



Eastern Michigan Greenhouse Growers Report 2025: Key Issues & Insights

The purpose of this report and how information was collected

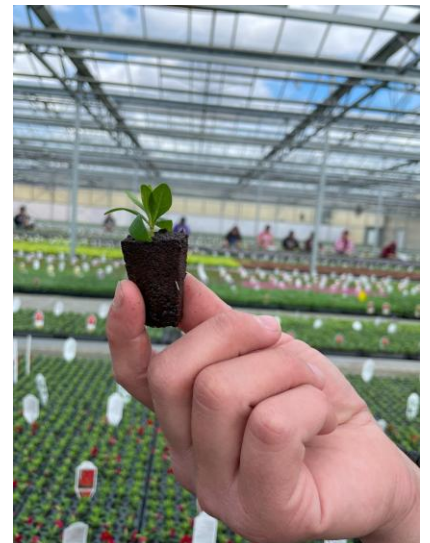
This report is intended to share information that is relevant to the greenhouse grower community throughout the eastern portion of the state. It reflects the challenges and successes that growers encountered and shared with MSU Extension during the 2025 growing season. Observations during Jan-Mar covered 3 counties with multiple visits in each county (Wayne: 9, Monroe: 2, Oakland: 2). During Apr-June, information is included from 10 counties with at least one visit in each county listed (Oakland: 11, Wayne: 10, Genesee: 5, Macomb: 5, Tuscola: 5, Monroe: 3, Lapeer: 3, St. Clair: 2, Livingston: 1, Washtenaw: 1). During July-Sept, information is included from 9 counties with at least one visit in each county listed (Wayne: 5, Huron: 2, Sanilac: 2, Tuscola: 2, Jackson: 1, Monroe: 1, Genesee: 1, Lapeer: 1, Oakland: 1).

Diseases

January-March

Powdery mildew was observed in succulents. Conditions in early spring and fall especially favor this disease, which thrives at relative humidities greater than 90% and at temperatures between 65-85°F. Powdery mildew on succulents can look very similar to the damage caused by edema, or sunscald, presenting as brown, scabby patches on leaves. Among succulent crops, kalanchoe, crassula, and echeveria tend to be more susceptible. Fungicides with FRAC code 3 are going to be your best control products (myclobutanil, metconazole and triflumizole). However, it is critical to rotate to other FRAC codes such as 7, 9, 11 or 12 with subsequent applications to avoid developing resistance.

Photo: One grower mentioned mitigating stem rot concerns using Jiffy-cubes for petunia and calibrachoa. All photos by Caitlin Splawski, MSU Extension.



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Diseases

April-June

Monkshood, *Aconitum*, tested positive for Cucumber Mosaic Virus (CMV). A member of the buttercup family (Ranunculaceae) and native to the Eastern United States, this poisonous perennial can harbor diseases like CMV, tomato spotted wilt orthotospovirus (TSWV), and potato leafroll virus (PLRV) among others. It's best practice to keep this perennial pest-free to avoid spreading virus to other genera that may have more susceptibility to these viruses.

Fungal diseases such as Coleus Downy Mildew were also detected this season. Symptoms of this fungal pathogen were found at 3 different sites and one grower confirming a positive sample of downy mildew on their coleus crop through the MSU diagnostic lab. This is a good reminder to use preventative measures in controlling downy mildew in coleus. Important IPM measures include maintaining low relative humidity levels, scouting for the disease, selecting downy mildew-tolerant coleus cultivars, and use of preventative fungicides.

July-September

This summer brought pleasant conditions for growers, leading to relatively minimal disease issues. Some powdery mildew was observed on certain monarda varieties. Some chrysanthemum producers also saw root rot symptoms following abundant rain events, but incidences of this were minimal.

If you're ever unsure if your crop is developing disease symptoms, it's recommended that a sample be sent to the MSU diagnostic lab for detection and confirmation of a pathogen. Visit <https://www.canr.msu.edu/pestid/index> for information on services and fees, submittal forms and how to submit a sample. Your MSU Extension Educator can assist with submission forms and shipping during the busy spring season!



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Weeds

January-March



Liverwort, *Marchantia polymorpha*, management continues to be an active area of research for MSU Horticulture Department professor and researcher, Debalina Saha. Growers can struggle with controlling this weed, a primitive species that will form dense mats in wet environments. This weed is primarily an issue in long-term crops like perennials but was spotted this season in annual bedding crops like spikes as well.

To manage liverwort, growers should focus on improving drainage, avoiding over-irrigation, and using drip or microirrigation instead of overhead systems. Sanitation is also key—cleaning surfaces, pots, and tools with disinfectants helps prevent spread. Cultural practices like avoiding topdressed fertilizer, using organic mulches (e.g., pine bark, rice hulls), and maintaining lower nitrogen and phosphorus levels can suppress liverwort growth as well. More information on management can be found in this article, <https://www.canr.msu.edu/resources/identifying-and-managing-liverwort-in-michigan-nurseries-and-greenhouses>.

April-June



Marsh parsley, *Cyclospermum leptophyllum*, was an interesting find at one greenhouse. This weed is a member of the carrot family and is a summer annual that will emerge mid-spring through mid-autumn with multiple generations per season. It prefers to grow in moist environments, making it well suited to grow underneath greenhouse benches as we found. There are limited herbicide options for controlling this species, with only dimethenamid-p (Tower) showing efficacy for control and labelled for use in the greenhouse.

July-September

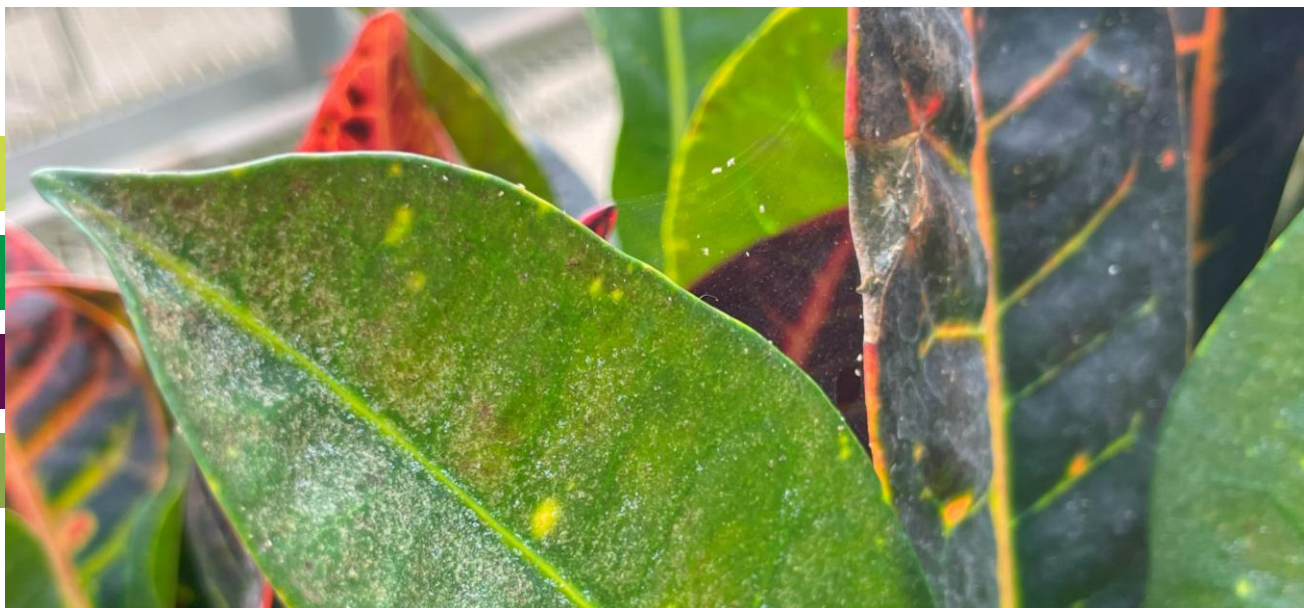
One grower noted purslane and cottonwood tree seedlings being abundant in their mum crop this season outdoors in their nursery pad. Another grower observed horseweed, *Erigeron canadensis*, under benches in the greenhouse. Upon closer inspection they seem to do a wonderful job at harboring whitefly. A helpful reminder that good weed control goes hand-in-hand with pest control.

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Pests

January-March

Among the issues reported during the early season for pests were thrips being difficult to manage in some pepper and other flower crops. Shorefly were also noted at one site, and growers were looking into options of using biological control agents such as nematodes to provide control in addition to chemical sprays for pests like fungus gnats, shorefly and thrips. One grower was also looking to options for low-spray volume applications using a fogger to gain better control.

April-June

While thrips continued to be a challenging pest throughout the season, spider mites, fungus gnats and aphids started to become more problematic at points during the season. Spider mites were particularly an issue with many tropical and houseplant crops brought in from Florida this season. Aphids were tricky to control in hanging baskets and edible crops, such as strawberries, especially when infestations popped up close to when plants were marketable. Growers were especially interested in sprays or biological controls that could be used on edible crops that would be safe for customers at retail.

July-September

Spider mites continued to be an issue on tropical plants like elephant ears and palms for some growers. Blotch leafminer and red headed flea beetle were also observed on a chrysanthemum crop. This summer Box tree moth also became a frequently asked about topic for many retailers. The current quarantine area for this invasive pest includes 13 southeast and central Michigan counties: Clinton, Eaton, Ingham, Lapeer, Livingston, Oakland, Jackson, Washtenaw, Wayne, Lenawee, Monroe, Macomb and St. Clair. Several new and updated publications regarding boxwood and box tree moth have been published this year covering everything from diagnosing damage to selection of alternative landscape shrubs. You can find them posted on MSU Extension's website, <https://www.canr.msu.edu/tag/box-tree-moth>. Print materials for customers are also available, just contact your local MSU Extension Educator.



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Abiotic Issues

January-March

Throughout the entire season, abiotic stressors were among the most frequently reported issues. Nutrient deficiencies and toxicities were encountered by some growers, which led to exploration of water quality concerns. Most often a simple pH or EC adjustment to irrigation water resolved the issue at hand. This speaks to the importance of conducting routine pour-through testing of crops to make sure pH and EC are within range.

Additionally, some growers were seeing purpling of young petunia plants that had recently been stuck as unrooted cuttings. This purpling of foliage on young plant material, especially in petunias and begonias, is linked to LED lighting that is too intense, and greenhouse temperatures are too low. You can read more about lighting pitfalls in Dr. Erik Runkle's article, <https://www.canr.msu.edu/resources/supplemental-lighting-pitfalls>.

Besides water quality and lighting, growers must also consider temperature and humidity conditions especially during the early spring season. One grower encountered a variety of fuchsia that was very sensitive to high humidity causing low transpiration rates and cupped leaves. Another grower experienced the impact of high heat resulting in bleaching of foliage in geraniums that were placed too close to a heater.

April-June

As the season progressed, growers encountered some different abiotic issues in the greenhouse. The cold spring resulted in some growers experiencing cold damage with malfunctioning heaters. Heaters were also being run fairly regularly without much ventilation and ethylene exposure impacted some sensitive crops. A good reminder to service and maintain heaters throughout the season.

Additionally, some growers experienced herbicide damage to plants this season. Some instances were due to a product misformulation of an insecticide, which led to some plants being dosed with herbicide. Other growers saw phytotoxicity from herbicides that were either improperly applied within the greenhouse or through drift from nearby farm fields.



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Abiotic Issues

July-September

Amongst those that produce mums, most growers are aware of the many challenges this crop can encounter related to lighting and temperature conditions. This year was no different with some growers experiencing early crown budding due to a series of cool nights, plus some experiencing heat delay on early flowering varieties. Though it's nearly impossible to control the weather, there are some techniques that can be used to ensure chrysanthemum crops flower on schedule. For instance, to mitigate heat impacts that could delay flowering, several cultural and environmental control strategies can be utilized. Adjust photoperiod for early-season varieties to 10-12 hours of light. Pull black cloth in the early morning rather than late in the day to minimize hot air building up underneath. Optimize irrigation, since water stress can further suppress growth. Last, but not least, monitor fertility; high temperatures can alter nutrient uptake especially if you're relying on controlled-release fertilizers. You can read more on this topic in MSU Extension's recent publication,

<https://www.canr.msu.edu/news/navigating-temperature-and-timing-challenges-in-garden-mum-production>.

Labor & Technology

January-March

Some operations noted utilizing H2A workers to meet their staffing needs and having a positive experience with their first few seasons exploring this staffing option. However, many growers that I spoke with source their staff domestically. One operator noted that their current, domestic staff can plant 600 trays over 7 hours by hand, implying that they see little need to invest in H2A workers or technological advances that might cut costs and/or meet their labor needs. Some operators noted that they had experienced challenges sometimes having to rely on smaller crews and family members to meet their labor needs.

April-June

A couple of other topics were brought up concerning labor during the late spring season. One grower stated an interest in MSU Extension providing some hands-on staff training opportunities. Scouting for pests and diseases was an area of interest, as were proper watering techniques and pesticide application procedures. Another operator mentioned difficulty in hiring for middle to upper management positions, that require more horticultural knowledge and experience. Also brought up was the topic of aging ownership with no clear successor for the business. Did you know that MSU Extension assists growers with business management topics such as recordkeeping, business succession, risk management, and even farm stress? Visiting the farm management team's website, https://www.canr.msu.edu/farm_management/, is a great place to start for more information.

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Customer Engagement



January-March

According to the Garden Media Group's spring 2025 analysis, garden center sales were nearly on par with 2024 even amid poor weather conditions and economic uncertainty related to tariffs. Amongst garden centers utilizing 'Square' as their point-of-sale system, users saw an 8.6% increase in gross profit and a 9.3% increase in transaction volume compared to the same early spring period in 2024.

April-June

Several growers mentioned a slower May, in terms of retail traffic, due to poor weather conditions, primarily during normally busy weekends. Although, traffic seemed to pick-up and balance out in June. During this time, a few grower-retailers requested resources for customer education, particularly on pest issues.

During this period MSU Extension along with the MSU Extension Master Gardener Program piloted having Smart Gardening outreach tables at some Southeast Michigan garden centers. Not only did these tables help to educate customers with environmentally-friendly gardening resources, but they helped collect information about the types of questions routinely asked about by the public. This information is invaluable to growers and retailers as they try to market their products in a way that enables their customers to be successful with what they purchase and plant.

A total of 383 customers engaged with Smart Gardening booths across 9 outreach days. Participants represented 9 Michigan counties, with the majority from Wayne (58%) and Oakland (30%) counties. 230 gardening inquiries were recorded, with the most common topics being: General questions regarding interest in MSU Extension programs (38%), Flowers (13%), Trees & Shrubs (12%), Wildlife control (10%), and Pollinators (9%). Other topics that came up were invasive species, lawns, pests, vegetables, soil testing, and indoor plants (11%). The public response to these events was overwhelmingly positive, with many expressing appreciation for MSU Extension's presence and the availability of expert advice.

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