

DuPont™ Telar® XP

herbicide

Invasive Weed Management

DuPont™ Telar® XP herbicide helps to reduce undesirable weed populations. It delivers strong foliar activity and lasting residual control of many undesirable weeds without harming most desirable grass species. This aids the implementation of integrated weed management plans at the treatment site to promote the growth of desirable plants.

Benefits of using Telar® XP

- Minimal potential for accumulation in ground-water when used according to label directions.
- Studies indicate that Telar® XP is very low in toxicity to mammals, birds, fish and insects when used in accordance with the label.
- Telar® XP is odorless and non-volatile at high temperatures.

What to expect from Telar® XP

During controlled aerobic soil metabolism studies, the half-life of chlorsulfuron, the active ingredient in Telar® XP, averaged 45 days. Therefore, Telar® XP can provide greater residual activity to control germinating weed seedlings throughout the season and into next spring. Additionally, in research trials, fall applications have demonstrated improved performance on tough-to-control weeds such as dalmatian toadflax.

Following application, Telar® XP is rapidly translocated into the foliage and roots of growing plants and begins to inhibit amino acid synthesis. The plant halts its upward growth and also stops feeding. Symptoms of leaf yellowing begin to appear approximately 1 to 3 weeks after treatment. The full effect of the treatment is evident in the spring.



Performance Assurance Solution

Performance Assurance Solution (PAS) assures customers that they will receive the quality and benefits they expect from DuPont products. Product performance, of course, is conditioned on our products being used in accordance with all label directions, and applications must be made in accordance with the PAS recommendations. DuPont will respond promptly to all performance inquiries. If retreatment is necessary, DuPont will pay for the actual and reasonable cost of the retreatment program so that your performance expectation is met during the spray season. An official PAS offer can be obtained from your DuPont representative or one of your authorized service centers.

Application information

Environmental impact

DuPont™ Telar® XP is a member of the DuPont family of sulfonyleurea (SU) herbicides which are characterized by very low use rates — typically ¼ to 2 ounces of formulated product per acre. Compared to higher use-rate products, the use of Telar® XP and other SUs helps decrease the overall chemical load on the environment. Additionally, SUs control weeds by blocking an enzyme that plants use to produce several branch-chained amino acids. This plant enzyme is not present in humans, other mammals, birds, aquatic life or insects.

Applications near water and wetlands

All herbicides are regulated by the EPA. If a herbicide has an aquatic label, it may be used as specified in or around water. The EPA requires limited usage of other herbicides, including Telar® XP, as follows: *Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high-water mark.* Consult the product label, 2(ee) and/or supplemental labels for detailed information.

Surfactants

The use of a surfactant is required to obtain the maximum

performance from Telar® XP. However, the use of certain surfactants may lead to non-performance, product degradation or grass injury. The use of oils, including methylated or ethylated oils, may reduce grass tolerance. Temporary yellowing also may occur. It is best to utilize proven surfactants. A quality surfactant will provide enhanced spreading and coverage of the herbicide with no antagonism to the active ingredient.

Additionally, the surfactant will not disrupt the active transport of the SU within the plant, thereby allowing the herbicide to penetrate into the leaves and shoots of plants. Always include a quality non-ionic surfactant when making postemergence applications of Telar® XP (except when used on turf). Apply at a minimum rate (concentration) of 0.25 percent v/v (1 quart per 100 gallons of spray solution) or at the manufacturer's recommended rate based on spray area. Use only EPA-approved surfactants containing at least 80 percent active ingredient.

Tank mix

Combination with other herbicides broadens the spectrum of weeds controlled. Telar® XP may be applied with the recommended rates of other herbicides registered for this use. For application method and other use specifications, use the most-restrictive directions on any of the tank-mix product labels.

Window of application

Apply Telar® XP as a preemergent or early postemergent spray when weeds are actively germinating or growing. Best timing for some tough-to-control perennial weeds is at bud to bloom or fall rosette stage of growth.

Spray mixtures

Use a sufficient amount of water to ensure thorough coverage — 20 gallons per acre (GPA) is recommended for best results when applied using ground equipment. For aerial application, 5 to 10 GPA is recommended.

Refer to the Federal Telar® XP label and applicable supplemental labeling for aerial and ground application directions.

Spray solutions

Use the spray solution of Telar® XP within 24 hours to avoid product degradation. Under spray solution conditions of low pH (5 to 6) and high temperatures (above 80° F), the product may degrade more quickly. If the spray preparation is left standing, agitate it before using.

Activity on insects

Studies indicate that Telar® XP has no known insecticidal activity.

Minimal impact on wildlife

The effects on animals are rigorously evaluated as part of the EPA's registration process.

Margin of safety (MOS) — cold-water fish

Product (average rate)	Trout LC ₅₀ (PPM)	Direct concentration (PPM)	Direct MOS	5% Runoff (PPM)	5% Runoff MOS
DuPont™ Escort® XP (1 oz)	>150	0.0138	10,880	0.00069	217,600
DuPont™ Oust® XP (4 oz)	>148	0.0689	2,147	0.00345	42,940
Telar® XP (2 oz)	>122	0.0345	7,253	0.00172	145,067

Active ingredient in one foot of water. Actual MOS is **greater than** indicated. Genus Oncorhynchus (trout). MOS = LC₅₀/Direct or Runoff Concentration.

Source: 2002 WSSA Herbicide Handbook

No-observed-effect levels (NOELs) must be determined in various test systems for each new product.

The EPA considers exposure assessments to be acceptable when the registered herbicide provides adequate margins of safety between the NOEL and the expected human and wildlife exposures.

The toxicity of DuPont™ Telar® XP was evaluated and assessed in the course of the registration process. Concentrations encountered under normal, labeled use conditions are considered not to pose undue risks to humans or wildlife. Residues found on grass and leaves begin to breakdown immediately after spraying, dissipating by hydrolysis or microbial breakdown. Therefore, the potential for adverse effects on wildlife following incidental exposure is minimal.

Grass replant intervals

Following an application of Telar® XP, the treated sites may be replanted with various species of grasses at minimum recommended intervals.

The recommended intervals are for applications made in spring to early summer. Because Telar® XP degradation is slowed by cold or frozen soils, intervals for applications made in late summer to early fall should be considered as beginning in the spring following treatment.

Testing has indicated that there is considerable variation in response among species of grasses when seeded into areas treated with Telar® XP. If species other than those listed on the label are to be planted into areas treated with Telar® XP, a field bioassay should be performed, or previous experience may be used, to determine the feasibility of replanting treated sites.

Grass replant intervals for soils of pH 7.5 or less		
Species	Telar® XP rate (oz/A)	Replant interval (months)
Brome, meadow	½-1	1
	1-2	2
Brome, smooth	½-1	2
	1-2	4
Fescue, alta/tall	½-1	2-3
	1-2	3-5
Fescue, sheep	½-1	2
	1-2	4
Foxtail, meadow	½-1	3-4
	1-2	4-6
Needlegrass, green	½-2	1
Orchardgrass	½	2
	1-2	3
Switchgrass	½-2	3
Timothy	½	2
	1	4
	2	6
Wheatgrass, western	½	1
	1	2
	2	4
Wildrye, Russian	½-2	1
For soils with a pH of 7.5 and greater, observe the following minimum replant intervals		
Bluestem, big	½	3
Brome, mountain	½	1
	1	2
	2	>3
Gamma, blue	½	1
	1	2
	2	>3
Gamma, sideoats	1-2	>3
Sacaton, alkali	½	1
	1	3
	2	>3
Switchgrass	1-2	>3
Wheatgrass, thickspike	½-2	1
Wheatgrass, western	½	1
	1	2
	2	4

Grass tolerance

Grasses vary in their tolerance to Telar® XP by species. Many species are tolerant to Telar® XP when applied at rates specified on the label. Consult the label for the appropriate use rate for specific grass species.

Grazing and haying

The EPA approved Telar® XP for weed control in pasture, range and CRP lands. There are no grazing or hay harvest restrictions for any livestock, including lactating animals, when Telar® XP is applied at up to 1½ ounces per acre. No enclosure of any animals is required.

Recommended rates: DuPont™ Telar® XP

This table includes the rates recommended to achieve the greatest amount of control on the target species. Always include a surfactant per the Telar® XP label. For best results, use with a minimum of 25 gallons of water per acre uniformly over the target pest.

Key weeds controlled	Rate/A	Control comments
Bedstraw*	1 oz	
Buttercup	1 oz	
Carrot, wild	1 oz	
Cinquefoil, common	1.3 oz	
Clover: red, white	1 oz	Except California for red clover
Dock, curly	1-3 oz	
Dyer's woad	1-3 oz	
Equisetum species	2 oz	For best results, apply in the spring before plants bolt to 6 inches in height
Foxtail (Setaria spp)*	1 oz	
Garlic, wild	1 oz	
Halogeton	0.5-1 oz	
Hemlock, poison	1 oz	
Houndstongue, common	1-3 oz	
Knapweed, Russian	1.3 oz	Apply at the bud-bloom or fall rosette stage. Fall rosette is preferred.
Mallow, common	1 oz	
Marestail/horseweed	1 oz	
Mullein, common	1 oz	For best results, use a silicone surfactant to help achieve full coverage
Mustard: treacle, tumble, wild	0.50 oz	Except California for treacle mustard
Pepperweed, perennial	1 oz	Can be applied anytime to actively growing plants
Pigweed, redroot	0.25-0.50 oz	
Puncturevine	1.5 oz	Apply in the spring, in selective grass areas
Ragwort, tansy	1-3 oz	
Sickleweed	1-3 oz	
Sicklepod	0.5-1 oz	
Starthistle, yellow	0.50 oz Telar® XP + 5 oz clopyralid	Tank mix of Telar® XP and clopyralid
Sunflower, common	0.50-1 oz	
Tansy, common	1 oz	Can be applied anytime to actively growing plants
Teasel, common	1 oz	
Thistle, Canada	1.3 oz	Prebloom to bloom, and fall rosette are recommended timings
Thistle: bull, musk, Scotch	1 oz	
Toadflax, dalmatian	2-3 oz	For best results, apply the product at the bud-bloom or fall rosette stage.
Toadflax, yellow	1.5-2 oz	Fall rosette is preferred. Ensure full coverage spray.
Whitetop (hoary cress)	1 oz	Prebloom to bloom and fall rosette
Woad, dyer's	1 oz	

* Partial control only.

Refer to the Telar® XP herbicide label for application rate ranges. When applied at the lower rates, Telar® XP provides short-term control of weeds listed; when applied at the higher rates, weed control is increased.

Tordon 22K is a restricted-use pesticide.

This reference guide is not intended as a substitute for the product label for the product(s) referenced herein. Product labels for the above product(s) contain important precautions, directions for use and product warranty and liability limitations that must be read before using the product. Applicators must be in possession of the product label(s) at the time of application. Always read and follow all label directions and precautions for use when using any pesticide alone or in tank mix combinations.

The DuPont Oval Logo, DuPont™, The miracles of science™, Escort®, Oust® and Telar® are trademarks or registered trademarks of DuPont or its affiliates.

Milestone and Tordon 22K are trademarks of Dow AgroSciences, LLC.

Copyright © 2005-2009 E.I. du Pont de Nemours and Company. All Rights Reserved. 9/09
Reorder No.: K-15116 (Replaces K-14671)

Problem knapweed recommendations

Telar® XP (1 ounce per acre) + aminopyralid¹ (7 fluid ounces per acre)

- Controls targeted weeds plus spotted and diffuse knapweeds, and yellow starthistle.
- Is an excellent combination for sensitive site areas.

Telar® XP (1 ounce per acre) + picloram² (1 pint per acre)

- Controls targeted weeds, including spotted and diffuse knapweed.
- Delivers outstanding broad-spectrum, residual weed control.

¹ Such as Milestone

² Such as Tordon 22k

For more information

Contact your Service Center or DuPont representative to learn more about Telar® XP herbicide for invasive weed management. And visit us on the Web at telar.dupont.com.



The miracles of science™