

Report for 2002NY8B: Greenhouse BMPs: Transforming Principles into Practice Year Two

- Other Publications:

- Koplinka-Loehr, C.; J. S. Lamboy; M. L. Cummings. 2002. Brochure: Protecting Your Business and the Environment with Best Management Practices. New York State Integrated Pest Management Program.
- Lamboy, J. S.; T. C. Weiler; and M. L. Cummings, 2002, Protecting the Environment with Best Management Practices, 11"x17" Poster, NYS Integrated Pest Management Program, Cornell University, Geneva, NY.
- Weiler, T.C., 2002, Best Management Practices for Watershed Protection: Greenhouse Fertilizers, Fact sheet, NYS Integrated Pest Management Program, Cornell University, Geneva, NY.

Report Follows:

Problem & Information Transfer Objectives:

The 2001 Directory of New York State Certified Nurseries, Greenhouses, and Plant Dealers lists 1,967 operations. Many of these businesses discharge wastewater directly to the ground surface or through drains to surface water. Greenhouse and nursery wastewaters are likely to contain some contamination from the legal and appropriate use of pesticides and fertilizers. New York growers need simple and direct resources explaining how to construct safe storage facilities for pesticides, and why and how they should monitor their nutrient solutions.

The goal of this project is to increase awareness and implementation of best management practices for minimizing the discharge of nutrient- and pesticide-contaminated wastewaters from commercial greenhouses and nurseries in New York State. The target audience includes commercial greenhouse owner/operators, extension educators, and horticultural students. The project will satisfy three primary objectives:

- Develop an Agricultural Environmental Management (AEM) program for commercial greenhouses.
- Teach horticulture students and CCE educators how to evaluate current practices.
- Reach industry leaders to enlist their support to increase adoption of BMP principles.

Methodology:

The current Cornell Research Greenhouse BMP Plan addresses several areas of greenhouse environmental stewardship in depth but it was not written for commercial establishments. In 2001 we learned about grower concerns and prepared introductory materials for the industry. We are ready to revise the BMP Plan within the framework of AEM.

Principal Findings & Significance:

With input received from growers and Agricultural Environmental Management (AEM), we revised the Cornell Best Management Plan for Research Greenhouses to be better suited for commercial operations. This involved expanding the current status descriptions in each worksheet from three categories to four, writing the relevant water quality principles, and creating the glossary. The fertilizer and pesticide storage sections were separated to clarify the different issues related to the chemicals. The seven worksheets are currently being reviewed by AEM: Nutrient Storage in the Greenhouse, Nutrient Usage in the Greenhouse, Pesticide Storage in the Greenhouse, Weed Management for the Greenhouse, Pest Management for the Greenhouse, Greenhouse Maintenance, and Greenhouse Construction.

Notable Achievements:

Educational resources have been developed and distributed to greenhouse operators and Extension Educators in New York. Several presentations noting environmental and worker safety concerns and the benefits of BMPs have been made at industry meetings. A few industry leaders have requested further information and have held awareness workshops with their employees. In a few cases, back-flow-prevention devices have been installed to protect water sources from movement of in-line fertilizers back to wells or municipal supplies because of pressure failure.

Extension Educators and key nurserymen on Long Island have asked for our participation in creating materials for container nurseries. The Friends of Long Island Horticulture will fund the next project with a grant to Jana Lamboy and Scott Clark, Suffolk County CCE.