



Minnesota Landscape
ARBORETUM

Schoolyard Gardens 2015

Biographical Sketches and Presentation/Workshop Summaries

FRIDAY, FEBRUARY 27

PRESENTER BIOGRAPHICAL SKETCHES

ARDEN BUCKLIN-SPORER

Executive Director, Education Outside

Arden has worked with green schoolyards and public-school gardens in San Francisco for 15 years, building an award-winning school garden program as a public-school parent and working closely with school districts at the local, state, and national level. She has worked to integrate school gardens and outdoor classrooms with the broader goals of the San Francisco Unified School District. Arden is coauthor of *How to Grow a School Garden: A Guide for Parents and Teachers* (Timber Press, 2010). Her interest in urban agriculture is fueled by her family's organic farm and vineyard in Sonoma County, California.

LEAH BOTT

Agriculture, Food and Natural Resource Teacher and Statewide Health Improvement Program (SHIP) Coordinator

Leah Bott has an M.S. in Agricultural Education from the University of Minnesota and is in her 20th year of teaching. Leah teaches a variety of courses for 7 – 12th grade students at William Kelley High School in Silver Bay with the focus on understanding, connecting and valuing the agriculture, food and natural resource system in our region, state, nation and world. Her goal is to educate and empower students to make wise food choices through hands-on activities in the garden, kitchen and classroom that will allow them to lead healthy, productive lives.

JENNY BREEN

Chef, Nutrition Educator

Jenny is a professional chef, public health nutritionist, and former Bush Leadership Fellow with more than 20 years in the local, sustainable food world. She teaches an undergraduate cooking class at the University of Minnesota and works in a sustainable food project, promoting whole foods cooking and eating through engaged community programs.

JIM CALKINS, PH.D.

Horticulturist; Research Information Director, Minnesota Nursery & Landscape Association

Jim earned his Bachelor of Science, Master of Science, and Ph.D. degrees from the University of Minnesota; is well-known for his research, extension, and teaching activities through the Department of Horticultural Science at the University of Minnesota; and speaks extensively on a variety of horticultural topics around and outside the state. His academic interests include native plant communities and plant selection for designed landscapes, nursery production and landscape management practices, and sustainable landscape design and management, and he has taught classes in nursery management and production, plant propagation, woody and herbaceous landscape plants, home horticulture, landscape design and implementation, and landscape operations and management.

Jim is a Certified Nursery and Landscape Professional and serves as the Research Information Director for the Minnesota Nursery and Landscape Association. He is also President of the Minnesota Shade Tree Advisory Committee and serves on the Minnesota Noxious Weed Advisory Committee.

MARY CICHON

Hennepin County Extension Master Gardener Program Volunteer

Mary contributes hundreds of hours each year in her work with youth in the community, and currently serves as the Youth Education Chair for Hennepin County Master Gardener volunteers.

LARRY CIPOLLA

Vice President, CCI Surveys; Hennepin County Master Gardener Volunteer

Larry has been gardening for more than 50 years. As a Master Gardener volunteer in Hennepin County, he teaches a wide range of programs on vegetables and herbs. He is a frequent speaker to other Master Gardener volunteers, garden clubs, teachers, community garden organizers, and anyone interested in growing their own food. Larry helped create the first community garden in Edina and has been involved in many schoolyard and company gardening projects. His Japanese garden has been featured on Rebecca's Garden, written up in the Star Tribune, Sun Current, and several local and national magazines, and has been featured on more than 20 Twin City garden tours. He has written more than 300 articles on leadership-management related topics and published his first book on performance-based 360-degree feedback in 2009. He has developed an open-pollinated paste tomato variety that averages 16-24 ounces and is being field-trialed by Seed Savers.

GALEN ERICKSON

Director, Jeffers Foundation

Galen is a retired president of New Horizon Productions, Inc., a video production company based in Minneapolis. He has a degree in Education from the University of Minnesota and long experience in working with youth programs. Most of his friends know him as an avid adventurer who backpacks and bikes, and he has been known to climb major mountains.

JEFF EPPEN

Agricultural Educator, Sibley East

Jeff is a graduate of the University of Minnesota-Twin Cities and a 13-year teaching veteran. He believes strongly in hands-on education and the importance of agriculture in our rural communities.

DAR FOSSE

School Garden Grant Coordinator, Jeffers Foundation

Dar is a retired elementary principal and teacher presently serving as a director for Jeffers Foundation. Dar worked with several Minnesota schools in developing the following programs for elementary and middle schools: "The Outdoor Classroom" (Team Teaching with Mother Nature); "Waste Reduction Awareness Program" (WRAP); and "A Garden 4 Every School."

RANDY GAGE

Manager of Youth Education, Minnesota Landscape Arboretum

Randy leads the Arboretum's Youth Education Program, which includes on-site field trips, Plantmobile outreach, summer day camps and the children's garden, as well as the Summer Urban Garden Program. The youth education team designs and implements hands-on plant science programs at the Arboretum, in area schools, and in the local community. The work includes developing standards-based programming that uses plants and gardens as tools, building partnerships with schools and community organizations, and reaching out to underserved audiences.

LISA GEMLO

Food Systems Planner, Minnesota Department of Health

A registered dietitian, Lisa has served as the state lead for the Food Charter since its inception. She also serves as the state's Fruit and Vegetable Coordinator, and has provided important leadership to the Farm to School movement in Minnesota.

LYNNE HAGEN

University of Minnesota Extension Master Gardener Volunteer Program Coordinator

Lynne has been the Extension Master Gardener Volunteer Program Coordinator in Anoka County since 2005, overseeing hundreds of volunteer-led projects that have included schoolyard gardens. Since 2012, Lynne has also been the project manager for a USDA NIFA-funded research project testing the viability of biochar as a soil amendment in four demonstration sites in Minnesota. She has a degree from the University of Minnesota with a concentration in therapeutic horticulture and serves as a therapeutic horticulture consultant for Merrick, Inc., an organization that serves more than 350 adults with developmental and cognitive disabilities.

JOAN JAMES***Owner and Managing Director, A Backyard Farm, LLC***

A Backyard Farm has installed more than 400 raised-bed organic gardens for homes, schools, and businesses. We provide ongoing coaching, teaching, camp programs, and technical assistance. The most salient point in our mission statement is teaching children from seed to table about their food. A Backyard Farm currently works with more than 15 organizations that work with children 3-18 years of age. Joan's additional work background includes coaching high school and college soccer, working with Roosevelt High School's health careers program, and helping underprivileged youth enter college or the work force, as well as sales and marketing in the business sector. Joan loves being owner, farmer, teacher, and public speaker.

TIM KENNY***Director of Education, Minnesota Landscape Arboretum***

As Education Director, Tim provides critical organizational and statewide leadership on school gardens, youth plant science literacy and education, and the statewide Extension Master Gardener Volunteer Program. He was also a key contributor to the Food Charter and Schools Leader Guide, with a focus on school garden-related recommendations.

SUE KNOTT***Education Specialist, Minnesota Agriculture in the Classroom***

Sue's agricultural roots were established on her family's farm in southwestern Minnesota. Experiences in 4-H and FFA, and helping to raise crops and livestock, inspired her to earn a degree in Agricultural Education from the University of Minnesota, as well as a Master's in Education degree from Saint Mary's University. Sue was a high school teacher for nine years before joining the Minnesota Agriculture in the Classroom team as Education Specialist. She has served in this role for three years and has enjoyed opportunities to provide professional development that builds educators' comfort and confidence in utilizing agricultural content to enhance their curricula.

ULI KOESTER***Executive Director, Midwest Food Connection***

Uli taught for six years in the Minneapolis Public Schools before starting full-time work for the Midwest Food Connection. Now its executive director, Uli continues to teach classroom lessons, leads a staff of educators, and partners with schools, organizations and sponsoring businesses in the community. The Midwest Food Connection sends educators into K-8 classrooms to teach about nutritious, and often local, foods while highlighting the foods' cultural origins. Lessons are also designed to teach about the benefits of organic agriculture and gardening. Uli was one of the founders of the Minnesota Schoolyard Garden Coalition and currently serves on its Stewardship Team.

SUE LETOURNEAU***Senior Project Manager, Blue Cross and Blue Shield of Minnesota (BCBS) Center for Prevention***

As Senior Project Manager, Sue is a member of BCBS's Healthy Eating Team. She provides statewide leadership in several healthy eating-related issues, including serving as a drafting committee member of the Minnesota Food Charter Schools Leader Guide.

LYNN OLSON***Hennepin County Extension Master Gardener Program Volunteer***

Lynn has been a Master Gardener volunteer for more than ten years and serves as the school garden lead for Hennepin County Master Gardener volunteers.

MARNIE PEICHEL***Clara Barton Open School Garden Co-Coordinator***

Marnie is a parent in the Barton Open School community. A vegetable and native plant gardener at home, she loves to bring others into experiencing nature through gardening. She began by helping to start a community garden in her neighborhood and then moved on to the more challenging task of creating a school garden.

Marnie's architectural design background, a love of hands-on projects, the desire to bring good food to people and the joys of living with nature are what keep her working to make this garden strong. The reward is seeing the kids poke around to study the sunflower seeds in their heads, find out just how a bean actually grows, or be able to taste a juicy cherry tomato fresh off the vine.

KRISTEN POPPLETON

Director of Education, Will Steger Foundation (WSF)

Kristen began her work with the Will Steger Foundation as a participant in the first educator Summer Institute in 2006 and has authored several of WSF's curricula resources. Kristen oversees WSF Education Program, including curriculum and professional development, funding and partnerships. Kristen holds an M.Ed. in Environmental Education and a M.S. in Conservation Biology from the University of Minnesota.

MARY ROGERS, PH.D.

*Assistant Professor, Sustainable and Organic Horticultural Food Production Systems, University of Minnesota
Department of Horticultural Science*

Mary's lab investigates sustainable strategies to improve production of vegetables and fruit, including microclimate and season extension techniques, fertility management, plant defensive compounds, and ecological pest management of insects. Mary teaches classes in organic horticulture, vegetable production and urban agriculture. Her background includes extension programming and training for beginning farmers.

MELANIE SANCO-GOOCH

Director, Resource Development and Innovation, Minneapolis Public Schools (MPS)

Melanie has worked in various development capacities since the mid-1980s. In her current position at MPS, she leads a team of development professionals who together raise more than \$25 million each year in support of schools, departments and district initiatives.

ANNE SAWYER

Ph.D. Candidate in Land and Atmospheric Science, Dept. of Soil, Water, and Climate, University of Minnesota

Anne has an M.S. in Watershed Science from Colorado State University and a B.A. in Geology from Carleton College. Her current research examines nitrogen and phosphorus nutrient requirements in switchgrass grown for biofuel. She is also characterizing microbial populations in the switchgrass rooting zone using DNA analyses. Anne is a Master Gardener volunteer in Rice County, where she and her husband have a small hobby farm and grow organic veggies and raise chickens and pigs.

KATHERINE SIMON, REHS

Food Inspection Supervisor, Minnesota Department of Agriculture (MDA)

Katherine received a B.S. in Animal Science from Iowa State University and began her career in food safety as an inspector for the U.S. Department of Agriculture Food Safety Inspection Service. She transitioned to the MDA in 2007 to work as an area food inspector for retail and manufactured foods before assuming her current role.

CHRIS TOWER

5th Grade Teacher, Concord Elementary School, Edina

Chris has been teaching 4th and 5th grade for 21 years in the Eagan and Edina Public Schools. He has also served as Director of Distance Learning at the Bell Museum of Natural History at the University of Minnesota, where he provided professional development for teachers throughout the state of Minnesota. He has produced and directed two distance learning science programs: the JASON Project and BellLive. These programs focused on water ecology and Minnesota ecosystems.

At Concord Elementary School in Edina, Chris has established eleven raised garden beds, three handicap-accessible gardens, and a rain garden, with the help from students, families and community organizations. He has also consulted with others on rain gardens and schoolyard gardens.

In 2012, Chris received the National Science Teachers Association's Sylvia Sgrue Award for the best elementary science lesson plan, which surrounded his work in his schoolyard garden.

TIM UHLENKAMP

Agricultural Educator, Sibley East

Tim is a graduate of the University of Minnesota-Twin Cities. He has taught at Sibley East for 11 years and believes strongly in hands on education and the importance of agriculture in our rural communities.

KA VANG***School Social Worker, St. Paul City School***

Ka has been a school social worker at St. Paul City School for the last seven years. Her interest in school gardens began with a couple of middle school students who wanted to learn more about gardening. This developed into an after-school/summer club where students were able to prepare and plant their own garden at school. Through contact with the Ramsey County Extension Master Gardener Volunteer Program, Ka and her colleagues were able to connect with the Arboretum to offer a children's program where our students can get hands-on experience with building a garden and learning about nutrition.

LESLIE YETKA***Education Manager and Extension Educator – Horticulture***

For the past twenty years, Leslie has focused on plants, native plant communities, habitat restoration, sustainable landscape practices, and water resource management and protection. She has worked primarily for local government, managing upland and water resources, and promoting the use of green infrastructure (plants and soil) over gray infrastructure (concrete) to protect our environment. More recently, she has been developing and implementing education programs on topics related to sustainable landscape practices and clean water at multiple scales (residential to city-wide) for a variety of audiences, including citizens, community groups, technical/industry professionals, municipal staff, and local decision-makers.

At the Arboretum, Leslie is managing education programming and developing new education opportunities related to horticulture, with a focus on the idea that healthy plants are a critical piece of our green infrastructure – necessary for maintaining healthy soil, clean water, healthy landscapes, greener communities, and ultimately a healthier planet.

Leslie has a B.S. in Biology from Macalester College and an M.S. in Horticulture with a minor in Water Resources Science from the University of Minnesota.

PRESENTATION SUMMARIES – FRIDAY**PLENARY SESSIONS*****Keynote: Getting Everyone Outside in the Garden******Arden Bucklin-Sporer, Executive Director, Education Outside***

A schoolyard garden offers a world of learning that reaches beyond and endures longer than any growing season for our children. Several studies suggest that school gardens and outdoor classrooms enhance student achievement, especially in elementary education. As a form of environmental education, gardening has been shown to improve performance in math, science, writing, social studies, and overall attitudes toward learning. Our schoolyard gardens are living laboratories and libraries with potentials from which we have just begun to draw.

Arden will offer multiple-value arguments for why gardens are important in every school. Drawing from more than 20 years of developing school-based gardens for every age, Arden will provide research-based support showing that gardens provide a space for students to reconnect to the landscape around them. Arden will detail how all curricula, from math to literature, can be enriched by using the garden as a central resource and not an additional feature. She will share stories of effective ways in which gardens teach students about agriculture, how to use them to nourish ourselves, why they are important in understanding our roles in stewardship, and how they let us all gain an appreciation for the natural systems that support life on our planet.

Minnesota Food Charter Schools Leader Guide: A Tool for Advancing School Gardens at Local and State Levels***Lisa Gemlo, Food Systems Planner, Minnesota Department of Health******Tim Kenny, Director of Education, Minnesota Landscape Arboretum******Sue LeTourneau, Senior Project Manager, Blue Cross and Blue Shield of Minnesota Center for Prevention***

Presenters will introduce the Minnesota Food Charter and its companion document, Minnesota Food Charter Schools Leader Guide, and demonstrate how these tools can help advance the work of school gardens at school, district, and state levels for many types of educational decision-makers. Participants will explore how they can use the Schools Leader Guide to advance their own school gardens work and galvanize statewide policy and systems changes that benefit school gardens as a key part of student health and learning.

Cooking and Eating from the Garden

Jenny Breen, Chef and Nutrition Educator

This presentation will demonstrate how to use the garden to prepare simple, delicious and intriguing foods that engage students as they prepare, taste and talk about real food from the earth.

Square Foot and Vertical Growing: Methods for Engaging Youth in Gardening

Joan James, Owner and Managing Director: A Backyard Farm, LLC

Square Foot Gardening is a method of growing food developed by retired engineer Mel Bartholomew more than 30 years ago. A Backyard Farm has finely tuned these methods, which are efficient at solving the number-one problem faced by urban growers: how to get high production levels out of a small space. Square Foot Gardening also provides a structure conducive to teaching youth and new gardeners. Lecture and handouts will describe techniques for proper soil composition, raised bed use, succession planting, three-season harvesting, vertical growing, and strategies for youth engagement and curriculum.

CONCURRENT SESSIONS

Curriculum Connections

Hands-on Garden Activities that Cultivate Academic Achievement

Sue Knott, Education Specialist, Minnesota Agriculture in the Classroom

“To forget how to dig the earth and to tend the soil is to forget ourselves.”

– Mahatma Gandhi

Discover how digging the earth and involvement in a school garden can help students achieve Minnesota’s K-12 academic standards! Workshop participants will complete a variety of garden-based, hands-on activities applicable to a wide range of learners. These lessons will serve as a starting point for educators to brainstorm opportunities to use school gardens of any size as a vehicle for contextualizing learning in social studies, language arts, math and health/nutrition. FREE resources and lessons demonstrating the connection between core curricular concepts and school gardens and agriculture will be shared.

Garden Evolution/Classroom Revolution: Taking FOSS Science Kits into the Garden

Chris Tower, 5th Grade Teacher, Concord Elementary School, Edina

Elementary teachers already using the FOSS Hands-on Science program will come away with ideas on how to adapt the curriculum for use in the schoolyard garden. For teachers who do not yet use FOSS curriculum, the lesson adaptations are very transferable to any environmental /outdoor science program.

The main FOSS modules that will be addressed will include:

FOSS Environments (grade 5 & 6)

FOSS Variables (grade 5 & 6)

FOSS New Plants (grade 2 & 3)

Other FOSS Modules with connections:

FOSS Insects & Plants (grade 2 & 3)

FOSS Living Systems (grade 5 & 6)

A variety of additional lessons and activities that support FOSS will also be presented.

Gardens as a Tool for Observing a Changing Climate

Kristen Poppleton, Director of Education, Will Steger Foundation

The Will Steger Foundation’s Minnesota’s Changing Climate Curriculum offers grades 3-12 educators the opportunity to teach about climate change in a place-based, experiential and interdisciplinary manner. The curriculum offers many opportunities to take students outside and presents an excellent way to integrate climate change into a schoolyard gardening experience.

Field to Fork in The Classroom

Leah Bott, Agriculture, Food and Natural Resource Teacher; Coordinator, Statewide Health Improvement Program

Where is our food grown? How? Why? How is it processed? How do the food choices we make every day impact our health and wellness? What are the options? Asking these questions of students often leads to a vague understanding of

the field-to-fork continuum. Through hands-on activities you can educate and engage students not only in the school garden and the value of growing food, but to the practice of preservation, processing and preparation. Courses, units, and lessons focusing on the entire process from Field to Fork can provide students with the knowledge and skills necessary to improve health and empower them to make sound food choices. Resources, lessons, activities and recipes will be shared.

Resources for Program Sustainability

Nonprofit and School Partnerships for School Gardens

Marnie Peichel, Clara Barton Open School Garden Co-Coordinator

Uli Koester, Executive Director, Midwest Food Connection

Randy Gage, Manager of Youth Education, Minnesota Landscape Arboretum

Ka Vang, School Social Worker, St. Paul City School

Panelists will discuss roles, responsibilities, structures, and benefits of partnership around school yard gardens. The panelists represent a partnership of Hmong International Academy Children's Garden in Residence, which is a summer garden program hosted by a Minneapolis Public School (Hmong International Academy), a youth-serving nonprofit enrichment program (Beacons, YWCA), and the Minnesota Landscape Arboretum's Urban Garden Program. The panel will explore ways to leverage community partnerships to create and deliver a schoolyard garden program.

Partnering with Master Gardeners

Lynn Olson, Hennepin County Extension Master Gardener Volunteer

A partnership with a Master Gardener volunteer can enhance your school garden. Come to hear a short informational session about things that you should know before requesting a Master Gardener volunteer and what benefits a Master Gardener volunteer can offer to a link with your organization. We will have plenty of time for discussion.

Fundraising for School Gardens

Melanie Sanco-Gooch, Director, Resource Development and Innovation for Minneapolis Public Schools

Securing the funds you need to launch and sustain a schoolyard garden is challenging for many schools. At this workshop you will learn about who has what kind of resources, and you will receive information and tools to help you create a multiple-year development plan, organize donor research, and evaluate funding opportunities. You will receive a variety of "how-to" briefs that spell out implementation steps for popular fundraising activities and events. Fundraising has the potential to bring together important stakeholders across communities and build relationships for impact that goes beyond the garden itself. This workshop will support you to align the goals of your schoolyard garden to leverage contributions from your local philanthropic community.

How to Set Up a Summer-Only Garden Program

Randy Gage, Manager, Youth Education, Minnesota Landscape Arboretum

One of the difficult questions to address with schoolyard gardens is what to do when school's out for summer. Great opportunity for garden-based learning exists during the warm months of summer. What is needed to establish a gardening program that takes advantage of the prime growing months and the presence of a schoolyard garden? Community partnerships can help to turn the schoolyard garden into a powerful place for learning during the summer.

Schoolyard Gardens 101

Preview of School Garden 101

Mary Cichon, Hennepin County Extension Master Gardener Volunteer

School Garden 101 is a 4-week course for staff/teachers who work with school gardens. The course was developed by extension staff in Maine, then shared in Minnesota statewide through video and support from Master Gardener volunteers in four locations throughout the state. The course includes information about basic topics of soil, compost, seeds and seedlings, and needs of plants that apply to all types of gardens, including rain, vegetable, and pollinator gardens. The course also offers staff lesson plans for students and some insightful questions to use in planning the garden. A short presentation will include video on one topic, a lesson plan for students on that topic, and planning questions. There will be ample time for questions and discussion.

An Analysis of Food Safety Risks in the School Garden

Katherine Simon, REHS, Food Inspection Supervisor, Minnesota Department of Agriculture

A hands-on workshop to identify and discuss food safety risks related to your individual school garden. This is an opportunity to identify options for managing risk through operational and process choices.

Succeeding with a New School Garden: Case Studies from 30 Minnesota Schools

Galen Erickson, Director, Jeffers Foundation

Dar Fosse, Director, Jeffers Foundation

In 2013, Jeffers Foundation initiated the program “A Garden 4 Every School” and worked with 15 schools in Minnesota who had in place successful school garden programs. Using their experiences, they developed an online “One Stop School Garden Resource Center,” featuring the best practices from each of these schools (jeffersfoundation.org).

In 2014, Jeffers Foundation awarded 15 School Garden Grants to schools wishing to start a school garden program. Based on the experiences of the 15 schools who started new school gardens, the website was expanded to include case studies from each of these schools, along with additional resources that will be made available to all schools in Minnesota and surrounding states.

In 2015-16, Jeffers will award \$10,000 in School Garden Grants to schools in Minnesota.

Building Support for Your Garden: A Strategic Effort

Tim Kenny, Director of Education, Minnesota Landscape Arboretum

Leslie Yetka, Education Manager and Extension Educator – Horticulture

Involving key stakeholders in your school garden effort is essential for garden sustainability. Strategically engaging them will save your team time and energy. In this interactive session, Tim will model a power-and-interest grid tool for your garden team to use to identify key stakeholders and change agents with the most capacity to help your school garden effort. Leslie will show you how to use that information to frame your message to these essential constituents in a way that will be appealing, invitational, and engage them in your school garden.

Horticulture Best Practices

Healthy Plants in Your School Garden

Anne Sawyer, Ph.D. Candidate, Department of Soil, Water, and Climate, University of Minnesota

Plants need three major nutrients to grow and thrive: nitrogen, phosphorus, and potassium. Fertilizers supply these nutrients and more, but with so many to choose from, how do you know which fertilizers to use, and when? This session will explore differences between organic and synthetic fertilizers and discuss how each affects plant health over the course of a single season or many years. Take the guesswork out of fertilizing and learn how to make informed decisions about plant nutrient needs in your school garden.

Garden & Landscape Plant Selection: Heirloom, Native, or Hybrid

Jim Calkins, Ph.D., Horticulturist; Research Information Director, Minnesota Nursery & Landscape Association

For nearly 12,000 years, human beings have been selecting and modifying plants for their own purposes and benefit relative to their food, fiber, landscaping, and other needs. Beginning with native plants and leading to the domestication and cultivation of certain native species and the introduction of non-native species, plants have played a central role in human history and the success and survival of the human species – and continue to play an essential role in the daily lives of people worldwide.

Learn the significance of terms like genus, species, variety, and cultivar, and the comparative differences, advantages, and disadvantages associated with native, introduced, heirloom, hybrid, and genetically modified plants. Teachers and students need solid, science-based information to separate myth from fact, inform plant selections, and understand how plant choices can impact things like the environment, production requirements, maintenance, yield, quality, pest susceptibility, seed saving, and harvest time.

The Good, the Bad and the Bugly: Fun Ways to Teach Pest Management in the Garden and Classroom

Mary Rogers, Ph.D., Assistant Professor, Department of Horticultural Science, University of Minnesota

Learning entomology can be fun! We will go over simple ways to teach kids how to distinguish “good” from “bad” bugs in the garden, how to teach kids to be “plant detectives” and look for signs and symptoms of pest problems, and identify

some chemical-free, safe ways to save plants from pesky insects while providing homes for the good bugs. We will also explore some simple experiments that can be performed in the classroom or garden to teach about principles of insect pest management and biological control. We will focus on insects found in vegetable gardens in northern climates.

Those Wascally Weeds: How to Control and Prevent Common Garden Weeds

Lynne Hagen, University of Minnesota Extension Master Gardener Volunteer Program Coordinator

Weeds can be “wascals” and sometimes a real chore to keep out of the garden. Some weeds are annuals and are easily controlled by pulling, others are perennial and persistent – they regrow almost every time you hoe them out! Learn which weeds are the toughest “wascals” and what options you have for getting them out of your school garden safely and effectively. Weeding time can also be turned into eating time when you learn which of the common garden weeds are actually edible, making weeding...weeding with benefits.

Special Topics

Growing School Garden Success with Farm to School

Zoe Hastings, Farm to School Coordinator at the Minnesota Department of Agriculture

Learn how building partnerships between the school garden, classroom, and cafeteria can enrich the connection youth have with healthy food and local producers! Participants will explore the big picture of farm-to-school and the benefits of framing gardens as a farm-to-school initiative. Delving deeper through hands-on activities, including a taste test, participants will brainstorm ways to sustain their school garden through partnerships with the school meal program and build on their garden momentum to initiate and expand local food offerings in the cafeteria. Free resources and opportunities will be shared, including grants, educational materials, and training from the Minnesota Department of Agriculture and other state and national farm-to-school supporters.

Growing a Garden: From Field to Table

Tim Uhlenkamp, Agricultural Educator, Sibley East

Jeff Eppen, Agricultural Educator, Sibley East

Sibley East Agriculture Education has been growing a two-acre garden that goes directly into the school lunch program and the community for the past five years. This program has evolved every year to fit the community, school and agriculture program.

Hydroponics In (and Out of) the Classroom

Larry Cipolla, Vice President, CCI Surveys; Hennepin County Master Gardener Volunteer

Grow vegetables and herbs during the school year (and year-round). Hydroponic gardening is a water-based medium that is easy to set up and maintain. Selected benefits include no soil, a “clean” growing environment, low maintenance, no weeding, minimal one-time costs, continuous-successive harvests, the opportunity to integrate textbook learning with experiential learning within the classroom, harvesting, and on-site food preparation. Hydroponic gardening is an easy way to involve students and teachers without having to worry about weather conditions, poor soil, insects, and other critters. Space requirements are minimal: you can grow 36 plants on a 30”x 60” table/floor/footprint.

SATURDAY, FEBRUARY 28

PRESENTER BIOGRAPHICAL SKETCHES

JEAN LARSON, PH.D.

Manager, University of Minnesota Nature-Based Therapeutic Services, Minnesota Landscape Arboretum

Jean has a Ph.D. in Education with an emphasis in Therapeutic Recreation and a minor in Integrative Medicine from the University of Minnesota. She is also an assistant professor at the University’s Center for Spirituality and Healing, where she teaches seven courses: Introduction to Therapeutic Horticulture, Introduction to Therapeutic Landscape Design, Applications in Therapeutic Horticulture, Animals in Healthcare, Introduction to Nature-Based Therapeutics, Horse as Teacher: Equine-facilitated Interactions and Walking into Wellbeing. She is a Certified Therapeutic Recreation Specialist, a Registered Horticultural Therapist, and has a certificate in disability services and administration from the Institute of Community Integration. Jean’s work has taken her to Japan, England, Sweden, Norway, Taiwan and Israel.

HEATHER G. BENSON

Program Specialist, University of Minnesota Nature-Based Therapeutic Services, Minnesota Landscape Arboretum

Heather began her work with the University of Minnesota in the spring of 2014 and coordinates nature-based recreation programs for the Northeast Metro Intermediate School District 916. Her background is in environmental education and farming. In 2007, she created a therapeutic horticulture program for elementary-age students at the Tenderloin Community School in San Francisco, California.

KAREN DEPRATTO

Youth Development Coordinator, Minnesota Landscape Arboretum

Karen oversees the integration of college and career programming into the Arboretum's Urban Garden Program. She has participated in Arboretum programs since the age of 14, and she now plays a key leadership role in the Urban Garden Program she grew up with as a teenager. Karen is the first in her family to graduate from college and is currently finishing a Master's Degree in Youth Development at the University of Minnesota.

DEBORAH FOYE

Nutrition Services Coordinator, Nay Ah Shing Schools on the Mille Lacs Band of Ojibwe Reservation

Deborah Foye grew up in central Minnesota, on a farm where gardening was a necessary part of life. She graduated from two culinary foods programs and has worked in restaurants, hotels, resorts, etc. since 1980. She has served as the Nutrition Services Coordinator for the Mille Lacs Band of Ojibwe for 22 years and started the gardens in 2009 as a way to teach the students more about where their food comes from and what is involved in getting it to them.

TOM FRERICKS

5th Grade Teacher, Silver Bay Schools

Tom grew up on the North Shore of Lake Superior and graduated from William Kelley Schools in Silver Bay. He has taught and coached for more than 30 years, 21 of which have been in Silver Bay. Currently he teaches 5th grade and serves as the school-forest and school-garden coordinator for both the elementary and high schools. The question most asked by Silver Bay residents (and, of course, his principal) is, "What is he up to now?"

RANDY GAGE

Manager of Youth Education, Minnesota Landscape Arboretum

Randy Gage leads the Arboretum's Youth Education Program, which includes on-site field trips, Plantmobile outreach, summer day camps and the children's garden, as well as the Summer Urban Garden Program. The youth education team designs and implements hands-on plant science programs at the Arboretum, in area schools, and in the local community. The work includes developing standards-based programming that uses plants and gardens as tools, building partnerships with schools and community organizations, and reaching out to underserved audiences.

CATHY HELLER

Media Specialist, Edina South View Middle School

Cathy has been the South View Media Specialist for 19 years. She has been a resource person for all curricular areas and has developed numerous successful projects including Cyber Cafe, an after-school social program for kids, and a science-based workshop taught by Life Labs, called "Our Growing Community," for staff interested in garden classrooms. She is an out-of-the-box creative thinker and continues to pursue the idea of non-traditional educational experiences for students.

BONNIE LOHMAN

Garden Specialist, Blooming Heights Edible Schoolyard

The Blooming Heights Edible Schoolyard is a district-wide school garden located in the Columbia Heights Public School district. Bonnie has a degree in Horticulture, a Minnesota teaching license in Agricultural Education, and she is currently working towards an M.Ed in Agricultural Education. She is also an Extension Master Gardener Volunteer.

MARY HOCKENBERRY MEYER, PH.D.

Professor and Extension Education, Department of Horticultural Science, University of Minnesota

Dr. Meyer is responsible for the development and coordination of statewide multi-media educational programs in environmental and consumer horticulture, including sustainable home landscapes. She joined the Horticultural Science faculty in 1994 and has primarily an Extension/outreach and research appointment. Her research interests include native

and ornamental grasses and sedges and she has studied the propagation and production of grasses including cold hardiness, and low-maintenance sustainable landscaping and alternative low-maintenance turfgrasses. Dr. Meyer manages the North American Plant Collections Consortium Ornamental Grass Collection at the Minnesota Landscape Arboretum.

From 1993 to 2007, Dr. Meyer was the State Coordinator for the University of Minnesota Extension Master Gardener Volunteer Program. For two years, 2008-2010, Dr. Meyer was the Interim Director of the Minnesota Landscape Arboretum. She is one of the coordinators for the North Central Consumer Horticulture IPM Working Group that produces regional webinars and creates online learning modules through eXtension. From 2013 to 2014, Dr. Meyer was President of the American Society of Horticultural Science, and she is the author of *Ornamental Grasses for Cold Climates*.

REBECCA MINO

Cooking and Wellness Program Manager, Urban Roots

Rebecca has worked at Urban Roots since 2013, as the Cooking and Wellness Program Manager, sharing her passion for food with the youth interns and community members. She teaches cooking skills that utilize garden produce, food preservation and healthy eating habits. Rebecca earned a Master's degree in Community Food & Agricultural Systems from Michigan State University and has been actively engaged with many groups to promote healthy food access, especially through the acceptance of food-assistance benefits at farmers markets.

SELIESA (SIL) PEMBLETON

Education Director, Jeffers Foundation

As a secondary science teacher for 13 years, Sil taught with the philosophy that science is an exciting process of making discoveries about the natural world. When living in Washington, D.C., she was based at the Smithsonian Institution, writing and field-testing hands-on elementary science curricula for the National Academy of Science. For 10 years she served as Director of Environmental Studies at Hard Bargain Farm, a residential ELC facility on the banks of the Potomac River, teaching everything from watershed ecology, to canoeing, to cow milking – and helping children discover where their food comes from.

Sil has been invited to Japan several times to teach environmental education “American style” and has authored two natural history books for children, *The Pileated Woodpecker*, and *The Armadillo*. Currently she serves as the Director of Educational Programs for Jeffers Foundation, is adjunct faculty at Hamline University – and plants a vegetable garden each spring.

XAVIER PORTER

Youth Educator, Minnesota Landscape Arboretum

Xavier has been growing as a youth and garden-program participant since 1996, and in his current role as youth educator, he leads and facilitates Plantmobile and field trip programs at the Arboretum. He also facilitates the Smart Snacks program, working with a team who installs pop-up gardens at various non-profit organization sites throughout Minneapolis.

JASON REESE

Garden Coordinator, Social Studies/Ag Econ Instructor, West Education Center - Minnetonka

Jason has a B.S. in Agricultural Economics and Anthropology and an M.Ed. in Social Studies Education, from the University of Minnesota. Jason also worked as a produce buyer and stocker at Linden Hills Co-op from 2003 to 2010, where he formed relationships with local farmers. Further, Jason regularly collaborates with Stone's Throw Urban Farm and has volunteered at their gardens since the business's inception.

DAVID RITTENHOUSE

Conservation Program Manager

David leads youth on conservation projects ranging from habitat restoration, rain gardens to educating the community about their local parks. While obtaining a biology degree from the University of Minnesota, David worked as an environmental educator at the Bell Museum. After graduating, David gained experience in the field as an Americorps member for the New Hampshire and Minnesota Conservation Corps.

Note: Urban Roots interns go to school at Johnson and Harding High Schools.

KIRSTEN SAYLOR

The Worm Lady for the Hiawatha-Howe School Garden Team

Kirsten is a parent and member of the Hiawatha-Howe Elementary School PTO's School Garden Team. Kirsten has had a worm bin in her home for years and has helped others get started as well. In 2013 Kirsten worked with fellow parents to start a long-awaited garden on the Howe campus in 2014. After attending the School Garden 101 session by Master Gardeners at last year's Schoolyard Gardens Conference, we constructed worm bins for each class.

ERIN MCKEE VANSLOOTEN

Farm to Institution Senior Program Associate, Institute for Agriculture and Trade Policy (IATP)

Erin joined IATP in 2010. Her current projects focus on Farm to School and Farm to Childcare, getting fresh healthy produce from our local growers into school and childcare meals, and testing and promoting curricula and educational models that encourage food literacy as children make the connection between those locally grown foods and the farmers who produce them.

Erin especially appreciates the opportunity to work with partners to advance the farm-to-institution cause both locally and nationally, and is a member of the Minnesota Farm to School Leadership Team, the Minnesota Child Nutrition Advisory Group, the School Food FOCUS Upper Midwest Learning Lab, and the National Farm to Preschool Subcommittee, and is currently helping to start a Minnesota Farm to Childcare Coalition.

BRIAN WHEAT

Biology and Food Science Instructor, Edible Schoolyard Coordinator

Brian serves as the Schoolyard Garden Coordinator and Facilitator in addition to teaching biology and food science. Brian studied Botany at SUNY-Oswego and at The University of Tasmania, received his M.Ed. at the University of Buffalo, New York, and has attended the Edible Schoolyard Academy in Berkeley, California. He and his team presented on building community and sustainability in an alternative school setting at the 2014 Schoolyard Gardens Conference.

AMY M. WYANT

Health Educator, Aitkin County Health and Human Services Public Health Unit; Statewide Health Improvement Program (SHIP) Coordinator, Aitkin County

Amy is a task force member of the Aitkin County Rural Aging Initiative and serves on the Aitkin-Itasca-Koochiching Community Health Services Local Public Health Assessment and Planning Process team. For 20 years, she worked as a high school German teacher and had a part-time career as an international tour director. During this time, she planned, promoted and managed fourteen tours to Mexico and to several countries in Europe.

Amy received an undergraduate degree in Education and German from the University of Minnesota-Duluth, a Master's Degree in Education-Curriculum and Instruction from the College of St. Scholastica, a German-language certificate from the Goethe Institute in Murnau, Germany, and an Institute for Executive Director Leadership Certificate from the University of St. Thomas.

PRESENTATION SUMMARIES – SATURDAY

PLENARY SESSIONS

Keynote

Gardening Is Good Therapy – And You Get Tomatoes

Jean Larson, Ph.D., Manager, U. of Minnesota Nature-Based Therapeutic Services, Minnesota Landscape Arboretum

Schoolyard gardens provide experiential learning opportunities that enhance children's essential academic skills. In this address, Dr. Larson will present the latest research demonstrating another benefit: how exercise in an outdoor schoolyard garden doubles the benefits for children.

Studies show that exercise in outdoor, plant-rich environments fully engages the brain in complex and varied motion, strengthens muscles, boosts serotonin levels, focuses the attention of children with attention-deficit hyperactivity disorders, and helps children simply cope with the everyday demands of student life. Dr. Larson will help you build the case for establishing a schoolyard garden, not only for the cross-over between academic subjects, but also for social and

emotional learning opportunities. She will provide essential evidence to build support and legitimacy for school gardens as an important part of every school's whole-child approach to learning.

Youth Voices: Inspiration and Call to Action – Panel Discussion

Karen DePratto, Youth Development Coordinator, Minnesota Landscape Arboretum

Karen will moderate a discussion among youth and young adults who will share personal stories about the impact of garden programs on their lives.

CONCURRENT SESSIONS

Youth Voices

Growing to College and Career

Karen DePratto, Youth Development Coordinator, Minnesota Landscape Arboretum

Randy Gage, Manager of Youth Education, Minnesota Landscape Arboretum

How can a garden program be a gateway to college and career for participants without a family history of college education? We will share the barriers to higher education that we found through our literature review and discuss how we address these barriers by integrating college and career programming into the garden program.

Cultivating the Next Generation: Stories from a Successful Youth Engagement Model

Rebecca Mino, Cooking and Wellness Program Manager, Urban Roots

David Rittenhouse, Conservation Program Manager, Urban Roots

Urban Roots employs high school students on Saint Paul's East Side in education, job training, and action projects that provide service to the community and develop young leaders while improving the environment and the health of the community. Using a youth-development framework and a progressive program model, the organization creates intentional opportunities and structure to help teens build important job and life skills. Learn how they use paid employment opportunities to engage youth in environmental stewardship of their local parks and their food system by using hands-on experiences in gardening and cooking. In this session you will hear from Urban Roots staff and interns about a dynamic model – what works and what doesn't for engaging with schools, local organizations, and communities.

Innovative Case Studies/Successes

The Mad Scientist in All of Us: What's Your Next Creation?

Tom Frericks, 5th Grade Teacher, Silver Bay Schools

In this session I hope to reveal to you the established environmental venues available to students and teachers at our Silver Bay schools, the ways we integrate these venues into the Common Core State Standards and, finally, to inspire you to become that "mad scientist," to explore and learn with your students in creating your own environmental landscape.

Farm to Classroom in Five years and Twenty-four NutriMan Programs – The Story of the Little Garden that Could and the People Behind this Success Story

Amy M. Wyant, Health Educator, Aitkin County Health and Human Services Public Health Unit; Statewide Health Improvement Program (SHIP) Coordinator, Aitkin County

The concept is SO simple: A school garden – the experience where kids get their hands in the black dirt and truly understand where food really comes from! Seeds, sprouts, plants, produce, fresh air, sun, rain, earth. The basics. Simple concept, yes; extremely complicated process? YOU BET! Learn how this idea grew into reality over a five-year period of successes and challenges. Topics will include: strategies for incorporating change into a culture, sustainability, and making a positive, lasting impact in the lives of students. Specific programs, policies and implementation tools will be shared with attendees.

NutriMan encourages children to eat healthy foods, lead a healthy lifestyle and take care of our planet through environmental responsibility. The NutriMan Program consists of the Produce and Sensory Gardens, Apple Orchard, Adoption Program, Processing Team, K-1 Healthy Snack Program, and K-6 Minnesota Department of Plant Science Lessons.

Edina South View Middle School Garden: Grant to Growing 2014

Cathy Heller, Media Specialist, South View Middle School (SVMS), Edina

For South View Middle School, a produce garden has the potential to impact nearly every aspect of the school's learning environment. Applicable across all disciplines, students can measure, observe, grow, build, experiment and see key concepts come to life.

This potential inspired Cathy to make a dream, to create a produce garden in an under-utilized SVMS courtyard space, into a reality. By partnering with several community organizations and an 8th grade math class, SVMS was able to secure \$2,000 from the Whole Foods Whole Kids Foundation School Garden Grant to start the project in spring 2014. Garden installation was completed by May 2014. The spring/summer planting resulted in a prolific fall 2014 harvest.

Nay Ah Shing School Gardens

Deborah Foye, Nutrition Services Coordinator, Nay Ah Shing Schools on the Mille Lacs Band of Ojibwe Reservation

In 2009, a couple of teachers and I had the same idea, separately, but at the same time, to start a small school garden. I thought it would be a good way to teach the students where their food comes from, what it looks like before it comes to them in a restaurant, at home, or at school. I applied for some grants and asked local businesses for donations, as well as the Band's DNR to help jump-start the idea. I start the seeds in the classrooms with the students, and after they have germinated, I bring in homemade grow lights. The students care for the seedlings until it is warm enough to transplant them outside in the gardens. During the summer, early education, and the boys and girls club help maintain the gardens. The single seed has now grown to incorporate four beds, two grape arbors, a cucumber tunnel, a sunflower house, and several apple trees.

Curriculum Connections

K-12 Garden Curriculum Share

Bonnie Lobman, Garden Specialist, Blooming Heights Edible Schoolyard

Brian Wheat, Biology and Food Science Instructor, Edible Schoolyard Coordinator

With so many garden-based lesson plans and curricula available online and in print, it can be difficult to determine which will be the best fit for your garden and school. In this session we'll discuss what to look for in a lesson plan or curriculum, share our favorite resources and lessons, and highlight best practices and tips that we've learned along the way. If you have a lesson, curriculum or other resource that you use in your garden, we'd love to hear about it too!

Brian and Bonnie are currently members of the Minnesota Schoolyard Gardens Coalition's stewardship team.

Accessible for All: Integrating Existing Curricula to Benefit Students with Varying Abilities

Jean Larson, Ph.D., Manager, Nature-Based Therapeutic Services, Minnesota Landscape Arboretum

Heather G. Benson, Program Specialist, Nature-Based Therapeutic Services, Minnesota Landscape Arboretum

This break-out session will introduce participants to a method of connecting students to nature through the integration of existing curriculum: Project WILD, Project WET, Minnesota Agriculture, Project Learning Tree. The integrated curriculum is built on the following framework:

- Supporting four primary domains of personal growth: physical, social, cognitive and vocational.
- Including activities specifically suited to a school's nature-based resources, such as a school garden and school forest.
- Bridging the inside classroom with the outside classroom in a manner that encourages continued union of the natural world into all aspects of the students' academic lives.

Participants will come away from the session with a new understanding of curriculum development and adaptation.

Farm to School and Youth Leadership: A Perfect Match!

Erin McKee VanSlooten, Farm to Institution Senior Program Associate, Institute for Agriculture and Trade Policy (IATP)

This hands-on workshop will introduce participants to IATP's high school-level Farm to School Youth Leadership Curriculum. The curriculum is designed to empower youth, teach them about their local food system, engage them in meaningful, hands-on learning activities that also strengthen their school's Farm to School program, and link them directly to farmers in their community. Implementation of the curriculum in a high school setting simultaneously gives students ownership and commitment to their school's Farm to School program, while reducing the amount of legwork and research required of teachers or food service staff to establish or expand a Farm to School initiative. Participants will

learn the definition and benefits of Farm to School, will leave with concrete strategies to start or expand Farm to School in their own community, and will learn how to access IATP's curriculum (available to download free of charge) and other useful resources.

Horticulture Best Practices

Bring the Pollinator Story to Life for Your Students

Dr. Mary Meyer, Professor and Extension Educator, Dept. of Horticultural Science, University of Minnesota

Invite pollinator guests to your school garden – it's as easy as tucking a few annual or herb plants in your vegetable plot, by the playground, in some containers – or wherever you garden. The key to success is choosing plants that are pollinator magnets. And since these plants can be grown as annuals, you are only committing to one growing season – you can change it up next year. Dr. Meyer will provide you the ingredients (specific plant varieties), where to find the seed or plants, and how to tend them to ensure your students can go on a pollinator safari at your school.

Worms in Schools

Kirsten Saylor, The Worm Lady for the Hiawatha-Howe School Garden Team

Worms are a great way to bring a bit of spring into the school throughout the year. Children are fascinated by them and want to learn more. Learn about the journey and lessons of the Hiawatha-Howe Elementary School worms. In addition, we will make a worm bin, go through the worm lab, and share some of the tools we used for being good worm farmers.

No Soil, Early Frost . . . No Problem !

This two-part session will explore growing plants in two innovative ways: one that extends our short summer growing season, and one that solves the problem of gardening on a site with very poor soil, or no soil at all.

Part 1: Pop-Up Gardens

Xavier Porter, Youth Educator, Minnesota Landscape Arboretum

This presentation will show you how to install, plant and tend pop-up gardens for a schoolyard site anywhere there is sufficient sun to grow plants. These pop-ups can be used on sites with no garden space and are perfect when a fear of “garden commitment” is at hand, since they can be easily removed after one growing season.

Part 2: Season Extension

Larry Cipolla, Vice President, CCI Surveys; Hennepin County Master Gardener Volunteer

Larry will present growing techniques that can help you and your students can grow plants earlier in the spring, and later into the fall, by avoiding the impact of frost. Techniques include low and high tunnels.

Special Topics

Intermediate Strategies (Setting Goals and Output Maximization)

Jason Reese, Garden Coordinator, Social Studies/Ag Econ Instructor, West Education Center – Minnetonka

This session is for those with existing schoolyard gardens and garden teams who wish to improve their programs and seek more intermediate strategies for success. Managing a garden committee, setting goals, and improving collaboration with stakeholders will be reviewed. Focus will be on successful collaboration with the food service and the culinary arts department through output maximization and waste reduction. Methods for projecting, planning, season extension, and processing will also be shared.

Teaching Outdoors: Strategies for Maintaining a Positive Learning Environment

Seliesa (Sil) Pembleton, Education Director, Jeffers Foundation

Gardens are filled with delights – sights, textures, aromas, and tastes – a perfect place to help students enhance their observational skills and make connections to the natural world. But when taking students outdoors, educators worry about many management issues: preparation, behavior problems and control, safety, scheduling time in an already busy day, meeting learning objectives, dealing with the “unknowns.” In this hands-on session you will learn management tips and tricks for maintaining focus and control while using your schoolyard and garden as resources to meet your learning objectives and make learning “real” for students. Learn how Jeffers Foundation supports educators and students with professional development opportunities and educational materials. 🌻