

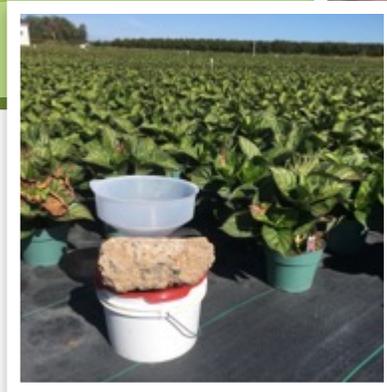


# RESEARCH UPDATE

## 2017 Trial Results Chrysanthemum and Hydrangea Leachate Study



February 2018



## KEY RESULTS

### Irrigation Volumes

Volume!  
Volume! Volume!

Volumes irrigated **MUST** be checked regularly!

Weekly maintenance

### Fertilizer Type

Water Soluble Fertilizer can be used safely if volumes are managed

Controlled Release Fertilizer is a better choice at some farms

## Background

The Ontario greenhouse floriculture sector produces ornamental crops in close proximity to the Great Lakes. While floriculture greenhouses have made significant advances in decreasing nutrient discharges from inside their greenhouses, implementation of Best Management Practices (BMPs) must continue. Outdoor production of floriculture crops such as garden chrysanthemums and hydrangeas is largely based on water-soluble fertilizers. This production system lends itself to potential generation of leachate that could reach watercourses. This study, funded in part by the Ontario Ministry of Agriculture Food & Rural Affairs, reviewed the current practices and investigated BMPs to minimize environmental impact.

## Goals of the Project

1. Evaluate the extent of potential leachate from outdoor production
2. Demonstrate alternative methods of production to decrease risk of nutrients reaching environment
3. Raise awareness and increase adoption of BMPs





## Research Findings

The number one reason for nutrient loading to the environment can be addressed through irrigation equipment maintenance

### Irrigation Method

- Drip irrigation should have the lowest leachate volumes, but many maintenance issues were discovered
- Overhead irrigation typically means more water and can result in more runoff
- Cyclic irrigation can be very effective for minimizing leachate

### Type of Fertilizer Used

- Water Soluble fertilizers work well in drip application (precise, adjustable)
- Increased nutrient levels in leachate with Water Soluble compared to Controlled Release fertilizers
- Range of fertilizer formulations available for a range of needs

### Runoff Collection

- Slope/compaction of growing areas varies
- Best practice is to collect and re-use runoff water
- Important to close/shut off main lines that have no plants late in season

## What you can do:

- Track your water use – even if you think it’s perfect!
- Test your leachate – especially in July after bringing plants out of the greenhouse
- Investigate options for fertilizers – low phosphorus fertilizers for chrysanthemums are available and can be effective for decreasing phosphorus loading
- Investigate Control Release Fertilizers – they are worth it!



For more information: visit [www.flowerscanadagrowers.com/environment-water-specialist-resource-page](http://www.flowerscanadagrowers.com/environment-water-specialist-resource-page)