



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

JUN 24 1993

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

Dear Registrant:

Subject: Label Amendment Submission of 5/14/93 in Compliance with the  
PR Notice 93-7  
Du Pont Harmony Herbicide, EPA Reg. No. 352-446

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is accepted subject to the comments listed below. Five copies of the finished labeling must be submitted prior to releasing the product for shipment.

Based on your certification, the Agency has accepted only those changes to your labeling which are necessary to comply with PR Notice 93-7, which reflects the WPS labeling requirements of 40 CFR part 156, subpart K. Any changes to the labeling submitted in connection with this amendment application not directly related to compliance with PR Notice 93-7 were not reviewed and have not been accepted by the Agency. If you wish to make such changes, you must submit a separate amendment application proposing them. If your product is currently suspended, acceptance of this labeling amendment does not affect the suspension in any way.

Please note that a typographical error has been highlighted on the stamp "Accepted with comments" label attached for your records. You must correct this error before printing the final label, which you will submit to the Agency.

We wish to remind you that on your final printed label the "User Safety Recommendations" text must be shown in a box on the label. This text must be shown in a clearly separate box on the product label. The box will be delineated with lines or other graphic indicators, or possibly with background shading or coloring to readily distinguish it from other text on the label.



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contains at least 90% recycled fiber

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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 constitutes acceptance of these conditions.

Sincerely,



Thomas Adamczyk, Deputy Chief  
Fungicide-Herbicide Branch  
Registration Division (H7505W)

Enclosure

30F10

ACCEPTED  
with COMMENTS  
in EPA Letter Dated

6/24/93

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act  
as amended, for the pesticide  
registered under EPA Reg. No.  
352-446



# HARMONY®

## HERBICIDE DRY FLOWABLE BY WEIGHT

### ACTIVE INGREDIENTS

Methyl 3-[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)-amino] carbonyl]amino]sulfonyl]-2-thiophenecarboxylate ..... 75%

INERT INGREDIENTS ..... 25%

TOTAL ..... 100%

EPA Reg. No. 352-446

U.S. Patent 4,481,029

### KEEP OUT OF REACH OF CHILDREN

## CAUTION

### PRECAUTIONARY STATEMENTS

#### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**CAUTION!** Avoid contact with skin, eyes and clothing. In case of contact with eyes, immediately flush with plenty of water. Get medical attention if irritation persists. Wash thoroughly after handling.

For medical emergencies involving this product, call toll free 1-800-441-3637.

#### PERSONAL PROTECTIVE EQUIPMENT

Applicators and other handlers must wear:

- Long-sleeve shirt and long pants.
- Waterproof gloves.
- 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 toilet.

#### ENVIRONMENTAL HAZARDS

Do not apply directly to water or wetlands (swamps, bogs, marshes and potholes). Do not contaminate water when disposing of equipment washwaters.

### IMPORTANT INFORMATION - (READ BEFORE USING)

Injury to or loss of desirable trees or vegetation may result from failure to observe the following: Do not apply or drain or flush equipment on or near desirable trees or other plants, or on areas where their roots may extend, or in locations where the chemical may be washed or moved into contact with their roots. Do not use on lawns, walks, driveways, tennis courts or similar areas. Prevent drift of spray to desirable plants. Do not contaminate any body of water. Carefully observe all sprayer cleanup instructions both prior to and after using this product, as spray tank residue may damage crops other than wheat or barley.

### PESTICIDE HANDLING

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

### GENERAL INFORMATION

Du Pont "Harmony" Herbicide is recommended for selective postemergence control of certain broadleaf weeds in wheat (including durum) and barley. Do not use "Harmony" on any other crop. "Harmony" is a dry flowable granule to be mixed in water or other recommended carrier and applied as a uniform broadcast spray. It is noncorrosive, nonflammable, nonvolatile and does not freeze.

Best results are obtained when "Harmony" 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 of control and duration of effect are dependent on rate used, sensitivity and size of target weed and environmental conditions at the time of and following application.

"Harmony" stops growth of susceptible weeds rapidly. However, typical symptoms of dying weeds (discoloration) may not be noticeable for 1-3 weeks after application (2-5 weeks for wild garlic) depending on the environmental conditions and weed susceptibility. Warm, moist conditions following treatment promote the activity of "Harmony", while cold, dry conditions delay the activity. Weeds hardened-off by cold weather or drought stress will be less susceptible.

A vigorous growing crop will aid weed control by shading and providing competition for weeds. However, a dense crop canopy at time of application can intercept spray and result in reduced weed control. Weeds may not be adequately controlled in areas of thin crop stand or seeding skips.

### INFORMATION ON RESISTANT WEEDS

Naturally-occurring weed biotypes\* that are resistant to Du Pont Ally® Herbicide, Du Pont Express® Herbicide, Du Pont Finesse® Herbicide, Du Pont Glean® FC Herbicide or Du Pont "Harmony" Extra Herbicide will also be resistant to "Harmony". In areas where these weed biotypes are known to exist, only spray "Harmony" in tank mixtures with other broadleaf herbicides having a different mode of action\*\* such as: 2,4-D, Banvel[1]/"Banvel" SGF\*\*\*, Buctril[2], Bronate[2], Curtail[3], Curtail M[3] MCPA or Du Pont Lexone® DF Herbicide. Refer to TANK MIXTURES.

Note: Because these resistant biotypes are known to be present, accurate record keeping of pesticides applied to individual fields is advisable in order to obtain information on the dispersal and spread of the resistant biotypes.

\*Biotypes are naturally-occurring individuals of the species which have a slightly different genetic makeup. Resistant biotypes may look exactly the same as susceptible biotypes. Herbicide-resistant biotypes are able to survive a use rate several times higher than needed to control susceptible biotypes.

\*\* Mode of action is the chemical interaction that interrupts a biological process necessary for plant growth and development.

\*\*\* Tank mixes with "Banvel"/"Banvel" SGF may result in reduced control of some broadleaf weeds.

Read and follow all appropriate sections of label, including precautions, before using this product.

### GRAZING

Do not graze or feed forage or hay from treated areas to livestock (harvested straw may be used for bedding and/or feed).

### 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 in your State 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.
- Waterproof gloves.
- Shoes plus socks.

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

"Harmony" Herbicide should be used only in accordance with recommendations on this label or in separately published Du Pont recommendations.

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

Do not use this product in the following counties of Colorado: Alamosa, Conejos, Costilla, Rio Grande and Saguache.

### WEED CONTROL IN WHEAT AND BARLEY

#### CROP STAGE AT APPLICATION

For winter wheat, make applications after the crops in the 2-leaf stage, but before the 3rd node is detectable.

For spring wheat and barley, make applications after the crop is in the 2-leaf stage, but before the 1st node is detectable.

#### APPLICATION RATES

Apply 1/2 ounce "Harmony" per acre to wheat (including durum) or barley for control or partial control of the weeds listed below.

Use 2/3 ounce "Harmony" per acre when weed infestation is heavy and predominately consists of those weeds listed under partial control, or when application timing and environmental conditions are marginal (refer to APPLICATION AND ENVIRONMENTAL CONDITIONS FOR OPTIMUM PERFORMANCE).

Use 1/3 ounce "Harmony" per acre when weed infestation is light and predominately consists of those weeds listed under weeds controlled, and when optimum application conditions occur.

Do not use less than 1/3 ounce "Harmony" per acre.

Sequential treatments of "Harmony" may be made provided the total amount of "Harmony" applied to the crop does not exceed 1.0 ounce per acre; for example, 1/2 ounce followed by 1/2 ounce. Do not make the first application until after winter wheat is in the 2-leaf stage and make the last application before the 3rd node is detectable. Do not make the first application until after spring wheat or barley is in the 2-leaf stage and make the last application before the 1st node is detectable.

### WEEDS CONTROLLED

- |                      |                         |
|----------------------|-------------------------|
| Annual knawel        | Mouseear chickweed      |
| Annual sowthistle    | Pennsylvania smartweed  |
| Black mustard        | Prostrate knotweed      |
| Bushy wallflower     | Redmaids                |
| /Treacle mustard     | Redroot pigweed         |
| Carolina geranium    | Russian thistle         |
| Coast fiddleneck     | —in ID, OR and WA       |
| Common buckwheat     | partial control only    |
| Common chickweed*    | Scotless                |
| Common groundsel     | chamomile/mayweed       |
| Common lambsquarters | Shepherd's-purse        |
| Corn chamomile       | Smallflower buttercup   |
| Corn spurry          | Stinking mayweed        |
| Cress (mouse-ear)    | /Dogfennel              |
| Curly dock           | Swinecress              |
| False chamomile      | Tarweed fiddleneck      |
| Field pennycress     | Tumble/Jim Hill mustard |
| Flixweed             | Volunteer lentils       |
| Green smartweed      | Volunteer peas          |
| Kochia               | Volunteer sunflower     |
| Ladysthumb           | Wild buckwheat*         |
| London rocket        | Wild chamomile          |
| Mallow (little)      | Wild garlic*            |
| Marshelder           | Wild mustard            |
| Miners lettuce       |                         |

#### PARTIAL CONTROL\*\*

- |                         |                  |
|-------------------------|------------------|
| Common cocklebur        | Mallow (common)  |
| Common sunflower        | Prickly lettuce* |
| Cutleaf eveningprimrose | Tansymustard*    |
| Henbit                  | Wild radish*     |

\* See SPECIFIC WEED PROBLEMS for more information.

\*\*Partial control: A visual reduction of weed population as well as a significant loss of vigor for individual weed plants. For better results, use 1/2 or 2/3 ounce "Harmony" per acre and include a tank mix partner such as 2,4-D, MCPA, "Buctril" or "Banvel"/"Banvel" SGF (refer to TANK MIXTURES).

#### SPECIFIC WEED PROBLEMS

**Common chickweed and wild buckwheat:** For best results, apply a minimum of 1/2 ounce "Harmony" per acre plus surfactant when all or the majority of weeds have germinated and are past the cotyledon stage. Weeds should be less than 3 inches tall or across at the time of "Harmony" application.

**Prickly lettuce and tansymustard:** For best results, use 1/2 ounce to 2/3 ounce "Harmony" per acre plus 2,4-D or MCPA. Refer to TANK MIXTURES for more information.

**Wild garlic:** For best results, apply 1/2 to 2/3 ounce "Harmony" per acre plus surfactant when wild garlic plants are less than 12 inches tall with 2 to 4 inches of new growth. For severe infestations, use the 2/3 ounce per acre rate of "Harmony". Control may be reduced when plants are hardened-off by cold weather and/or drought stress. Control is enhanced when applications are made during warm temperatures to actively growing wild garlic plants. Typical symptoms of dying wild garlic plants (discoloration and collapse) may not be noticeable for 2-5 weeks.

Thorough coverage of all garlic plants is essential.

**Wild radish:** For best results, apply 1/2 to 2/3 ounce "Harmony" 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. Fall applications should be made prior to hardening-off of plants.

**Note:** If resistant weed biotypes, such as kochia and Russian thistle, are suspected (land which has had 2 or more previous applications of "Glean"/"Glean" FC or is immediately adjacent to land where "Glean"/"Glean" FC has been used 2 or more times) or known to be present, consider using another herbicide treatment or adjust the use rate of the "Harmony" tank mix partner labeled for the control of kochia and/or Russian thistle so that it alone will control the resistant biotypes.

### **APPLICATION AND ENVIRONMENTAL CONDITIONS FOR OPTIMUM PERFORMANCE**

**Crop Safety:** Many environmental, cultural practices, soil conditions and crop variety factors can cause stress to a crop. A pesticide application to a stressed crop may increase the chance for injury. To lessen the chance of crop injury under such conditions, tank mix "Harmony" with 2,4-D (ester formulations perform best) and apply after the crop is in the tillering stage of growth.

**Crop Stage:** For winter wheat, make applications after the crop is in the 2-leaf stage, but before the 3rd node is detectable.

For spring wheat and barley, make applications after the crop is in the 2-leaf stage, but before the 1st node is detectable.

Since thorough coverage is required, avoid crop canopy obstruction of the spray contacting the weed foliage.

**Crop Competition:** A vigorous growing crop will aid weed control by shading and providing competition to the weeds. However, a dense crop canopy at time of application can intercept spray and result in reduced weed control. Weeds may not be adequately controlled in areas of thin crop stand or seeding skips.

**Pest Stage:** Since "Harmony" has very little or no soil activity, only those weeds that have germinated above the soil surface will be controlled. Consequently, application of "Harmony" should be made when all or the majority of weeds have germinated. Annual broadleaf weeds should be past the cotyledon stage, actively growing, and less than 4 inches tall or across. Wild garlic plants should be less than 12 inches tall with 2 to 4 inches of new growth. See SPECIFIC WEED PROBLEMS for more information on common chickweed, wild buckwheat, prickly lettuce, tansymustard, wild garlic and wild radish.

**Application:** Foliar absorption is the primary means of "Harmony" uptake by plants; therefore, thorough spray coverage of all target weeds is essential.

**Weather:** Conditions which are conducive to healthy, actively growing plants optimize "Harmony" weed control performance. Ideal conditions include warm temperatures and adequate soil moisture before, during and immediately after application.

Avoid making applications of "Harmony" to weeds when rainfall is threatening. Rainfall immediately after treatment

can wash "Harmony" off weed foliage and result in reduced weed control effectiveness. Several hours of dry weather are needed to allow "Harmony" to be absorbed by weed foliage.

**Surfactant:** Use only EPA approved surfactants authorized for use on food crops.

**Water Spray Carrier -** Unless specified otherwise, always add a nonionic surfactant of at least 80% active ingredient strength at 0.25% vol/vol (1 quart per 100 gallons of spray solution).

**Liquid N Carrier -** Surfactant use is recommended when applying "Harmony" in liquid nitrogen fertilizer. When "Harmony" is applied using liquid nitrogen fertilizer solution as a spray carrier, early, temporary, crop yellowing and stunting may occur. These symptoms will be more noticeable when surfactant is used. Use 0.06 - 0.25% vol/vol surfactant (1/2 pint - 1 quart per 100 gallons of spray solution) when applying "Harmony" in liquid nitrogen fertilizer solution. Refer to TANK MIXTURES for surfactant information when tank mixing with other products. If surfactant is not used when applying "Harmony" in liquid nitrogen fertilizer, weed control may be significantly reduced.

### **EQUIPMENT-SPRAY VOLUMES**

It is important that spray equipment is cleaned and free of existing pesticide deposits before using "Harmony". Follow the cleanup procedures specified on the label of the product previously sprayed. If no procedure is provided, follow this cleanup procedure for all application equipment.

1. Thoroughly rinse sprayer, tanks, boom, and hoses with clean water. Loosen and physically remove any visible deposits.
2. Partially fill the tank with water and add ammonia (1 gallon of 3% (household) ammonia per 100-gallons of tank volume) or a tank cleaner\* (follow individual label instructions for amount of tank cleaner to use). Complete filling the tank and flush the cleaning solution through the boom and hoses. Let stand for 15 minutes with agitation/recirculation and then drain the tank after flushing the hoses, boom and nozzles.
3. Thoroughly rinse sprayer, tanks, boom, and hoses with clean water.
4. Follow label directions of the product previously sprayed for rinsate disposal.

\* See listing of Du Pont approved tank cleaners under SPRAYER CLEANUP section of the label.

**NOTE:** A steam cleaning of aerial spray tanks is recommended to dislodge any visible pesticide deposits.

**Spray Equipment:** Refer to specific manufacturer's recommendations for additional information on GPA, pressure, speed, nozzle types and arrangements, nozzle heights above the target canopy, etc., for respective application equipment.

Apply using properly calibrated air or ground equipment. Select a spray volume and delivery system that will insure thorough coverage and a uniform spray pattern. Avoid overlapping (unless otherwise specified), and shut off spray

booms while starting, turning, slowing or stopping, or injury to the crop may result.

Do not use equipment and/or spray volumes that will cause spray to drift onto nontarget sites. Do not make applications during weather conditions which cause spray to drift onto nontarget sites. For additional information, refer to CAUTION - AVOID SPRAY DRIFT section of label.

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

**Ground Application:** For optimum spray distribution and thorough coverage, use flat fan or low volume flood nozzles. For flat fan nozzles, do not use less than 5-gallon spray volume per acre (GPA).

For flood nozzles on 30-inch spacing, use not less than 10 GPA and no larger than TK10 or equivalent and not less than 30 psi. On 40-inch nozzle spacings, use not less than 13 GPA or not less than 20 GPA when nozzles are on a 60-inch spacing. 100% overlapping of nozzle spray pattern is essential for 30, 40 and 60-inch spacings.

When using liquid nitrogen solution as a spray carrier, for flood nozzles use not less than 30 GPA and no larger than TK20. See statements on liquid N solutions below for additional information.

Raindrop[4] nozzles are not recommended for "Harmony" applications as weed control performance may be reduced. Use 50-mesh screens or larger.

**Aerial Application:** Use nozzle types and arrangements that will provide for optimum spray distribution and maximum coverage at 2 to 5 GPA. Do not use less than 3 GPA in ID, OR, UT or WA. Do not apply during inversion conditions, when winds are gusty, or when other conditions will favor poor coverage and/or off-target spray movement.

For aerial application in the state of Washington, refer to and follow the directions on the Washington Special Local Need label, "Harmony" Herbicide Aerial Application to Wheat and Barley in the State of Washington.

**Liquid Nitrogen Fertilizer Solutions:** Always slurry "Harmony" in clean water PRIOR to mixing in liquid N solutions. Surfactant use is recommended when applying "Harmony" in liquid nitrogen fertilizer. If surfactant is not used, weed control may be significantly reduced. When "Harmony" is applied using liquid nitrogen fertilizer solution as a carrier, early, temporary crop yellowing and stunting may occur. The symptoms will be more noticeable when surfactant is used. Use 0.06 - 0.25% vol/vol surfactant (1/2 pint - 1 quart per 100 gallons of spray solution) when applying "Harmony" in liquid nitrogen fertilizer solution.

The addition of liquid nitrogen fertilizer to the spray solution, or the use of liquid nitrogen fertilizer as the total carrier of the spray solution will increase the weight of the spray solution as compared to water (see table below). Consequently, appropriate conversions of spray nozzles and/or pressure must be made in order to maintain proper spray volumes. Refer to the conversion chart below for guidance (taken from Spray Systems Company Catalog 39, page 2).

Influence of adding liquid 28% N fertilizer to spray solution weight per gallon:

% of Spray Solution		Spray Solution (Lbs/Gallon)
Water	28% N	
100	0	8.34
50	50	9.5
0	100	10.6

**SPRAYING SYSTEMS CONVERSION CHART**  
**SPRAYING SOLUTIONS OTHER THAN WATER-NEW METHOD**

Since all the tabulations in the Spray Systems Catalog are based on spraying water, which weighs 8.34 lbs per USA gallon, conversion factors must be used when spraying solutions which are heavier or lighter than water. To determine the proper size nozzle for the solution to be sprayed, first multiply the desired GPM or GPA of solution by the water rate conversion factor. Then use the new converted GPM or GPA rate to select the proper size nozzle.

Example: 10 GPA (28%N) X 1.13 = 11.3 GPA (water)

Weight of Solution	Specific Gravity	Conversion Factors
7.0 lbs per gallon	0.84	0.92
8.0 lbs per gallon	0.96	0.98
8.34 lbs per gallon-Water	1.00	1.00
9.0 lbs per gallon	1.08	1.04
10.0 lbs per gallon	1.20	1.10
10.65 lbs per gallon-28% nitrogen	1.28	1.13
11.0 lbs per gallon	1.32	1.15
12.0 lbs per gallon	1.44	1.20
14.0 lbs per gallon	1.68	1.30

Published in Spraying Systems Company Catalog 39, page 2.

**Agitation:** Continuous agitation is required to keep "Harmony" in suspension.

**CAUTION - AVOID SPRAY DRIFT**

Follow these practices to minimize drift.

Do not allow spray from either ground or aerial equipment to drift onto adjacent crops or land, as even small amounts can injure susceptible plants. When spraying near adjacent, sensitive crops or plants, do everything possible to reduce spray drift. This includes:

- o Stop spraying if wind speed becomes excessive. DO NOT SPRAY IF WIND SPEED IS 10 MPH OR GREATER. Spray drift can occur at wind speeds less than 10 MPH. If sensitive crops or plants are downwind, extreme caution must be used even in relatively low wind conditions! DO NOT SPRAY IF WINDS ARE GUSTY.
- o High temperatures, drought and low relative humidity increase the possibility of spray drift. EXTREME CAUTION MUST BE USED WHEN THESE CONDITIONS ARE PRESENT AND SENSITIVE CROPS OR PLANTS ARE NEARBY, REGARDLESS OF WIND SPEED.

o Do not apply when a temperature inversion exists. An inversion is characterized by low air movement and an increase in air temperature with an increase in altitude. In humid regions, a fog or mist may form. An inversion may be detected by producing a smoke column and checking for a layering effect. Smoke-producing devices on aircraft are recommended. If not sure whether inversion conditions are present, consult with local weather services before making an application.

o Postemergence grass herbicides (such as Hoelon[5], Avenge[6] and Assert[6]) are often applied using high pressure. When "Harmony" is tank mixed with these products, do not exceed 40 psi.

o Drift from aerial or ground equipment may be further reduced by:

1. Using large droplet size sprays to minimize drift. **DO NOT APPLY WITH HOLLOW-CONE INSECTICIDE NOZZLES ON GROUND EQUIPMENT.** Do not use nozzles that produce small droplets, such as Sprayfoil[7] or airblast-type nozzles. Nozzles should be oriented at an angle between straight down and straight back for ground applications.

For aerial applications, orient nozzles straight back along the windstream using straight stream orifices (such as disk with no swirl plate). If using flood-type nozzles on aircraft, orient them so spray is produced in direction of the airstream. Use the lowest number of nozzles practical with the largest orifice size per nozzle to obtain minimum of 2 or 3 GPA. Application height should not exceed 1/2 length of wing span, to minimize drift potential. Boom length must not exceed 2/3 of wing span.

2. Increasing volume of spray mix per acre (for example, minimum 5 GPA by air, 10 GPA by ground) by using higher flow-rate nozzles.
3. Reducing pressure (PSI). **DO NOT EXCEED 40 PSI** when applying "Harmony". (Vehicle speed must also be reduced to maintain spray mix volume per acre). Consult manufacturer's catalogs for details on correct calibration.
4. Apply as close to target plants as possible while still maintaining a good spray pattern

**NOTE:** Do not allow spray to drift onto adjacent crops, or onto agricultural land scheduled to be planted to crops other than wheat or barley, as injury to the crop may occur. Extreme care must be taken to prevent drift onto susceptible nontarget plants or nontarget land.

### TANK MIXTURES

2,4-D (amine or ester) or MCPA (amine or ester) - Use "Harmony" plus 1/8 to 3/8 lb active ingredient 2,4-D or MCPA (ester formulations have provided best results). Surfactant may be added at 0.125-0.25% vol/vol (1 pint to 1 quart per 100 gallons of spray volume); however, the addition of surfactant may increase the chance of crop injury. Use the 1 pint to 1 quart rate of surfactant with 1/8 lb active ingredient rate of 2,4-D or MCPA. Use the 1 pint rate of surfactant with 1/4 to 3/8 lb active ingredient of 2,4-D or MCPA. Higher rates of 2,4-D or MCPA may be used, but do not exceed highest rate allowed on the label.

Always mix "Harmony" in water prior to adding 2,4-D or MCPA. Always add surfactant last. Read and follow all label instructions on timing, precautions and warnings for these herbicides prior to using these tank mixtures.

"Harmony" may be tank mixed with other suitable registered herbicides (for example "Lexone" DF, "Banvel"/"Banvel" SGF, "Buctril", "Bronate") to control weeds listed in Partial Control Table or other weeds than those listed in the Weeds Controlled Table. Read and follow all manufacturer's label recommendations for the companion herbicide. If these recommendations conflict with this "Harmony" label or supplemental "Harmony" labels, do not use as a tank mix with "Harmony".

"Harmony" will not control wild oats or other grasses. For wild oat control, "Harmony" can be tank mixed with "Hoelon", "Avenge" or "Assert". For green or yellow foxtail (pigeongrass) suppression, "Harmony" can be tank mixed with "Hoelon". When tank mixing "Harmony" and "Hoelon", the addition of surfactant is not required. When tank mixing "Harmony" and "Assert", ALWAYS include another broadleaf weed herbicide with a different mode of action, for example: 2,4-D ester, MCPA ester, "Buctril" or "Bronate".

Always mix "Harmony" in water PRIOR to adding other products, including surfactants. When mixing "Harmony" in liquid nitrogen fertilizer solutions, first mix the "Harmony" in clean water and then add the "Harmony" and water slurry to the liquid nitrogen solution. Refer to SPRAY PREPARATION for further information.

Tank mixes of "Harmony" plus "Banvel"/"Banvel" SGF may result in reduced control of some broadleaf weeds.

Tank mixes of "Harmony" plus metribuzin may result in reduced control of wild garlic.

"Harmony" may be tank mixed or used sequentially with fungicides or insecticides registered for use on cereal grains. However, under certain conditions (drought stress, crop in 2-4 leaf stage), tank mixes or sequential applications of "Harmony" plus organophosphate insecticides (such as parathion) may produce temporary crop yellowing or, in severe cases, crop injury. Limit first use to a small area before treating large areas.

**DO NOT USE "HARMONY" PLUS MALATHION** as crop injury will result.

The use of a "Harmony" plus Lorsban[3] tank mix is recommended only in the states of CO, ID, KS, NE, NM, OK, OR, TX, UT, WA and southeastern WY.

### SPRAY PREPARATION, ADDITIVES, PRODUCT MEASUREMENT, SURFACTANT AND LIQUID NITROGEN FERTILIZER

**Spray Preparation:** Mix the proper amount of "Harmony" into the necessary volume of water in the spray tank with the agitator running, then add the companion herbicide to the tank after all the "Harmony" is in suspension.

**ALWAYS MIX "HARMONY" IN WATER FIRST, PRIOR TO ADDING OTHER PRODUCTS IN THE SAME SPRAY TANK.**

Use the spray preparation of "Harmony" within 24 hours as product degradation may occur. If spray preparation is left standing, thoroughly agitate before reusing.

**Additives:** 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".

**Product Measurement:** The "Harmony" volumetric measuring cylinder is to be used as a guide, since the degree of accuracy varies by plus or minus 7.5%. For more precise measurement, use scales calibrated in ounces.

**Surfactant:** Unless specified otherwise, add a nonionic surfactant of at least 80% active ingredient strength at 0.25% vol/vol (1 quart per 100 gallons of spray solution). Use only EPA approved surfactants authorized for use on food crops. Antifoaming agents may be needed. Do not use liquid fertilizer as a substitute for a surfactant. Refer to TANK MIXTURES and EQUIPMENT - SPRAY VOLUMES for variations on surfactant rate.

**Liquid Nitrogen Fertilizer:** Liquid nitrogen fertilizer solutions may be used as a carrier in place of water. Slurry the desired amount of "Harmony" in a clean bucket using water until a flowable mixture is produced. Add this slurry to the agitating spray tank of liquid nitrogen fertilizer solution. Thoroughly rinse all of the "Harmony" slurry into the spray tank. Do not use "Harmony" in liquid fertilizer solutions of less than pH 5.0. Run a tank mix compatibility test before mixing "Harmony" in fertilizer solution. If 2,4-D is included in "Harmony" and liquid fertilizer mixture, ester formulations are generally more compatible.

Use 0.06 - 0.25% vol/vol surfactant (1/2 pint - 1 quart per 100 gallons of spray solution) when applying "Harmony" in liquid nitrogen fertilizer solution.

Use of "Harmony" and a surfactant in liquid nitrogen fertilizer solutions may cause early, temporary crop injury (discoloration and stunting).

When the spray solution contains liquid nitrogen fertilizer, the weight per gallon of solution varies significantly from the weight of water (8.34 lbs per USA gallon). Consequently, liquid nitrogen fertilizer spray solutions must use the appropriate conversion in order to insure proper spray volume. See EQUIPMENT-SPRAY VOLUMES for further information.

## CROP ROTATION

Any crop may be planted 60 days after the application of "Harmony".

## SPRAYER CLEANUP

### AT THE END OF THE DAY

It is recommended that during periods when multiple loads of "Harmony" herbicide will be applied, at the end of each day of spraying rinse the interior of the tank with fresh water, then partially fill the tank and flush the boom and hoses. This will prevent the buildup of dried pesticide deposits which can accumulate in the application equipment.

### AFTER SPRAYING "HARMONY" AND BEFORE SPRAYING CROPS OTHER THAN WHEAT OR BARLEY

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

1. Drain tank: thoroughly rinse spray tanks, boom, and hoses with clean water. Loosen and physically remove any visible deposits.
2. Fill the tank with clean water and one gallon of household ammonia\* (contains 3% active) for every 100 gallons of water. Flush the hoses, boom and nozzles with the cleaning solution. Then add more water to completely fill the tank. Circulate the cleaning solution through the tank and hoses for at least 15 minutes. Again flush the hoses, boom and nozzles with the cleaning solution and then drain the tank.
3. Remove the nozzles and screens and clean separately in a bucket containing cleaning agent and water.
4. Repeat step 2.
5. Rinse the tank, boom and hoses with clean water.
6. The rinsate may be disposed of on site or at an approved waste disposal facility.

\* Equivalent amounts of an alternate strength ammonia solution or a Du Pont approved cleaner (listed below) can be use in the cleanout procedure. Carefully read and follow the individual cleaner instructions.

#### Du Pont approved cleaners:

- Protank Cleaner-Manufactured for Cenex/Land O'Lakes Agronomy Co.
- Chem-Tank Cleaner & Neutralizer-Manufactured by Farmbelt Chemicals, Inc.
- Incide-Out[8]
- Nutra-Sol-Compounded for Thomas G. Kilfoil Co., Inc., San Bruno, CA
- Tank and Equipment Cleaner-Manufactured by Loveland Industries, Inc.
- Tank-Aid -Manufactured for Cornbelt Chemical Company

#### NOTES:

1. A steam cleaning of aerial spray tanks is recommended prior to performing the above cleanout procedure to facilitate the removal of any caked deposits.
2. When "Harmony" is tank mixed with other pesticides, all cleanout procedures should be examined and the most rigorous procedure should be followed.
3. In addition to this cleanout procedure, all precleanout guidelines on subsequently applied products should be followed as per the individual labels.
4. Where routine spraying practices include shared equipment frequently being switched between applications of "Harmony" and applications to sensitive crops during the same spray season, it is recommended a sprayer be dedicated to "Harmony" to further reduce the chance of crop injury.
5. Since the presence of tank-mix partners can interfere with the dispersion of "Harmony", when multiple tank loads of the same mix are being prepared, preslurry "Harmony" in a dedicated container of clean water prior to adding to the tank.

## PRECAUTIONS

The total rate of "Harmony" cannot exceed 1.0 ounce product per acre applied to any one crop during one growing season.

Do not graze or feed forage or hay from treated areas to livestock (harvested straw may be used for bedding and/or feed).

Do not plant to any crop other than wheat or barley for 60 days after application of "Harmony".

Varieties of wheat (including durum) and barley differ in their tolerance to herbicides. When using "Harmony" for the first time on a particular variety, limit initial use to one 10 oz canister. If no symptoms of crop injury occur within 14 days after treatment, balance of acreage can be treated.

Do not apply to wheat or barley that is stressed by severe winter, drought (including low levels of subsoil moisture), water-saturated soil, disease or insect damage as crop injury may result. Under certain conditions such as prolonged cool weather (daily high temperature less than 50 Deg.F.) or wide fluctuations in day/night temperatures just prior to, during or soon after treatment, temporary yellowing and/or crop stunting may occur. Risk of injury is greatest when crop is in the 2 to 5-leaf stage.

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

"Harmony" is only registered on wheat and barley. Do not use on any other crop.

For ground applications applied to weeds when dry, dusty field conditions exist, control of weeds in wheel track areas may be reduced.

Tank mix applications of "Harmony" plus "Assert" may cause temporary crop discoloration/stunting or injury when heavy rainfall occurs shortly after application.

## STORAGE AND DISPOSAL

**STORAGE:** Store product in original container only, away from other pesticides, fertilizer, food or feed.

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

**CONTAINER DISPOSAL:** 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.

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

## NOTICE OF WARRANTY

Du Pont warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for purposes stated on such label only when used in accordance with directions under normal use conditions. 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 weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Du Pont. In no case shall Du Pont be liable for consequential, special or indirect damages resulting from the use or handling of this product. All such risks shall be assumed by the buyer. **DU PONT MAKES NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.**

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