

Bernalillo County Extension Master Composters (BCEMC) Volunteer Training Schedule and Syllabus of Instruction – Spring 2018

Course Goal: Complete the Master Composter Training with the knowledge and skills to become an active participant in the BCE Master Composter community outreach efforts

Course Objective: Complete the training with 100% attendance

Course Objective: Complete the take-home final exam within the timeframe established by the Education Coordinator

Course Objective: Complete a project, pre-approved by the Education Coordinator, within the established timeframe

Wednesday, April 11, 6:30 – 9 PM

Orientation (½ hr)

Goal: Learn about BCEMC Association and the Volunteer Training Course

Objective: Understand the mission and goals of BCEMCA and how its members go about achieving them

Objective: Understand the make-up of the Volunteer Training Course and the students' requirements for completing certification

Objective: Understand BCEMCA outreach program and members' expectations upon completing training

Instructors:

Rod Reay is a gardener, beekeeper, Master Composter, and the BCEMCA Education Coordinator. Pat Barger is a Master Composter, Master Gardener, Climate Master, and past BCEMCA President. Her backyard is certified as a Monarch Butterfly Way Station by Monarch Watch and a Certified Wildlife Habitat by the National Wildlife Federation.

Module 1: Introduction to composting: rationale, selection, and methods (2 hrs)

Assignment: Read Training Manual, Chapter 1

Goal: Learn the history of composting, understand why composting is important, and be introduced to different methods of composting

Objective: Discuss three reasons to compost

Objective: Identify at least three methods of composting

Objective: Given a list of potential ingredients, identify which are or are not compostable

Objective: Name the five essential components of successful composting

Objective: Delineate what potential hazards can and cannot be controlled in composting for the garden

Instructor: John Zarola is a Master Gardener and Master Composter, as well as the current BCEMCA President.

Saturday, April 14, 8AM – noon

Module 2: Soil and soil chemistry (2 hrs)

Assignment: Read Training Manual, Chapter 2

Goal: Gain a general knowledge of the composition of soils and the interaction of the major components relevant to composting and soil amendment.

Objective: Understand the significance of cation exchange capacity (CEC) in soil composition

Objective: Explain the importance of Carbon and Nitrogen and what ratios are necessary for decomposers

Objective: Demonstrate an understanding of the importance of organic matter in the soil, by naming at least four of its benefits as a soil property

Instructor: Rudy Garcia is a 28-year employee of USDA-NRCS, Rudy is the Regional Soil Health Specialist for UT, AZ, NM, and CO, where he facilitates the adoption of soil health management systems.

Module 3: Microbiology and soil food web (2 hrs)

Assignment: Read Training Manual, Chapter 3

Goal: Develop an understanding of the role of decomposers in the composting process and the interdependence of the organisms which make up a soil food web

Objective: Identify at least three microorganisms that have a function in decomposition

Objective: Distinguish between physical and chemical decomposers and give examples of each

Objective: Describe consumers at various trophic levels

Instructor: Steve Glass. Retired from a local government career in environmental quality, Steve teaches biology and environmental science at CNM, instructs state Compost Operator Certification classes, and serves on the Advisory Committee for Bernalillo County Master Naturalists Program.

Saturday, April 21, 8AM – 3PM

Module 4: Composting in the Desert – Hot and Cold (2 hrs)

Assignment: Read handouts on website

<http://bernalilloextension.nmsu.edu/mastercomposter/desert-composting.html>

Goal: Become conversant in the basics of hot and cold composting and understand how composting in our arid environment differs from composting under more humid conditions

Objective: Explain the challenges of composting in a desert environment

Objective: Delineate the differences between hot and cold compost piles

Objective: Explain the concept of air management in a compost pile

Instructor: John Zarola

Module 5: Outdoor composting demonstration (2 hrs)

Assignment: None

Goal: Appreciate the process of building both a cold and a hot compost pile in the desert

Objective: Explain the rationale for the size of a hot compost pile

Objective: Describe how to achieve an acceptable C:N ratio in a hot compost pile

Instructor: Jana Hazelbaker. Jana is a Master Composter and coordinates the maintenance of compost operations at the Bernalillo County Extension Office.

LUNCH

Module 6: Vermicomposting (2 hrs)

Assignment: Read Training Manual, Chapter 7

Goal: Have a working knowledge of vermicomposting using Red Worms (*Eisenia fetida*, *Eisenia Lubricus*, *Eisenia Andrei*)

Objective: Describe the process by which Red Worms turn organic matter into castings

Objective: Be conversant with creating a suitable habitat for Red Worms, indoors or outdoors, providing bedding, food, and harvesting the castings.

Instructor: Mel Chavez. Mel is a Master Composter and also owns a Vermiculture company selling worms and worm castings to local gardening enthusiasts in the Albuquerque area.

Saturday, April 28, 8AM – 3PM

Module 7: Roles of the Municipal & Commercial Composting Facilities (Field Trip) (4 hrs)

Assignment: Read Training Manual, Chapter 9

Goal: Be aware of the local composting operations

Objective: Specify at least two types of large composting facilities operating in the Albuquerque area

Instructors: Steve Glass and Joe Bailey. Joe is the director of ABCWUA's Soil Amendment Facility. As such, he is the largest compost producer in New Mexico, helping the smallest to the largest gardener achieve his/her dreams.

LUNCH

Module 8: Anaerobic composting (2 hrs)

Assignment: Read Training Manual, Chapter 6

Goal: Be conversant with anaerobic methods of decomposition as an alternative to aerobic composting

Objective: Describe the Bokashi method of composting as well as at least two other methods

Objective: Explain the advantages and disadvantages of anaerobic methods

Instructor: Rye Bailey. Rye is a retired teacher and a Master Composter. She and her husband have a small hobby farm in the South Valley.

Saturday, May 5, 8AM – 3PM

Module 5x: Outdoor composting follow-up (1 hr)

Revisit the compost piles you assembled 2 weeks ago.

Instructor: Jana Hazelbaker

Module 9: Compost curing and uses of compost (1 hr)

Assignment: Read Training Manual, Chapters 4 & 10

Goal: Understand the importance and process of curing as the finishing stage of hot composting and comprehend the variety of ways to use both fully cured and unfinished compost

Objective: Identify at least three out of four crucial changes that compost undergoes during curing

Objective: As methods of testing finished compost, describe both the bag and seed sprout methods

Instructor: Pat Barger.

Module 10: Compost Teas/Extract (2 hrs)

Assignment: Read Training Manual, Chapter 8

Goal: Understand the differences between compost tea and extract and know the benefits of each for agricultural and horticultural applications

Objective: Identify three or more tea-making methods

Objective: Identify the different compost materials and ingredients needed to brew compost tea or extract safely

Objective: Demonstrate knowledge of the benefits and drawbacks of making and/or using compost teas

Objective: Identify the environmental impact of making and using compost teas

Instructor: Mel Chavez.

LUNCH

Module 11: Tips on Teaching, manning an information table, final questions, and roadmap to certification (2 hrs)

Assignment: Read Training Manual, Chapters 11 & 12

Goal: Develop an increased comfort with the teaching aspect of BCEMC volunteer work

Goal: When presented with specific concerns/problems, suggest composting methods tailored to the individual composting operation

Objective: Name at least four circumstances which suggest a specific compost method choice

Objective: During the Teaching Tips instruction portion, actively participate, asking questions, sharing information and responding to questions from the instructor

Objective: Finish this module knowing exactly what is required to complete certification

Instructor: Rye Bailey, Rod Reay