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Asheville Cats

John Friel



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This column comes to you from Asheville, North Carolina, this year's base for the National Symposium of the Perennial Plant Association. It's hard to pick just one facet to talk about from this five-day event, so here are two presentations that really stood out.

Future Roof: How Plants Transform Rooftops Into Resilient Infrastructure

In recent years, I'd heard less and less about green roofs. The buzz seemed to have died down. So I was happy to hear Kate Ancaya of Asheville-based Living Roofs Inc. describe the evolution of her field and her company.

When green roofs came to the U.S., the natural response was to adopt what worked in Europe—which, in Southeastern U.S. humidity, simply didn't. Early on, unfortunately, many green roofs, which I call groundcover in the sky, were sold on pie-in-the-sky marketing: No maintenance! No irrigation needed! Yeah, well. That sales pitch resulted in early, ugly failures. Forget Carole King's lyrics: Up on the roof, it's not trouble-proof and wishing won't make it so. Some takeaways:

- Designing for green roofs from the beginning is simpler than retrofitting existing structures. There's significant weight to account for.
- Living roofs cool buildings and cities, improve air quality, increase biodiversity and extend the life of roof membranes.
- It's not just for sedum anymore. Lots of grasses, perennials and self-sowing annuals are now used to beautiful effect. Succulents still work, of course, but not everywhere. Nothing works everywhere. As a former grassmonger, I loved seeing waves of *sporrabolus* (which Kate called "a workhorse") and *erianthus*.
- Going green can cost less than "gray" infrastructure, i.e., the modern alternative for stormwater management: storage and slow release using massive, hard-to-access, underground structures. Green roofs need attention, too—as Kate said, "No roof is maintenance-free"—but installation and long-term maintenance are "minimal" by comparison.
- Last, but still first: The original problem that forced Germany to develop green roofs—older cities with combined storm drains and sanitary sewers—still looms. Depending on variables like square footage, coverage, location and species, a green roof can retain up to 100% of a 1-in. rain event. A roof under 4,000 sq. ft. can keep 100,000 gallons of stormwater out of a sewer system—and, thus, raw sewage out of your local streams—annually.

Tissue Culture (TC): Next Stage Labs

I was lured in by Kelly Elsworth's title, "From Test Tube to Garden Center." I'm always intrigued, and often bemused, by the paper trail behind every plant sold at retail. Your cash register receipt is the caboose on a long train of purchase orders, acknowledgments, invoices, shipping documents, phytosanitary certificates, patent applications, propagation licenses and contracts.

"Micropropagation" is mostly a misnomer. Yes, TC labs deal with tiny bits of plant tissue, but they're easily visible to the naked eye. An exception: Apical meristem culture, a key step in indexing for virus-free stock, really IS done—delicately and with great skill—under a microscope.

Fittingly, Kelly started Next Stage Labs in a business incubator. She deftly explained her field's esoteric terminology, which ranges from self-explanatory to dauntingly opaque. I sort of knew about ploidy manipulation, but never realized my own cells are diploid. And embryo rescue sounds like an election year hot-button topic, but is actually a technique for coaxing viable plants from fragile seeds that can't sprout and grow on their own.

TC presents a way to rapidly replicate plants, both ornamental and edible, that take too long to ramp up into commercially viable quantities by traditional means. Labs can insert desirable traits like new colors or render too-fecund species sterile. That can "save" potentially problematic crops like *Euonymus elatus* that people want anyway.

But, lately, it seems like they're just showing off: Mad scientists have inserted genetic material from bioluminescent mushrooms to create Firefly Petunia, which actually glows in the dark. I don't remember asking for that. You? **GP**