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Technical Bulletin

DuPont™ Revolin™ Q herbicide

DuPont™ Revolin™ Q herbicide is a developmental product for which an application has been filed with the EPA. This developmental product is not registered for use and sale in the United States, and no sale, offer for sale or use of this product may be made unless and until all necessary federal and state registrations have been obtained.

General information

DuPont™ Revolin™ Q herbicide is being tested as a dry, blended, single-product offering for postemergence application to various corns, including field corn grown for grain, silage or seed; yellow popcorn; and sweet corn. Revolin™ Q contains two active ingredients, nicosulfuron and mesotrione, from two different chemical mode-of-action groups, 2 and 27.

Nicosulfuron and mesotrione are currently registered and used in U.S. corn production. Both deliver contact and residual control of a broad spectrum of grass and broadleaf weeds in corn. In addition to these two active ingredients, Revolin™ Q also contains a crop safener. Testing will confirm if postemergence applications can be made across more hybrids and across diverse weather environments with greater crop safety to all corns.

Additionally, testing will determine how Revolin™ Q should be included as part of a planned specialty corn herbicide program, following a before-planting application of products such as DuPont™ Alluvex™, Basis® Blend, Breakfree® NXT brand herbicides, Cinch® brand herbicides, Instigate®, LeadOff®, Prequel®, Resolve® Q herbicides and/or other preapplied corn herbicides.

Biological activity

Testing has shown that Revolin™ Q is absorbed through the roots and leaf tissue of plants, rapidly inhibiting the growth of susceptible weeds. Rainfall or sprinkler irrigation is needed to move Revolin™ Q into the soil. Susceptible weeds will generally not emerge after a postemergence application with activating rainfall or sprinkler irrigation (>0.5 inch). In some cases, susceptible weeds may germinate and emerge

Rotational crop guidelines to key crops*	
Rotational crop	Interval (months)
Corn (field or seed)	anytime
Cereals (winter)	4
Cereals (spring)	8
Alfalfa	10
Corn (popcorn, sweet)	10
Alfalfa, barley, canola, lentils	10
Soybeans	10

* Additional crops were studied.

a few days after application, but growth then ceases and leaves become chlorotic three to five days after emergence. Some species will experience death of leaf tissue and growing point, while others will remain green, stunted and noncompetitive.

Revolin™ Q is being tested to deliver:

- Consistent control of the toughest weeds in corn production (especially seed, sweet and popcorn), including foxtails, fall panicum, crabgrass, lambsquarters, pigweeds, ragweeds, and many other grass and broadleaf weeds. (See the weed control chart on the reverse side for a current list of known controlled and suppressed weeds and specific application rates/directions used in field trials.)
- Additional weed control when tank mixed with appropriate labeled corn herbicides, such as (but not limited to) atrazine, metolachlor-containing products (such as Cinch® brands), acetochlor-containing products (such as Breakfree® NXT brands), additional HPPD products (such as Impact), or auxin products (such as Clarity).
- Effective weed control when tank mixed with appropriate adjuvants.

DuPont™ Revolin™ Q herbicide		
Biological attributes	Active ingredients	Performance measures
Contact and residual control	Nicosulfuron Mesotrione	Consistent control of the toughest weeds in corn production (especially seed, sweet and popcorn), including foxtails, fall panicum, crabgrass, lambsquarters, pigweeds, ragweeds, and many other grass and broadleaf weeds.

Studies have demonstrated weed control/suppression with postemergence applications of DuPont™ Revulin™ Q (partial list)

Common name	3.4 oz/A weeds <4 inches tall	3.4 oz/A + atrazine weeds <5 inches tall	4.0 oz/A + atrazine weeds <5 inches tall	4.0 oz/A + atrazine weeds 5–10 inches tall
Amaranth, Palmer*	PC ³	C ^{2,3}	C	C
Barnyardgrass	C	C	C	PC
Burcucumber	C ¹	C	C	C
Chickweed, common	C	C	C	C
Cocklebur, common	C	C	C	C
Crabgrass, large	C ¹	C ¹	C ¹	PC
Dandelion	C ⁵	C ⁵	C ⁵	C ⁵
Foxtails (bristly, giant, green, yellow)	C	C ⁴	C ⁴	PC
Horse nettle	C	C	C	C
Johnsongrass, seedling	C ⁷	C ⁷	C ⁷	C ⁷
Johnsongrass, rhizome	C ⁸	C ⁸	C ⁸	C ⁸
Kochia*	C ¹	C ¹	C ²	PC
Lambsquarters, common	C	C	C	C
Morningglogy (entireleaf, ivyleaf, pitted)	C ¹	C ¹	C	PC
Nightshade, eastern black	C	C	C	C
Panicum, fall	C	C ⁴	C ⁴	PC
Pigweed (redroot, smooth, tumble)	C	C	C	C
Quackgrass	C ⁶	C ⁶	C ⁶	C ⁶
Ragweed, common	C ³	C ³	C	C
Ragweed, giant	C ³	C ³	C	C
Ryegrass* (Italian, perennial)	C ⁵	C ⁵	C ⁵	C ⁵
Sandbur, field; longspine	C ³	C ³	C ³	PC
Shattercane	C ⁷	C ⁷	C ⁷	C ⁷
Smartweed (ladysthumb, pale Pennsylvania)	C	C	C	C
Velvetleaf	C	C	C	C
Waterhemp*	PC ³	C ^{2,3}	C	C
Woolly cupgrass	C	C ⁴	C ⁴	PC

¹ Apply before weed exceeds 2 inches in height

² For control, add atrazine at 1 pt (0.5 lb) per acre

³ Apply before weed exceeds 3 inches in height

⁴ Apply before weed exceeds 4 inches in height

⁵ Apply before weed exceeds 6 inches in height

⁶ Apply before weed exceeds 10 inches in height

⁷ Apply before weed exceeds 12 inches in height

⁸ Apply before weed exceeds 18 inches in height

* ALS-resistant biotypes are known to exist

C = Control PC = Partial Control

Application rate

Revulin™ Q was tested at a rate range of 3.4–4.0 ounces per acre.

Application window

Revulin™ Q was applied postemergence to field corn grown for grain, silage or seed; yellow popcorn; and sweet corn.

Tank-mix partners

- Studies indicate Revulin™ Q can be tank mixed with a variety of herbicides labeled for postemergence application in specialty and field corn to improve contact and residual control of grass and broadleaf weeds.
- Adjuvants are recommended. Study results indicate that an application of Revulin™ Q must contain an appropriate adjuvant labeled for in-crop postemergence use to control emerged weeds.

- For additional residual control of grasses and broadleaf weeds, studies have shown Revulin™ Q may be tank mixed with appropriate rates of herbicides registered for the corn crop being treated.

Formulation

Revulin™ Q is a water-soluble granule formulation that is mixed in water and applied as a spray solution.

For more information

Contact your local DuPont representative to learn more about Revulin™ Q herbicide from DuPont.



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