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### The Myth of Folklore Gardening

"Applying horticultural practices from past eras is a sound approach to landscape management"

## The Myth

It's said that history repeats itself, and the same holds true for horticultural practices. Old knowledge is rediscovered and presented in a context perceived as more natural and environmentally friendly than cold, clinical science. Certainly, many of the chemical-heavy pest management practices so popular in the middle of the last century have been prudently replaced with lower-tech, holistic approaches. Understanding how systems work is crucial when one is making landscape management decisions; the specter of persistent pesticides in our soil and water has led us out of the "spray and pray" mentality. The organic approach has spawned products and practices that are often environmentally sustainable, economically feasible, and socially acceptable. Are our "new" best management practices to be found in the past?

### The Reality

As in most paradigm shifts, there's a danger in discarding current practices and replacing them with not only the good but with the bad and the ridiculous. A successful, holistic approach to landscape management requires solid underpinnings of whole plant physiology – a field that barely existed 100 years ago and continues to evolve. If we don't understand how a plant responds to environmental changes – which includes management practices – then we can't predict what will happen to that plant or to the landscape in the future.

It's in this context that we need to critically assess old horticultural "wisdom." Two of the questions one should ask are: "Does the rationale behind the practice make sense given our current scientific understanding?" and "Does the practice actually have a significant effect?" Here are some simplistic approaches I found in a 30-year old, but still popular book by a well-known garden writer:

- For feeding trees: "Poke holes...about ten inches deep...fill with lawn food."
  [Most tree roots are within the top 18" of soil; in compacted soils they are even shallower. Fine roots used for water and nutrient uptake are very close to the surface. Why put fertilizer well below most feeder roots? And why use lawn food, which is often high in phosphates (a nutrient not usually deficient in non-agricultural soils?)]
  - "Empty coffee cans aid deep-down irrigation. Cut out both ends, place in holes dug every few feet, fill with gravel and water regularly."

[Ditto information in previous myth – fine roots are near the soil surface. Irrigating in this way will waste a significant amount of water and neglects many of the fine roots.]

• For tree wounds: "Should be sterilized with a solution of two tablespoons of ammonia per quart of water and then covered with pruning paint."

[Treating living tissues with a bleach solution and then covering the area with an impermeable barrier inhibits the natural formation of antimicrobial compounds and wound wood.]

• "Plants love music! Put small potted plants on or next to the radio or stereo. The sound will vibrate and aerate the soil."

[Ignoring the dubious science linking plants and music, there is no evidence that vibration will aerate soil, but in fact can destroy soil structure and increase compaction.]

• "Plastic sheets placed between rows of flowers and covered with colorful gravel keep weeds down all summer and provide attractive bed covering."

[I find plastic sheets to be anything but attractive, but leaving aesthetics aside, the use of plastic sheet mulch decreases water and gas transfer between the soil and the atmosphere. This inhibits desirable plant roots from colonizing the area under the mulch.]

• "Don't spare the rod! Striking a tree trunk with a stick or a rolled newspaper stimulates sap flow in early spring."

[Huh?]

This last piece of "wisdom" propelled me to seek confirmation of this practice. I did find one reference to this "curious habit", which was "to whip trees to induce them to fruit better, this being done ritually on Good Friday." Beating trees is hardly a practice grounded in rational thinking, and being open to new or old ideas doesn't mean buying into snake oil and quackery.

It is astonishing that the more dubious elements of "folklore gardening" not only persist in practice but have grown in popularity. We should be open to the wisdom of the past, but not at the expense of critical thinking. There are few who would argue that medical knowledge from past centuries is more advanced than modern medicine; we are continually honing the practices necessary for optimal human health. Likewise, we need to continually evaluate the effectiveness of horticultural practices – old and new – in providing the best plant (and planetary!) health care.

#### **The Bottom Line**

- Understanding how a plant adapts and responds to its environment is crucial in making landscape management decisions.
- Practices grounded in science, not promoted through folklore and superstition, should be the basis of landscape management.
- Critically assess "garden wisdom" does it make sense and does it actually work? Going "back to nature" in medicine or plant health care shouldn't include quackery.
- If your own knowledge of plant science is shaky, consider taking basic classes offered through university extension services or through professional associations.

For more information, please visit Dr. Chalker-Scott's web page at http://www.theinformedgardener.com.