

GREEN ENVIRONMENT (Friday morning, 10/13). Moderator: Steve Foltz**Tom Fernandez, Professor, Dept. of Horticulture, Michigan State University****Title: *Keeping Nutrients in Their Place: Irrigation Management to Enhance Nutrient Retention in Container Production***

Description: Irrigating to excess may seem to be a good way to reduce plant losses from improper irrigation but the negative consequences of over-irrigating can be as costly as under-irrigating. Depending on your water rights, water costs can be negligible or a significant part of the production cost. Loss of nutrients due to excess leaching wastes fertilizer and has detrimental environmental effects. Over-irrigating can prolong production time and increase losses to pests. This presentation will cover scheduling irrigation in order to conserve water, reduce runoff, and retain nutrients in containers and how this affects plant growth, quality and costs.

Brad Rowe, Professor, Dept. of Horticulture, Michigan State University**Title: *Green Roofs: Plant Production and Installation Methods***

Description: Green roofs are a means of partially replacing the vegetated footprint that was destroyed when buildings are constructed. Learn about the various types of green roofs, how they impact the environment, what plant species are suitable, and how the components and installation methods vary among conventional built-up systems, pre-vegetated mats, and modular green roof systems

David Smitley, Professor, Dept. of Entomology, Michigan State University**Title: *Marketing the Ecosystem Services Provided by Food Plants for Pollinators***

Description: Pollinator-attractive plants serve three important services in the urban landscape: (1) they provide food (pollen and nectar) for honey bees, monarchs, swallowtails, and other desirable pollinators; (2) they provide food for predators and parasitoids that keep plant pests under control; and (3) the pollinators they attract are excellent indicators of the level of natural control that you can expect in the yard or garden. In addition, many perennials, shrubs and trees are important food plants for caterpillars that develop into desirable butterflies. In this session I will briefly review lists of annuals, perennials, shrubs and trees that are good food plants for pollinators, predators and parasitoids, then explain in simple terms the important benefits they provide in urban and rural habitats, including natural pest control, a reduction in pesticide use, a boost for honey bees, and habitat for threatened species. The session will conclude with bullet points that can be listed for plants that are attractive to pollinators.

Chris Howe, Hortechn, Inc., Spring Lake Michigan**Title: *How to Begin a Successful Biocontrol Program***

Description: Chris will describe the types of insects and disease on which to focus your efforts. biologicals for both foliage and media, and banker plants. He will stress the

importance of training, scouting, and record keeping, and provide sources for purchasing biocontrols.

Eric Runkle (MSU), Drew Koschmann (Walters Gardens), and Garrett Owen (MSU)

Title: Lighting Plants with LEDs: A Panel Discussion

Description: The science and technology of light-emitting diodes (LEDs) has advanced rapidly in the past several years, yet many questions remain about if and how they "fit" in commercial plant production. Erik, Garrett, and Drew will briefly share their experiences using LEDs in the production of young plants, including as supplemental greenhouse lighting and sole-source lighting indoors. Time is allotted for participants to ask the panelists questions and to stimulate discussion.

GREEN PROFITS (Friday afternoon, 10/13); Moderator Brian Decker

Cheryl Boyer, Assoc. Professor, Kansas State University

Title: Current Status of E-commerce in the Green Industry

Description: Cheryl Boyer loves to help nursery professionals meet their business goals and solve production problems, and has a growing reputation as an expert in new media technologies for garden center marketing. Are you ready for E-commerce? Time to find out!

Kim Hye-Ji, Asst. Professor of Sustainable Horticulture, Purdue University

Title: Plant Propagation for Successful Hydroponic Production

Description: Using hydroponics to produce crops creates unique challenges, including the choice of crops and cultivars, type of propagation media, hydroponic water and nutrient management, and environment control and management. This presentation will provide general information on propagation practices, and specific goals and unique strategies for each process to establish stronger and healthier seedlings.

Dale Deppe, President, Spring Meadow Nursery Inc., Grand Haven, Michigan

Title: Grow Your Business

Description: Hear from a successful nursery owner and industry legend how to plan for the future, be different, add value and become more profitable.

Bart Brusse, Container Manager, Sheridan Nursery, Ontario, Canada

Title: Can't sell apples out of an empty barrel - production cycles at Sheridan Nurseries

Description: A look at production planning and growing cycles at Sheridan Nurseries, how we make decisions – propagation, buying in liners and liner choices. Follow through some real examples. There will be some photos, some fun, and yes – some math!

Brigid Behe, Professor, Dept. of Horticulture, Michigan State University

Title: People are Social, Plants Should be Too!

Description: Plants are cool. Plants are hip. But has our industry kept up with consumers, how they shop, how they buy, and how they interact with our products? Bridget will share some consumer research findings to help you better understand what today's consumer is looking for and doing with our products.

Gerson Cortes, FlowVision, LLC, and Matt Fredrickson, Midwest Groundcovers, LLC

Title: LEAN Panel Discussion

Description: Learn from two green industry leaders what you can do to reduce costs in a very tight margin industry, by improving productivity, optimizing space utilization, improving throughput and reducing overproduction - a common problem for plant propagators!

GREEN PLANTS (Saturday morning, 10/14); Moderator Ron Strasko

Aren Phillips, Asst. Manager of Propagation, Spring Meadow Nursery

Title: Foliar Application of Auxin During Propagation

Description: The recent purchase of automated sticking machines at Spring Meadow Nursery led to an experiment involving foliar applications of the plant rooting hormone, auxin. The effect of different foliar treatments on rooting scores was compared to the standard method of a basal quick dip. The experiment involved hardwood evergreen cuttings in the winter of 2016-2017 and deciduous softwood cuttings in the spring and summer of 2017.

Bill Schneider, owner, Wildtype Ltd., Mason, Michigan

Title: Restoration Horticulture: propagation, production and marketing of native plants

Description: For more than 20 years Wildtype nursery has specialized in growing Michigan native plants, including trees, shrubs, grasses, wildflowers and wetland species typical of Michigan woodlands, wetlands and prairies, with an emphasis on maintaining genetic diversity. Is this a niche that would work for you - come find out!

Todd West, Assoc. Professor, Dept. of Plant Sciences, North Dakota State University

Title: Plant Breeding at North Dakota State University

Description: North Dakota State University has been evaluating and selecting ornamental woody plants for over 60 years. In the past five years, breeding has been added to the program with focus on environmental (hardiness and pH tolerance) conditions as well as ornamental characteristics. The presentation will give insights on goals and objectives of this woody plant improvement program.

Bob Geneve, Professor, University of Kentucky

Title: Cyclophysis – What's Old and New about Phase Change and Propagation

Description: Physiological aging (cyclophysis) is an important factor associated with propagation. It is important for determining the time to first flowering and therefore seed set. Equally important is the relationship between a plant's physiological age and the ability to regenerate adventitious organs (like rooting in some woody perennial

cuttings). It was the subject of one of the first IPPS presentations made by F.L. O'Rourke in 1950 and published in Vol. 1 of the proceedings. Although there has been recent work on the mechanisms controlling phase change (especially the transition from the juvenile to reproductive maturity), many of the concepts related to the impact of juvenility on propagation have not changed in the past 50 years. This presentation will revisit physiological aging and discuss current methods of plant manipulation related to phase change and propagation.

Erin Yafuso, Ph.D. Candidate in Horticulture, University of Florida

Title: *Managing Water and Oxygen for Optimum Rooting*

Description: Oxygen is essential for healthy root growth. Should you inject oxygen into your irrigation water? Or just avoid over-watering? Learn about new research on ways to supply oxygen to growing roots.

Robert Kuszmaul, D & B Plants, Richmond, Michigan

Title: *Mycorrhiza in Woody Cutting Production*

Description: D & B Plants is committed to using an effective, environmentally compatible blend of traditional and high tech equipment and techniques to produce a diverse selection of superior starter plant material. Come learn more about the growth benefits for using mycorrhiza in our propagation and growing on environments.

Charles Tubesing, Plant Collections Curator, Holden Arboretum, Kirtland, OH

Title: *New Plant Forum*

Description: Join other attendees for a look at the latest new plants and some old favorites that we should consider using more, moderated by Charles Tubesing. Contact Charles (ctubesing@holdenarb.org) if you would like to take part in this long-standing IPPS tradition!