably ester formulations) may be tank mixed with HARMONY® GT XP plus "Starane". Consult local recommendations and the "TANK MIXTURES" section of this label for additional information. With "Aim"

HARMONY® EXTRA can be tank mixed with "Aim" herbicide for improved control of weeds in wheat, barley and triticale.

### With "Stinger" or "Curtail" or "Curtail M" or "Widematch"

HARMONY® EXTRA can be tank mixed with "Stinger" or "Curtail" or "Curtail M" or "WideMatch" herbicide for improved control of weeds in wheat, barley and triticale. Refer to the "Stinger" or "Curtail" or "Curtail M" or "WideMatch" labels for information regarding use restrictions, labeled crops, rotational cropping recommendations, sprayer cleanup, use precautions and other information. The most restrictive provisions on either label will apply. Do not use the tank mix if any restrictions on the "Stinger" or "Curtail" or "Curtail M" or "WideMatch" labels conflict with the recommendations on the DuPont herbicide label.

#### With Other Broadleaf Herbicides

Tank mixes of HARMONY® EXTRA plus metribuzin may result in reduced control of wild garlic.

#### With "Hoelon" Herbicide

HARMONY® EXTRA may be used in combination with "Hoelon" 3EC and "Buctril" herbicides in accordance with the "Hoelon" 3EC label. For best results, use the three-way

tank mix of DuPont™ HARMONY® EXTRA at 0.6 oz per acre plus "Hoelon" 3EC at 2 2/3 pt per acre plus "Buctril" at 1 1/2 pt per acre. Apply only to winter wheat. This tank mix should only be used under good soil conditions when wild oat is in the 1-4 leaf stage. If conditions are not ideal for the performance of "Hoelon" 3EC, wild oat control may be reduced. Be sure to follow all warnings and cautions on the "Hoelon" 3EC and "Buctril" labels.

#### With "Assert" Herbicide or "Avenge" Herbicide

HARMONY® EXTRA can be tank mixed with "Avenge" or "Assert". When tank mixing HARMONY® EXTRA with "Assert", always include another broadleaf weed herbicide with a different mode of action (for example: 2,4-D ester, MCPA ester, "Buctril," or "Bronate"). Tank-mixed applications of HARMONY® EXTRA plus "Assert" may cause temporary crop discoloration, stunting, or injury when heavy rainfall occurs shortly after application.

#### With "Discover" NG

HARMONY® EXTRA can be tank mixed with "Discover NG" herbicide for improved control of weeds in spring wheat. Refer to the "Discover NG" label for information regarding use restrictions, labeled crops, rotational cropping recommendations, sprayer cleanup, use precautions and other information. The most restrictive provisions on either label will apply. Do not use the tank mix if any restrictions on the "Discover NG" label conflict with the recommendations on the DuPont herbicide label.

#### With "Everest"

HARMONY® EXTRA can be tank mixed with "Everest" herbicide for improved control of weeds in spring wheat. Refer to the "Everest" label for information regarding use restrictions, labeled crops, rotational cropping recommendations, sprayer cleanup, use precautions and other information. The most restrictive provisions on either label will apply. Do not use the tank mix if any restrictions on the "Everest" label conflict with the recommendations on the DuPont herbicide label.

#### With "Maverick"

HARMONY® EXTRA can be tank mixed with "Maverick" herbicide for improved control of weeds in wheat. Refer to the "Maverick" label for information regarding use restrictions, labeled crops, rotational cropping recommendations, sprayer cleanup, use precautions and other information. The most restrictive provisions on either label will apply. Do not use the tank mix if any restrictions on the "Maverick" label conflict with the recommendations on the DuPont herbicide label.

#### With "Puma"

HARMONY® EXTRA can be tank mixed with "Puma" 1EC herbicide for control of some annual grass weeds. This tank mix may also include MCP ester, bromoxynil or bromoxynil/MCP, "Starane", or "Starane" + "Sword" for a greater spectrum of broadleaf control. Refer to the "Puma" label for information regarding use restrictions, labeled crops, rotational cropping recommendations, sprayer cleanup, use precautions and other information. The most restrictive provisions on either label will apply. Do not use the tank mix if any restrictions on the "Puma" label conflict with the recommendations on the DuPont herbicide label.

#### With other grass control products

Tank mixtures of HARMONY® EXTRA and grass control products may result in poor grass control. DuPont recommends that you first consult your state experiment station, university, or extension agent, Agricultural dealer, or DuPont representative as to the potential for antagonism before using the mixture. If no information is available, limit the initial use of HARMONY® EXTRA and the grass product to a small area.

#### With Insecticides

HARMONY® EXTRA may be tank mixed or used sequentially with insecticides (or fungicides) registered for use on cereal grains. However, under certain conditions (drought stress, or if the crop is in the 2-4 leaf stage), tank mixes or sequential applications of HARMONY® EXTRA with organophosphate insecticides (such as parathion) may produce temporary crop yellowing or, in severe cases, crop injury. Test these mixtures in a small area before treating large areas.

Do not use HARMONY® EXTRA plus Malathion, as crop injury will result.

#### With Liquid Nitrogen Solution Fertilizer

Liquid nitrogen fertilizer solutions may be used as a carrier in place of water. Run a tank mix compatibility test before mixing HARMONY® EXTRA in fertilizer solution. HARMONY® EXTRA must first be dissolved with water and then added to liquid nitrogen solutions (e.g., 28-0-0, 32-0-0). Ensure that the agitator is running while the HARMONY® EXTRA is added. Use of this mixture may result in temporary crop yellowing and stunting.

If using low rates of liquid nitrogen fertilizer in the spray solution (less than 50% of the spray solution volume), the addition of surfactant is necessary. Add surfactant at 1/4 qt -1 qt per 100 gal of spray solution (0.06 -0.25% v/v) based on local recommendations.

When using high rates of liquid nitrogen fertilizer solution in the spray solution, adding surfactant increases the risk of crop injury. Consult your agricultural dealer, consultant, fieldman, or DuPont representative for a specific recommendation before adding an adjuvant to these tank mixtures.

If 2,4-D or MCPA is included with HARMONY® EXTRA and fertilizer mixture, ester formulations tend to be more compatible (See manufacturer's label). Additional surfactant is not needed when using HARMONY® EXTRA in tank mix with 2,4-D ester or MCPA ester and liquid nitrogen fertilizer solutions.

Note: In certain areas east of the Mississippi river unacceptable crop response may occur with use of straight or dilute nitrogen fertilizer carrier solutions where cold temperatures or widely fluctuating day/night temperatures exist. In these areas consult your agricultural dealer, consultant, field advisor, or DuPont representative for a specific recommendation before using nitrogen fertilizer carrier solutions.

Liquid nitrogen fertilizer solutions that contain sulfur can increase crop response.

Do not use low rates of liquid nitrogen fertilizer solution as a substitute for a surfactant.

Do not use with liquid fertilizer solutions with a pH less than 3.0.

1/14

SPRINKLER CHEMIGATION WITH DUPONT<sup>TM</sup>
HARMONY® EXTRA AND BRONATE FOR
POSTEMERGENCE WEED CONTROL IN WINTER &
SPRING WHEAT & SPRING BARLEY IN IDAHO
HOW TO USE

Use 0.6 to 0.75 oz. HARMONY® EXTRA per acre in combination with 3/4 to 1 1/2 pint "Bronate" per acre. Apply to wheat, barley and triticale after the 3-leaf stage but before the flag leaf is visible. Make only one chemigation application of this tank mixture per crop year.

For best results, apply to broadleaf weeds up to the 4-leaf stage, or 2 inches in height or 1 inch in diameter, whichever comes first. Consult HARMONY® EXTRA and "Bronate" package labels for list of weeds controlled/suppressed.

#### SPRINKLER IRRIGATION APPLICATION

Apply this tank mix through sprinkler irrigation systems including center pivot, lateral move, side (wheel) roll, solid set or hand move irrigation systems only. Do not apply these herbicides through any other type of irrigation system.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts. **Do not connect an** 

irrigation system (including greenhouse systems) used for HARMONY® EXTRA application to any public water system. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

The sprinkler chemigation system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump. The pesticide injection pipeline must also contain a functional, normally closed, solenoidoperated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock. Do not apply when wind speed favors drift beyond the area intended for treatment.

### SPECIFIC REQUIREMENTS FOR APPLICATION THROUGH SPRINKLER IRRIGATION SYSTEMS

1. In center pivot and continuous lateral move systems, HARMONY® EXTRA + "Bronate" should be applied continuously for the duration of the water application. In solid set systems, application of the tank mix should be

made during the last 30 to 45 minutes of the irrigation set.

- 2. Set the sprinkler system to deliver approximately 0.5 inch or less of water per acre for best product performance.
- 3. Fill the supply tank with half of the water amount desired, add the HARMONY® EXTRA and agitate until dissolved. Add the "Bronate" and then add the remaining water amount with agitation. "Bronate" requires a dilution with at least 4 parts water to 1 part "Bronate".
- Agitation is recommended in the pesticide supply tank when applying this tank mix.
- 5. The use of a surfactant is not recommended with this tank mix application.
- 6. Inject the HARMONY® EXTRA + "Bronate" solution at least 8 feet ahead of a right angle turn of irrigation pipe to insure adequate mixing. Allow sufficient time for the herbicide mixture to be flushed through the lines before turning off irrigation water.
- 7. Follow both HARMONY® EXTRA and "Bronate" label instructions for spray tank cleanout both before and after application. Flush lines with clean water following application.
- 8. Do not apply when wind speed favors drift beyond the area intended for treatment. Avoiding spray drift is the responsibility of the applicator.

#### **MIXING INSTRUCTIONS**

- 1. Fill the tank 1/4 to 1/3 full of water.
- 2. While agitating, add the required amount of HARMONY® EXTRA
- Continue agitation until the HARMONY® EXTRA is fully dissolved, at least 5 minutes.
- Once the HARMONY® EXTRA is fully dissolved, maintain agitation and continue filling tank with water.
- 5. As the tank is filling, add tank mix partners (if desired) then add the required volume of nonionic surfactant. Always add surfactant last. Do not use with spray additives that alter the pH of the spray solution below pH 5.0 or above pH 9.0, as rapid product degradation can occur. Spray solutions of pH 6.0-8.0 allow for optimum stability of HARMONY® EXTRA.
- Dispersed tank mix partners can settle if the tank mixture is not continually agitated. If settling occurs, thoroughly re-agitate before using.
- Apply HARMONY® EXTRA spray mixture within 24 hours of mixing to avoid product degradation.
- 8. If HARMONY® EXTRA and a tank mix partner are to be applied in multiple loads, fully dissolve the HARMONY® EXTRA in clean water prior to adding to the tank.

#### PRODUCT MEASUREMENT

HARMONY® EXTRA is measured using the HARMONY® EXTRA volumetric measuring cylinder. The degree of accuracy of this cylinder varies by ± 7.5%. For more precise measurement, use scales calibrated in ounces.



#### **CROP ROTATION - ALL USES**

Wheat (including durum), Barley, Triticale and Oat may be replanted anytime after the application of DuPont™ HARMONY® EXTRA.

Cotton can be planted 14 days after the application of HARMONY® EXTRA. Sugarbeets, Winter Rape, and Canola can be planted 60 days after the application of HARMONY® EXTRA. Any other crop may be planted 45 days after the application of HARMONY® EXTRA.

#### SPRAY ADJUVANTS

Always include a spray adjuvant with applications of HARMONY® EXTRA. In addition to a spray adjuvant, an ammonium nitrogen fertilizer may be used.

Consult your Ag dealer or applicator, local DuPont fact sheets, technical bulletins, and service policies prior to using an adjuvant system. If another herbicide is tank mixed with HARMONY® EXTRA, select adjuvants authorized for use with both products. Products must contain only EPA-exempt ingredients (40CFR 1001).

Nonionic Surfactant (NIS)

- Apply 0.06 to 0.50% volume/volume (1/2 pt to 4 pt per 100 gal of spray solution).
- Surfactant products must contain at least 60% nonionic surfactant with a hydrophilic/lipophilic balance (HLB) greater than 12. See the Tank Mixtures section of this label for additional information.

Petroleum Crop Oil Concentrate (COC) or Modified Seed Oil (MSO)

- Apply at 1% volume/volume (1 gal per 100 gal spray solution) or 2% volume/volume under arid conditions.
- Oil adjuvants must contain at least 80% high quality, petroleum (mineral) or modified vegetable seed oil with at least 15% surfactant emulsifiers.

Special Adjuvant Types

- Combination adjuvant products may be used at doses that provide the required amount of NIS, COC, MSO and/or ammonium nitrogen fertilizer. Consult product literature for use rates and restrictions.
- In addition to the adjuvants specified above, other adjuvant types may be used if they provide the same functionality and have been evaluated and approved by DuPont product management. Consult separate DuPont technical bulletins for detailed information before using adjuvant types not specified on this label.

Ammonium Nitrogen Fertilizer

Use 2 qt/acre of a high-quality urea ammonium nitrate (UAN), such as 28%N or 32%N, or 2 lb/acre of a spraygrade ammonium sulfate (AMS). Use 4 qt/acre UAN or 4 lb/acre AMS under arid conditions.

#### GROUND APPLICATION - ALL USES

For optimum spray distribution and thorough coverage, use flat-fan or low-volume flood nozzles.

For flat-fan nozzles, use a spray volume of at least 5 gal per acre (GPA).

For flood nozzles on 30" spacings, use at least 10 GPA, flood nozzles no larger than TK10 (or the equivalent), and a pressure of at least 30 psi. For 40" nozzle spacings, use at least 13 GPA; for 60" spacings use at least 20 GPA. It is essential to overlap the nozzles 100% for all spacings.

"Raindrop RA" nozzles are not recommended for HARMONY® EXTRA applications, as weed control performance may be reduced.

Use screens that are 50-mesh or larger.

#### AERIAL APPLICATION - ALL USES

Use nozzle types and arrangements that provide optimum spray distribution and maximum coverage at 2 to 5 GPA. Use at least 3 GPA in Idaho, Oregon, or Utah.

Do not apply HARMONY® EXTRA by air in the state of New York.

See the Spray Drift Management section of this label.

#### **GRAZING**

Allow at least 7 days between application and grazing of treated forage. In addition, allow at least 7 days between application and feeding of forage from treated areas to livestock. Allow at least 30 days between application and feeding of hay from treated areas to livestock. Harvested straw may be used for bedding and/or feed. Allow at least 45 days between application and harvesting of grain.

#### SPRAY EQUIPMENT

For specific application equipment, refer to the manufacturer's recommendations for additional information on GPA, pressure, speed, nozzle types and arrangements, nozzle heights above the target canopy, etc.

Be sure to calibrate air or ground equipment properly before application. Select a spray volume and delivery system that will ensure thorough coverage and a uniform spray pattern with minimum drift. Use higher spray volumes to obtain better coverage when crop canopy is dense. Avoid swath overlapping, and shut off spray booms while starting, turning, slowing, or stopping, to avoid injury to the crop.

Do not make applications using equipment and/or spray volumes or during weather conditions that might cause spray to drift onto nontarget sites. For additional information on spray drift refer to Spray Drift Management section of label.

#### SPRAYER CLEANUP

The spray equipment must be cleaned before HARMONY® EXTRA is sprayed. Follow the cleanup procedures specified on the labels of the previously applied products.

#### AT THE END OF THE DAY

It is recommended that during periods when multiple loads of HARMONY® EXTRA herbicide are applied, at the end of each day of spraying the interior of the tank be rinsed with fresh water and then partially filled, and the boom and hoses flushed. This will prevent the buildup of dried pesticide deposits which can accumulate in the application equipment.

## AFTER SPRAYING DUPONT™ HARMONY® EXTRA AND BEFORE SPRAYING CROPS OTHER THAN WHEAT, BARLEY, TRITICALE AND OAT

To avoid subsequent injury to desirable crops, thoroughly clean all mixing and spray equipment immediately following applications of HARMONY® EXTRA as follows:

- 1. Empty the tank and drain the sump completely.
- 2. Spray the tank walls with clean water using a minimum volume of 10% of the tank volume. Circulate the water through the lines, including all by-pass lines, for at least two minutes. Flush the boom well and empty the sprayer. Completely drain the sump.
- 3. Repeat step 2.
- 4. Remove the nozzles and screens and clean separately in a bucket containing water.

The rinsate solution may be applied to the crop(s) recommended on this label. Do not exceed the maximum-labeled use rate. If cleaners are used, consult the cleaner label for rinsate disposal instructions. If no instructions are given, dispose of the rinsate on site or at an approved waste disposal facility.

#### Notes:

- 1. Always start with a clean spray tank.
- 2. Steam-cleaning aerial spray tanks is recommended to facilitate the removal of any caked deposits.
- When HARMONY® EXTRA is tank mixed with other
  pesticides, all cleanout procedures for each product should
  be examined and the most rigorous procedure should be
  followed.
- 4. In addition to this cleanout procedure, all pre-cleanout guidelines on subsequently applied products should be followed as per the individual labels.

#### 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 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 recommended 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.

#### Controlling Droplet Size - Aircraft

- Number of Nozzles Use the minimum number of nozzles with the highest flow rate that provide uniform coverage.
- Nozzle Orientation Orienting nozzles so that the spray is emitted backwards, parallel to the airstream will produce larger droplets than other orientations.
- Nozzle Type Solid stream nozzles (such as disc and core with swirl plate removed) oriented straight back produce larger droplets than other nozzle types.
- Boom Length The boom length should not exceed 3/4 of the wing or rotor length longer booms increase drift potential.
- Application Height Application more than 10 ft above the canopy increases the potential for spray drift.

#### **BOOM HEIGHT**

Setting the boom at the lowest referenced height (if specified) which provides uniform coverage reduces the exposure of droplets to evaporation and wind. For ground equipment, 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 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 GUSTY AND WINDLESS CONDITIONS.

**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 hot and dry conditions, set up equipment to produce larger droplets to reduce effects of evaporation.

#### TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain close to the ground and move laterally in a concentrated cloud. Temperature 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 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.

#### 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.

#### AIR ASSISTED (AIR BLAST) FIELD CROP SPRAYERS

Air assisted field crop sprayers carry droplets to the target via a downward directed air stream. Some may reduce the potential for drift, but if a sprayer is unsuitable for the application and/or set up improperly, high drift potential can result. It is the responsibility of the applicator to determine that a sprayer is suitable for the intended application, is configured properly, and that drift is not occurring.

**Note:** Air assisted field sprayers can affect product performance by affecting spray coverage and canopy penetration. Consult the spray equipment section of this label to determine if use of an air assist sprayer is recommended.

#### 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 retreat 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, retreatment, 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. See the Weeds Controlled section of this label for additional information on managing herbicide resistant weed 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.

#### **PRECAUTIONS**

Injury to or loss of adjacent sensitive crops, desirable trees or vegetation may result from failure to observe the following:

- Do not apply, 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 spray to desirable plants.
- Take all necessary precautions to avoid all direct or indirect contact (such as spray drift) with non-target plants or areas.
- Carefully observe all sprayer cleanup instructions both prior to and after using this product, as spray tank residue may damage crops other than wheat, barley, triticale or

HARMONY® EXTRA is only registered on wheat, barley, oat, triticale and fallow. Do not use on any other crop.

The total rate of HARMONY® EXTRA for wheat (including durum), barley and triticale cannot exceed 1.5 ounce product per acre applied to any one crop during one growing season.

The total rate of HARMONY® EXTRA for oat (spring and winter) cannot exceed 0.6 ounces product per acre applied to any one crop during one growing season.

Varieties of wheat (including durum), barley and triticale may differ in their response to various herbicides. DuPont recommends that you first consult your state experiment station, university, or extension agent as to sensitivity to any herbicide. If no information is available, limit the initial use to a small area.

Under certain conditions such as heavy rainfall, prolonged cold weather, or wide fluctuations in day/night temperatures prior to or soon after HARMONY® EXTRA application, temporary discoloration and/or crop injury may occur. To reduce the potential of crop injury, tank mix HARMONY® EXTRA with 2,4-D (ester formulations perform best-see Tank Mixtures) and apply after the crop is in the tillering stage of growth.

HARMONY® EXTRA should not be applied to wheat, barley. triticale or oat that is stressed by severe weather conditions, drought, low fertility, water-saturated soil, disease, or insect damage, as crop injury may result. Risk of injury is greatest when crop is in the 2 to 5- leaf stage. Severe winter stress, drought, disease, or insect damage following application also may result in crop injury.

Do not apply to wheat, barley, triticale or oat crops underseeded with another crop.

Dry, dusty field conditions may result in reduced control in wheel track areas.

Do not harvest sooner than 45 days after the last application of DuPont<sup>TM</sup> HARMONY® EXTRA.

#### STORAGE AND DISPOSAL

**Pesticide Storage:** Store product in original container only. Do not contaminate water, other pesticides, fertilizer, food or feed in storage.

**Pesticide Disposal:** Do not contaminate water, food, or feed by disposal. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Disposal: For Plastic Containers: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke. For Fiber Sacks: Completely empty fiber sack by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into manufacturing or application equipment. Then dispose of sack in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

Container Refilling and Disposal (For Containers up to 250 gal): This is a refillable container. If the container is to be refilled, do not rinse with any material or introduce any pesticide other than HARMONY® EXTRA. Reseal and return the container to any authorized DuPont refilling facility. If the container is not to be refilled, triple rinse (or equivalent) and offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or by open burning, if allowed by state and local authorities. If burned, keep 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 cleanup procedures and disposal of wastes. In the event of a major spill, fire or other emergency, call 1-800-441-3637 day or night.

Container Disposal for Bulk Containers: When this container is empty, replace the cap and seal all openings that have been opened during use, and return the container to the point of purchase or to a designated location named at time of purchase of this product. The container must only be refilled with this pesticide product. DO NO REUSE THE CONTAINER FOR ANY OTHER PURPOSE. Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn-out threads and closure devices. Check for leaks after refilling and before transporting. Do not transport if this container is damaged or leaking. If the container is damaged, leaking or obsolete, contact DuPont at 1-800-441-3637. If not returned to the point of purchase or to a designated location, triple rinse emptied container and offer for recycling. Disposal of this container must be in compliance with state and local regulations.

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 cleanup procedures and disposal of wastes. In the event of a major spill, fire or other emergency, call 1-800-441-3637 day or night.

NOTICE TO BUYER: Purchase of this material does not confer any rights under patents of countries outside of the United States.

The DuPont Oval Logo, DuPont™, HARMONY®, ALLY®, EXPRESS®, GLEAN® and TOTALSOL® are trademarks or registered trademarks of E. I. duPont de Nemours and Company

#### D - 1231 073008



<sup>&</sup>quot;Fallow Master", "Landmaster", "Maverick" and "Roundup" are registered trademarks of Monsanto Company

<sup>&</sup>quot;Assert" and "Banvel" are registered trademarks of Micro Flo Company LLC

<sup>&</sup>quot;Clarity" is a registered trademark of BASF Ag Products

<sup>&</sup>quot;Buctril", "Bronate", "Bronate Advanced", "Hoelon" and "Puma" are registered trademarks of Bayer Crop Science

<sup>&</sup>quot;Starane", "Stinger", "Curtail", "Curtail M", and "Widematch" are registered trademarks of Dow AgroSciences LLC

<sup>&</sup>quot;Salvo" and "Sword" are registered trademarks of UAP Loveland Products Inc.

<sup>&</sup>quot;Aim" is a registered trademark of FMC Corp.

<sup>&</sup>quot;Discover" is a registered trademark of Syngenta Participations AG

<sup>&</sup>quot;Everest" is a registered trademark of Arysta LifeScience North America USA

<sup>&</sup>quot;Raindrop RA" is a registered trademark of Delavan

<sup>&</sup>quot;Avenge" is a registered trademark of Amvac Chemical Corporation

<sup>&</sup>quot;Rhino" is a registered trademark of McGregor Company

#### LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read this 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.

It is impossible to eliminate all risks associated with the use of this product. Such risks arise from weather conditions, soil factors, off target movement, unconventional farming techniques, presence of other materials, the manner of use or application, or other unknown factors, all of which are beyond the control of DuPont. These risks can cause: ineffectiveness of the product, crop injury, or injury to non-target crops or plants. WHEN YOU BUY OR USE THIS PRODUCT, YOU AGREE TO ACCEPT THESE RISKS.

DuPont warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for the purpose stated in the Directions for Use, subject to the inherent risks described above, when used in accordance with the Directions for Use under normal conditions.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, DUPONT MAKES NO OTHER **EXPRESS OR IMPLIED WARRANTY OF FITNESS** OR OF MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, IN NO EVENT SHALL DUPONT OR SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT. BUYER'S OR USER'S **BARGAINED-FOR EXPECTATION IS CROP** PROTECTION. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER AND THE EXCLUSIVE LIABILITY OF DUPONT OR SELLER, FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY OR CONTRACT, NEGLIGENCE, TORT OR STRICT LIABILITY), WHETHER FROM FAILURE TO PERFORM OR INJURY TO CROPS OR OTHER PLANTS, AND 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 DUPONT OR SELLER, THE REPLACEMENT OF THE PRODUCT.

To the extent consistent with applicable law that allows such requirement, DuPont or its Ag Retailer must have prompt notice of any claim so that an immediate inspection of buyer's or user's growing crops can be made. Buyer and all users shall promptly notify DuPont or a DuPont Ag Retailer of any claims, whether based on contract, negligence, strict liability, other tort or otherwise, or be barred from any remedy.

This Limitation of Warranty and Liability may not be amended by any oral or written agreement.

For product information call: 1-888-6-DUPONT
Internet address: www.dupont.com/ag/us
© 2006-2008 E. I. du Pont de Nemours and Company, Crop Protection, Wilmington, Delaware 19898.
All rights reserved.

## SUPPLEMENTAL LABELING

**DuPont Crop Protection** 

DUPONT™ HARMONY ® EXTRA HERBICIDE (with TotalSol ® soluble granules) DUPONT™ HARMONY ® EXTRA SG HERBICIDE (with TotalSol ® soluble granules)

## DUPONT™ HARMONY ® EXTRA HERBICIDE (with TotalSol ® soluble granules)

EPA Reg. No. 352-714

## DUPONT™ HARMONY ® EXTRA SG HERBICIDE (with TotalSol ® soluble granules)

EPA Reg. No. 352-714

## BURNDOWN IN COTTON, FIELD CORN, RICE, SOYBEANS, AND GRAIN SORGHUM

#### **GENERAL INFORMATION**

DuPont<sup>TM</sup> HARMONY® EXTRA HERBICIDE (with TotalSol® soluble granules) or DuPont<sup>TM</sup> HARMONY® EXTRA SG HERBICIDE (with TotalSol® soluble granules) may be applied for burndown of emerged weeds before planting cotton, field corn, grain sorghum, rice and soybeans.

#### **DIRECTIONS FOR USE**

HARMONY® EXTRA or HARMONY® EXTRA SG may be used as part of a pre-plant or at-planting burndown treatment, in combination with other suitable registered herbicides.

Read and follow all manufacturer's label recommendations for the companion herbicide. If those recommendations conflict with this label, do not tank mix the herbicide with HARMONY® EXTRA or HARMONY® EXTRA SG.

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

Rice may be planted anytime after the application of HARMONY® EXTRA or HARMONY® EXTRA SG. Allow at least 7 days between application and planting of soybeans. Allow at least 14 days between application and planting of cotton, field corn, or grain sorghum.

In fields to be planted to cotton, apply HARMONY® EXTRA or HARMONY® EXTRA SG at 0.45 to 0.75 ounce per acre. In fields to be planted to field corn, grain sorghum, rice, or soybeans, apply HARMONY® EXTRA or HARMONY® EXTRA SG at 0.45 to 0.9 ounce per acre for control or partial control of the weeds listed on the EPA registered label. Always include a spray adjuvant when applying HARMONY® EXTRA or

HARMONY® EXTRA SG. If another herbicide is tank mixed with HARMONY® EXTRA or HARMONY® EXTRA SG to increase the broadleaf weed spectrum, select adjuvants based in the adjuvant limitations of the companion herbicide.

#### SPRAY ADJUVANTS

#### Nonionic Surfactants (NIS)

Apply at a rate (concentration) of 0.06-0.50% v/v (1/2 pint to 4 pints per 100 gallons of spray solution). Use the higher rate in hot and dry conditions to enhance weed control.

#### **Crop Oil Concentrate**

Under dry conditions or during cool weather, a petroleum based crop oil concentrate, or vegetable-seed oil-based product may be used in place of a nonionic surfactant at 1-2 gallon/100 gallons of spray solution (1-2% v/v) to enhance weed control. Use an oil adjuvant that contains at least 80% of a high quality, petroleum (mineral) or modified vegetable seed oil with at least 15% surfactant emulsifiers.

#### Ammonium Nitrogen Fertilizer

An ammonium nitrogen fertilizer can be added to a surfactant or a crop oil concentrate to enhance control. Alternately, a highquality, sprayable grade of ammonium sulfate may be used.

HARMONY® EXTRA SG or HARMONY® EXTRA			
Crop	(ounce per acre)	Time Interval Before Planting (days)	
rice	0.45 to 0.9	0	
soybeans	0.45 to 0.9	7	
cotton	. 0.45 to 0.75	14	
field com and grain sorghum	0.45 to 0.9	14	

For product information call 1-888-6-DUPONT © 2008. E. I. du Pont de Nemours and Company, Crop Protection, Wilmington, Delaware 19898

## 18/19

#### **IMPORTANT PRECAUTIONS - COTTON**

Seedling disease, nematodes, cold weather, deep planting (more than 2"), excessive moisture, high salt concentration, and/or drought may weaken cotton seedlings and increase the possibility of crop injury. Cotton resumes normal growth once favorable growing conditions return.

#### RESTRICTIONS

- DO NOT apply HARMONY® EXTRA or HARMONY® EXTRA SG by air in the State of New York
- DO NOT apply after planting cotton, field corn, grain sorghum, or soybeans
- DO NOT apply later than 7 days before planting soybeans
- DO NOT apply later than 14 days before planting cotton, field corn, or grain sorghum
- DO NOT allow livestock to graze on, or feed forage, hay or straw from treated soybean fields
- DO NOT make more than one pre-plant or at-planting application of HARMONY® EXTRA or HARMONY® EXTRA SG to field corn, rice, grain sorghum, or soybeans per growing season
- DO NOT exceed a total of 1.5 ounces of HARMONY® EXTRA or HARMONY® EXTRA SG per acre during one fallow/pre-plant cropland season.

#### **IMPORTANT**

BEFORE USING HARMONY® EXTRA or HARMONY® EXTRA SG, READ AND FOLLOW ALL APPLICABLE DIRECTIONS, RESTRICTIONS AND PRECAUTIONS ON THE EPA-REGISTERED LABEL.

Read the Limitation of Warranty and Liability on the Section 3 Federal product label before buying or using THIS product. If terms are not acceptable, return the unopened package at once to Seller for full refund of purchase price paid. Otherwise, use by Buyer or any other User constitutes acceptance of the terms of the Limitation of Warranty and Liability on the Section 3 Federal product label.

This bulletin contains new or supplemental instructions for the use of this product, which do not appear on the EPA-registered package label. Follow these instructions carefully. This labeling must be in the possession of the user at the time of application.

This product may not be available in all states. See you local DuPont retailer or representative for details and availability in your state.

R-765 031708 11-01-07