

1711 DE 352-538 10/13
 UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

AUG 26 1995

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J. H. Cain
 E. I. du Pont de Nemours and Co., Inc.
 Barley Mill Plaza, Walker's Mill Bldg. 37
 Wilmington, DE 19880-0038

Dear Mr. Cain:

Subject: Revision of Master Label and Addition of Supplemental Label
 - Add Chemigation Instructions for Idaho
 DuPont Harmony Extra Herbicide
 EPA Registration No. 352-538
 Your Submission Dated June 28, 1995

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable with the following provision:

Add the appropriate Net Contents statement.

A stamped copy is enclosed for your records. Please submit one (1) final printed copy for the referenced label, incorporating the above change, before releasing the product for shipment.

Sincerely yours,

Joanne I. Miller
 Product Manager (23)
 Fungicide-Herbicide Branch
 Registration Division (7505C)

Enclosure

DK: 305-7546: FHB/PM 23		CONCURRENCES					
SYMBOL	7.525C						
SURNAME	D. KEENEY						
DATE	8/25/95						

H-10



Harmony[®] Extra

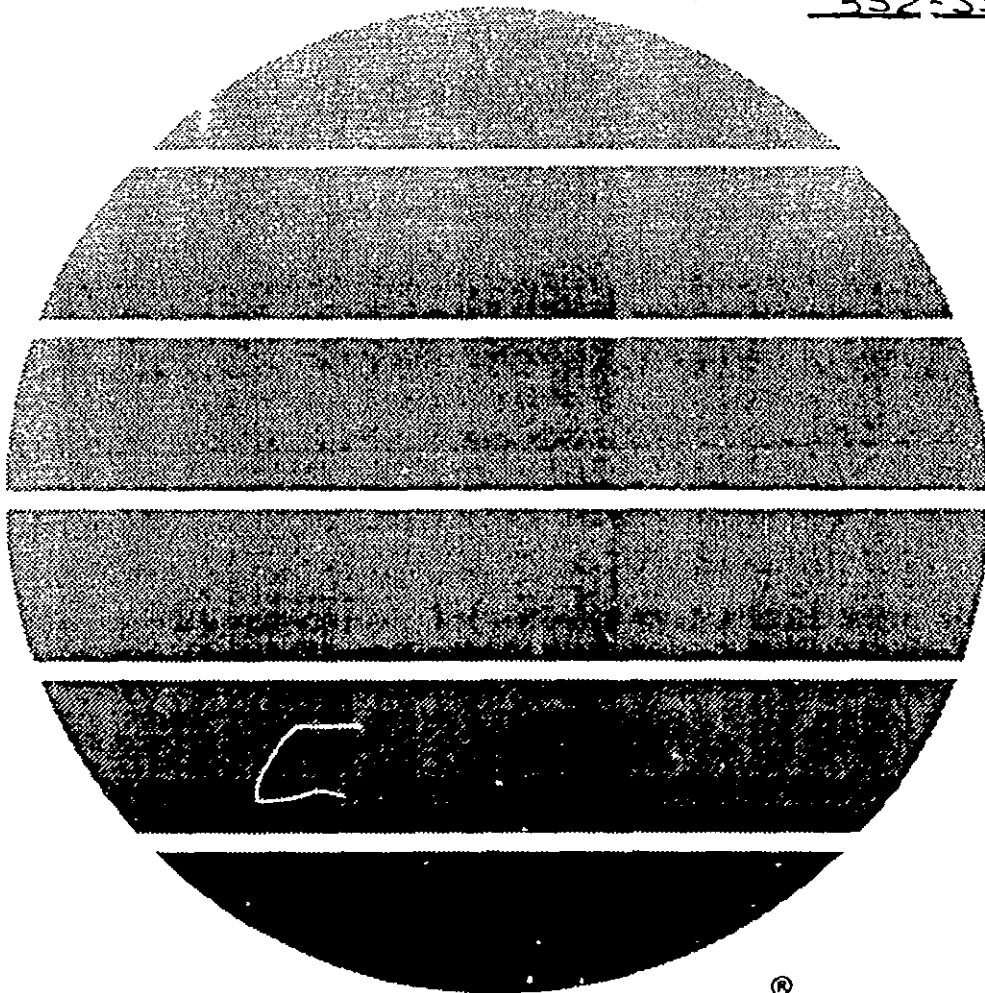
herbicide

ACCEPTED
with COMMENTS
In EPA Letter Dated

AUG 26 1995

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

352-538



®

"..... A Growing Partnership With Nature"

204/12

"HARMONY EXTRA" HIGHLIGHTS

- *For selective postemergence broadleaf weed control in Wheat, Barley and Oat.*
- *Apply at the rate of 0.3 to 0.6 ounce per acre on Wheat and Barley, 0.3 to 0.4 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 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).*
- *Can rotate to any crop 60 days after last application.*
- *Consult label text for complete instructions. Always read and follow label "Directions For Use".*

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Harmony[®] Extra

herbicide

Dry flowable

For Use on Wheat, Barley and Oat

Active Ingredients	By Weight
Thifensulfuron-methyl Methyl 3-[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl) amino]carbonyl]amino]sulfonyl]-2-thiophenecarboxylate	50%
Tribenuron-methyl Methyl 2-[[[N-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)methylamino]carbonyl]amino]sulfonyl]benzoate	25%
Inert Ingredients	25%
TOTAL	100%

EPA Reg. No. 352-538

U.S. Patents 4,481,029, 4,383,113 & 4,740,234

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-sleeved 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 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 disposing of equipment washwaters.

IMPORTANT

Injury to or loss of 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.

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

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 or oat.

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.
- Waterproof gloves.
- Shoes plus socks.

HARMONY EXTRA should be used only in accordance with recommendations on this label or in separately published DuPont recommendations.

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

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

GENERAL INFORMATION

DuPont Harmony® Extra Herbicide is a dry flowable granule that is used for selective postemergence weed control in wheat (including durum), barley and oat. 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 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.

APPLICATION INFORMATION

Mix the required amount of HARMONY EXTRA into the necessary volume of water in the spray tank with the agitator running; add the companion product(s) to the tank after all the HARMONY EXTRA is in suspension.

Always mix HARMONY EXTRA in water before adding other products to the same spray tank.

Use the spray preparation of HARMONY EXTRA within 24 hours to avoid product degradation. If the spray preparation is left standing, agitate it thoroughly before reusing.

USE RATE

Do not use less than 0.3 ounce HARMONY EXTRA per acre.

Wheat (including Durum) and Barley

Apply 0.3 to 0.6 oz HARMONY EXTRA per acre to wheat (including durum) or barley. Two applications of HARMONY EXTRA may be made provided the total amount applied does not exceed 1.0 oz per acre per crop season.

Use 0.3 to 0.4 oz 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.

leaf 12

Use 0.5 oz HARMONY EXTRA per acre for heavy infestation of the weeds listed under Weeds Partially Controlled.

Use 0.6 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 0.3 to 0.4 ounce HARMONY EXTRA per acre for control of the weeds listed in WEEDS CONTROLLED table. If predominant weed(s) in field is(are) one of those listed in WEEDS PARTIALLY CONTROLLED table below, always include a tank mix partner (refer to TANK MIXTURES).

Do not make more than one application of HARMONY EXTRA per crop season on oat.

APPLICATION TIMING

Do not harvest sooner than 45 days after the last application of HARMONY EXTRA.

Wheat (Including Durum), Barley and Winter Oat

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 on Canada thistle, vetch (common, hairy), wild garlic, and wild radish.

Do not apply HARMONY EXTRA to stressed crops, as this may cause crop injury. 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.

Rainfall immediately after treatment can wash HARMONY EXTRA off of weed foliage, resulting in reduced weed control. Do not apply HARMONY EXTRA when rainfall is threatening. Several hours of dry weather are needed to allow HARMONY EXTRA to be sufficiently absorbed by weed foliage.

WEEDS CONTROLLED

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

- | | |
|--------------------------------------|---------------------------------|
| Annual knawel | Mayweed chamomile |
| Annual sowthistle | Miners lettuce |
| Black mustard | Narrowleaf lambsquarters |
| Blue/Purple mustard | Nightflowering catchfly |
| Broadleaf dock | Pennsylvania smartweed |
| Bur buttercup | Pineappleweed |
| Bushy wallflower/
Treatle mustard | Prickly lettuce |
| Clasping pepperweed | Prostrate knotweed |
| Coast fiddleneck | Prostrate pigweed |
| Common buckwheat | Redmaids |
| Common chickweed | Redroot pigweed |
| Common groundsel | Russian thistle |
| Common lambsquarters | Scentless chamomile/
mayweed |
| Common radish | Shepherd's-purse |
| Common sunflower | Slimleaf lambsquarters |
| Corn chamomile | Smallflower buttercup |
| Corn gromwell* | Smallseed falseflax |
| Corn spurry | Stinking chickweed |
| Cowcockle | Stinking mayweed/
dogfennel |
| Cress (mouse-ear) | Swinecress |
| Curly dock | Tansymustard |
| False chamomile | Tarweed fiddleneck |
| Field chickweed | Tumble/ Jim Hill mustard |
| Field pennycress | Volunteer lentils |
| Filaree (redstem, Texas) | Volunteer peas |
| Flixweed | Volunteer sunflower |
| Green smartweed | Wild buckwheat* |
| Henbit | Wild chamomile |
| Kochia | Wild garlic* |
| Ladysthumb | Wild mustard |
| London rocket | Wild radish* |
| Marshelder | |

* See SPECIFIC WEED PROBLEMS for more information.

WEEDS PARTIALLY CONTROLLED**

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

- | | |
|--------------------|-----------------------------|
| Canada thistle* | Cutleaf eveningprimrose |
| Carolina geranium | Mallow (common, little) |
| Catchweed bedstraw | Nightshade (cutleaf, hairy) |
| Common cocklebur | Vetch* (common, hairy) |
| Common ragweed | |

* 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 (refer to TANK MIXTURES).

SURFACTANTS

Unless specified otherwise, add DuPont-authorized, nonionic surfactant having at least 80% active ingredient strength at 0.25% v/v (1 qt per 100 gal of spray solution).

Antifoaming agents may be needed. Consult your Ag dealer, applicator, or DuPont representative for a listing of approved surfactants.

GROUND APPLICATION

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.

Chemigation - Refer to specific supplemental labeling for use directions for HARMONY EXTRA herbicide in chemigation systems. Do not apply this product through any irrigation system unless the supplemental labeling on chemigation is followed.

AERIAL APPLICATION

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.

When applying HARMONY EXTRA by air in areas near sensitive crops, use solid-stream nozzles oriented straight back. Adjust swath to avoid spray drift damage to downwind sensitive crops and/or use ground equipment to treat border edge of field. See the **Spray Drift Management** section of this label.

For aerial application in Washington, follow the directions on the Washington Special Local Need label, HARMONY EXTRA Herbicide Aerial Application to Wheat, Barley and Oat in the State of Washington.

PRODUCT MEASUREMENT

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

RESISTANCE

Biotypes of certain weeds listed on this label are resistant to HARMONY EXTRA and other herbicides with the same mode of action,* even at exaggerated application rates. Biotypes are naturally occurring individuals of a species identical in appearance but with slightly different genetic compositions; the mode of action of a herbicide is the chemical interaction that interrupts a biological process necessary for plant growth and development.

If weed control is unsatisfactory, it may be necessary to respray problem areas using a product with a different mode of action. If resistant weed biotypes such as kochia and Russian thistle are suspected or known to be present, consider using another herbicide treatment or adjust the use rate of the HARMONY EXTRA tank-mix partner to help control these biotypes.

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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.

* Naturally occurring weed biotypes that are resistant to DuPont ALLY® Herbicide, DuPont EXPRESS® Herbicide, DuPont FINESSE® Herbicide or DuPont GLEAN® FC Herbicide will also be resistant to HARMONY EXTRA.

TANK MIXTURES

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.

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 HARMONY EXTRA.

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

Since tank-mix partners can interfere with HARMONY EXTRA dispersion, it is recommended that HARMONY EXTRA be slurried in a separate container before adding it to the tank mix. HARMONY EXTRA must be in suspension in the spray tank before adding companion products.

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

HARMONY EXTRA can be tank mixed with 2,4-D and MCPA (preferably ester formulations) herbicides for use on wheat, barley and oat. For best results, add 2,4-D or MCPA herbicides to the tank at 1/8 to 3/8 lb active ingredient. Surfactant may be added to the mixture at 1 to 2 pt per 100 gal of spray volume; however, adding surfactant may increase the potential for crop injury. In tank mixes containing 1/8 lb active ingredient 2,4-D or MCPA per acre, add 1 to 2 pt of surfactant; in tank mixes containing 1/4 to 3/8 lb active ingredient 2,4-D or MCPA per acre, add 1 pt of surfactant. Higher rates of 2,4-D or MCPA may be used, but do not exceed the highest rate allowed by those respective labels.

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

With Other Herbicides

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

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

Tank mixes of HARMONY EXTRA plus "Buctril" may result in reduced control of Canada thistle.

Used alone, HARMONY EXTRA will not control wild oat or other grasses. To control wild oat, tank mix HARMONY EXTRA with Avenge⁴ or Assert⁴. 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. Except in areas noted below, do not tank mix HARMONY EXTRA with Hoelon³ BEC, as gas control may be reduced.

In the States of ID, OR and WA

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 HARMONY EXTRA at 0.4 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 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. Slurry the desired amount of HARMONY EXTRA 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 EXTRA slurry into the spray tank. Do not use HARMONY EXTRA in liquid fertilizer solutions of less than pH 5.0. Run a tank mix compatibility test before mixing HARMONY EXTRA in fertilizer solution. If 2,4-D is included in HARMONY EXTRA and liquid fertilizer mixture, ester formulations are generally more compatible.

Use 0.06 - 0.25% v/v surfactant (1/2 pt - 1 qt per 100 gal of spray solution) when applying HARMONY EXTRA in liquid nitrogen fertilizer solution. Use of this mixture may result in temporary crop yellowing and stunting.

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

Note: Liquid fertilizers are significantly heavier than water per gal of liquid; therefore, to maintain proper spray volumes, adjust the nozzle type and nozzle pressure as necessary. Consult fertilizer solution suppliers and/or spraying systems company catalogs to determine the appropriate spray nozzles.

SPECIFIC WEED PROBLEMS

Canada thistle: For control in wheat and barley, use 0.6 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 0.4 ounce HARMONY EXTRA per acre plus 2,4-D (refer to TANK MIXTURES)

Corn groundwell, Wild buckwheat: For control in wheat and barley, use 0.5 to 0.6 ounce "Harmony" Extra per acre plus surfactant.

For control in oat, use 0.4 ounce HARMONY EXTRA per acre plus 2,4-D, MCPA or "Buctril" (refer to TANK MIXTURES).

Vetch (common and hairy): For control in wheat and barley, use 0.5 to 0.6 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 0.4 ounce HARMONY EXTRA per acre plus 2,4-D or MCPA (refer to TANK MIXTURES).

Wild garlic: For control in wheat and barley, use 0.5 to 0.6 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 0.6 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 0.4 ounce "Harmony" Extra per acre plus 2,4-D or MCPA (refer to TANK MIXTURES).

Wild radish: For control in wheat and barley, use 0.5 to 0.6 oz HARMONY EXTRA per acre plus surfactant to wild radish rosettes less than 6" in diameter. Make the application either in the fall or spring. Applications made later than 30 days after weed emergence will result in partial control. Fall applications should be made before plants harden-off.

For control in oat, use 0.4 ounce "Harmony" Extra per acre plus 2,4-D or MCPA (refer to TANK MIXTURES).

CROP ROTATION

Any crop may be planted 60 days after the application of HARMONY EXTRA.

GRAZING

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

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.

Continuous agitation is required to keep HARMONY EXTRA in suspension.

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. If no directions are provided, follow the six steps outlined in After Spraying HARMONY EXTRA.

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 HARMONY EXTRA AND BEFORE SPRAYING CROPS OTHER THAN WHEAT, BARLEY 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. 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 1 gal of household ammonia* (contains 3% active) for every 100 gal 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 min. Flush the hoses, boom, and nozzles again 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. Dispose of the rinsate on site or at an approved waste disposal facility.
- * Equivalent amounts of an alternate-strength ammonia solution or a DuPont-approved cleaner can be used in the cleanout procedure. Carefully read and follow the individual cleaner instructions. Consult your Ag dealer, applicator, or DuPont representative for a listing of approved cleaners.

Notes:

1. **CAUTION:** Do not use chlorine bleach with ammonia as dangerous gases will form. Do not clean equipment in an enclosed area.
2. Steam-cleaning aerial spray tanks is recommended prior to performing the above cleanout procedure to facilitate the removal of any caked deposits.
3. When HARMONY EXTRA is tank mixed with other pesticides, all cleanout procedures should be examined and the most rigorous procedure should be followed.
4. In addition to this cleanout procedure, all precleanout guidelines on subsequently applied products should be followed as per the individual labels.
5. Where routine spraying practices include shared equipment frequently being switched between applications of HARMONY EXTRA and applications of other pesticides to HARMONY EXTRA-sensitive crops during the same spray season, it is recommended that a sprayer be dedicated to HARMONY EXTRA to further reduce the chance of crop injury.

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.

PRECAUTIONS

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

The total rate of HARMONY EXTRA for wheat (including durum) and barley cannot exceed 1.0 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 0.4 ounces product per acre applied to any one crop during one growing season.

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

Do not rotate to crops other than wheat, barley or oat for 60 days after application.

Varieties of wheat (including durum), barley or oat differ in their tolerance to herbicides. When using HARMONY EXTRA on a particular variety for the first time, limit initial use to one container. If no symptoms of crop injury occur during the season the entire acreage of that variety can be treated the next season.

Do not apply HARMONY EXTRA to wheat, barley or oat under stress from abnormal weather or growing conditions, drought, disease, or insect damage, as crop injury may result. Abnormal weather conditions (e.g., prolonged cold weather or extreme day and night temperature fluctuations, etc.) just prior to or soon after treatment may result in crop injury. Risk of injury is greatest when crop is in the 2- to 5-leaf stage.

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

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

STORAGE AND DISPOSAL

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

Product 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: Triple rinse (or equivalent) the container. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by 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

DuPont 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 DuPont. In no case shall DuPont 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. DUPONT MAKES NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

- 1 Registered trademark of Rhone-Poulenc Ag Company.
- 2 Registered trademark of Sandoz Crop Protection Corporation.
- 3 Registered trademark of Delavan Corporation.
- 4 Registered trademark of American Cyanamid Company.
- 5 Registered trademark of Hoechst-Roussel Agri-Vet Company.
- 6 Registered trademark of DowElanco.

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ACCEPTED
with COMMENTS
In EPA Letter Dated

AUG 26 1995

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.
352-538

1124H
SULFONAMIDE LABELING

DuPont Agricultural Products

"..... A Growing Partnership With Nature"

HARMONY® EXTRA HERBICIDE WITH BRONATE® SPRINKLER CHEMIGATION IN IDAHO

HARMONY® EXTRA HERBICIDE

EPA Reg. No. 352-538

SPRINKLER CHEMIGATION WITH "HARMONY" EXTRA AND BRONATE FOR POSTEMERGENCE WEED CONTROL IN WINTER & SPRING WHEAT & SPRING BARLEY IN IDAHO

DIRECTIONS FOR USE

It is in violation of federal law to use these products in a manner inconsistent with their labeling.

DuPont HARMONY EXTRA Herbicide is recommended in combination with "Bronate" for use in fall seeded wheat, spring seeded barley and spring seeded wheat when applied through sprinkler irrigation systems

HOW TO USE

Use 0.4 to 0.5 oz. HARMONY EXTRA per acre in combination with 3/4 to 1 1/2 pint "Bronate" per acre. Apply to wheat and barley 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, solenoid-operated 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 it well. 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".
4. 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.

IMPORTANT

BEFORE USING "HARMONY" EXTRA IN COMBINATION WITH BRONATE, READ AND FOLLOW ALL APPLICABLE DIRECTIONS, RESTRICTIONS AND PRECAUTIONS ON THE EPA-REGISTERED LABELS.

This bulletin contains new or supplemental instructions for use of these products which do not appear on the EPA-registered package labels. Follow the instructions carefully.

This labeling must be in the possession of the user at the time of pesticide application.

¹ Registered trademark of Rhone-Poulenc Corporation

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