COMPOST TEA

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Overview

- What is compost tea?
- Benefits
- Terminology
- Research status
- Technology/equipment
- Inputs
- Processing
- Application
- Markets
- Examples
- Conclusion

What is Compost Tea?

A liquid extract of compost containing soluble plant nutrients, beneficial plant compounds and beneficial microorganisms

Reported Benefits of Compost Tea

- Stimulates soil biological activity
- Improves soil structure
- Enhances overall plant health and vigor
- Disease suppression
- Reduced fungicide and fertilizer requirements
- Cost savings/potential revenue

Terminology

- Active vs. passive
- Aerated vs. nonaerated
- “Tea” vs. “Steepage”

Research

Most published research pertains to non-aerated processes, but that is changing.

Evolution of Technology

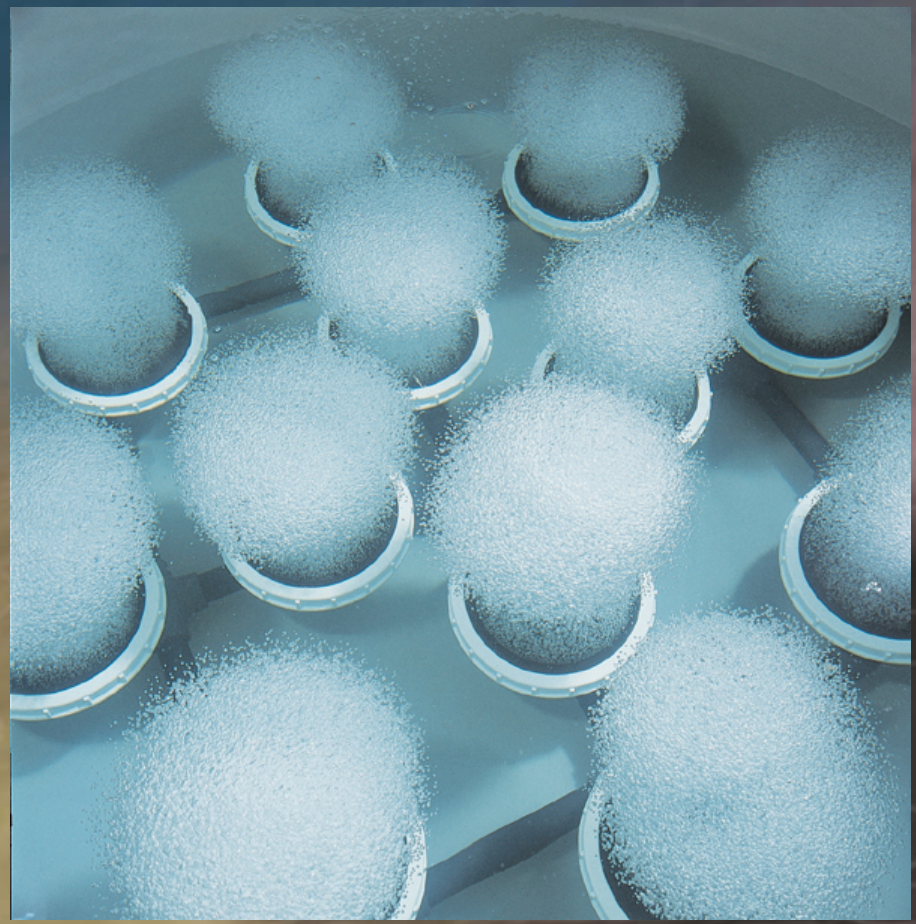
- Passive steep
- Stirring action
- Recirculation
- Fine bubble diffusion

Passive Steep

Stirring Action

Recirculation

Fine Bubble Diffusion



Aerated Compost Tea Systems

Provide optimum conditions for:

- Extraction and proliferation of beneficial aerobic microorganisms
- Extraction of soluble compounds

Basic Components of Aerated Compost Tea Systems

- Tank
- Mesh container/filter for compost
- Aeration system

Inputs for Making Aerated Compost Tea

- Water
- Compost/vermicompost
- Supplemental food source

Inputs - Water

- Chlorine
- Salinity or other problems
- Temperature (70 degees)

Inputs - Compost

- Source of organic matter, organisms and nutrients for extraction
- Quality is important (no universal standards yet)
- Vermicompost or blend
- 1 lb compost/5 gallons of water (varies)

Inputs - Supplemental Food Sources - Catalyst

- To encourage proliferation of diverse, beneficial, aerobic microorganisms
- Humates, kelp, rock powders, fish products, complex carbohydrates, etc.
- Commercial formulations available

Processing Time

- 24 hours is common
- Aerated throughout process
- Should be used immediately or kept aerobic

Compost Tea Application

- Foliar application
- Soil application

Foliar Application

- Provides nutrition and beneficial microorganisms that colonize leaf surfaces
- Important in disease suppression

Soil Application

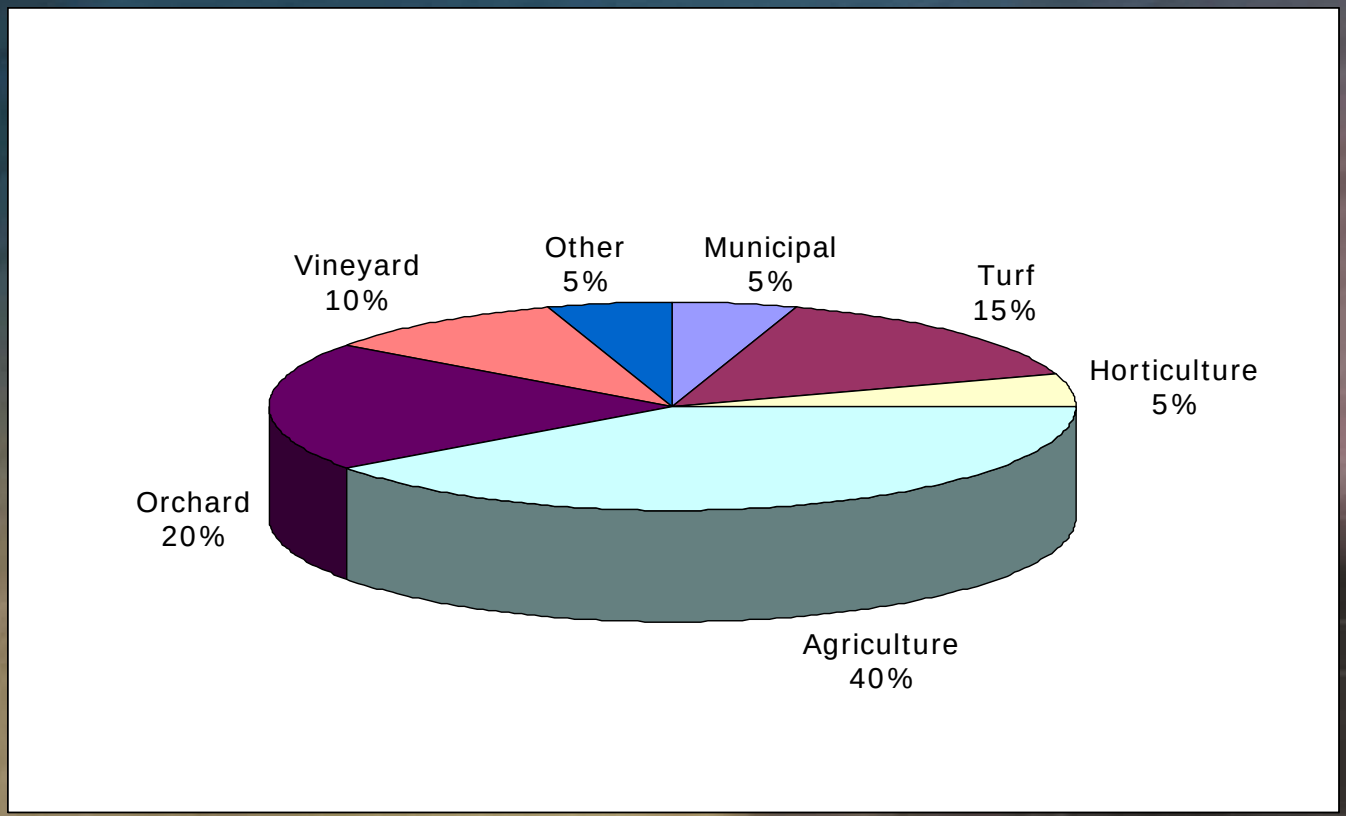
- Boosts biological activity in the soil and rhizosphere
- Direct physiological plant response
- Alternative to solid application
- Supplement to regular compost application

Application Methods

Application Methods

Application Methods

Compost Tea Markets



Retail - Composters, Nurseries

Retail

- Nurseries, garden centers, retail composters
- Combined with workshops
- $3-5/gallon

Golf Courses

Vineyards

Landscaping & Lawn Care

Landscaping & Lawn Care

- Growing market for organic lawn care
- Water quality issues, e.g. “Soils for Salmon”
- Alternative to persistent herbicides!!!

Nursery/Greenhouse Production

Bulk Sales

Hydromulch Erosion Control

Conclusion

- Market is strong
- Lots of anecdotal information
- Need more experimental data to validate
- Potential for misinformation
- Synergistic with composters
- Market niche opportunities
- Quality assessment issues to be resolved (compost, tea, food resources)

Resources

COMPOST TEA INDUSTRY ASSOCIATION www.composttea.org ATTRA www.attra.org	Carolina Compost Council & Carolina Recycling Association P.O. Box 1578 Pittsboro, NC 27312 www.cra-recycle.org/cccindex www.cra-recycle.org
NC DENR Div. of Pollution Prevention & Environmental Assistance www.p2pays.org	NC State University Dept of Biological & Ag. Engineering http://www.bae.ncsu.edu/people/faculty/sherman/