

Using Atrazine and Protecting Water Quality

A Guide for Corn/Sorghum Producers and Sugarcane Growers

More than 40 agricultural herbicide products contain atrazine. Introduced more than 45 years ago, atrazine continues to provide effective, economical weed control for producers of corn, sorghum and many other crops.

This Best Management Practices guide provides water quality protection information specific to the use of agricultural herbicides containing atrazine. This guide highlights many of the key water quality protection requirements provided on the label. These requirements apply to all products which contain atrazine. See the back of this brochure for a listing of many of the prepackaged products which contain atrazine as one of the primary active ingredients.

State/Local Requirements

Where any state/local atrazine use requirements (including lower maximum rates and/or greater setback distances) differ from the label, you must follow the more restrictive/protective requirements. Some states may limit application rates within specific geographical areas. Consult your lead pesticide control agency for more information. It is a violation of the atrazine label to deviate from state use regulations.

Atrazine Watershed Information Center (AWIC)

AWIC is a tool designed to provide information on specific watershed areas identified by EPA that are subject to atrazine prohibition. All labels for products containing atrazine require the AWIC to be consulted prior to atrazine use.

Phone: 866-365-3014 (Toll-free)

Website: www.atrazine-watershed.info

All herbicides containing atrazine carry directions to help you protect ground and surface water.

Application Rates (Corn and Sorghum)

Note: The total amount of atrazine applied may not exceed 2.0 pounds of active ingredient (a.i.) in a single pre- or post-emerge application or 2.5 pounds (pre- and post-emergence combined) of active ingredient per acre per calendar year.

Soil Application Prior to Crop Emergence

On Highly Erodible Soils (as defined by the USDA, Natural Resources Conservation Service)

- Apply a maximum of 2.0 pounds of atrazine a.i. per acre as a broadcast spray on fields where 30 percent or more of the soil is covered with plant residue at planting;
- or*
- Apply a maximum of 1.6 pounds of atrazine a.i. per acre on fields where less than 30 percent of the soil is covered with plant residue at planting.

On Soils Not Highly Erodible

- Apply a maximum of 2.0 pounds of atrazine a.i. per acre to all soils that are not highly erodible.

Post-emergence Applications

- If no atrazine was applied prior to crop emergence, use a maximum post-emergence rate of 2.0 pounds of atrazine a.i. per acre.
- If a pre-emergence application was made in the same calendar year, the combined pre- and post-emergence applications may not exceed 2.5 pounds of atrazine a.i. per acre.

Maximum Rates* Per Acre Allowed For Syngenta Herbicide Products Containing Atrazine

Product	Pre-emergence on Soils Not Highly Erodible	Pre-emergence on Highly Erodible Soils and Crop Residue of:		Total Rate Per Year Pre + Post
		At least 30%	Less than 30%	
Corn and Sorghum				
AAtrex® 4L	2.0 qts./A	2.0 qts./A	1.6 qts./A	2.5 qts./A
AAtrex® Nine-O®	2.2 lbs./A	2.2 lbs./A	1.8 lbs./A	2.8 lbs./A
Bicep II MAGNUM®	2.6 qts./A	2.6 qts./A	2.1 qts./A	3.2 qts./A
Bicep Lite II MAGNUM®				
Corn	2.2 qts./A	2.2 qts./A	2.2 qts./A	2.2 qts./A
Sorghum	1.9 qts./A	1.9 qts./A	1.9 qts./A	1.9 qts./A
Corn Only				
Expert®	3.75 qts./A	3.75 qts./A	3.0 qts./A	3.75 qts./A
LUMAX®	3.0 qts./A	3.0 qts./A	3.0 qts./A	3.0 qts./A
Lexar™	3.5 qts./A	3.5 qts./A	3.5 qts./A	3.5 qts./A
Sugarcane				
AAtrex 4L (All Soils)	4.0 qts./A			10.0 qts./A
AAtrex Nine-O (All Soils)	4.4 lbs./A			11.0 lbs./A

*Consult label for specific rates.

The following guidelines show you how to comply with label directions and protect the quality of water resources on and around your farm.

This requirement applies to:

- Drinking water wells
- Ag drainage wells
- Irrigation wells
- Sinkholes: surface depressions that permit direct runoff of surface water into ground water. Typically, sinkholes are found in karst (primarily limestone) regions.
- Livestock water wells
- Abandoned wells

Wells

Do not apply atrazine within 50 feet of any well, including drinking water wells, irrigation wells, agricultural drainage wells, livestock water wells and abandoned wells.

Do not conduct atrazine mixing, filling, washing or rinsing operations within 50 feet of any well, unless your containers and sprayer are on an impervious pad. Refer to AAtrex® label for details on pad construction.

Sinkholes

The 50-foot mixing/loading setback and application buffer also apply to sinkholes.

Streams and Rivers

Do not mix or load atrazine within 50 feet of any stream or river. Do not apply atrazine within 66 feet of any point where field surface water runoff enters a stream or river.

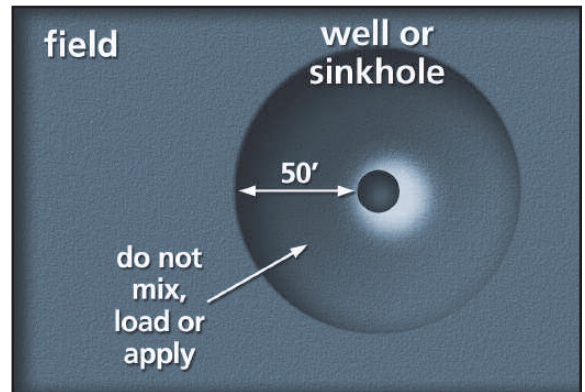
Do not apply atrazine within 66 feet from the stream edge if the field is “highly erodible” (based on NRCS guidelines) and plant the 66-foot buffer to your crop or another suitable crop, or seed with grass. If the field is not highly erodible, seeding of the 66-foot buffer is optional.

This water protection measure applies to both perennial and intermittent streams.

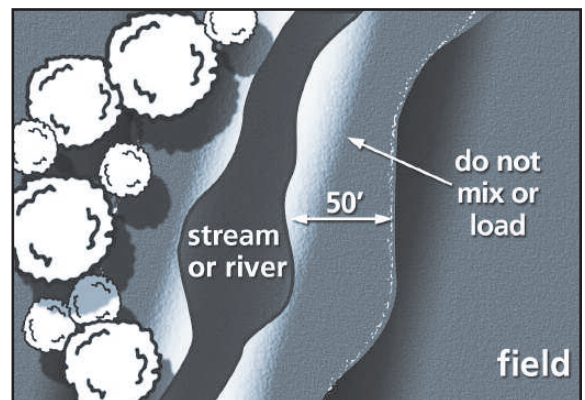
The EPA accepts this U.S. Geological Survey (USGS) definition of intermittent and perennial streams: “A stream is a body of water flowing in a natural surface channel. Streams which flow only during wet periods are termed intermittent streams.” USGS and USDA NRCS maps may be used as reference. However, if an intermittent stream fits the USGS definition, or is commonly known as an intermittent stream, the 66-foot application buffer applies to only the points where surface water runoff leaves the field and enters the stream, even if the stream does not appear on a USGS or NRCS map.

Establish a 66-foot application buffer from any point where field surface water runoff enters a stream or river.

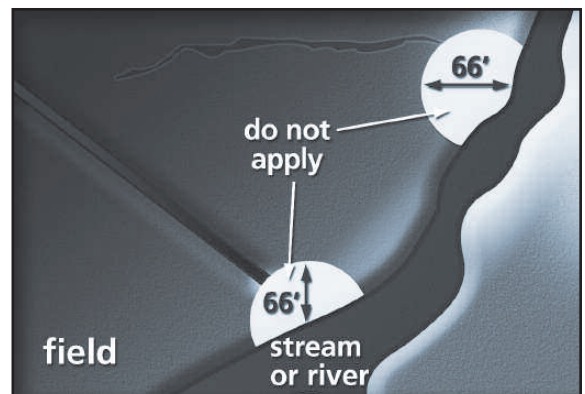
Do not mix, load or apply atrazine within 50 feet of any well or sinkhole.



Do not mix or load atrazine within 50 feet of any stream or river.



Do not apply atrazine within a 66-foot arc measured from any point where field surface water runoff enters a stream or river.



Man-made Ditches and Grass Waterways

Man-made ditches and grass waterways are excluded from setbacks and buffers, except in cases where they fall within other specific setbacks or buffers required by the label. However, you should follow NRCS guidelines and Best Management Practices for constructing and maintaining agricultural drainage ditches.

Standpipes

Do not apply atrazine within 66 feet of any standpipe in a terraced field if the tile outlet is within 66 feet of a point where surface water runoff from the field through the outlet enters a stream or river.

However, you may apply atrazine to an entire terraced field with tile outlets if you immediately incorporate the herbicide to a depth of two to three inches. Also, you may apply atrazine to an entire terraced field with tile outlets if you use no-till and high crop residue management practices (i.e., remove little or no crop residue).

Lakes and Reservoirs

Do not mix or load atrazine within 50 feet of any natural or impounded lake or reservoir.

Do not apply atrazine within 200 feet of a natural or impounded lake or reservoir.

Farm Ponds

Farm ponds are excluded from atrazine setback/buffer regulations if they meet all the following requirements:

- 1) The pond is located entirely on the farmer's property;
- 2) It is not used for human drinking water; *and*
- 3) Its discharge is not directly conveyed to a stream or river through a clearly traceable, concentrated water course.

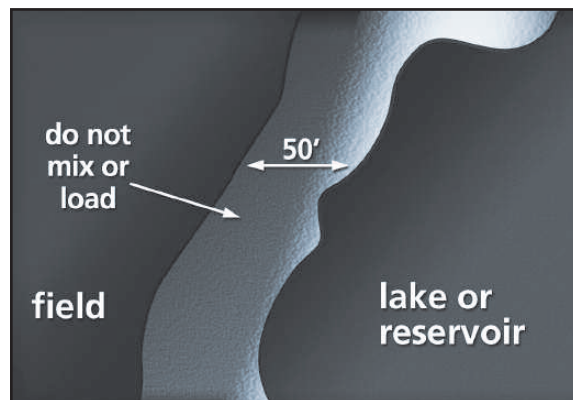
Field Evaluation

Evaluate your farm, field by field, to determine which fields are highly erodible. Also, identify wells, sinkholes and points where field surface water runs off into streams, rivers, lakes or reservoirs.

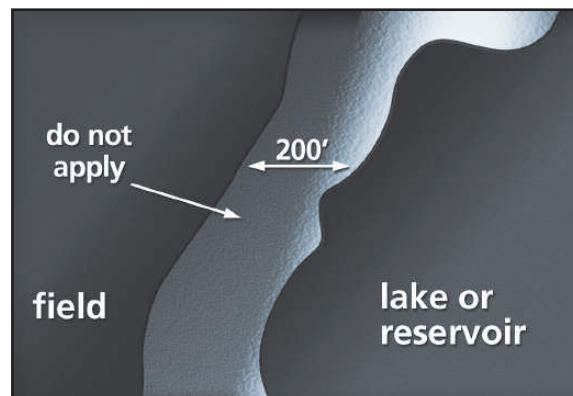
Work with your dealer/applicator and evaluate your fields before planting season. You also may obtain help from the USDA, NRCS or the Cooperative Extension Service.

If your farm is in a recharge or wellhead protection area, or within a setback for a public drinking water supply, additional environmental safeguards may be needed. Your local water utility, state water protection agency or state lead pesticide agency may direct safeguards in addition to those required by the atrazine label.

Do not mix or load atrazine within 50 feet of a lake or reservoir.



Do not apply atrazine within 200 feet of any lake or reservoir.



Many agricultural herbicide pre-pack products containing atrazine are listed below. Maximum rates for Syngenta products containing atrazine appear in the table on the front of this guide. For rates of other products containing atrazine, see the specific product labels.

Acetochlor Plus Atrazine	Expert®	LUMAX®
Banvel-K™ + atrazine	Field Master®	Marksman®
Basis Gold®	FulTime™	Metolachlor AT
Bicep II MAGNUM®	G-Max Lite™	Prompt® 5L
Bicep Lite II MAGNUM®	Guardsman®	Ready Master™ ATZ
Bromox + atrazine	Guardsman Max™	Shotgun®
BROX®-At	Harness® Xtra	Simazat™ 4L
BUCTRIL® + atrazine	Harness® Xtra 5.6L	Stalwart™ Xtra
Bullet®	Keystone™	Steadfast® ATZ
Cinch® ATZ	Keystone™ LA	Stratos™ Dicamba + atrazine
Cinch® ATZ Lite	Laddok® S-12	Trizmet II
Contour®	Lariat®	Volley® ATZ
Degree Xtra™	Lexar™	Volley® ATZ Lite
Dicamba + Atrazine	Liberty® ATZ	

Several companies have single active ingredient registration formulations for atrazine and the various formulations are listed below. Maximum rates for Syngenta atrazine-only formulations are in the table on page one of this guide. For rates of other atrazine-only products, see the specific product labels.

AAtrex: 4L, Nine-0®

Atrazine: 4L, 4F, 4FL, 90, 90DF, 90 Water Dispersible Granules, WDG, 80, 80WP, 5L, 90DP

Provided as a service by Syngenta Crop Protection, Inc.

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