

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

May 13, 2020

S. K. Theodorakis Registration Manager Corteva Agriscience Chestnut Run Plaza LR735/4160-8 974 Centre Road Wilmington, DE 19805

Subject: Registration Review Label Mitigation for Rimsulfuron and Nicosulfuron Product Name: Dupont Steadfast Q EPA Registration Number: 352-774 Application Date: 05/31/2018 Decision Numbers: 562417 and 541517

Dear Mr. Theodorakis:

The Agency, in accordance with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, has completed reviewing all of the information submitted with your application to support the Registration Review of the above referenced product in connection with the Sulfonylurea (SU) Herbicides Interim Decision, and has concluded that your submission is acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

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.

A copy of your label stamped "Accepted" is enclosed. Products shipped after 12 months from the date of this amendment must bear the new revised label. Your release for shipment of the product bearing the amended label constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6.

Page 2 of 2 EPA Reg. No. 352-774 Decision No. 562417 and 541517

If you have any questions about this letter, please contact Erik Kraft by phone at 703-308-9358, or via email at <u>Kraft.Erik@epa.gov</u>.

Sincerely,

in the

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

Enclosure

(Base Label)

	NICOSULFURON RIMSULFURON	GROUP GROUP	2 2		RBICIDE RBICIDE
<b>DuPont<sup>TM</sup> Steadfast</b> ® [Alternate Brand Name: Steadfast® HERBICIDE		ACCE 05/13 Under the Federal and Rodenticide A	3/2020 Insecticide, F	) ungicide	
For use in Field Corn		pesticide registere		a, for the	

#### This product is a water-dispersible granule containing 37.7% active ingredient by weight.

Active Ingredients	By Weight
Nicosulfuron	
2-[[(4,6-dimethoxypyrimidin-2-yl)aminocarbonyl]aminosulfonyl]-N,N-dimethyl-3-	
pyridinecarboxamide	25.2%
Rimsulfuron	
N((4,6-dimethoxypyrimidin-2-yl) aminocarbonyl)-3-(ethylsulfonyl)-	
2-pyridinesulfonamide	12.5%
Other Ingredients	62.3%
TOTAL	100.0%

# 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.)

# Precautionary Statements Hazard to Humans and Domestic Animals

# CAUTION

Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Prolonged or frequently repeated contact may cause allergic reactions in some individuals.

# Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants.
- Chemical resistant gloves made of any water proof material such as butyl rubber, natural rubber, • neoprene rubber, or nitrile rubber.
- Shoes plus socks. ٠

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

#### **USERS SHOULD:**

# USER SAFETY RECOMMENDATIONS

Wash thoroughly with soap and water after handling and 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.

# STORAGE AND DISPOSAL

DO NOT contaminate water, food, or feed by storage and disposal.

**Pesticide Storage:** Store product in original container only. **DO NOT** contaminate water, other pesticides, fertilizer, food or feed in storage. Store in a cool, dry place.

**Pesticide Disposal: DO NOT** contaminate water, food, or feed by disposal. Waste resulting from the use of this product may 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 "Refillable Container" or "Nonrefillable 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, (a) for Plastic Containers, offer for recycling if available 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, or (b) 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. Turn the container or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then, (a) for Plastic Containers, offer for recycling if available 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, or (b) 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. Pressure rinse as follows: Empty the remaining product contents into application equipment or a mix tank. Insert pressure rinsing nozzle in the container, and rinse at about 40 PSI for at least 30 seconds. Drain rinsate for 10 seconds after the flow begins to drip. Pour or pump rinsate into application equipment or rinsate collection system. Then, (a) for Plastic Containers, offer for recycling if available 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, or (b) 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, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**Refillable Fiber Drums With Liners:** Refillable container (fiber drum only). Refill this container with STEADFAST® Q containing nicosulfuron and rimsulfuron only. **DO NOT** reuse this container for any other purpose. Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. Then offer the liner for recycling if available or dispose of liner in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke. If drum is container (fiber drum) before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container (fiber drum) before final disposal, completely empty container by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application, or, if allowed by state and local authorities of the refiller. To clean the container (fiber drum) before final disposal, completely empty container by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. Then offer the container for recycling if available or 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.

**All Other Refillable Containers:** Refillable container. Refill this container with STEADFAST® Q containing nicosulfuron and rimsulfuron only. **DO NOT** reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then, (a) for Plastic Containers, offer for recycling if available 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, or (b) for Metal Containers, offer for recycling if available or procedures approved by state and local authorities. Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn out threads and closure devices. Check for leaks after refilling and before transporting.

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

Refer to the inside of label booklet for additional precautionary information and Directions for Use.

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

#### EPA Reg. No. 352-774

EPA Est.

<sup>®</sup>™ Trademarks of Dow AgroSciences, DuPont or Pioneer and their affiliated companies or respective owners

For product information call: 1-800-258-3033 E. I. du Pont de Nemours and Company, Chestnut Run Plaza, 974 Centre Road, Wilmington, Delaware 19805.

NET:\_\_\_\_\_

(Cover/Shipping Label)

		RIMSULFURON	GROUP	2	HERBICIDE
				~	
		NICOSULFURON	GROUP	2	HERBICIDE

# DuPont<sup>™</sup> Steadfast<sup>®</sup> Q [Alternate Brand Name: Steadfast<sup>®</sup> Q]

HERBICIDE

For use in Field Corn

#### This product is a water-dispersible granule containing 37.7% active ingredient by weight.

Active Ingredients	By Weight
Nicosulfuron	
2-[[(4,6-dimethoxypyrimidin-2-yl)aminocarbonyl]aminosulfonyl]-N,N-dimethyl-3-	
pyridinecarboxamide	25.2%
Rimsulfuron	
N((4,6-dimethoxypyrimidin-2-yl) aminocarbonyl)-3-(ethylsulfonyl)-	
2-pyridinesulfonamide	12.5%
Other Ingredients	62.3%
TOTAL	100.0%

# 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.)

# AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to the booklet under "Agricultural Use Requirements" in the Directions for Use section for more information about this standard.

Refer to the inside of label booklet for additional precautionary information and Directions for Use.

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

**DO NOT** transport if 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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E. I. du Pont de Nemours and Company, Chestnut Run Plaza, 974 Centre Road, Wilmington, Delaware 19805.

NET:\_\_\_\_\_

EPA Est.

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# FIRST AID

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

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

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

# Precautionary Statements

# Hazard to Humans and Domestic Animals

# CAUTION

Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Prolonged or frequently repeated contact may cause allergic reactions in some individuals.

# **Personal Protective Equipment (PPE)**

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants.
- Chemical resistant gloves made of any water proof material such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber.
- Shoes plus socks.

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

# USER SAFETY RECOMMENDATIONS

# USERS SHOULD:

- Wash thoroughly with soap and water after handling and 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, 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 or rinsate.

# **Groundwater Advisory**

This product is known to leach through soil into groundwater under certain conditions as a result of label use. This product may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

# **Surface Water Advisory**

This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having high potential for reaching surface water via runoff for several months or more after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of this product from runoff water and sediment. Runoff of this product will be greatly reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours.

# Windblown Soil Particles Advisory

This product has the potential to move off-site due to wind erosion. Soils that are subject to wind erosion usually have a high silt and/or fine to very fine sand fractions and low organic matter content. Other factors which can affects the movement of windblown soil include the intensity and direction of prevailing winds, vegetative cover, site slope, rainfall, and drainage patterns. Avoid applying this product if prevailing local conditions may be expected to result in off-site movement.

# Non-target Organism Advisory

This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated area. Protect the forage and habitat of non-target organisms by minimizing spray drift. For further guidance and instructions on how to minimize spray drift, refer to the Spray Drift Management section of this label.

# **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.

STEADFAST® Q herbicide must be used only in accordance with instructions on this label. To the extent consistent with applicable law, DuPont will not be responsible for losses or damage resulting from use of this product in any manner not specified by DuPont.

# 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 4 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 water proof material such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber.
- Shoes plus socks.

# STORAGE AND DISPOSAL

DO NOT contaminate water, food, or feed by storage and disposal.

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

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**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, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**Refillable Fiber Drums With Liners:** Refillable container (fiber drum only). Refill this container with STEADFAST® Q containing nicosulfuron and rimsulfuron only. **DO NOT** reuse this container for any other purpose. Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. Then offer the liner for recycling if available or dispose of liner in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke. If drum is container (fiber drum) before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container (fiber drum) before final disposal, completely empty container by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application, or, if allowed by state and local authorities, by shaking and tapping sides and bottom to loosen clinging is the responsibility of the refiller. To clean the container (fiber drum) before final disposal, completely empty container by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. Then offer the container for recycling if available or 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.

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# **PRODUCT INFORMATION**

STEADFAST® Q herbicide is a water-dispersible granule used at the rate of 1.5 ounces (0.024 pounds nicosulfuron and 0.011 pounds rimsulfuron active ingredients) per acre for selective postemergence grass and broadleaf weed control in field corn.

CROPS	Maximum Oz of Product/ Acre/ Single Application	Maximum Lb Al/ Acre/Single Application	Maximum Number of Applications Per Year	Maximum Oz of Product /Acre/Year	Maximum Lb Al/A per Year	Last Treatment Preharvest Interval
Field Corn	1.5 oz	0.024 lb ai nicosulfuro n + 0.011 lb ai rimsulfuron	1	1.5 oz	0.024 lb ai nicosulfuro n + 0.011 lb ai rimsulfuron	DO NOT graze or feed forage, hay, or straw from treated areas to livestock within 30 days of application

# RESTRICTIONS

**DO NOT** make more than one application of STEADFAST® Q per year.

DO NOT apply to field corn grown for seed, to popcorn or to sweet corn.

DO NOT apply aerially in California or New York State.

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

- DO NOT apply STEADFAST® Q or drain or flush application 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 contract with their roots.
- DO NOT use on lawns, walks, driveways, tennis courts.
- DO NOT contaminate any body of water.

DO NOT apply STEADFAST® Q through any type of irrigation system.

**DO NOT** graze or feed forage, hay, or straw from treated areas to livestock within 30 days of STEADFAST® Q application.

DO NOT exceed labeled application rates.

**DO NOT** tank mix STEADFAST® Q with other products that contain the same active ingredients as STEADFAST® Q (nicosulfuron and rimsulfuron) unless the label of either tank mix partner specifies the maximum rate that may be used.

# PRECAUTIONS

Thoroughly clean application equipment immediately after use (See Sprayer Cleanup section of this label).

Prevent drift or spray onto desirable plants.

For all application systems, use 50-mesh or larger strainer screens.

# WEED RESISTANCE MANAGEMENT

STEADFAST® Q which contains the active ingredients nicosulfuron and rimsulfuron is a Group 2 herbicide based on the mode of action classification system of the Weed Science Society of America.

Proactively implementing diversified weed control strategies to minimize selection for weed populations resistant to one or more herbicides is a best practice. A diversified weed management program may include the use of multiple herbicides with different sites of action and overlapping weed spectrum with or without tillage operations and/or other cultural practices. Research has demonstrated that using the labeled rate and directions for use is important to delay the selection for resistance.

The continued effectiveness of this product depends on the successful implementation of a weed resistance management program.

To aid in the prevention of developing weeds resistant to this product, users should:

- Scout fields before application to ensure herbicides and rates will be appropriate for the weed species and weed sizes present.
- Start with a clean field, using either a burndown herbicide application or tillage.
- Control weeds early when they are relatively small (less than 4 inches).
- Apply full rates of this product for the most difficult to control weed in the field at the specified time (correct weed size) to minimize weed escapes.

- Scout fields after application to detect weed escapes or shifts in control of weed species.
- Control weed escapes before they reproduce by seed or proliferate vegetatively.
- Report any incidence of non-performance of this product against a particular weed to your DuPont representative, local retailer, or county extension agent.
- Contact your DuPont representative, crop advisor, or extension agent to find out if suspected resistant weeds to these MOAs have been found in your region. **DO NOT** assume that each listed weed is being controlled by multiple sites of action. Products with multiple active ingredients are intended to broaden the spectrum of weeds that are controlled. Some weeds may be controlled by only one of the active ingredient in this product.
- If resistance is suspected, treat weed escapes with an herbicide having a site of action other than Group 2 and/or use nonchemical methods to remove escapes, as practical, with the goal of preventing further seed production.
- Suspected herbicide-resistant weeds may be identified by these indicators:
- Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
- A spreading patch of non-controlled plants of a particular weed species; and
- Surviving plants mixed with controlled individuals of the same species.

Additionally, users should follow as many of the following herbicide resistance management practices as is practical:

- Use a broad spectrum soil-applied herbicide with other sites of action as a foundation in a weed control program.
- Utilize sequential applications of herbicides with alternative sites of action.
- Rotate the use of this product with non-Group 2 herbicides.
- Avoid making more than two applications of this product and any other Group 2 herbicides within a single growing season unless mixed with an herbicide with a different site of action with an overlapping spectrum for the difficult-to-control weeds.
- Incorporate non-chemical weed control practices, such as mechanical cultivation, crop rotation, cover crops and weed-free crop seeds, as part of an integrated weed control program.
- Use good agronomic principles that enhance crop development and crop competitiveness.
- Thoroughly clean plant residues from equipment before leaving fields suspected to contain resistant weeds.
- Manage weeds in and around fields, during and after harvest to reduce weed seed production.

# 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.

# MANDATORY SPRAY DRIFT MANAGEMENT

#### Aerial Applications:

- **DO NOT** release spray at a height greater than 10 feet above the vegetative canopy, unless a greater application height is necessary for pilot safety.
- For applications prior to the emergence of crops and target weeds, applicators are required to use a Coarse or coarser droplet size (ASABE S572.1).
- For all other applications, applicators are required to use a Medium or coarser droplet size (ASABE S572.1).

- The boom length must not exceed 65% of the wingspan for airplanes or 75% of the rotor blade diameter for helicopters.
- Applicators must use one-half swath displacement upwind at the downwind edge of the field.
- Nozzles must be oriented so the spray is directed toward the back of the aircraft.
- DO NOT apply when wind speeds exceed 10 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

#### **Ground Boom Applications:**

- Apply with the nozzle height recommended by the manufacturer, but no more than 3 feet above the ground or crop canopy unless making a turf, pasture, or rangeland application, in which case applicators may apply with a nozzle height no more than 4 feet above the ground.
- For applications prior to the emergence of crops and target weeds, applicators are required to use a Coarse or coarser droplet size (ASABE S572.1).
- For all other applications, applicators are required to use a Medium or coarser droplet size (ASABE S572.1).
- DO NOT apply when wind speeds exceed 10 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

#### SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

#### IMPORTANCE OF DROPLET SIZE

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

#### **Controlling Droplet Size – Ground Boom**

- **Volume** Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- **Pressure** Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- **Spray Nozzle** Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

#### **Controlling Droplet Size – Aircraft**

• **Adjust Nozzles** - Follow nozzle manufacturers recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

#### **BOOM HEIGHT – Ground Boom**

Use the lowest boom height that is compatible with the spray nozzles that will provide uniform coverage. For ground equipment, the boom should remain level with the crop and have minimal bounce.

#### **RELEASE HEIGHT - Aircraft**

Higher release heights increase the potential for spray drift. When applying aerially to crops, **DO NOT** release spray at a height greater than 10 feet above the crop canopy, unless a greater application height is necessary for pilot safety.

#### SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

#### TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

#### **TEMPERATURE INVERSIONS**

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or 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. Avoid applications during temperature inversions.

#### WIND

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.

• Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

#### WHEN TO APPLY

#### Timing to Crop

Apply STEADFAST® Q to corn that is up to 20 inches tall and exhibiting up to and including 6 leaf-collars. **DO NOT** apply to corn taller than 20 inches or exhibiting more than 6 leaf collars, whichever is more restrictive. Some State and corn hybrid restrictions apply (see below). Not all STEADFAST® Q tank mixtures may be applied to corn that is beyond 12" tall. Consult TANK MIX APPLICATIONS for more information.

While STEADFAST® Q has a wide application window, research has shown best results are obtained when applications are made early postemergence when corn and weeds are small. Target applications to corn that is less than 12" tall for best overall performance.

Apply STEADFAST® Q to field corn hybrids with a relative maturity (RM) rating of 77 days or more, including "food grade" (yellow dent, hard endosperm), waxy and oil corn. Not all field corn hybrids of less than 77 days RM, not all white corn hybrids nor Hi-Lysine hybrids have been tested for crop safety, nor does DuPont have access to all seed company data. Consequently, injury arising from the use of STEADFAST® Q on these types of corn is the responsibility of the user. Consult with your seed supplier before applying STEADFAST® Q to any of these corn types. Applications of STEADFAST® Q to corn hybrids of 77-88 CRM must be limited to corn that is 12" tall, less than or equal to 5-leaf collars, whichever is most restrictive. In addition, the application of tank mixtures with dicamba-containing herbicides to 77-88 CRM corn must contain no more than 2 ounces active ingredient per acre of dicamba. Seed company publications indicate "DO NOT use" notations for the use of some ALS herbicides on corn hybrids. As noted in the seed company publications, DuPont sulfonylurea herbicides such as STEADFAST® Q must not be used on these hybrids. Consult with your local DuPont representative for any additional information relative to potential corn hybrid sensitivity to STEADFAST® Q.

Limit STEADFAST® Q applications to corn that is up to 12" tall, up to and including 5 leaf collars, whichever is most restrictive, in the states of KS, OK and TX.

#### TIMING TO WEEDS

Apply STEADFAST® Q when grasses are young and actively growing, but before they exceed the sizes listed on this label.

- Applications made to weeds at growth stages greater than those listed below may result in incomplete control. Grass competition due to incomplete control may reduce yields.
- Adequate soil moisture is required for optimum activity. Rainfall within 5 to 7 days after application will enhance STEADFAST® Q residual activity.

If an activating rainfall or sprinkler irrigation (>0.5 inch) is not received within 5-7 days after application, follow with a cultivation or with a sequential application of ACCENT® Q herbicide, if needed. See CULTIVATION or SEQUENTIAL ACCENT® Q APPLICATIONS.

#### RATE

Apply STEADFAST® Q at a rate of 1.5 ounces per acre (0.024 lb Nicosulfuron + 0.011 lb Rimsulfuron) for year-long control of grass and broadleaf weeds listed below.

#### WEEDS CONTROLLED

Grasses	Height or Diameter at Application
Barnyardgrass	4"
Canarygrass	6"
Cereals, volunteer	2"
Crabgrass, large	1"
Cupgrass, woolly*	3"
Foxtails	
bristly	4"
giant	4"
green	4"
yellow	4"
Goosegrass	2"
Johnsongrass, seedling or rhizome	8 - 12"
Millet, wild proso	4"
Muhly, wirestem	4"*
Panicum, fall & Texas	4"
Quackgrass	8"*
Ryegrass, Italian	4"
Sandbur, field	2"
Shattercane	6"
Signalgrass, broadleaf	2"
Oats, wild	2"
Witchgrass	4"
*Cultivation or retreatment with ACCENT® Q may be requi	ired See "For Additional Control of Craborass and Later Emerging

\*Cultivation or retreatment with ACCENT® Q may be required. See "For Additional Control of Crabgrass and Later Emerging Grasses."

Broadleaf Weeds	Height or Diameter at Application
Control:	
Amaranth, powell	4"
Burcucumber	4"
Dandelion	8"
Jimsonweed	4"
Morningglory, annual	4"
Mustard, wild	4"
Pigweed, redroot & smooth	4"
Sunflower, common	4"
Suppression:	
Cocklebur, common	4"
Ladysthumb	4"
Lambsquarters, common	4"
Hemp dogbane	4"
Nutsedge, yellow	4"

Smartweed, PA	4"
Thistle, Canada	4"
Velvetleaf	4"
Waterhemp, tall & common	2"

As weeds mature, their sensitivity to STEADFAST® Q decreases. Grassy weeds growing under stress due to drought or other environmental factors may become mature (more than 3 tillers) before they reach the size listed, in which case their susceptibility to STEADFAST® Q may be reduced.

#### SPRAY ADJUVANTS

Applications of STEADFAST® Q must include either a crop oil concentrate, modified seed oil or a nonionic surfactant. In addition, an ammonium nitrogen fertilizer must be used unless specifically prohibited by tank mix partner labeling.

Crop oil concentrate/modified seed oil plus ammonium nitrogen fertilizer is the preferred adjuvant system for STEADFAST® Q.

Consult local DuPont fact sheets, technical bulletins, and service policies prior to using other adjuvant systems. If another herbicide is tank mixed with STEADFAST® Q, select adjuvants authorized for use with both products. Products must contain only EPA-exempt ingredients (40 CFR 1001).

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

- Apply at 1% v/v (1 gallon per 100 gallons spray solution) or 2% under arid conditions.
- MSO adjuvants may be used at 0.5% v/v (0.5 gallon per 100 gallons spray solution) if specifically noted on adjuvant product labeling.
- 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 quart per 100 gallons 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 quarts/acre of a high-quality urea ammonium nitrate (UAN), including 28%N or 32%N, or 2 pounds/acre of a spray-grade ammonium sulfate (AMS). Use 4 quarts/acre UAN or 4 pounds/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. Consult separate DuPont technical bulletins for detailed information before using adjuvant types not specified on this label.

# **MIXING INSTRUCTIONS**

- 1. Fill the tank 1/4 to 1/3 full of water.
- 2. While agitating, add the required amount of STEADFAST® Q.

- 3. Continue agitation until the STEADFAST® Q is fully dispersed, at least 5 minutes.
- 4. Once the STEADFAST® Q is fully dispersed, maintain agitation and continue filling tank with water. Thoroughly mix STEADFAST® Q with water before adding any other material.
- 5. As the tank is filling, add the required spray adjuvants (crop oil concentrate, nonionic surfactant, or ammonium nitrogen fertilizer).
- 6. If the mixture is not continuously agitated, settling will occur. If settling occurs, thoroughly re-agitate before using.
- 7. Apply STEADFAST® Q spray mixture within 24 hours of mixing to avoid product degradation.
- 8. If STEADFAST® Q and a tank mix partner are to be applied in multiple loads, pre-slurry the STEADFAST® Q in clean water prior to adding to the tank. This will prevent the tank mix partner from interfering with the dissolution of the STEADFAST® Q.

# SEQUENTIAL APPLICATIONS FOLLOWING PREEMERGENCE HERBICIDES

STEADFAST® Q may be used as a sequential application in a planned postemergence weed control program in corn following a preemergence herbicide including BASIS® Blend, Keystone® NXT, Keystone® LA NXT, CINCH® ATZ, INSTIGATE®, LEADOFF®, Resicore®, RESOLVE® Q, SureStart® II, Surpass® NXT and other pre-applied corn herbicides. Refer to the preemergence grass herbicide label for use restrictions, application information, rotational crop guidelines, and cautionary statements prior to applying STEADFAST® Q.

**DO NOT** apply STEADFAST® Q to corn that exhibits herbicide injury from previous applications made to the current or preceding crop.

# TANK MIX APPLICATIONS

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

#### For Additional Control of Broadleaf Weeds

STEADFAST® Q may be tank mixed with other herbicides below for additional control of broadleaf weeds unless that mixture is specifically prohibited by the STEADFAST Q label or tank-mix partner label. See the tank mix partner label for weeds controlled, necessary adjuvants, precautions, use restrictions and crop rotation information.

# ADDITIONAL INSTRUCTIONS AND/OR INSTRUCTIONS FOR SPECIFIC WEED PROBLEMS

#### Tank Mixtures with Atrazine

STEADFAST® Q may be tank mixed with 1/4 - 2 pounds ai atrazine\* for additional control of many broadleaf weeds, including:

# Weed height at applicationSicklepod1 - 2 inchesPrickly sida1 - 2 inchesWild Radish6 - 12 inchesCutleaf evening primrose4 - 6 inchesFlorida pusley1 - 2 inches

\*For best results add 0.25 - 2.0 quarts atrazine 4L OR 4 - 35 ounces atrazine 90DF. Products containing atrazine are restricted use products.

STEADFAST® Q + atrazine tank mix may result in reduced control of grasses (antagonism) if applied to grasses under low moisture stress or to grasses exceeding the maximum labeled height. Before applying STEADFAST® Q + atrazine tank mix, refer to the atrazine product label for information regarding the maximum amount of atrazine that may be applied in a year.

#### Tank Mixtures with Mesotrione

STEADFAST® Q may be tank mixed with 1.5 - 3.0 fluid ounces/acre of mesotrione herbicide (4 lb ai per gallon) to improve control of the weeds listed below. **DO NOT** use MSO adjuvants when tank mixing STEADFAST® Q with mesotrione. Use a petroleum-based crop oil concentration + an ammonium nitrogen fertilizer.

#### Weed Species

Cocklebur Dandelion Jimsonweed Kochia Lambsquarters, common Morningglory, annual Nightshade, black Nightshade, eastern black Pigweed, Palmer Pigweed, redroot Ragweed, common Raqweed, giant Smartweed, ladysthumb Smartweed, Pennsylvania Sunflower, common Velvetleaf Waterhemp

#### Tank Mixtures with Dicamba-based products

Tank mixture applications of STEADFAST® Q with herbicides containing dicamba, should be limited to corn that is up to 20" tall, up to and including 6 leaf collars.

#### STEADFAST® Q with Glyphosate

Glyphosate may be tank mixed with post emerge applications of STEADFAST® Q when made to glyphosate-resistant corn hybrids. Refer to the Spray Adjuvants section for additional information on proper adjuvant selection.

#### STEADFAST® Q with Glufosinate

STEADFAST® Q may be tank mixed with glufosinate herbicide if applications are made to glufosinateresistant corn hybrids. Consult with your seed supplier to confirm the corn hybrid is glufosinate-resistant before applying any herbicide containing glufosinate.

#### For Additional Control of Crabgrass and Later Emerging Grasses

STEADFAST® Q may be tank mixed with full or reduced rates of preemergence grass herbicides labeled for early postemergence application to field corn (including Keystone® NXT, CINCH® ATZ, Resicore®, SureStart® II and Surpass® NXT) for increased residual activity of later-emerging flushes of grasses such as smooth and large crabgrass. Application must be made before the crabgrass emerges and before other grass weeds on the STEADFAST® Q label exceed their labeled sizes.

#### For Additional Control of Broadleaf Weeds

STEADFAST® Q may be tank mixed with 0.5 to 0.75 fluid ounces per acre of topramezone (2.8 lb ai per gallon) plus atrazine at 0.375 to 1.5 pounds active per acre for improved burndown or residual control of several broadleaf weeds including waterhemp, common ragweed, common lambsquarters, and velvetleaf. When applying mixtures of STEADFAST® Q plus topramezone at 0.5 fluid ounces per acre, the use of methylated seed oil is advised. Refer to the topramezone product label for additional information regarding application timing, tank mixtures, adjuvants, and rotational crops.

The use of nonionic surfactant is advised in place of crop oil concentrate for tank mixtures with preemergence grass herbicides where applications are made early postemergence to small weeds.

When tank mixing STEADFAST® Q with EC formulated preemergence grass herbicides such as smetolachlor, **DO NOT** add mesotrione herbicide to the tank mixture. When other formulations of preemergence grass herbicides are tank mixed with STEADFAST® Q + mesotrione (CINCH® ATZ), limit preemergence herbicide rates to no more than 2/3 the preemergence rates. Always add nonionic surfactant in place of crop oil concentrate, and limit broadleaf weed sizes to less than or equal to 4" tall.

Tank mixes of STEADFAST® Q and preemergence grass and broadleaf herbicides must be applied postemergence to field corn before the crop exceeds the heights listed on the preemergence herbicide label. Refer to the preemergence herbicide label for complete postemergence application information, rates, and restrictions.

#### Tank mixtures with insecticides

STEADFAST® Q may be tank mixed with pyrethroid or carbamate insecticides including LANNATE® insecticide.

To avoid crop injury or antagonism, apply the products indicated below at least seven days before or three days after the application of STEADFAST® Q.

DO NOT tank mix STEADFAST® Q with bentazon or severe crop injury may occur.

**DO NOT** tank mix STEADFAST® Q with 2,4-D -containing products as severe grass control antagonism may occur.

**DO NOT** tank mix STEADFAST® Q with foliar-applied organophosphate insecticides including chlorpyrifos, malathion, etc., as severe crop injury may occur.

**DO NOT** tank mix STEADFAST® Q with other acetolactate synthase (ALS) inhibiting herbicides unless the mixture is specifically advised on STEADFAST® Q labels or fact sheets, as severe crop injury may occur.

Other than the exceptions noted, and in addition to the tank mix partners and rates indicated above, STEADFAST® Q may be tank mixed or followed with sequential applications of other products registered for use in field corn. STEADFAST® Q 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 STEADFAST® Q.
- The tank mixture 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.

#### **Tank Mixing Precautions:**

- Weed control and crop response with tank mixtures not specifically advised in this label are the responsibility of the user and manufacturer of the tank mix product.
- Read and follow all applicable use directions, precautions, and limitations specified on the respective product labels and fact sheets.
- A corn plant's predisposition to develop fused tissue emerging from the whorl (rattail) after the V11 stage may increase when a product containing dicamba is applied to small corn under early stressful conditions. Be aware of this when applying tank mixes with dicamba to small corn (V3 stage or smaller) under stressful conditions. See ENVIRONMENTAL CONDITIONS for a description of these stressful conditions.

# TANK MIX COMPATIBILITY TESTING

Perform a jar test prior to tank mixing to ensure compatibility of STEADFAST® Q 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 and the tank mix combination cannot be used.

# SEQUENTIAL APPLICATIONS WITH ACCENT® Q

Apply ACCENT® Q herbicide 14 or more days after STEADFAST® Q applications to control grasses that may emerge later in the year. Refer to the ACCENT® Q label for grass species controlled, proper size of weeds, rates, corn sizes, and other information. When following a STEADFAST® Q application, **DO NOT** use more than 1.1 ounces (0.037 lb ai/acre) of ACCENT® Q per acre.

A sequential application of ACCENT® Q will affect crop rotation intervals to certain sensitive crops, including sugarbeets. For maximum crop rotation flexibility, consult the CROP ROTATION section before applying ACCENT® Q to fields previously treated with STEADFAST® Q.

# CULTIVATION

A timely cultivation may be necessary to control suppressed weeds, or weeds that emerge after an application of STEADFAST® Q in the absence of an activating rainfall.

Optimum timing for cultivation is 7–14 days after STEADFAST® Q application or upon seeing the establishment of new weeds.

# ENVIRONMENTAL CONDITIONS AND BIOLOGICAL ACTIVITY

STEADFAST® Q provides best results when applied to young, actively growing weeds. Applications made during warm, moist conditions (70°F or more) and adequate soil moisture both before and after application maximizes performance.

The degree and duration of control depend on spray coverage, activating rainfall, weed spectrum, weed size, growing conditions before and after treatment, soil moisture, and adjuvant selection. Adequate soil moisture is required for optimum activity. Rainfall within 5-7 days will enhance STEADFAST® Q residual activity. A timely cultivation may be required for maximum weed control without an activating rain.

STEADFAST® Q is rainfast in 4 hours.

Treating weeds that exceed maximum label height or that are under stress may result in incomplete control. Poor weed control or crop injury may result from applications made to plants under stress from:

- abnormally hot or cold weather
- environmental conditions such as drought, water-saturated soils, hail damage, or frost
- disease, insect, or nematode injury
- prior herbicide, or carryover from a previous year's herbicide application

Severe stress from conditions immediately following application may also result in crop injury or poor weed control. Stress affects all weeds, but especially weeds such as woolly cupgrass, green and yellow foxtail, and wild proso millet.

If the corn or grass weeds are under stress, delay application until stress passes and both weeds and corn resume active growth.

Apply STEADFAST® Q when minimum nighttime temperatures are above 40°F and the maximum daytime temperatures are below 92°F to maximize performance and minimize the potential for crop injury.

Applications made during or immediately following periods of large day/night temperature fluctuations or where daytime temperatures **DO NOT** exceed 50°F may decrease weed control and increase the potential for crop injury.

STEADFAST® Q rapidly inhibits the growth of susceptible weeds, reducing weed competition within as little as 6 hours after application. Susceptible plants are controlled in 7–21 days.

Ground application of STEADFAST® Q to dry, dusty fields may reduce weed control in wheel track areas.

# SOIL INSECTICIDE INTERACTION INFORMATION

Before using STEADFAST® Q, ensure that it is compatible with any other insecticides previously applied to the corn crop.

STEADFAST® Q may interact with certain insecticides previously applied to the crop. Crop response varies with field corn type, insecticide used, insecticide application method, and soil type.

STEADFAST® Q may be applied to corn previously treated with chlorethoxyfox, chlorethoxyfos + bifenthrin, tebupirimphos + cyfluthrin, tefluthrin insecticides or non-organophosphate (OP) soil insecticides regardless of soil type.

**DO NOT** tank mix STEADFAST® Q with foliar-applied organophosphate insecticides including chlorpyrifos or malathion, as severe crop injury may occur. To avoid crop injury or antagonism, apply these products at least seven days before or 3 days after the application of STEADFAST® Q.

**DO NOT** apply STEADFAST® Q within 45 days of crop emergence where the organophosphate insecticide terbufos was applied since corn crop injury may occur. Applications made to corn previously treated with chlorpyrifos or other similar organophosphate insecticides may result in unacceptable crop injury. Any crop injury or yield loss resulting from these applications are the responsibility of the grower.

Applications of STEADFAST® Q to corn previously treated with terbufos, chlorpyrifos or phorate may cause unacceptable crop injury, especially on soils of less than 4% organic matter.

# **CROP ROTATION**

Rotational crops vary in their response to low concentrations of STEADFAST® Q remaining in the soil. STEADFAST® Q dissipates rapidly in warm, acidic, microbiologically active soils.

The amount of STEADFAST® Q which may be present in the soil depends on soil pH and organic matter content, elapsed time since application, crop production practices, and environmental factors.

Injury to rotational crops may occur in high-pH, cold soils if dry weather prevails between application and rotational crop planting.

For fields treated with sequential applications of STEADFAST® Q and ACCENT® Q herbicide, consult the crop rotation intervals listed on the ACCENT® Q and STEADFAST® Q labels. Use the most restrictive recrop interval from either label.

The following rotational intervals must be observed when using STEADFAST® Q:

#### STEADFAST® Q ROTATIONAL CROP GUIDELINE - 1

#### No soil pH restrictions

Interval in Months
Anytime
10
0.5 (15 days)
Anytime
8
4
10
10
10
10
10
10
10
10
10
See Rotational Crop Guideline 2

\* Except the sweet corn varieties "Merit", "Carnival", and "Sweet Success", for which the minimum time interval is 15 months.

\*\*Rotational intervals need to be extended to 18 months if drought conditions prevail after application and before the rotational crop is planted, unless sprinkler irrigation has been applied and totals greater than 15" during the growing season.

† On sprinkler irrigated fields in Idaho, Utah, and Northern Nevada it is best to use deep fall tillage such as plowing prior to planting alfalfa. Product degradation may be less on furrow irrigated soils and may result in some crop injury.

#### STEADFAST® Q ROTATIONAL CROP GUIDELINE - 2

			Rotational Interval i	n Months
Crop	Soil pH - < 6.5	6.5 - 7.5	> 7.5	
Sorghum	10	10	18*	
Sugarbeets***	10	18**	18	
All other crops	10	18	18	

#### **Crops With Soil pH Restrictions**

\* Except in Texas and Oklahoma east of Highway 281, where the rotational interval is 10 months, regardless of pH.

\*\* Except on irrigated sites in Colorado, Wyoming, Nebraska, Texas, or in Minnesota east and south of the Red River Valley, Michigan, and Ohio, where precipitation and/or irrigation following application must exceed 25" prior to planting beets, where the interval is 10 months on soils with pH < 7.5. In the States of Colorado, Wyoming, and Nebraska, temporary crop response, stunting and/or crop injury may occur if soil pH is > 7.5, or precipitation and/or irrigation following application is less than 25" prior to planting sugarbeets.

\*\*\*In North Dakota and northwest Minnesota, the cumulative precipitation and/or irrigation following in the 18 months following application must exceed 28" in order to rotate to sugarbeets.

# **APPLICATION INFORMATION**

#### **GROUND APPLICATION**

#### **Broadcast Application**

Use a minimum of 15 gallons of water per acre (GPA) to ensure thorough coverage of the weeds and the best performance. Use a minimum of 10 GPA for light, scattered stands of weeds

Ensure that equipment is set up to avoid applying an excessive rate directly over the rows and into the corn plant whorl. Overlaps or starting, stopping, slowing, and turning while spraying may result in crop injury.

#### **Band Application**

For band applications, use proportionately less spray mixture. To avoid crop injury, carefully calibrate the band applicator to not exceed the labeled rate. Carefully follow the manufacturer's instructions for nozzle type (flat fans), orientation, distance of nozzles from the crop and weeds, spray volumes, calibration and spray pressure.

#### AERIAL APPLICATION

Aerial application is not permitted in New York State or California.

Use nozzle types and arrangements that will provide optimum spray distribution and maximum coverage at a minimum of 5 GPA.

# SPRAYER PREPARATION/CLEANUP

It is important that spray equipment is clean and free of previous pesticide deposits before using STEADFAST® Q and then properly cleaned out following application. Clean all application equipment before applying STEADFAST® Q. 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 STEADFAST® Q, thoroughly clean all mixing and spray equipment to avoid subsequent crop injury.

#### Note:

- When cleaning spray equipment before applying STEADFAST® Q, 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 STEADFAST® Q, 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 the 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 may be used.

USEPA REGISTERED PRODUCTS MENTIONED IN THIS LABEL FOR USE IN TANK MIXTURES OR OTHER REASONS				
PRODUCT BRAND NAME	ACTIVE INGREDIENT(S)	EPA REGISTRATION NUMBER		
Accent® Q	nicosulfuron	352-773		
Cinch® ATZ	S-metolachlor + atrazine	352-625		
Instigate®	mesotrione + rimsulfuron	352-873		
Keystone® NXT	acetochlor + atrazine	62719-671		
Keystone® LA NXT	acetochlor + atrazine	62719-670		
Lannate®	methomyl	352-389		
LEADOFF®	rimsulfuron + thifensulfuron methyl	352-853		
Resicore®	acetochlor + mesotrione + clopyralid	62719-693		
Resolve® Q	rimsulfuron + thifensulfuron methyl	352-777		
SureStart® II	acetochlor + clopyralid + flumetsulam	62719-679		
Surpass® NXT	acetochlor	62719-672		

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# LIMITATION OF WARRANTY AND LIABILITY

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