

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

October 6, 2016

Richard J. Ambrose Product Registration Manager E.I. DuPont de Nemours and Company Stine-Haskell Research Center P.O. Box 30 Newark, DE 19714

Subject: Label Amendment – General label updates

Product Name: Dupont Synchrony XP Herbicide

EPA Registration Number: 352-648

Application Date: 07/29/2016 Decision Number: 520043

Dear Mr. Ambrose:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance

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with FIFRA section 6. If you have any questions, please contact Lisa Pahel by phone at (703) 347-0459, or via email at pahel.lisa@epa.gov.

Sincerely,

Erik Kraft, Acting Product Manager 24 Fungicide and Herbicide Branch Registration Division (7505P) Office of Pesticide Programs

Ein My for

Enclosure



# **DuPont™ Synchrony® XP**

# **HERBICIDE**

GROUP 2 HERBICIDE

### Dispersible Granules

For Preemergence, pre-plant incorporated, pre-plant, burndown, and postemergence control or suppression of weeds in Soybeans

Active Ingredients			By Weight
Chlorimuron ethyl Ethyl 2-[[[[(4-chloro-6-methoxypyrimid	in-2-yl)amino]carbonyl]ar	nino]sulfonyl]benzoate	21.5%
Thifensulfuron methyl Methyl 3-[[[(4-methoxy-6-methyl-1,3,5	-triazin-2-yl)amino]carboı	nyl]amino]sulfonyl]-2-thiophenecarboxylate	6.9%
Other Ingredients			71.6%
TOTAL			100.0%
EPA Reg. No. 352 - 648 Nonrefillable Container	ACCEPTED	EPA Est. No	
Net:	10/06/2016		
OR Refillable Container Net:	Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 352-648		

# KEEP OUT OF REACH OF CHILDREN CAUTION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand this label, find someone to explain it to you in detail.)

#### **FIRST AID**

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

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

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

# PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling.

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

# PERSONAL PROTECTIVE EQUIPMENT (PPE)

# Applicators and other handlers must wear:

Long-sleeved shirt and long pants.

Chemical Resistant Gloves made of any waterproof material.

Shoes plus socks.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

**Engineering Control Statement:** When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

Important: When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for "Applicators and Other Handlers" and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown.

#### **USER SAFETY RECOMMENDATIONS**

**USERS SHOULD:** Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

#### **ENVIRONMENTAL HAZARDS**

Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate. Do not apply where/when conditions favor runoff.

# **DIRECTIONS FOR USE**

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

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

# AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment(PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

Coveralls

Chemical Resistant Gloves made of any waterproof material such as polyethylene or polyvinylchloride. Shoes plus socks.

Use only in the geographies identified in the "Geographical Use Regions" section of this label.

DuPont™ SYNCHRONY® XP herbicide, referred to below as DuPont™ SYNCHRONY® XP, SYNCHRONY® XP herbicide, or SYNCHRONY® XP must be used only in accordance with instructions on this label, in separately published DuPont instructions (Supplemental Labels, Special Local Need Registrations, FIFRA Section 18 exemptions, FIFRA 2(ee) Bulletins), or as otherwise permitted by FIFRA. Always read the entire label, including the Limitation of Warranty and Liability.

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

#### PRODUCT INFORMATION

- SYNCHRONY® XP herbicide is a dispersible granule formulation which readily dissolves in water.
- SYNCHRONY® XP may be used in conventional, no-till, or conservation tillage soybean production.
- SYNCHRONY® XP may be used at various rates and by various use methods depending on geographical location in the use regions Northern, Central and Southern.
- Residual applications of SYNCHRONY® XP require rainfall or sprinkler irrigation to activate the herbicide. Degree of control and duration of effect depend on: rate used, weed spectrum, growing conditions at and following time of treatment, soil pH, texture, organic matter, moisture and precipitation.
- Best residual control is obtained if SYNCHRONY® XP is applied to moist soil and followed by rainfall or irrigation (~1") before weeds germinate. Several small rainfalls of less than 1/4" each are not as beneficial as one large rainfall of 1/2-1".

On dry soil, more moisture is required for activation (1-2") before weed emergence. If moisture is insufficient to activate the herbicide, a rotary hoeing or shallow cultivation should be made after emergence of the crop while weeds are small enough to be controlled by mechanical means. Deep cultivation reduces the effectiveness of DuPont<sup>TM</sup> SYNCHRONY® XP and should be avoided.

#### **BIOLOGICAL ACTIVITY**

SYNCHRONY® XP rapidly inhibits the growth of susceptible weeds. Following application of preplant or preemergence treatment, susceptible weeds may germinate and emerge, but growth then ceases and leaves become yellow and/or brown by 3-5 days after emergence. Death of leaf tissue and growing point will follow in some species while others will remain green but stunted and noncompetitive.

SYNCHRONY® XP will provide best results when applied postemergence to young, actively growing weeds. Leaves of susceptible plants yellow 3-5 days after application, followed, in controlled plants, by the death of the growing point.

SYNCHRONY® XP will provide complete control of susceptible weeds in 7-21 days. Suppressed plants may remain green but will be stunted and noncompetitive. Degree of control depends on: weed spectrum; weed size (if weeds are large, use higher spray volume); growing conditions at and following treatment; soil moisture; precipitation; and spray adjuvants. Treating weeds under stress or large weeds may result in only partial control. Stress may be caused by:

- abnormal weather (hot or cold)
- · mechanical injury from cultivation
- · drought
- · water-saturated soil
- disease
- · insect injury
- prior herbicide injury

#### RESTRICTIONS

- Do not graze treated fields or harvest for hay within 14 days after application.
- SYNCHRONY® XP can be applied in tank mixtures with organophosate insecticides or at any time preceding or following an application of an organophosphate insecticide on any STS®, STS®/RR soybean variety or soybeans with BOLT™ technology. Tank mixtures of SYNCHRONY® XP plus organophosphate insecticides applied to STS®, STS®/RR soybean varieties or soybeans with BOLT™ technology may result in minor transient crop response (i.e. stunting and/or chlorosis).
- Do not apply SYNCHRONY® XP within 14 days before or after an application of an organophosphate insecticide on any soybean variety that is not STS®, STS®/RR or soybeans with BOLT<sup>TM</sup> technology, as severe crop injury may occur.
- Do not apply more than a total of 0.82 ounces active ingredient chlorimuron ethyl per acre per year in the Northern and Central Region states or 1.07 ounces active ingredient chlorimuron ethyl per acre per year in the Southern Region states. This includes combinations of preemergence and postemergence applications of chlorimuron ethyl products.
- Do not apply more than a total of 0.75 ounces active ingredient of thifensulfuron methyl per acre per year in all use regions specified on this label.
- 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.
- Do not apply this product through any type of irrigation system.
- Do not use liquid nitrogen fertilizer as the total carrier solution.
- Do not apply to frozen or snow covered ground.
- Do not cultivate within 7 days of application.
- Do not tankmix "Poast Plus" with 0.375 oz/acre SYNCHRONY® XP unless the soybean is designated as an STS® variety
  or soybeans with BOLT™ technology.
- Do not apply during a temperature inversion, when winds are gusty, or when other conditions could produce poor coverage and/or off-target spray movement.
- Do not apply SYNCHRONY® XP herbicide by air in the state of New York.
- Do not apply SYNCHRONY® XP if rain is expected within 1 hour or weed control may decrease.
- Many crops are sensitive to SYNCHRONY® XP. Avoid all direct or indirect contact (such as spray drift) with crops other than soybeans.
- Thoroughly clean all application equipment immediately after use and prior to spraying crops other than soybeans.

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

• Do not apply SYNCHRONY® XP or drain or flush equipment on or near desirable trees or other plants, 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.

#### **PRECAUTIONS**

- 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 and avoid overfilling of spray tank.
- When triple-rinsing the pesticide container, be sure to add the rinsate to the spray mix.
- Failure to remove even small amounts of DuPont™ SYNCHRONY® XP from application equipment may result in injury to subsequently sprayed crops.
- Keep from contact with fertilizers, insecticides, fungicides and seeds during storage.
- · Avoid storage of pesticides near well sites.
- Stress affects some weeds, such as pigweed, more than others. delay application until stress passes and weeds start to grow again.
- Severe stress (drought, disease, insect damage, or nutrient deficiency such as iron chlorosis) following application may also result in poor weed control.
- Applications made when the crop is under stress from moisture, cold, heat, high humidity, disease, insect pressure and prior herbicide stress may result in excessive crop response.

#### WEED RESISTANCE

SYNCHRONY® XP, which contains the active ingredients chlorimuron ethyl and thifensulfuron methyl, are both Group 2 herbicides based on the mode of action classification system of the Weed Science Society of America.

When herbicides with mode of action classifications that affect the same biological sites of action are used repeatedly over several years to control the same weed species in the same treatment area, naturally-occurring resistant biotypes may survive a correctly applied herbicide treatment, propagate, and become dominant in that area. Adequate control of these resistant weed biotypes cannot be expected. If weed control is unsatisfactory, it may be necessary to retreat the problem area using a product affecting a different biological site of action.

To better manage herbicide resistance through delaying the proliferation and possible dominance of herbicide resistant weed biotypes, it may be necessary to change cultural practices within and between crop seasons such as using a combination of tillage, retreatment, tank-mix partners and/or sequential herbicide applications that have a different site of action. Weed escapes that are allowed to go to seed will promote the spread of resistant biotypes.

It is advisable to keep accurate records of pesticides applied to individual fields to help obtain information on the spread and dispersal of resistant biotypes. Consult your agricultural dealer, consultant, applicator, and/or appropriate state agricultural extension service representative to determine appropriate actions for treating specific resistant weed biotypes in your area.

#### INTEGRATED PEST MANAGEMENT

This product may be used as part of an Integrated Pest Management (IPM) program that can include biological, cultural, and genetic practices aimed at preventing economic pest damage. IPM principles and practices include field scouting or other detection methods, correct target pest identification, population monitoring, and treating when target pest populations reach locally determined action thresholds. Consult your state cooperative extension service, professional consultants or other qualified authorities to determine appropriate action treatment threshold levels for treating specific pest/crop systems in your area.

# **APPLICATION INFORMATION**

# **Geographic Use Regions**

The geographical use regions for SYNCHRONY® XP are defined below:

**Northern Region:** The states of Iowa (fields inside the boundaries of the Clarion-Nicollet-Webster and Hamburg-Ida-Monona soil associations and fields located inside the historic floodplain of the Missouri River), Minnesota, Nebraska (fields north of route 30 and west of Route 281), New York (fields north of Interstate 90), South Dakota, Wisconsin (fields north of Interstate 90 between Lacrosse and Madison and fields north of Interstate 94 between Madison and Milwaukee) and Hawaii.

Central Region: The states of Delaware, Illinois, Indiana, Iowa (fields located outside the boundaries of the Clarion-Nicollet-Webster and Hamburg-Ida-Monona soil associations and fields located outside the historic flood plain of the Missouri River), Kansas, Maryland, Michigan, Missouri (except the Bootheel), Nebraska (fields south of Route 30 or east of Route 281), New Jersey, New York (fields south of Interstate 90), Ohio, Pennsylvania, Virginia, West Virginia and Wisconsin (fields south of Interstate 90 between Lacrosse and Madison and fields south of Interstate 94 between Madison and Milwaukee).

**Southern Region:** The states of Alabama (except the "Black Belt" where soil pH must be less than 7.0), Arkansas, Florida, Georgia, Kentucky, Louisiana, Missouri (Bootheel region only), Mississippi (except the "Black Belt" where soil pH must be less than 7.0), North Carolina, Oklahoma, South Carolina, Tennessee and Texas (fields east of Route 183).

# **Application Methods**

- preemergence, including pre-plant incorporated.
- pre-plant and early pre-plant, including burndown.
- postemergence in-crop
- sequential preemergence followed by postemergence

# **Timing To Crop Stage**

- DuPont<sup>TM</sup> SYNCHRONY® XP for PRE, PPI and Burndown uses may be applied any time prior to soybean emergence.
- SYNCHRONY® XP, for in-season use on STS® soybeans or soybeans with BOLT™ technology, may be applied any time after emergence but no later than 60 days before soybean maturity.
- SYNCHRONY® XP, for in-season use on non-STS® soybeans, may be applied any time after the first trifoliate but no later than 60 days before soybean maturity.

# **Timing To Weeds**

Apply SYNCHRONY® XP when weeds are young and actively growing. Applications made to weeds larger than the sizes indicated below, or to weeds under stress, may result in unsatisfactory control.

# **Spray Additives**

Applications of SYNCHRONY® XP must include either a crop oil concentrate or a nonionic surfactant. Crop oil concentrate is the required adjuvant system unless tank mixing with a product that precludes use of crop oil concentrate. An ammonium nitrogen fertilizer may also be required. Products that combine ammonium fertilizers with surfactants or crop oils must meet all of the surfactant/crop oil and ammonium nitrogen fertilizer requirements.

Consult local DuPont fact sheets, technical bulletins, and service policies prior to using other adjuvant systems. If another herbicide is tank mixed with SYNCHRONY® XP, select adjuvants authorized for use with both products. Adjuvants must contain only EPA-exempt ingredients.

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

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

#### Nonionic Surfactant (NIS)

- Apply at 0.25% v/v (1 qt per 100 gal spray solution) or 0.5% under arid conditions.
- Surfactant products must contain at least 60% nonionic surfactant with a hydrophilic/lipophilic balance (HLB) greater than 12.

#### Ammonium Nitrogen Fertilizer

- Use 2 qt/acre of a high-quality urea ammonium nitrate (UAN), such as 28%N or 32%N, or 2 lb/acre of a spray grade ammonium sulfate (AMS). Use 4 qt/acre UAN or 4 lb/acre AMS under arid conditions.
- Do not use liquid nitrogen fertilizer as the total carrier solution.

# Special Adjuvant Types

- Combination adjuvant products may be used at doses that provide the required amount of NIS, COC, MSO and/or ammonium nitrogen fertilizer. Consult product literature for use rates and restrictions.
- In addition to the adjuvants specified above, other adjuvant types may be used if they provide the same functionality and have been evaluated and approved by DuPont Product Management.

#### **Tank Mixes**

• SYNCHRONY® XP can be applied in tank mixtures with organophosate insecticides or at any time preceding or following an application of an organophosphate insecticide on any STS®, STS®/RR soybean variety or soybeans with BOLT™ technology. Tank mixtures of SYNCHRONY® XP plus organophosphate insecticides applied to STS®, STS®/RR soybean varieties or soybeans with BOLT™ technology may result in minor transient crop response (i.e. stunting and/or chlorosis). Do not apply SYNCHRONY® XP within 14 days before or after an application of an organophosphate insecticide on any soybean variety that is not STS®, STS®/RR or soybeans with BOLT™ technology, as severe crop injury may occur.

Other than the exceptions noted, and in addition to the tank mix partners and rates indicated in this label, SYNCHRONY® XP may be tank mixed or followed with sequential applications of other products registered for use in soybeans. SYNCHRONY® XP may be applied in tank mix combinations with full or reduced rates of other products provided:

- The tank mix product is labeled for the same timing, method of application, adjuvants, and use restrictions as SYNCHRONY® XP.
- The tank mix is not specifically prohibited on the label of the tank mix product.
- The tank mix combination is compatible as determined by a "jar test" described in the TANK MIX COMPATIBILITY TESTING section below.

Weed control and crop safety resulting from the use of tank mixtures not specifically noted on this label, or in separately published DuPont directions, are the responsibility of the user.

# **Tank Mix Compatibility Testing**

Perform a jar test prior to tank mixing to ensure compatibility of DuPont<sup>TM</sup> SYNCHRONY® XP and other pesticides. Use a clear glass quart jar with lid and mix the tank mix ingredients in their relative proportions. Invert the jar containing the mixture several times and observe the mixture for approximately 1/2 hour. If the mixture balls-up, forms flakes, sludges, gels, oily film or layers, or other precipitates, it is not compatible.

# **Mixing Instructions**

- 1. Fill the tank 1/4 to 1/3 full of water.
- 2. While agitating, add the required amount of SYNCHRONY® XP.
- 3. Continue adequate agitation.
- 4. SYNCHRONY® XP needs to be thoroughly mixed with water in the spray tank before adding any other material. As the tank is filling, add (in order): other herbicide(s), the required spray adjuvant, and the nitrogen fertilizer where required.
- 5. Apply SYNCHRONY® XP spray preparation within 24 hours of mixing to avoid product degradation.
- 6. If the mixture has settled, thoroughly reagitate before using.

#### Cultivation

Do not cultivate within 7 days of application. Cultivation may put weeds under stress by pruning roots, thus diminishing control.

Cultivation approximately 14 days after application will help control suppressed weeds.

# FALL APPLICATION IN THE NORTHERN REGION

Tank mixes of SYNCHRONY® XP at 0.375 oz/acre plus DuPont™ EXPRESS® brand herbicides are directed for fall burndown of 3-inch dandelion in conservation tillage or no-till soybean production systems.

Apply 0.375 oz/acre SYNCHRONY® XP -plus- EXPRESS® brand herbicides - plus- crop oil concentrate -plus- 2, 4-D LVE or dicamba.

SYNCHRONY® XP + EXPRESS® brand herbicides may be applied to no-till or conservation tillage fields anytime after the fall harvest, up to 45 days prior to soybean planting.

# PREEMERGENCE OR PREPLANT SPRING APPLICATION: CENTRAL AND SOUTHERN REGIONS ONLY

SYNCHRONY® XP at 1.0 to 3.0 oz/acre may be used for preemergence weed control in all states located in SYNCHRONY® XP Central and Southern Rotational Regions (excluding Florida). Use higher rates for longer lasting residual control.

**Application Timing** - SYNCHRONY® XP may be applied from 45 days before planting soybeans to just before soybean emergence.

#### **Application Rates:**

Medium and Fine Soils,

1.5 - 4% Organic Matter

Rate

Central Region States:

No pH restriction\*

Composite soil pH of 7 or less

Southern Region States:

No pH restriction

1.0 oz/acre
1.25 - 3.0 oz/acre

Southern Region States:

No pH restriction

1.0 - 1.5 oz/acre

Composite soil pH of 7 or less

1.5 - 3.0 oz/acre

#### **Preemergence Residual Control**

When used as directed, applications of 1.25 - 3.0 oz/acre SYNCHRONY® XP will provide preemergence control or partial control (suppression) of the following weeds:

<sup>\*</sup> In Michigan, New York and Wisconsin, do not apply the 1 oz/acre rate to soils exceeding pH 7.6. In all other states, the soil pH is unrestricted for the 1 oz/acre rate.

Control

Cocklebur Jimsonweed Lambsquarters Marestail

Morningglory, annual, ivyleaf, entireleaf, pitted, smallflower, tall

Mustard, wild

Pigweed redroot, smooth Purslane speedwell Ragweed, common Smartweeds, annual

Velvetleaf

**Suppression** 

Annual grasses (foxtails, barnyardgrass crabgrass, panicum) Chickweed, common Nutsedge, yellow, purple Prickly Sida (teaweed) Ragweed, giant

Early spring applications of  $1.0 \text{ oz/acre DuPont}^{\text{TM}}$  SYNCHRONY® XP will provide limited residual control of the above-listed weeds to contribute to a clean seed bed at planting.

If applying 1.0 oz/acre SYNCHRONY® XP under heavy weed pressure, delayed planting, or adverse environmental conditions, additional control measures at planting may be required.

For improved residual control, SYNCHRONY® XP may be tank mixed with such products as linuron, metribuzin-containing products, such as "Boundary", "Valor", metolachlor such as DuPont™ CINCH® herbicide, pendimethalin or pyroxasulfone (Zidua).

#### Burndown Control of existing winter and summer annual weeds

SYNCHRONY® XP spring preplant applications will provide burndown control of certain broadleaf weeds which are no greater than 3 inches in height.

To obtain burndown of the weed species listed below:

- Addition of crop oil concentrate is required.
- Use a minimum of 20 gallons per acre with spray nozzles that provide thorough spray coverage of the weeds.
- 2,4-D LVE or dicamba may be added for enhanced burndown control.

# Weeds Controlled From a Burndown Application:

Bittercress, small- flowered Bushy wallflower Buttercup, smallflower Butterweed Dandelion Deadnettle, purple Garlic, wild\* Henbit Lambsquarters Lettuce, prickly

Lambsquarters Lettuce, prickly Marestail\* Mustard, wild Pennycress Pepperweed Pigweed

Ragweed, common, giant Shepherd's-purse Smartweed, annual Speedwell field, purslane

Sunflower Tansymustard

Thistle - Canadian (above ground portion)

Velvetleaf Whitlowgrass Yellow rocket

\*Addition of 2,4-D LVE is required.

For burndown of larger annual grasses or broadleaf weeds exceeding 1-3", or for burndown of weeds not listed, SYNCHRONY® XP may be tank mixed with herbicides such as DuPont<sup>TM</sup> ASSURE® II, DuPont<sup>TM</sup> EXPRESS® brands, DuPont<sup>TM</sup> PANOFLEX<sup>TM</sup> herbicide, dicamba, glyphosate such as ABUNDIT® brand, glufosinate (Liberty), paraquat, saflufenacil (Sharpen) or 2,4-D (LVE).

#### **Planned Sequential Programs**

SYNCHRONY® XP may be followed as needed by sequential applications of one or more postemergence herbicides such as glyphosate (such as ABUNDIT® brand) in glyphosate tolerant soybeans, glufosinate in glufosinate tolerant soybeans, DuPont™ CLASSIC®, SYNCHRONY® XP or DuPont™ HARMONY® SG herbicide (with TotalSol® soluble granules). To ensure maximal rotation flexibility when considering a sequential program of SYNCHRONY® XP followed by CLASSIC® or SYNCHRONY® XP, carefully consider: the soil pH, the directions below, the rotational information in this section, and the Rotational Crop Guidelines.

For applications of 1.0 oz/acre SYNCHRONY® XP to Central and Southern Region states on soils with pH greater than 7.0, do not apply additional chlorimuron-ethyl-containing herbicides (CLASSIC®, SYNCHRONY® XP) except in the states of AL, AR, GA, LA, MO bootheel, MS, NC, OK, SC, TN, and TX, where up to 0.5 oz/acre CLASSIC® or 0.75 oz/acre SYNCHRONY® XP may be applied.

For applications of 1.5 oz/acre SYNCHRONY® XP to Southern Region states on soils with pH greater than 7.0, do not apply additional chlorimuron-ethyl-containing herbicides (CLASSIC®, SYNCHRONY® XP).

For applications of 1.0 - 3.0 oz SYNCHRONY® XP to Central and Southern Region States on soils with pH less than 7.0 a single follow up postemergence application of CLASSIC® or SYNCHRONY® XP may be made. See table below for rates that may be applied:

#### PREEMERGENCE APPLICATIONS POSTEMERGENCE APPLICATIONS POSTEMERGENCE APPLICATIONS DuPont™ SYNCHRONY® XP oz/acre CLASSIC® oz/acre SYNCHRONY® XP oz/acre up to 2.0 up to 0.75 up to 0.75

2.1 - 2.5up to 0.67 up to 0.75 2.6 - 3.0up to 0.25

Refer to the sequential herbicide labels for specific information regarding use rates, application timing, crop rotations and other restrictions and precautions.

#### **Rotational Crop Information**

For rotational crop information following 1.0 oz/acre SYNCHRONY® XP in Central Region states, and up to 1.5 oz/acre applications in Southern Region states, use Recrop Interval 1 or 2 in the 'Rotational Crop Guidelines' section of this label. For application of SYNCHRONY® XP greater than 1.0 oz/acre in the Central region and greater than 1.5 oz/acre in the Southern region, use Recrop Interval 4 in the 'Rotational Crop Guidelines' section of this label. Sequential applications of SYNCHRONY® XP or CLASSIC® following 1.0 - 3.0 oz of SYNCHRONY® XP on soils with pH less than 7.0 also use Recrop Interval 4.

# SYNCHRONY® XP PLUS GLYPHOSATE SPRING BURNDOWN: ALL **REGIONS**

SYNCHRONY® XP at 0.375-0.75 oz/acre may be tank mixed with glyphosate-containing herbicides, such as ABUNDIT® brand, for burndown of existing summer and winter annual weeds and limited residual control of certain summer annual broadleaf weeds. Refer to 'Rotational Crop Guidelines' to provide guidance on allowable use rates by region.

# **Application Timing**

SYNCHRONY® XP plus glyphosate, such as ABUNDIT® brand, tank mixtures may be applied up to 30 days before planting or prior to soybean emergence after planting.

#### **Weeds Controlled**

SYNCHRONY® XP tank mixed with glyphosate containing herbicides such as ABUNDIT® brand applied prior to planting will provide burndown control of the weeds listed above as well as control of most winter and summer annual broadleaf and grass weeds. Consult the glyphosate specimen labels for specific use instructions including all weeds controlled or suppressed, the directed use rates, maximum weed size at application, restrictions, limitations and precautions. The addition of SYNCHRONY® XP to glyphosate-containing herbicides will increase the burndown control of the following weeds versus application of glyphosate alone:

Dandelion Morningglory Spp., annual Nutsedge, yellow Dock, curly Hemp sesbania Primrose, cutleaf evening Henbit Ragweed, common and giant Sicklepod Ladysthumb Lambsquarters Smartweed, Pennsylvania

Marestail (non ALS resistant) Velvetleaf

# Weeds Controlled - Limited Preemergence

When used according to this label, SYNCHRONY® XP at 0.75 oz/A can provide limited preemergence control of the weeds listed below to contribute to a clean seedbed at planting. For season-long control, a planned PRE or POST sequential program is required.

Jimsonweed Palmer amaranth Ladysthumb Pigweed, redroot, smooth Lambsquarters Smartweeds, pennsylvania Marestail Ragweed Spp. Nutsedge, yellow

# SYNCHRONY® XP POSTEMERGENCE - ANY SOYBEAN: ALL REGIONS

#### **Application Rates**

SYNCHRONY® XP at 0.375 oz/acre may be applied postemergence to any soybean for broadleaf weed control.

#### Timing to Weeds

Apply 0.375 oz/acre SYNCHRONY® XP to 1 - 4" weeds that are actively growing. Applications made to weeds that are in the cotyledon stage, larger than the size indicated, or to weeds under stress may result in unsatisfactory control.

#### **Spray Additives**

 Add nonionic surfactant and ammonium nitrogen fertilizer as noted in 'Spray Additives' under 'Application Information- All Uses'

#### Weeds controlled:

Cocklebur

Pigweed species (non ALS resistant)

Wild sunflower

#### Weeds suppressed:

Lambsquarters

Jimsonweed

Milkweed, common (above ground portions only)

Ragweed, common

Smartweeds, annual

Velvetleaf

#### **DuPont™ SYNCHRONY® XP and glyphosate tankmixes**

A tank mix of SYNCHRONY® XP at 0.375 oz/acre plus glyphosate (such as ABUNDIT® brand) will control the weeds listed in the table below.

- See the glyphosate manufacturer's label for specific ammonium sulfate and surfactant directions.

Maximum weed height in inches 0.375 oz/ac SYNCHRONY® XP

	0.575 OZIAC STITCHKOTTO AT
Weeds Controlled	+ glyphosate
Barnyardgrass	6
Cocklebur	8
Corn, volunteer (non Roundup Ready)	20
Crabgrass species	10
Dandelion	4
Foxtail species	10
Hemp sesbania	4
Jimsonweed	10
Ladysthumb	8
Lambsquarters	6
Morningglory, entireleaf, ivyleaf,	4
pitted, tall	4
Nightshade, eastern black	5
Nutsedge, yellow	6
Panicum, fall, texas	10
Pigweed, redroot, rough	12
Prickly sida	4
Ragweed, common, giant	8
Sicklepod	4
Signalgrass, broadleaf	4
Smartweed, Pennsylvania	8
Sunflower	8
Velvetleaf	4

#### Other SYNCHRONY® XP Tank Mixes

SYNCHRONY® can be tank mixed with DuPont™ CINCH®, "Flexstar" brand, "FirstRate", DuPont™ HARMONY® SG herbicide (with TotalSol® soluble granules), or glufosinate (Liberty).

Refer to the tank mix partner labels for other weeds controlled and for the appropriate rate based on the weed sizes. Read and follow all use directions, restrictions and precautions of both SYNCHRONY® XP and the tankmix partners. When tankmixing, the most restrictive labeling applies.

# Precautions for 0.375 oz SYNCHRONY® XP uses

- A temporary crop response may occur following an application of SYNCHRONY® XP to soybeans not designated STS® or soybeans with BOLT $^{\text{\tiny{TM}}}$  technology.
- Applications made when the crop and weeds are under stress from moisture, cold, heat, high humidity, disease, insect pressure and prior herbicide stress may result in excessive crop response and/or reduced weed control effectiveness.

# DUPONT™ SYNCHRONY® XP POSTEMERGENCE - FOR USE ON SOYBEAN VARIETIES DESIGNATED AS STS®/RR, STS® OR SOYBEANS WITH BOLT™ TECHNOLOGY: ALL REGIONS

- Application of greater than 0.375 oz/acre SYNCHRONY® XP to soybean varieties not designated as STS®/RR, STS® or soybeans with BOLT™ technology will result in severe crop injury and/or yield loss.
- DuPont will not warrant the safety of this treatment to seed saved from previous year's production (bin run seed).
- These STS®/RR, STS® varieties or soybeans with BOLT™ technology must be purchased from an authorized seed supplier.
- The STS®/RR, STS® or BOLT<sup>TM</sup> technology designation indicates the soybean variety contains a proprietary trait that enhances the soybean's natural tolerance to DuPont soybean sulfonylurea herbicides. Information on STS®/RR, STS® soybean varieties or soybeans with BOLT<sup>TM</sup> technology may be obtained from your seed supplier or DuPont representative.

#### **APPLICATION RATES**

SYNCHRONY® XP may be applied postemergence in STS® soybeans or soybeans with BOLT™ technology at 0.375 - 1.125 oz/acre. For rate limitations in certain geographies, see the "Rotational Crop Guidelines" section.

#### **Weeds Controlled**

Apply SYNCHRONY® XP at a rate of 0.375 to 1.125 oz/acre for selective postemergence control of the broadleaf weeds in the table below:

Maximum Haight (in inches)

	Maximum Height (in inches)		
Weed	0.375 oz/ac	0.75-1.125 oz/ac	
Beggarticks (bidens sp)		6	
Bristly starbur		3	
Buffalobur		6*	
Burcucumber		3	
Cocklebur	6	8	
Cowpea		5	
Dandelion (above ground portion)	3*	4	
Florida beggarweed		5	
Hemp sesbania		5	
Jerusalem artichoke (above ground portion)		6	
Jimsonweed	3	5	
Kochia		3*	
Ladysthumb	4	8	
Lambsquarters	4*	4	
Marestail (non ALS resistant)	2	5	
Milkweed, common (above ground portion)	4*	6	
Morningglory (annual)			
Entireleaf	2*	3	
Ivyleaf	2*	3	
Pitted	2*	3	
Smallflower	2*	3	
Tall	2*	3	
Mustard	4	5**	
Nutsedge, purple	·	4*	
Nutsedge, yellow	3*	3	
Palmer amaranth (non ALS resistant)	4	8	
Pigweeds	·		
Redroot (rough)	8	8	
Others (non ALS resistant)		8	
Pokeweed	3*	6*	
Ragweed			
Common	4*	4	
Giant	4*	4	
Sicklepod	·	3	
Smartweed, Pennsylvania	4	8	
Sowthistle, perennial (rosette stage)	6*	6	
Spurred anoda	<u> </u>	3*	
Sunflower	4	8	
Thistle, Canadian	·	4*	
Thistle, Russian		3*	
Wild poinsettia		2	
Velvetleaf	4*	8	
Venice mallow	· · ·	3*	
Wild carrot	4*	6	
* Suppression	·	<u> </u>	

<sup>\*</sup> Suppression

<sup>\*\*</sup> Diameter

Apply DuPont™ SYNCHRONY® XP at 1.125 oz/acre to preserve the STS® trait in STS® soybean seed production. SYNCHRONY® XP used at 1.125 oz/ac will give residual control of newly germinating broadleaf weeds (see Preemergence or Preplant Spring Application, Preemergence Residual Control).

# **Sequential Applications:**

A follow up application of DuPont<sup>TM</sup> CLASSIC® herbicide or SYNCHRONY® XP herbicide may be made 2-3 weeks after a SYNCHRONY® XP application to control weeds with multiple germination flushes or weeds under stress such as burcucumber, cowpea, giant ragweed, morningglory, and sicklepod. See Rotational Crop Guidelines for intervals following sequential applications.

#### **Spray Additives**

For directions for use on addition of crop oil concentrate, nonionic surfactant and ammonium nitrogen fertilizer, see the 'Spray Additives' section under 'Application Information - All Uses'.

#### **Tank Mixes**

SYNCHRONY® XP and glyphosate herbicides such as Abundit® brand herbicides on STS®/RR stacked-trait soybeans or soybeans with BOLT™ technology:

• SYNCHRONY® XP may be tank mixed with glyphosate-containing herbicides for improved control of broadleaf weeds not completely controlled by either product alone.

SYNCHRONY® XP and "Flexstar" brands, "Reflex", "Ultra Blazer", or "Cobra" Herbicides On Any STS® soybean or soybeans with BOLT<sup>TM</sup> technology:

For control of up to 2" eastern black nightshade and for improved common ragweed control, SYNCHRONY® XP may be tankmixed with "Flexstar" brands, "Reflex", "Ultra Blazer" or "Cobra" herbicides.

For control of prickly sida and hemp sesbania, tank mix SYNCHRONY® XP with "Cobra". Use the higher "Cobra" rate when prickly sida or hemp sesbania are heavy or if prickly sida and hemp sesbania approach the maximum size of 1" or 4", respectively. Do not use crop oil concentrate when tankmixing SYNCHRONY® XP and "Cobra" at the higher rates.

Tank mix applications of SYNCHRONY® XP plus "Flexstar", "Reflex", "Ultra Blazer", or "Cobra" may not control weeds listed on the SYNCHRONY® XP label as completely as applications of SYNCHRONY® XP alone.

Refer to the "Flexstar", "Reflex", "Ultra Blazer" and "Cobra" labels for the appropriate rate based on the weed sizes to be controlled.

#### SYNCHRONY® XP and "FirstRate" herbicide:

For improved ragweed (non ALS resistant) and cocklebur control, add between 0.075 - 0.3 oz/acre "FirstRate" to SYNCHRONY® XP. These tankmixes will control up to 10" cocklebur or common ragweed and up to 12" giant ragweed. Use a lower amount of "FirstRate" when weeds are less than the maximum size and under good growing conditions. Use a higher amount of "FirstRate" when weeds are approaching the maximum size and/or under unfavorable growing conditions.

# SYNCHRONY® XP and Postemergence Grass Herbicides:

SYNCHRONY® XP and SYNCHRONY® XP tankmixes may be tank mixed with postemergence grass herbicides such as DuPont<sup>TM</sup> ASSURE® II herbicide. For best results, apply SYNCHRONY® XP seven days before or one day after the grass herbicide. Refer to the grass herbicide label for precautions and specific use information.

# **APPLICATION EQUIPMENT**

# **Ground Application (See Also Spray Drift Management)**

# **Broadcast Application**

- Postemergence in soybeans, use a minimum of 10 gal water per acre. Under heavy weed pressure or dense crop foliage, increase minimum spray volume to 15-25 gal per acre. For best performance, select nozzle and pressure combinations that deliver medium to coarse spray droplets, as indicated, for example, by ASABE standard S572.
- Preemergence in soybeans, use a minimum of 10 gal water per acre. For best performance, select nozzle and pressure combinations that deliver coarse to very coarse spray droplets, as indicated, for example, by ASABE standard S572.
- For burndown applications of existing vegetation, use a minimum of 15 gal water per acre. For large weeds and/or heavy residue, increase gallonage to ensure coverage. For best performance, select nozzle and pressure combinations that deliver medium to coarse spray droplets, as indicated, for example, by ASABE standard S572.

# **Aerial Application**

# (See Also Spray Drift Management)

- Use nozzle types and arrangements that will provide optimum spray distribution and maximum coverage at 2-5 gal per acre.
- Use a minimum of 2 gal water per acre. Under heavy weed pressure or dense crop foliage, increase the minimum spray volume to 5 gal per acre.
- Do not apply during a temperature inversion, when wind speed is less than 2 mph or above 10 mph, or when other conditions could produce poor coverage and/or off-target spray movement.
- \* Do not apply SYNCHRONY® XP herbicide by air in the state of New York

# **ROTATIONAL CROP GUIDELINES - ALL USES**

Crop rotation intervals noted in the table below are based on crops grown under favorable growing conditions. Crops grown under unfavorable environmental conditions, such as drought, nutrient deficiency, high salts, disease and insect pressure may demonstrate reduced tolerance to crop protection chemicals. When deciding on a particular crop to replant in your fields, carefully consider your particular soil and other field conditions (see IMPORTANCE OF SOIL pH section of this label).

Important: Crops other than soybeans following a DuPont™ SYNCHRONY® XP application can vary in their sensitivity to low
concentrations of SYNCHRONY® XP remaining in the soil. Rotational crop guidelines must be followed.

**Northern Region:** The states of Minnesota, South Dakota, Wisconsin (fields north of Interstate 90 between Lacrosse and Madison and fields north of Interstate 94 between Madison and Milwaukee), Iowa (fields inside the boundaries of the Clarion-Nicollet-Webster and Hamburg-Ida-Monona soil associations and fields located inside the historic floodplain of the Missouri River), Nebraska (fields north of route 30 and west of Route 281), and New York (fields north of Interstate 90).

**Central Region:** The states of Delaware, Illinois, Indiana, Iowa (fields located outside the boundaries of the Clarion-Nicollet-Webster and Hamburg-Ida-Monona soil associations and fields located outside the historic flood plain of the Missouri River), Kansas, Maryland, Michigan, Missouri (except the Bootheel), Nebraska (fields south of Route 30 or east of Route 281), New Jersey, New York (fields south of Interstate 90), Ohio, Pennsylvania, Virginia, West Virginia and Wisconsin (fields south of Interstate 90 between Lacrosse and Madison and fields south of Interstate 94 between Madison and Milwaukee).

**Southern Region:** The states of Alabama (except the "Black Belt" where soil pH must be less than 7.0), Arkansas, Florida, Georgia, Kentucky, Louisiana, Missouri (Bootheel region only), Mississippi (except the "Black Belt" where soil pH must be less than 7.0), North Carolina, Oklahoma, South Carolina, Tennessee and Texas (fields east of Route 183).

# Follow Recrop Interval 1 if the field is in the Central Region and:

A maximum of 1.125 oz/acre of SYNCHRONY® XP was applied for the use year (all pH soils).

OR

A maximum of 0.75 oz/acre of SYNCHRONY® XP in sequence with 0.33 oz/acre of DuPont™ CLASSIC® was applied for the
use year (all pH soils).

OR

• A maximum of 0.75 oz/acre of SYNCHRONY® XP was applied in sequence with a maximum rate of 0.75 oz/acre of CLASSIC®, or a maximum of two applications of SYNCHRONY® XP at a rate of 0.75 oz/acre per application was applied (soils with pH less than 7.0).

#### Follow Recrop Interval 2 if the field is in the Southern Region with:

- All pH soils except those with pH greater than 7.0 in the Black Belt region of Alabama and Mississippi AND
- A maximum of 0.75 oz/acre of SYNCHRONY® XP was applied in sequence with 0.75 oz/acre of CLASSIC®.

OR

• A maximum of two applications of SYNCHRONY® XP at a rate of 0.75 oz/acre per application was applied.

OR

• A single maximum application of 1.5 oz/acre of SYNCHRONY ® XP was applied.

#### Follow Recrop Interval 3 if the field is in the Northern, Central or Southern Regions and either:

A maximum of 0.375 oz/acre SYNCHRONY® XP was applied during the use year (any soil pH).

OR

• A maximum of 0.75 oz/acre SYNCHRONY® XP was applied during the use year (soil pH less than 7.0).

#### **Follow Recrop Interval 4 if:**

- The field is located in the Central Region and greater than 1.125 oz/acre was applied to soils with a pH less than 7.0. OR
- The field is located in the Southern Region and greater than 1.5 oz/acre was applied to soils with a pH less than 7.0. OR
- The field is located in the Central or Southern Region and a sequential application of SYNCHRONY® XP or CLASSIC® was applied following 1.0 3.0 oz/acre of SYNCHRONY® XP applied Preplant, PPI or Pre on soils with pH less than 7.0

# Crop Rotational Intervals in Months Following the Use of DuPont™ SYNCHRONY® XP\*

Crop	Interval 1	<b>Interval 2</b>	Interval 3	Interval 4
Soybeans	0	0	0	0
Cereal Grains, Pasture Grasses (such as Fescue and Ryegrass)	3	3	3	4
Dry Beans, Kidney Beans, Peas, Snap Beans	9	9	9	12
Field Corn**	9	8***	9	10**
Popcorn	9	9	9/15§	10
Sorghum	9	9	9/15§	12
Tobacco (transplant)	9	9	9/15§	10
Tomato (transplant)	9	9	9/15§	10
Peanuts	15	6	6	8
Rice	15	9††	9	10
Cotton	9	8	9	10
Alfalfa	12	9	9	10
Clover	12	9	9	12
Cabbage	18	18	18	18
Canola (Rapeseed)	18	18	18	18
Cucumber	18	18	9	18
Flax	18	18	18	18
Lentils	18	18	18	18
Mustard	18	18	18	18
Pumpkins	18	18	9/18§	18
Sunflower	18	18	9	18
Sweet Corn	18	18	9†	18
Watermelon	18	18	9	18
Carrots∞	30	30	30	30
Onions∞	30	30	30	30
Potatoes∞	30	30/8†††	30	30
Sweet Potatoes, Yams∞	30	10	30	30
Sugar Beets∞	30	30	30	30
Any crop not listed∞  * If SVNCHPONY® VP or the letter port of a sequence.	30	30	30	30

<sup>\*</sup> If SYNCHRONY® XP or the latter part of a sequential treatment containing chlorimuron ethyl (such as DuPont<sup>TM</sup> CLASSIC®) is applied after August 1, extend rotational crop intervals 2 months for alfalfa, clover, corn (non-IR), cotton, popcorn, rice, sorghum, tobacco, and tomato.

# THE IMPORTANCE OF SOIL PH

Soil pH varies greatly, even within the same field, pH variations as much as 2 pH units are common. Composite soil samples taken across an entire field, such as those samples taken for soil fertility recommendations, may not detect areas of high pH. Sub-sampling is recommended for areas likely to have pH values higher than the field average. The following is a non-inclusive list of potential high pH areas where subsampling is recommended.

- Where different soil types are evident within a field, sample soil types separately.
- Where conditions vary within a field, sample areas separately, such as:
  - areas bordered by limestone gravel roads,
  - river bottoms subject to flooding,
  - low areas in hardpan soils where evaporative ponds may occur,
  - eroded hillsides,
  - along drain tile lines, and
  - areas where drainage ditch spoil has been spread.

<sup>\*\*</sup>The term "Field Corn" is defined to include only that corn grown for grain or silage or for seed corn relative to the Rotational Crop Guidelines section of this label. In the states of DE, KY, MD, MO Bootheel, NJ, NC, SC, TN, VA and WV, field corn may be recropped after 9 months if the SYNCHRONY® XP rate does not exceed 2.5 oz/ac.

<sup>\*\*\*</sup>In the states of AL, FL, GA, LA, MS, and SC field corn maybe rotated in 7 months.

<sup>†</sup> Rotational crop intervals are for processing Sweet Corn varieties only. The rotational crop interval for other Sweet Corn varieties is 18 months.

<sup>††</sup>For applications using 1.5 oz on soil with pH greater than 7.0, the rotation to rice is 18 months.

<sup>†††</sup> States of NC and VA in soils with organic matter greater than 1%.

<sup>∞</sup> For rotation interval 4 only, carrots, onion, potato, sugarbeets, and any other crop not listed may be recropped after 18 months in the states of AL, AR, DE, GA, KY, LA, MD, MS, MO bootheel, NJ, NC, SC, TN, VA, and WV.

<sup>§</sup> For the 0.375 oz/acre SYNCHRONY® XP rate, the rotation to popcorn, sorghum, tobacco (transplants), tomato (transplants) and pumpkins is 9 months. For the 0.75 oz/acre rate, use the longer rotations.

• Where lime has not been deeply incorporated, soil may exhibit significantly higher pH values in the upper 3 inches of soil.

Composite soil samples taken at a 6-8 inch depth may not reflect the elevated pH near the surface. In these cases shallow sampling the upper 3 inches is advised.

Determine soil pH by laboratory analysis using a 1:1 soil:water suspension.

# SPRAYER PREPARATION AND CLEANUP

It is important that spray equipment is clean and free of previous pesticide deposits before using  $DuPont^{TM}$  SYNCHRONY® XP and then properly cleaned out following application. Clean all application equipment before applying SYNCHRONY® XP. Follow the cleanup procedures specified on the label of the product previously sprayed. If no cleanup procedure is provided, use the procedure that follows. Immediately following applications of SYNCHRONY® XP, thoroughly clean all mixing and spray equipment to avoid subsequent crop injury.

#### Note:

- When cleaning spray equipment before applying SYNCHRONY® XP, read and follow label directions for proper rinsate disposal of the product previously sprayed.
- Steam cleaning of aerial spray tanks will help to dislodge any visible pesticide deposits.
- When spraying or mixing equipment will be used over an extended period to apply multiple loads of SYNCHRONY® XP, partially fill the tank with fresh water at the end of each day of spraying, flush the boom and hoses, and allow to sit overnight.

# **Cleanup Procedure**

- 1. Drain the tank and thoroughly hose down the interior surfaces. Flush the tank, hoses, and boom with clean water for a minimum of 5 min.
- 2. Partially fill the tank with clean water and add one gallon of household ammonia\* (containing 3% active) for every 100 gallons of water. Finish filling the tank with water, then flush the cleaning solution through the hoses, boom, and nozzles. Add more water to completely fill the tank and allow to agitate/recirculate for at least 15 min. Again, flush the hoses, boom, and nozzles with the cleaning solution, then drain the tank.
- 3. Repeat Step 2.
- 4. Remove the nozzles, screens and end caps of sprayer booms and clean separately in a bucket containing the cleaning agent and water.
- 5. Thoroughly rinse the tank with clean water for a minimum of 5 min, flushing the water through the hoses and boom.
  - \* Equivalent amounts of an alternate strength ammonia solution or a tank cleaner recommended in the DuPont bulletin "Sulfonylurea Herbicides, A Guide to Equipment Cleanout," may be used.

# **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 drift management strategy is to apply the largest droplets which are consistent with pest control objectives. 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. A droplet size classification system describes the range of droplet sizes produced by spray nozzles. The American Society of Agricultural and Biological Engineers (ASABE) provide a Standard that describes droplet size spectrum categories defined by a number of reference nozzles (fine, coarse, etc.). Droplet spectra resulting from the use of a specific nozzle may also be described in terms of volume mean diameter (VMD). Coarser droplet size spectra have larger VMD's and lower drift potential.

# Controlling Droplet Size - Ground Application

- Nozzle Type Select a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. The use of low-drift nozzles will reduce drift potential.
- Pressure The lowest spray pressures recommended for the nozzle produce the largest droplets. Higher pressure reduces droplet size and does not improve canopy penetration. When higher flow rates are needed, using a higher-capacity nozzle instead of increasing pressure results in the coarsest droplet spectrum.
- Flow Rate/Orifice Size Using the highest flow rate nozzles (largest orifice) that are consistent with pest control objectives reduces the potential for spray drift. Nozzles with higher rated flows produce coarser droplet spectra.

#### BOOM LENGTH (AIRCRAFT) AND APPLICATION HEIGHT

Boom Length (aircraft) - Using shorter booms decreases drift potential. Boom lengths are expressed as a percentage of an aircraft's wingspan or a helicopter's rotor blade diameter. Shorter boom length and proper positioning can minimize drift caused by wingtip or rotor vortices.

**Application Height (aircraft)** - Applications made at the lowest height that are consistent with pest control objectives and the safe operation of the aircraft will reduce the potential for spray drift.

**Application Height (ground)** - Applications made at the lowest height consistent with pest control objectives, and that allow the applicator to keep the boom level with the application site and minimize bounce, will reduce the exposure of spray droplets to evaporation and wind, and reduce spray drift potential.

#### Wind

Drift potential is lowest when applications are made in light to gentle sustained winds (2-10 mph), which are blowing in a constant direction. Many factors, including droplet size and equipment type determine drift potential at any given wind speed. AVOID GUSTY OR WINDLESS CONDITIONS. Local terrain can also influence wind patterns. Every applicator is expected to 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.

# **Surface Temperature Inversions**

Drift potential is high during a surface temperature inversion. Surface temperature inversions restrict vertical air mixing, which may cause small suspended droplets to remain close to the ground and move laterally in a concentrated cloud. Surface 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. Mist or fog may indicate the presence of an inversion in humid areas.

Inversions may also be identified by producing smoke and observing its behavior. Smoke that remains close to the ground, or moves laterally in a concentrated cloud under low wind conditions indicates a surface inversion. Smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

#### **Sensitive Areas**

Making applications when there is a sustained wind moving away from adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is an effective way to minimize the effect of spray drift.

#### **Drift Control Additives**

Using product compatible drift control additives can reduce drift potential. When a drift control additive is used, read and carefully observe cautionary statements and all other information on the additive's label. If using an additive that increases viscosity, ensure that the nozzles and other application equipment will function properly with a viscous spray solution. Preferred drift control additives have been certified by the Chemical Producers and Distributors Association (CPDA).

#### **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.

# Air Assisted (air blast) Tree and Vine Sprayers

Air assisted tree and vine sprayers carry droplets into the canopy of trees and vines via a radially or laterally directed air stream. These sprayers are not suitable for applying herbicides.

# STORAGE AND DISPOSAL

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

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

CONTAINER HANDLING: Refer to the Net Contents section of this product's labeling for the applicable "Nonrefillable Container" or "Refillable Container" designation.

Nonrefillable Plastic and Metal Containers (Capacity Equal to or Less Than 50 Pounds): Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Nonrefillable Plastic and Metal Containers (Capacity Greater Than 50 Pounds): Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Nonrefillable Plastic and Metal Containers, e.g., Intermediate Bulk Containers [IBC] (Size or Shape Too Large to be Tipped, Rolled or Turned Upside Down): Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying the contents from this container into application equipment or mix tank and before final disposal using the following pressure rinsing procedure. Insert a lance fitted with a suitable tank cleaning nozzle into the container and ensure that the water spray thoroughly covers the top, bottom and all sides inside the container. The nozzle manufacturer generally provides instructions for the appropriate spray pressure, spray duration and/or spray volume. If the manufacturer's instructions are not available, pressure rinse the container for at least 60 seconds using a minimum pressure of 30 PSI with a minimum rinse volume of 10% of the container volume. Drain, pour or pump rinsate into application equipment or rinsate collection system. Repeat this pressure rinsing procedure two more times. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. For Metal Containers, offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Nonrefillable Paper or Plastic Bags, Fiber Sacks including Flexible Intermediate Bulk Containers (FIBC) or Fiber Drums With Liners: Nonrefillable container. Do not reuse or refill this container. Completely empty paper or plastic bag, fiber sack or drum liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. Then offer for recycling if available or dispose of empty paper or plastic bag, fiber sack or fiber drum and liner in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances.

Refillable Fiber Drums With Liners: Refillable container (fiber drum only). Refilling Fiber Drum: Refill this fiber drum with DuPont<sup>TM</sup> SYNCHRONY® XP herbicide containing Chlorimuron ethyl and Thifensulfuron methyl only. Do not reuse this fiber drum for any other purpose. Cleaning before refilling is the responsibility of the refiller. Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. Disposing of Fiber Drum and/or Liner: Do not reuse this fiber drum for any other purpose other than refilling (see preceding). Cleaning the container (liner and/or fiber drum) before final disposal is the responsibility of the person disposing of the container. Offer the liner for recycling if available or dispose of liner in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. If drum is contaminated and cannot be reused, dispose of it in the manner required for its liner. To clean the fiber drum before final disposal, completely empty the fiber drum by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. Then offer the fiber drum for recycling if available or dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances.

All Other Refillable Containers: Refillable container. Refilling Container: Refill this container with DuPont<sup>TM</sup> SYNCHRONY® XP herbicide containing Chlorimuron ethyl and Thifensulfuron methyl only. Do not reuse this container for any other purpose. Cleaning before refilling is the responsibility of the refiller. Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn out threads and closure devices. If damage is found, do not use the container, contact DuPont at the number below for instructions. Check for leaks after refilling and before transporting. If leaks are found, do reuse or transport container, contact DuPont at the number below for instructions. Disposing of Container: Do not reuse this container for any other purpose other than refilling (see preceding). Cleaning the container before final disposal is the responsibility of the person disposing of the container. To clean the container before final disposal, use the following pressure rinsing procedure. Insert a lance fitted with a suitable tank cleaning nozzle into the container and ensure that the water spray thoroughly covers the top, bottom and all sides inside the container. The nozzle manufacturer generally provides instructions for the appropriate spray pressure, spray duration and/or spray volume. If the manufacturer's instructions are not available, pressure rinse the container for at least 60 seconds using a minimum pressure of 30 PSI with a minimum rinse volume of 10% of the container volume. Drain, pour or pump rinsate into application equipment or rinsate collection system. Repeat this pressure rinsing procedure two more times. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. For Metal Containers, offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Outer Foil Pouches of Water Soluble Packets (WSP): Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available or, dispose of the empty outer foil pouch in the trash as long as WSP is unbroken. If the outer pouch contacts the formulated product in any way, the pouch must be triple rinsed with clean water. Add the rinsate to the spray tank and dispose of the outer pouch as described previously.

Do not transport if this container is damaged or leaking. If the container is damaged, leaking or obsolete, or in the event of a major spill, fire or other emergency, contact DuPont at 1-800-441-3637, day or night.

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