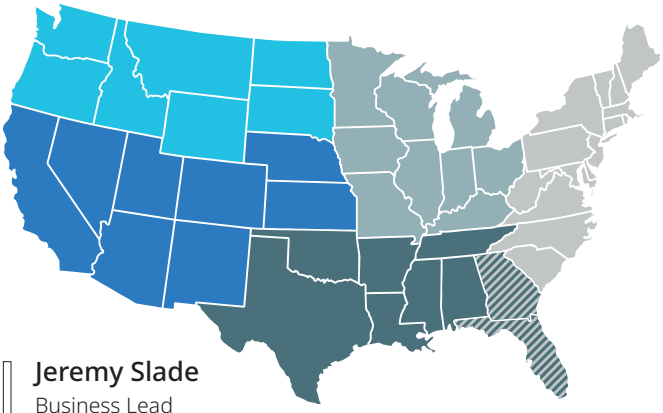


Jeremy Slade
Business Lead
662.617.4571
jeremy.slade@upl-ltd.com

Craig Smith
Pacific Northwest Territory Sales Manager
561.301.8326
craig.smith@upl-ltd.com

Nathan Hicks
Southwest Territory Sales Manager
707.372.4908
nathan.hicks@upl-ltd.com

Jacob Meganck
Midwest Territory Sales Manager
810.955.7626
jacob.meganck@upl-ltd.com

Dean Jones
Southeast Territory Sales Manager
863.514.6934
dean.jones@upl-ltd.com

Sam Sardes
Atlantic Territory Sales Manager
561.201.0713
samantha.sardes@upl-ltd.com

Technical Product Development Managers

Clyde Smith
850.376.7671
clyde.smith@upl-ltd.com

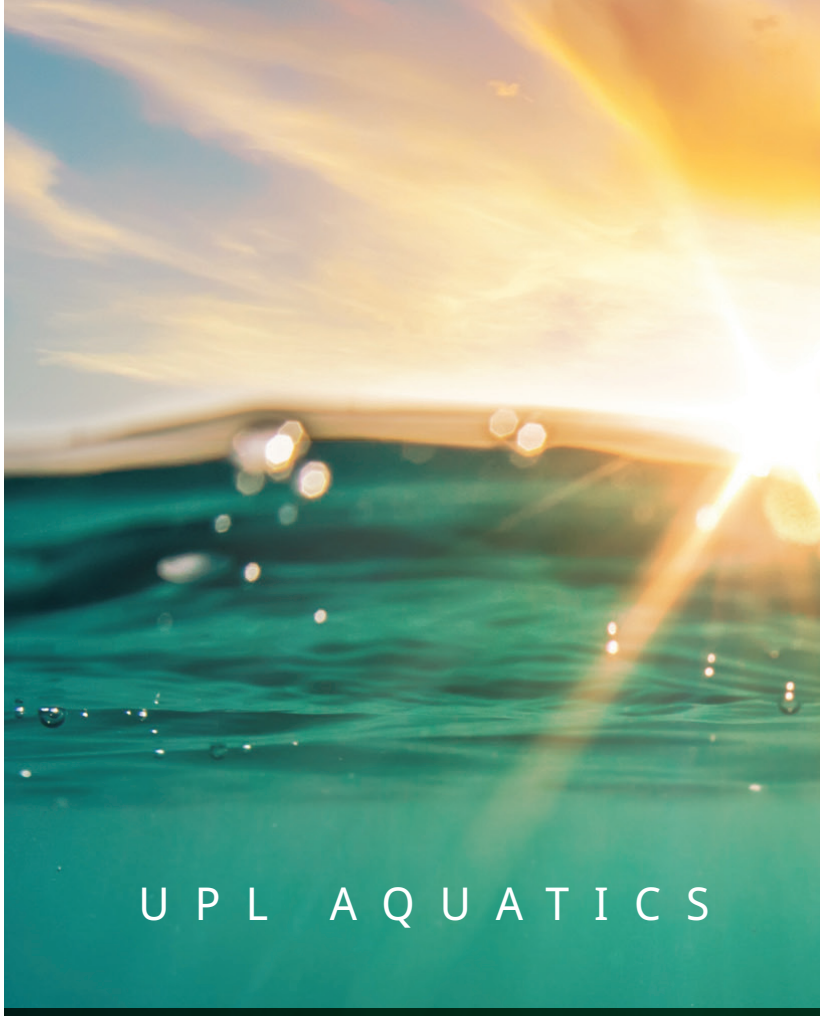
Justin Nawrocki
919.429.2185
justin.nawrocki@upl-ltd.com

UPL OpenAg® | ENVIRONMENTAL SOLUTIONS

1-800-438-6071

www.uplaquatics.com

630 Freedom Business Center, Suite 402
King of Prussia, PA 19406



UPL AQUATICS

IRRIGATION CANALS ENVIRONMENTAL GUIDE

Aquatic weeds and algae can be a nuisance in irrigation canals, preventing water delivery and reducing the carrying capacity of these conveyance systems. Endothall, the active ingredient in Cascade® and Teton®, controls weeds and algae in irrigation canals. These products control a wide spectrum of weeds including sago pondweed, horned pondweed, milfoil and naiad. Teton® provides control of algae including filamentous algae such as spirogyra and pithophora. Read our Q&A on how levels of endothall found in water following an application for aquatic weeds and algae relate to human health.

UPL OpenAg® | ENVIRONMENTAL SOLUTIONS

Q & A

Can I use the endothall-treated water to irrigate?

Yes. To address food crops, UPL with assistance from the USDA (IR-4) conducted a complete residue program for all crop groups. Based on the results of this extensive study, the U.S. EPA determined there was no health risk from consuming crops irrigated with endothall treated water. For non-food crops, such as ornamentals, lawns and turf (golf courses), the US EPA conducted a risk assessment. The Agency found no risk to human health based on labeled rates for these uses.

What about livestock that drink treated water?

Like in fish, endothall does not concentrate in the meat and is excreted rapidly. Beef cattle drinking from an irrigation canal treated with Cascade® and Teton® would ingest a small quantity of endothall. A person would have to eat almost 1,300 lbs of meat from animals drinking only treated water to exceed the no observable effect level (NOEL*).

Is endothall toxic to waterfowl or other wildlife?

Endothall formulations for aquatic uses are not toxic to waterfowl and wildlife when applied at labeled rates. (The maximum rate of application is 5 ppm for any of the endothall products: the 8-day LC50 for bobwhite quail and mallard ducklings is >5,000 ppm and the 21-day LD50 for mallard ducks is 344 ppm.)

How long does endothall last in the water following a treatment?

The time that endothall remains in the water varies with the size and type of application made, but it generally dissipates and degrades within a few days. The half-life (time in which ½ of the product is degraded) is about 3–7 days in most situations. Endothall is degraded by microbes into carbon, hydrogen, oxygen and organic acids normally found in the environment.

What about drinking treated water?

The U.S. Environmental Protection Agency (EPA) has established a maximum contaminant level (MCL) for drinking water of 0.1 ppm. At this concentration, an adult would have to drink more than 350 gallons of water every day for a lifetime to exceed the NOEL.

Why do applicators have to wear protective equipment?

The U.S. EPA conducts risk assessments based on potential human exposure. Assumptions to make these assessments are dependent upon the acute toxicity (short-term exposure) as well as chronic toxicity (long-term exposure) to the various compounds used for the control of aquatic plants and algae. In addition, commercial applicators are exposed to the concentrated product, unlike the average person that is exposed to products diluted in the water. In most cases dilution is 200,000 to over 1,000,000 to 1, based on the rate the product is applied. Commercial applicators are trained professionals and are just as concerned about the environment and their own health as anyone.

Who approves labels for the products used to control weeds and algae?

The U.S. EPA is responsible for registering all pesticides for use including aquatic herbicides and algaecides. The primary federal law that governs how EPA oversees pesticide use in the United States is the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). The EPA also derives its authority to regulate pesticide residues on food items from provisions of the Federal Food, Drug, and Cosmetic Act (FFDCA). The Agency may not register the product under FIFRA unless it can determine that the residues are "safe" under the FFDCA. The FFDCA defines "safe" to mean that there is "a reasonable certainty of no harm" from the exposure to the residue in food and from other non-occupational sources.

The above statements are based on exposure or consumption of endothall by an adult at the EPA established and proposed tolerances or levels predicted from animal studies. To protect yourself and the environment when using pesticides, carefully read and follow label directions.

*The NOEL is the highest dose at which no adverse effects were observed in laboratory animals. For regulatory purposes, the NOEL is selected from the laboratory mammalian species that shows the greatest sensitivity to the effects of the pesticide.