

10 DEC 1992

Ms. Priscilla L. Friedman
E.I. du pont de Nemours and Company, Inc.
Barley Mill Plaza
P.O. Box 80038
Wilmington, Delaware 19880-0038

Dear Ms. Friedman:

Subject: Supplemental Label - Stale Seedbed Use
Harmony Extra Herbicide
EPA Registration Number 352-538
Your Submission Dated May 28, 1991

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

On page number 3, under "Adjuvants" add the statement,
"The crop oil concentrate used must be cleared for food use."

A stamped copy of the label is enclosed for your records.
Please submit three (3) copies of final printed labeling with the correction referred to above made.

Sincerely yours,

Joanne I. Miller
Product Manager (23)
Fungicide-Herbicide Branch
Registration Division (H7505C)

Enclosure

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CONCURRENCES							
SYMBOL	H7505C						
SURNAME	Robbins						
DATE	12/8/92						



**HARMONY® EXTRA
HERBICIDE
PREPLANT APPLICATION FOR
BROADLEAF WEED AND
WILD GARLIC CONTROL**

HARMONY® EXTRA HERBICIDE

EPA REGISTRATION NO. 352-538

**PREPLANT APPLICATION FOR BROADLEAF WEED AND WILD GARLIC CONTROL PRIOR TO PLANTING
CORN, COTTON, RICE, GRAIN SORGHUM OR SOYBEANS**

DIRECTIONS FOR USE

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

In the states of AL, AR, DE, GA, IN, IL, KY, LA, MD, MO, MS, NC, OH, PA, SC, TN and VA, "Harmony" Extra may be applied prior to planting corn, cotton, rice, grain sorghum or soybeans for the control of certain broadleaf weeds and wild garlic. See Weed Control section for listing of weeds. "Harmony" Extra may be applied from late fall through early spring.

Do not apply within 45 days prior to planting the above listed crops.

Do not use this product through any type of irrigation equipment.

"Biotypes are naturally-occurring individuals of the species which have a slightly different make-up. 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.

APPLICATION TIMING

Apply "Harmony" Extra at least 45 days prior to planting corn, cotton, rice, grain sorghum or soybeans. Annual broadleaf weeds should be past the cotyledon stage, actively growing, but less than 4 inches tall or across. See SPECIFIC WEED PROBLEMS for information on vetch (hairy, common), wild garlic and wild radish.

WEED CONTROL

Application Rates:

Apply "Harmony" Extra at 0.5 - 0.6 ounce per acre to control emerged weeds. Use 0.6 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.

Sequential treatments of "Harmony" Extra to control emerged weeds may also be made provided the total amount of "Harmony" Extra applied during one fallow cropland season does not exceed 1.0 ounce per acre; for example, 0.5 ounce in the fall followed by 0.5 ounce in the spring. At least one of the sequential treatments should include a tank mix partner herbicide having a different mode of action than "Harmony" Extra.

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

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

"Harmony" Extra provides postemergence activity for short term control or partial control of labeled weeds. Degree of control and duration of effect are dependent on rate used, sensitivity and size of target weed, environmental conditions at the time of and following application, and spray coverage.

Best results are 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. 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" Extra while cold, dry conditions delay the activity. Weeds hardened off by cold weather, drought stress or too wet conditions will be less susceptible.

Some naturally-occurring weed "biotypes" resistant to this product are known to exist. If weeds listed on this label are not satisfactorily controlled, respray problem areas in a timely and effective manner using a broadleaf herbicide having a different mode of action.

10 DEC 1992

Under the Federal Insecticide,
Fungicide and Rodenticide Act
352-538

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Weeds Controlled at 0.5 - 0.6 ounce per acre

Annual knawel
Annual sowthistle
Black mustard
Blue/Purple mustard
Broadleaf dock
Bur buttercup
Bushy wallflower/Treacle mustard
Clasping pepperweed
Crest fiddleneck
Common buckwheat
Common chickweed
Common groundsel
Common lambsquarters
Common radish
Common sunflower
Corn chamomile
Corn spurry
Cowcockle
Cress (mouse-ear)
Curly dock
False chamomile
Field chickweed
Field pennycress
Filaree (redstem, Texas)
Flaxweed
Green smartweed
Henbit
Kochia
Ladysthurn
London rocket
Marshelder

Mayweed chamomile
Miners lettuce
Narrowleaf lambsquarters
Nightflowering catchfly
Pennsylvania smartweed
Pinsapple weed
Prickly lettuce
Prostrate knotweed
Prostrate pigweed
Redmaids
Redroot pigweed
Russian thistle
Scarfless 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 chamomile
Wild garlic
Wild mustard
Wild radish

Partial Control**

Carolina geranium
Catchweed bedstraw
Common cocklebur
Common ragweed

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 individual weed plants.

Specific Weed Problems:

Vetch (common and hairy): For best results, apply 0.5 to 0.6 ounce of "Harmony" Extra per acre plus surfactant when vetch is less than 6 inches in length.

Wild garlic: For best results, apply 0.5 to 0.6 ounce "Harmony" Extra 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 0.6 ounce per acre rate of "Harmony" Extra. 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 spray coverage of all garlic plants is easier.

Wild radish: For best results, apply 0.5 to 0.6 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. Fall applications should be made prior to hardening-off of plants.

TANK MIXTURES

"Harmony" Extra may be tank mixed with other suitable registered herbicides for use as preplant applications 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" Extra label or other supplemental "Harmony" Extra labels, do not use as a tank mix with "Harmony" Extra.

SPRAY PREPARATION, ADDITIVES, SPRAY EQUIPMENT, SPRAY VOLUMES AND ADJUVANTS

Spray Preparation: Mix the proper amount of "Harmony" Extra 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" Extra is in suspension. ALWAYS MIX "HARMONY" EXTRA IN WATER FIRST PRIOR TO ADDING OTHER PRODUCTS IN THE SAME SPRAY TANK. Continuous agitation is required to keep "Harmony" Extra in suspension.

Use the spray preparation of "Harmony" Extra 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" Extra.

Spray Equipment: It is important that spray equipment is cleaned and free of existing pesticide deposits before using "Harmony" Extra. 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.

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.

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Apply using properly calibrated air or ground equipment. Select a spray volume and delivery system that will provide 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.

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 10-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.

Raindrop[1] nozzles are not recommended for "Harmony" Extra 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 3 GPA. Do not apply during inversion conditions, when winds are gusty, or when other conditions will favor poor coverage and/or off-target spray movement.

Adjuvants: Preplant applications of "Harmony" Extra must include a crop oil concentrate (coc) at 1% v/v (1 gal/100 gal of spray solution) or a nonionic surfactant at 0.25% v/v (1 qt/100 gal of spray solution). COC should be a petroleum based product with a minimum of 15% emulsifiers/surfactants. Nonionic surfactants must contain at least 80% active ingredients.

SPRAYER CLEANUP

At The End Of The Day

It is recommended that during periods when multiple loads of "Harmony" Extra 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 build-up of dried pesticide deposits which can accumulate in the application equipment.

After Spraying "Harmony" Extra 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" 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 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 nozzle screens and clean separately in a bucket containing cleaning solution 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 used 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 Chem, Inc.
- Inside-Out[2]
- 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 Combell 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" Extra 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" Extra and applications to sensitive crops during the same spray season, it is recommended a sprayer be dedicated to "Harmony" Extra to further reduce the chance of crop injury.
5. Since the presence of tank-mix partners can interfere with the dispersion of "Harmony" Extra, when multiple tank loads of the same mix are being prepared, preslurry "Harmony" Extra in a dedicated container of clean water prior to adding to the tank.

PRECAUTIONS

The total rate of "Harmony" Extra cannot exceed 1.0 ounce product per acre applied during one fallow cropland season.

Do not plant to any crop for 60 days after application of "Harmony" Extra except for corn, cotton, rice, grain sorghum or soybeans which can be planted 45 days after an application of "Harmony" Extra. If a tank mix treatment is applied, follow the most restrictive crop rotation guidelines of the products used.

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

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IMPORTANT

**BEFORE USING "HARMONY" EXTRA, READ AND CAREFULLY
OBSERVE THE CAUTIONARY STATEMENTS AND ALL OTHER INFOR-
MATION APPEARING ON THE PRODUCT LABEL.**

This bulletin contains new or supplemental instructions for use of this product which may not appear on the package label. Follow the instructions carefully.

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

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- [1] Delevan Corporation
- [2] Precision Laboratories, Inc.

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