Garden Myths: practices and products

The ABC’s of my educational program

- Apply theoretical information
- Broad audience base (academic → public)
- Create citizen scientists

Garden myths in The Informed Gardener series

- Evidence-based gardening
- How/what/when/where to plant
- Mulches

Understanding how plants work
Soil additives
Miracles in a bag/bottle/box

Seminar roadmap

- Evaluating information
- Three case studies
- A more sustainable approach

Types of gardening information

- Scientific - peer reviewed, academic audience
- Gray - not peer reviewed, professional audience
- Popular - not peer reviewed, general audience

Using the CRAP test to evaluate gardening information*

*CRAAP test adapted from “Evaluating Information - Applying the CRAAP Test” (Meriam Library, California State University, Chico CA)

Credibility of the source
- Author’s credentials and qualifications?
- Publisher?
- Website urls?

Relevance to urban landscapes and gardens
- Crop production or home gardens?
- Geographic or other constraints on usability?

Accuracy
- Science-based?
- Objective?
- Current?
- Well-written?

Purpose
- Educational or commercial?
- Political, ideological, cultural, religious, or personal biases?

When in doubt, consult with Extension specialists (generally faculty with relevant PhDs) at your state landgrant university or ask an expert through eXtension.

Garden myth #1: Phosphate fertilizer stimulates root growth

Facts: Excess phosphate destroys symbiotic fungi, interferes with nutrient uptake, and contaminates soil and aquatic systems

Instead: Use a nitrogen fertilizer needed for root proteins and enzymes
Garden myth #2: compost tea fights plant diseases

- **NCT = Non-aerated Compost Tea**
  - Requires no aeration; contains anaerobic microbes and nutrients
- **ACT = Aerated Compost Tea**
  - Requires constant aeration; contains aerobic microbes and nutrients
  - Will revert to NCT if not aerated

**How does compost tea work?**
Contains microbes (primarily bacteria) that theoretically compete with or kill harmful microbes. If a leaf or root is colonized by beneficial microbes, harmful ones cannot take hold

**What is the science behind compost tea?**

**NCT studies**
- In general, mixed results in the lab and the field in controlling disease

**ACT studies**
- ACT less effective than NCT in controlling pathogens
- ACT not only was ineffective in preventing apple scab, but in some cases made it worse

**Health concerns about compost teas**
- Yard waste compost has tested for higher pathogens than manure compost
- Molasses in the mix worsens the problem

**Scientific summary on compost tea**
- There is no science supporting the use of ACT on turf and landscape materials
- ACT is not registered as a pesticide and cannot legally be recommended or applied as one
- ACTs have been demonstrated to harbor human pathogens, including *E. coli*

**Conclusion:** Aerated compost teas are an expensive and energy-wasteful “extra step” with no proven benefit to landscapes

Garden myth #3: Epsom salts create lush, healthy plants

- Epsom salts, or magnesium sulfate (MgSO$_4$), originally obtained by boiling down mineral waters at Epsom, England. Dissolved, they make bath water feel “silkier”
- None of the claims for Epsom salts in home gardens and landscapes are based on research
- Have soil tests done first to establish plant nutrient needs

**What you should do instead**
- Have soil tests done before adding chemicals or amendments
- Select plants that are known to do well in your area
- Plant many species; diversity in landscapes increases their ability to resist pests and disease
- Install plants properly; woody plants should be bare-rooted to ensure establishment
- Protect landscape soils with organic mulch; this helps plants resist pests and disease

For more information:

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