West Virginia University
Organic Research Farm

WVU Organic Farm Field Day and 20th Anniversary Celebration Program

Saturday, August 24, 2019

Thank you for joining us and welcome to the West Virginia University Organic Research Farm! Since 1999, our mission has been to conduct scientifically sound research designed to provide best-practice recommendations for organic farmers and home gardeners.

This Field Day is part of our education and grower outreach efforts. We truly hope you enjoy yourselves during your visit. Feel free to ask questions, walk around, or take pictures. Be sure to sign onto our mailing list, and visit us on the web at: http://organic.wvu.edu/

The 2019 Program emphasizes informal tours and demonstrations. Feel free to walk around the Farm. Presenters will be at stations near their plots, or in the Shop Building.

Get Your Soil Tested! Bring a soil sample (about a pint of topsoil representative of the site) from your farm, garden or yard, or a previous soil test report and learn about the new WVU Soil Test Lab format.

Financial Support for the WVU Organic Research Farm:

- US Dept. of Agriculture – Sustainable Agriculture Research and Education Program
- USDA National Institute for Food and Agriculture Grants Program
- USDA Hatch
- Organic Farming Research Foundation
- West Virginia University – Davis College of Agriculture, Natural Resources and Design

How to find us:

From I-68, take Exit 7 and travel west on Rt. 857, 1 mile to Rt. 119 (second stop light). Stay straight onto Rt.119 (south) for 1.5 mile. Proceed to the roundabout and bear right onto Rt. 705. Look for the driveway on the left (¼ mile) for the WVU Organic Research Farm.

Schedule of Events

Organic Agriculture Program

2:00 PM Gates Open
2:40 PM Shuttle from WVU Evansdale campus, Lot 43 (across from WVU Greenhouse)
2:30-7:00 PM Registration

3-5 PM Field Projects (Market Garden and Field Crops Area)

1. Diseases of Vegetables and Biorational Controls. Mafuz Rahman, PhD.
2. Industrial Hemp Varieties, Diseases, and Stand Establishment. Jim Kotcon, PhD.
3. No-till establishment of tannin-containing birdsfoot trefoil and sainfoin in existing grass pastures. Thomas Griggs, PhD.
4. Organic Management Practices for Sheep Health. Teri Koster, Cody Woodring, & Margaret Budik.
5. High Tunnel Crops Production of Vegetables and Ornamentals. Lewis Jett, PhD.
6. Heritage Bean Evaluations. Lewis Jett, PhD.
7. Lessons Learned from the WVU CSA. Fred Gifford.
8. Bee Keeping. Nelson?
9. Taro in West Virginia. Domingo Mata-Padrino, PhD
10. Low-Tunnel Training. Domingo Mata-Padrino, PhD.

3-7 PM Posters, Displays and Demonstrations (Shop Building)

11. Long-term Field Crop Systems-Twenty Years of Changes. Jim Kotcon, PhD.
12. Weeds of West Virginia ID Contest. Dr. Rakesh Chandran
13. Drought Resistance of Grafted vs. Non-Grafted Tomato Varieties. Saul Harlow.
14. Population Dynamics of Select Insect Pests through Summer Season. Joe Malone.
15. War on Weeds!. Jacob E. Joos.
16. Marketable vs. Unmarketable Vegetables. Jonathon Doty.
17. Do it yourself soil analysis: Texture, pH and EC. Louis McDonald, PhD.
18. Robot Pollinator. Yong-Lak Park, PhD.
19. Organic Or Not:? Annette Freshour. Dietetics.
20. Soil Test Lab. Eugenia Pena, PhD.
    3:00-3:30: How to prepare your sample and the Soil Sample Submission Form
    3:45-4:15: Soil sampling your farm, garden or yard.
    4:30-4:45: Your Soil Test Report and how to read it.

5-7 PM 20th Anniversary Celebration

5:00-5:10 PM Welcome – Dr. Ken Blemings, Interim Dean, Davis College of Agriculture, Natural Resources and Design
5:10-5:40 Keynote Speaker
5:40-6:15 Family activities (See next page)
5:40-6:15 Roller/Crimper Demo for No-Till Organic – Tom Basden
Bedder/Mulch Layer Demo

6:15-7:00 Supper (Menu on next page)

7:00 PM Adjourn

5-7 PM: Family Activities Slip-N-Slide

Taste Panel (Pick your favorite tomato)
Lambs
Insect Zoo

Caprese Salad. (Basil, tomato and mozzarella)
Lamb Burgers
Potato Homestead Fries
Veggie Kabobs
Cheese Slices
Lemonade & Iced Tea.

6:15-7:00 PM: Supper Menu **20th Anniversary Chocolate Zucchini Cake!**

Project Descriptions:

3-5 PM: Field Projects (Market Garden and Field Crops Area)

1. Biorational Disease Management of Vegetables and Small Fruits. Mafuz Rahman, PhD.

Diseases can cause significant yield and quality reduction in organic production systems due to the limitation in using synthetic fungicides. However, an integrated approach encompassing biorational/biological products and good cultural practices can be effective in minimizing disease severity and improving yield and quality.

2. Industrial Hemp Varieties and the Diseases They Get. Jim Kotcon, Ph.D.

Industrial hemp is a rapidly expanding crop in West Virginia and across America, but many growers need to information on commercial scale production methods. We will discuss common varieties, and look for diseases that can reduce yields.

3. No-Till Establishment of tannin-Containing Birdsfoot Trefoil and Sanfoin in Existing Pastures. Tom Griggs, Ph.D. Birdsfoot trefoil and sanfoin are forage legumes (nitrogen-fixing plants) that contain moderate levels of condensed tannins. Tannins complex with proteins, improving efficiency dietary protein utilization in ruminants and reducing urinary nitrogen losses to the environment. Both species can be difficult to establish in existing grass-dominant pastures without suppression of existing vegetation. We are evaluating no-till seeding methods to establish these species under organic management.

4. Organic Management Practices for Sheep Health. Teri Koster, Cody Woodring, & Margaret Budik. Learn basics of FAMACHA, hot to score Body Condition Index, rotational grazing schemes, and how to keep sheep healthy and organic.

5. High-Tunnel Crops: Production of Vegetables and Ornamentals. Lewis Jett, Ph.D. Trials in the high tunnel focus on grafted versus non-grafted Mortgage Lifter tomato. See high antioxidant Solanum berries that provide a phytonutrient boost, and learn how to manage crops in high tunnels to extend the growing season.

6. Heritage Bean Evaluations. Lewis Jett, Ph.D. This trial is evaluating heritage varieties of bean adapted to Appalachian conditions. We evaluate yield, market quality and trellises for harvest efficiency.

7. Lessons Learned from the WVU CSA. Fred Gifford.

What is a CSA? What crops do and don't work? Learn about crop rotation, designing planting schedules, ad livestock integration. Opportunities for student involvement.

8. Honey Bees: Pollinators and Producers. Nelson Rekos (local beekeeper).

This workshop is an introduction to honey bees and beekeeping. We will give an overview of the honey bee's life-cycle, their pollination activities, their products (honey, wax and propolis) they produce, and how the beekeeper assists this unique organism to survive in the modern world.

9. Taro in West Virginia. Domingo Mata-Padrino. Ph.D.

Taro is a tropical root crop, so how can it grow in West Virgina?

10. Low-Tunnel Training. Domingo Mata-Padrino, PhD.

3-7 PM. Posters, Displays and Demonstrations

11. Long-term Field Crop Systems-Twenty Years of Changes. Jim Kotcon, PhD.

The Long-Term Farming Systems trial began in 1999 and examines four versus seven-year crop rotations, with versus without compost. Soil quality as measured by fertility levels and soil organic matter improved faster with compost than without. Yield data and other system responses will be analyzed in this poster display, and feel free to walk to the field plots to see for yourself.

12. Weeds of West Virginia ID Contest. Dr. Rakesh Chandran and Whitney Dudding.

See examples of common weeds, learn about their ecology and growth habits, and see how many you can identify.

13. Drought Resistance of Grafted vs. Non-Grafted Tomato Varieties. Saul Harlow.

I'm comparing how well scions of edible tomato cultivars grafted onto a wild tomato rootstock fare against drought compared to the same scion variety grown on its own rootstock.

14. Population Dynamics of Select Insect Pests through Summer Season. Joe Malone.

I collected population data in the brassicas, potatoes, and cucurbits for cabbage whites, flea beetles, and cucumber beetles, respectively. The data track the changes in average population per plant (counting on five random plants throughout each plot) over the past weeks. I'll make a graph tracking the changes. I'll also have a modest collection of pinned insects caught in the market garden for people to see.

15. War on Weeds!. Jacob E. Joos

Weed suppression by three organically approved mulches (hay, paper, and black plastic) was compared by evaluating the amount of weeds pulled over time. Weed suppression was best with black plastic, then hay, with paper providing the least suppression.

16. Marketable vs. Unmarketable Vegetables. Jonathon Doty.

I will have pictures that examine quality marketable vegetables vs. defects that make vegetables unmarketable. Examples from the WVU Organic Farm Market Garden will demonstrate effects of disease, too small/large, nutrient deficiencies, etc. Data on yield losses will be presented

17. Do It Yourself soil analysis: Texture, pH and EC. Louis McDonald, PhD.

Test your skill, and learn new skills with these "Do-It-Yourself" soil analysis methods.

18. Robot Pollinator. Yong-Lak Park, PhD.

What do pollinators do, and can we replace them?

19. Organic or Not? Annette Freshour. Dietetics.

Participants will get to compare fresh produce that is either organic or traditionally grown and have to guess which is which. We will also be discussing what GMOs are and what "Fair Trade" means.

20. Soil Test Lab. Eugenia Pena, PhD

3:00 to 3:30 PM: How to prepare your sample and fill your Soil Sample Submission Form to send the samples to the WVU Soil Testing Laboratory for analysis: Description of the

information that the client needs to know to fill the soil sample submission form to be better served by the WVU Soil Testing Laboratory.

3:45 to 4:15 PM: Soil sampling your farm, garden, or yard. Short discussion on what will be recommended to take the best soil sample to describe the soil in the area that the client wants to fertilize.

4:30 to 5:00 PM: Receiving your Soil Test Report, and how to read it. Short discussion about how to read the new WVU Soil Test Report, and resources to help the client to adopt the fertility recommendations.

5-7 PM: Family Activities

21. Slip-N-Slide. Plan to get wet and cool off. Fun for kids of all ages.

22. Tomato Taste Panel. Test your palate and help us choose the best tasting tomato.

23. Insect Zoo. Yong-Lak Park Ph.D. and Vicki Kondo. See examples of the common and uncommon insects that share our world. Interact with live exotic insects and arthropods.

24. Lambs! These are among the friendliest sheep on the Farm!

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