



Ornamental Horticulture

Increasing Profitability and Sustainability of Michigan's Ornamental Plant Industry

Michigan State University (MSU) Extension ornamental horticulture educators serve 452 greenhouses, 352 nurseries and 560 Christmas tree growers in Michigan, an industry worth \$1.5 billion. During 2015, MSU Extension ornamental horticulture education impacted 4,124 growers and allied trade professionals across the state, resulting in growers adopting new practices in nearly 10 million square feet of production space and protecting over \$3.5 million of plant material.

In 2015, the state's \$56.6 million investment in MSU AgBioResearch and MSU Extension generated more than \$1 billion for Michigan residents. Every dollar the state invested in MSU AgBioResearch and MSU Extension leveraged an additional \$2.59 in federal funds and external contracts, grants and other revenues, including nearly \$1.3 million leveraged by MSU Extension children and youth programs alone. As a result, MSU Extension and MSU AgBioResearch are able to serve Michigan residents with a benefit/cost ratio of 18:1.



THE ISSUE

Climate, soils and a centralized location to markets make Michigan a national leader in producing greenhouse-grown plant material, landscape nursery stock and Christmas trees.

Michigan is the third largest floriculture crop producer and the largest young plant producer in the United States. In 2014, the total value of all floriculture crops in Michigan was over \$409 million. Michigan is the third largest producer of Christmas trees in the U.S. and ranks 11th in the nation in nursery stock sold—a value of \$1.2 billion.

MSU EXTENSION ACTION

In order to keep the ornamental horticulture industry a vibrant part of Michigan's and the national economy, MSU Extension conducts industry-driven programming research and then delivers the latest science-based, educational information to producers. The following programming keeps Michigan growers competitive and profitable:

- Protecting pollinators and alternative insect management
- Biological control of greenhouse insect pests
- Plant nutrition and soil health
- Integrated pest management
- Retail marketing of ornamentals
- Sustainable crop management

THE IMPACT

In 2015, this programming reached 4,124 participants. There were seven main program initiatives. The major program initiative was to teach growers alternative pest management practices that foster pollinator populations.

- As a result of educational programming, 23 ornamental plant growers representing nearly 10 million square feet from nine west Michigan counties will implement bee-friendly best management practices on over \$3.5 million of plant material.
- Another program that focused on alternative pest management practices was a three-day bus tour to Ontario greenhouses that practiced biological control. The 35 greenhouse growers who attended the Ontario biocontrol bus tour represented 15 large and small businesses from 11 counties in southern Michigan.
 - › 85 percent of survey respondents said they would implement a change to their current production practices.
- In an effort to reach other extension specialists and educators, the “First National Protecting Pollinators in Ornamental Landscapes Conference” was held in conjunction with North Carolina State University on Oct. 12-14, 2015, in Hendersonville, North Carolina. The 187 participants from 35 states and three countries who attended the conference represented extremely diverse audiences: Extension specialists, field educators, university researchers, pesticide industry representatives, growers and ornamental magazine writers. Twenty-two world-renowned speakers from 11 universities and two organizations presented a comprehensive spectrum of scientific evidence on pollinator health. The differing backgrounds of attendees inspired discussions about these highly controversial topics and brought differing points of view into the spotlight. The post-conference evaluation indicated the following:
 - › Ninety-eight percent of respondents said the session on pesticides and pollinators benefited their work.
 - › Fifty-two percent of respondents intended to develop outreach information on pollinators.
 - › Encouraged developing future bulletins such as “Protecting and Enhancing Pollinators in Urban Landscapes for the U.S. North Central Region.” **This publication, with 3,375 website views, has had the most downloads—1,026—on the MSU Extension website in 2016.**



Advanced equipment reduces herbicide and fertilizer application costs

MSU Extension was able to bring innovative equipment to Michigan Christmas tree growers through contacts formed at the International Christmas Tree Research and Extension Conference in Europe. MSU Extension Christmas tree educators invited Juergen Kaehlershoej to demonstrate his Danish-made Jutek high-clearance tractors at the 2012 Michigan Christmas Tree Association (MCTA) summer meeting. The state-of-the-art tractor allows operators to perform multiple tasks such as fertilizing, herbicide application and basal pruning in one pass, saving scarce labor. Since the MCTA demonstration, two Michigan farms and one Minnesota farm have purchased Jutek tractors. Growers report that using the new equipment has saved them 75-80 percent on the cost of their herbicide and fertilizer programs. Additionally, the tractor enables them to make applications during the growing season on trees that are up to 7 feet tall, which would not be feasible without the Jutek's high clearance.