



# MSU Extension Macomb County Green School Resources

Kristi Evans

**District Director** 



# **Our mission**

Michigan State University Extension helps people improve their lives through an educational process that applies knowledge to critical issues, needs and opportunities.



# Gardening assistance

- MSU Extension Lawn and Garden Hotline (888-678-3464), M, W, F: 9 – Noon
- Ask Extension online help
- Staffed by Horticulture educators and trained Extension Master Gardener volunteers





# Presentations on different gardening topics

- Insects and pollinators
- Basic vegetable gardening
- Integrated pest management
- Other topics too



# Smart Gardening: Don't Guess - Soil Test! Get Your Home Lawn and Garden Soil Test Today

Rebecca Finneran, Michigan State University Extension

Plant scientists know that lawn and garden plants require 18 nutrients for healthy, productive growth. Your lawn and garden "soil environment" is a reservoi that houses these nutrients, providing the platform for plant roots to acquire them. Understanding each individual plant's needs and the type of soil you have is the first step in properly managing soil fertility.

Often our lawn and garden soils are rich and productive needing little or no enhancements. Others may be poor soils or depleted, needing to be replenished. Approaching plant care without conducting a base-line soil test may put gardeners at the risk of over fertilization. This can have negative effects on plant growth as well as creating nutrient imbalances in the



um range

onment. Avoid

er our surface

what you

's provide 's ability to





# Choosing a smart site for your vegetable garden

Denise Johnson and Pamela I. Bennett, Ohio State University Extension

Selecting the optimal placement of your vegetable garden is important for success. Understanding the essential key components including sunlight, water and good soil will ensure your garden bounty. Picking fresh vegetables from your own garden or patio container can e very rewarding. In addition, you may discover new foods to add to your plate and may influence others to try new vegetables.

To the new gardener, a word of caution: start small. Consider how much time and space you have available and do not start with a garden that may be more than you can manage. Depending on the amount of space and garden, a small area with just a few plants, or a larger garden with a variety of vegetables





# Sun and water

Vegetables need sunlight in order to produce succulent fruits such as the tomatoes or fleshy stems like asparagus. Plants use sunlight to convert carbon dioxide and water into food through the process of photosynthesis. When selecting a site, find an area that gets at least eight to 10 hours of full sun per day. West or succumb to the "out of sight, out of mind" problems that south-facing sites are preferred. Vegetable production declines as sunlight decreases, yet some early season

THE OHIO STATE UNIVERSITY COLLEGE OF FOOD, AGRICULTURAL



crops such as radish or lettuce may be able to be produced in an area that receives part day of shade.

Before you select the site, observe it for a few days to determine the amount of sunlight it receives. Is there un in the early morning? Is the site in the shadow of neighboring trees, shrubs, fences or other structures' At noon, is the entire area in full sun? What are the light onditions at 2 p.m. and 4 p.m.? Take time to observe and make notes in order to locate the garden in the best area of your landscape. Keep in mind if you are observing sun patterns in winter or early spring that the sun will be more directly overhead in summer, somewhat changing where sunlight appears during the growing season.

Plants also require water for growth and food production. Locate your garden where you have access to a clean and consistent water source. You cannot depend on rain to consistently provide adequate moisture, especially when establishing young plants or during the drier part of summer. In addition, gardens



### Smart Gardening to support monarchs Duke Elsner Michigan State University Extension

The annual migratory flights of monarch butterflies ar one of the most amazing behaviors in the insect w Millions of adult monarchs from across the eastern United States and Canada overwinter at a few select forest sites in central Mexico. An alarming decline in the number of butterflies that complete this migratic in recent years has been documented. Overwintering populations during 2011-2015 averaged 25% of the 2013, was only 8% of the 2000-2005 average

A combination of natural and human-influenced factors have been linked to the drop in monarch numbers. There are fewer caterpillar host plants (milkweed) available and land development is making habitat unsuitable. Climate patterns and extreme weather such as severe droughts in the United States and unusual winter storms in Mex plans, educational programs and funding to understand the contributing factors and support monarch butterfly conservation efforts.

Although broad scale changes in certain farming Although broad scale changes in certain farming practices and managing larger propulations of monarchs, small landowners and gardeners can also have small landowners and gardeners can also have impact. Lawns, gardens and landscaping make a significant portion of "green space" in urban and residential areas. You can make monarch-friendly choices is east a selection, search advisor and cost processors. choices in plant selection, garden design and pes



flowers with nectar for the adults. Gardeners who want to help can add more flowers, including ontainer plantings. Monarch adults and caterpillar

# host plants: milkweeds





# Preparing the smart vegetable garden

Pamela I. Rennett and Denise Johnson, Ohio State University Extension

Productive vegetable gardens are based on a strong foundation, and that foundation is the soil. Healthy oils consist of different non-living mineral particles such as sand, silt and clay, as well as organic matter and iving organisms. Healthy soils provide an environmer conducive to root growth which leads to a healthy plant and fruit and vegetable production. The Smart Gardening tip sheet "Smart gardens begin with healthy



First, start with a soil test in order to know what nutrients are needed as well as the pH and organic ontent of the soil. Refer to the Smart Gardening tip sheet "Don't Guess - Soil Test!" for details on how to de a soil test. Soil tests can be purchased online at the MSU Extension Bookstore (search for E3154 at www.shop.

Once you have the results, you will know what amendments and in what proportion to add for best results in the vegetable garden. Only add the recommended amounts of fertilizer based on the soil test results. Over application of phosphorous and nitrogen fertilizers is a known contaminant of surface and ground water



soil as it is the "glue" holding all of the soil components together, providing space for oxygen and good drainage. Organic matter includes composted animal manure, channed un leaves, grass clinnings and cover crops. These capacity, and added to clay soils to improve drainage.

Organic matter is also a very important component of your

# Site preparation

If you are breaking ground for a new garden, eliminate s or weeds that might be in the planned garden are irst. One method is to remove the grass or sod by hand, This is most feasible when an instant result is needed. The sod chunks or grass removed can be added to a compost ile and re-entered to the garden system at a later time. wever, this method will also require some organic natter be added to the soil below the old turf roots

here are several methods that employ a "smothering" echnique that will accomplish this task without using hemicals. Laying down a sheet of plastic and securing with weights around the edges will effectively kill regetation beneath except for the most stubborn of perennial weeds. Another easy way to smother weeds is to place several sheets of newspaper down in the



Organic residues can easily be seen on the soil surface in the no till gardening system. As time goes on, soils should be crumbly





# **Health and Nutrition**

# Policy, System and Environment Change (PSE)

- A lasting impact on health outcomes that not only focuses on an individual, but changing the context, or conditions in the places we live, learn, work and play.
  - Example: school gardens, healthy snacks, increase recess time
  - School or classroom must have 50% of students receive free or reduced lunch

# **Direct Education**

- Six week series
  - USDA approved curriculum
  - Typically meet once a week for six weeks
  - One Time Presentation
    - Variety of topics-based off what your group would like
    - 20 minute minimum



# **PSE and Macomb County Green Schools**

- Provide coaching to aid in making changes the school is looking to improve on.
- Mini Grant Funding (\$1,000-\$1,500)
   to help make these changes
  - Garden Education
  - Fruit and Vegetables
  - Food Waste
  - Increase water consumption







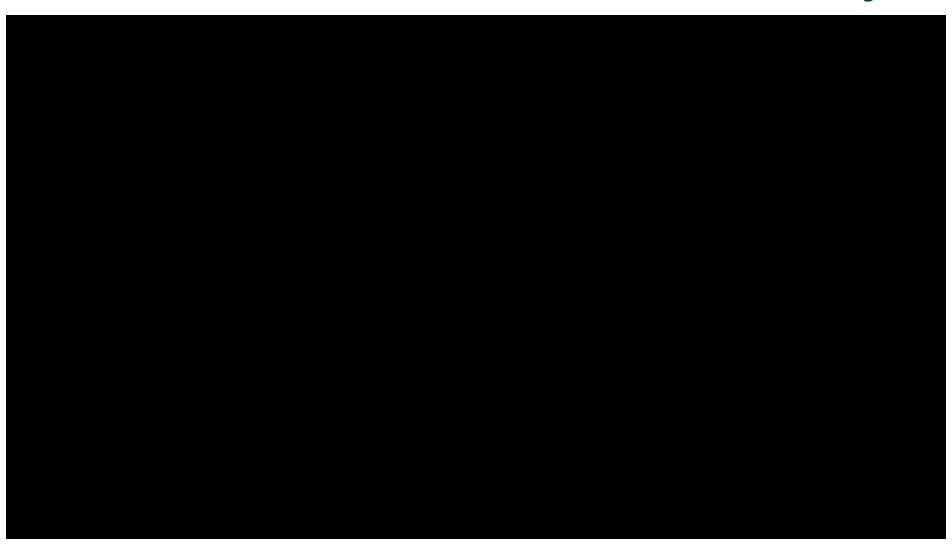








# **Brand New CGLL Website & Resource Library**





# **Great Lakes Literacy education exploration (GLLee)**

A **free** digital introductory collection of resources and partners assembled in three easy steps to help teachers and youth explore Great Lakes Literacy through place-based education and stewardship opportunities in your school and community!

Learn more: <a href="https://cgll.org/signature-program/great-lakes-literacy-education-exploration-gllee/">https://cgll.org/signature-program/great-lakes-literacy-education-exploration-gllee/</a>









# **Stay Connected:** CGLL Newsletter

Spring 2023 NEWSLETTER

Center for Great Lakes Literacy

Developing a community of Great Lakes literate educators, students, scientists, environmental professionals, and community members dedicated to improved Great Lakes stewardship.



https://www.cgll.org/connect/



# Contact:

Angela Scapini scapinia@msu.edu (586) 469-5060

# **Attention Michigan Educators!**



Want to connect your students with hands-on learning opportunities that support stewardship and address standards? Join this Great Lakes & climate change focused professional learning opportunity: the Lake Huron Place-Based Stewardship Education Teacher Summer Institute, Visit https://bit.lv/2023institute for more information.

# **Featured Story - Wisconsin**

Students collaborate to test Milwaukee-area water quality



This year, more than 300 students at six Milwaukee-area schools are investigating the importance of clean water, from our faucets to Lake Michigan.

Read More Here





# **Questions?**

**Contact:** 

msue.macomb@county.msu.edu

586-469-5180

MSU is an affirmative-action, equal-opportunity employer. Michigan State University Extension programs and materials are open to all without regard to race, color, national origin, sex, gender, gender identity, religion, age, height, weight, disability, political beliefs, sexual orientation, marital status, family status or veteran status.



n accordance with Federal law and U.S. Department of Agriculture (USDA) civil rights regulations and policies, this institution is prohibited from discriminating on the basis of race, color, national origin, sex, age, disability, and reprisal or retaliation for prior civil rights activity. (Not all prohibited bases apply to all programs.)

Program information may be made available in languages other than English. Persons with disabilities who require alternative means of communication for program information (e.g., Braille, large print, audiotape, and American Sign Language) should contact the responsible State or local Agency that administers the program or USDA's TARGET Center at (202) 720-2600 (voice and TTY) or contact USDA through the Federal Relay Service at (800) 877-8339.

To file a program discrimination complaint, a complainant should complete a Form AD-3027, USDA Program Discrimination Complaint Form, which can be obtained online, at <a href="https://www.usda.gov/sites/defaull/files/documents/ad-3027.pdf">https://www.usda.gov/sites/defaull/files/documents/ad-3027.pdf</a>, from any USDA office, by calling (866) 632-9992, or by writing a letter addressed to USDA. The letter must contain the complainant's name, address, telephonen number, and a written description of the alleged discriminatory action in sufficient detail to inform the Assistant Secretary for Civil Rights (ASCR) about the nature and date of an alleged civil rights violation. The completed AD-3027 form or letter must be submitted to USDA by:

# mail:

U.S. Department of Agriculture Office of the Assistant Secretary for Civil Rights 1400 Independence Avenue, SW Washington, D.C. 20250-9410; or

# fax:

(833) 256-1665 or (202) 690-7442:

# email:

program.intake@usda.gov.

This institution is an equal opportunity provider.

onforme a la ley federal y las políticas y regulaciones de derechos civiles del Departamento de Agricultura de los Estados Unidos (USDA), esta institución tiene prohibido discriminar por motivos de raza, color, origen nacional, sexo, edad, discapacidad, venganza o represalia por actividades realizadas en el pasado relacionadas con los derechos civiles (no todos los principios de prohibición aplican a todos los programas).

La información del programa puede estar disponible en otros idiomas además del inglés. Las personas con discapacidades que requieran medios de comunicación alternativos para obtener información sobre el programa (por ejemplo, Braille, letra agrandada, grabación de audio y lenguaje de señas americano) deben comunicarse con la agencia estatal o local responsable que administra el programa o con el TARGET Center del USDA al (202) 7720-2800 (voz y TTY) o comunicarse con el USDA a través del Servicio Federal de Transmisión de Información al (800) 877-8339.

Para presentar una queja por discriminación en el programa, el reclamante debe completar un formulario AD-3027, Formulario de queja por discriminación del programa del USDA, que se puede obtener en línea en

https://www.usda.gov/sites/default/files/documents/ad-3027s.pdf en cualquier oficina del USDA, llamando al (866) 632-9992, o escribiendo una carta dirigida al USDA. La carta debe contener el nombre, la dirección y el número de teléfono del reclamante, y una descrioción escrita de la supuesta acción

discriminatoria con suficiente detalle para informar al Subsecretario de Derechos Civiles (ASCR, por sus siglas en inglés) sobre la naturaleza y la fecha de la presunta violación de los derechos civiles. La carta o el formulario AD-3027 completado debe enviarse al USDA por medio de:

# correo postal:

U.S. Department of Agriculture Office of the Assistant Secretary for Civil Rights 1400 Independence Avenue, SW Washington, D.C. 20250-9410; o'

# fax:

(833) 256-1665 o' (202) 690-7442;

# correo electrónico:

program.intake@usda.gov.

Esta institución ofrece igualdad de oportunidades.