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The Myth of Plant Quality:

"The quality of plant material is directly proportional to the price"

The Myth

Last month I was having difficulty deciding on a topic for this column. To stimulate my creative juices, I tackled our home landscape-in-progress and ended up shopping for plants over two weekends. After spending several hundred dollars and installing my new shrubs and trees, I had identified a topic that, to put it mildly, I felt passionate about. I guess you could call this myth "you get what you pay for." The working hypothesis is that pricey retail nurseries are extra careful with their purchase and care of plant materials, and therefore consumers will find the best quality stock at these nurseries.

The Reality

Since I was installing a variety of shrubs and trees I limited my shopping to three well-known and respected Seattle-area nurseries with wide plant selections. At the first I inspected some *Ginkgo biloba* cultivars. They were 6-7' tall and nicely shaped – but in 2 gallon containers. When I pulled one out of the pot, I found finger-sized woody roots completely encircling the root ball. Eighty dollars for this? I don't think so. All of these *Ginkgo* cultivars had the same fatal root problems.

At the next nursery, I found a white flowering *Ribes sanguineum*. It was relatively loose in the soil, so I knew it had been recently potted up, but still appeared to be a healthy specimen. When I pulled this 3' shrub out of the pot at home, I found a 4" cubical, woody root mass with new fibrous roots growing from it. Out came the pruners, and away went most of the roots. I will have to give this plant extra care to ensure it establishes on such a reduced root system.

At the third nursery (now I was really careful) I looked for a *Cercis canadensis*. I avoided the B & B since the balls were all too small in comparison to the crown size, and inspected the containerized stock. They were firmly rooted and I almost bought one. Then I looked at the crown more carefully and found all the leaders had been pruned back to give the plant the appearance of a miniature adult specimen. Unless these trees are correctively pruned and a new leader established they will never regain their characteristic form. Disgusted, I returned the plant and settled on 5-gallon containers of *Acer circinatum* and *Philadelphus lewisii*. Both had nice crown shapes and were relatively loose in the soil: maybe a bit too loose. I was getting desperate, however, and needed to get my gardening fix. So I bought them at premium prices. At home I discovered they were simply bare-root stock covered with new potting media. No fibrous roots whatsoever. They will survive with extra care, but I resented paying for 5-gallon containers of potting media.

I could have taken all of this plant material back, but what would I have purchased instead? Every single shrub and tree I bought had some serious root problem, and I'd avoided many other plants with more obvious problems. It takes time to return plant material, and is especially difficult in the Seattle area where driving is everyone's most hated activity. So I kept them all and they will receive extra TLC. But in a year when drought is looming on the horizon, this is not an environmentally sound practice.

Solutions?

A great deal of work by Dr. Rita Hummel (WSU Puyallup) and others has found that plant failure is usually linked to fatal root flaws. Circling, girdling, or kinked roots are problems that begin at the nursery and if uncorrected will lead to early decline and death of woody plant material. It behooves the nursery and landscape industry to take an active role in addressing this problem through improved propagation practices and more critical inspection of plant materials. Consumers are becoming better educated, and to retain their trust we need to be more responsible for the quality of material we sell them.

The Bottom Line

- Most consumers are not careful in their selection of quality plant material, but even knowledgeable consumers can miss serious root problems at the retail nursery
- Retail nurseries need to be more vigilant in their inspection and acceptance of containerized and B & B materials
- Production nurseries need to modify potting-up practices to ensure root balls are properly trained
- All nurseries need to end the practice of improperly pruning young trees to mimic adult form

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