



# BIONUTRIENT Food Association

## High Bionutrient Crop Production: Principles of Biological Management Course

### Day 1: Biological Farming Introduction – Principles & Methods

#### Morning (9:00am-12:00pm)

- Why apply biological principles? What are the benefits of biological management?
- Soil biology basics (refresher)
- Identifying and minimizing limiting factors in your crops
- Soil testing: hands-on test interpretation
- Mineral balancing: target levels of macro and trace minerals
- “Math for minerals”: step-by-step calculations of important soil amendments

#### Afternoon (1:00-4:00pm)

- Evolution of pest & disease resistance
- Biological inoculation: the roles of bacterial and fungal species
- Transplantation (potting) soil: ideal composition, inoculants and enzyme stimulants
- Tillage: impact on bacterial-fungal spectrum; strategies for minimum tillage
- Fertigation/irrigation best practices
- Shifting gears: What do we know about phytonutrients and their potential health benefits in food vs. supplement form?

### Day 2: Biological Farming in Practice – Troubleshooting & Advanced Topics

#### Morning (9:00am-12:00pm)

- Review of Day 1 – attendee Q&A
- Biochemical processes of plant nutrition: nutritional needs by growth stage
- Visual guides of plant growth and health status
- Troubleshooting problems using plant and soil monitoring
- Crop and soil management tools: including how and why to check soil conductivity
- plant sap Brix and pH testing
- Saturated paste and tissue testing: how and when they make sense

#### Afternoon (1:00-4:00pm)

- Addressing soil deficiencies through cover crops and mineral amendments
- Tips on effective planting/transplanting solutions and drenches
- Foliar spraying: how & when to apply
- Final Q&A/close by 3:30pm
- OPTIONAL bonus session (3:30-5pm): discussion of foundational thinkers