

A GOOD FIT?

Pot-in-pot nursery production requires a large investment but can pay off big for growers

BY KYM POKORNY

ON THE CUSP of the 21st century, a handful of Oregon nurseries took a chance on a fledgling production system called pot-in-pot that allowed them to ship crops of trees and large shrubs year round.

Simple in concept, the method uses one container, called a socket, that's buried to its rim in the ground, where it remains. A smaller pot slips snugly into the socket, ready to be lifted out as soon as the plant inside grows to saleable size.

New plants rotate in as market-ready trees are harvested, making for quick sales and potentially higher profits per acre.

"When we want to ship, July or January, we pull up a pot and send it down the road," said Pete Brentano, owner of Brentano's Tree Farm, which started transitioning to pot-in-pot in 2002 and now has between 65,000 and 70,000 trees in PIP.

Early adopters such as Brentano's, Woodburn Nursery and Azaleas, and Tree Frog Nursery saw the advantages and realized the timing was right.

"The shift was definitely toward container material," said Carson Lord, owner of Tree Frog. "They're lighter and easier to care for on both the retail and consumer end. They look better, especially on the garden center lot, and the smaller size lends itself to cash-and-carry type sales."

Pros and cons

Lord, who has been growing conifers, Japanese maples, boxwood and topiaries for 20 years, attended a round table about pot-in-pot at the Oregon Association of Nurseries' Farwest Show about 15 years ago. Magazine articles about the relatively unknown system had caught his eye and the event cemented his interest.

Within two years, Lord started his conversion. Now 20 of his 50 acres are in PIP.

The readiness of the market, ease of harvest and ability to ship year round gave his decision momentum, but reduced freight costs factored in, too. The timing happened to coincide with a "real freight crunch," he said. "It was hard to get trucks."

The transportation savings hinge on lighter and smaller pot-in-pot trees grown in a soil-less medium — usually bark dust mixed with fertilizer, sometimes with pumice or peat added — that is less weightier to ship than field-grown material.

And because all the trees are grown in the same mix with the same amount of fertilizer and water, they have a uniform size and shape.

"Do they look better than trees grown in the ground? Yes," Brentano said. "In the field we always had spots that did better and spots that did worse, even though we have pretty good ground. In the pots, it's all the same. So as long as we do a good job, they are almost like they came out of cookie cutters all the way up and down the row."

But for all the rewards, pot-in-pot has its disadvantages. The price tag is one of them.

Woodburn Nursery and Azaleas was one of the first nurseries in Oregon to get started in PIP in 2000. Upfront costs >>



Frank Lord installs a new pot-in-pot field at Tree Frog Nursery in Silverton. The nursery first adopted the technology 15 years ago because it provides the ability to ship plants anytime the customer places an order. PHOTOS BY CURT KIPP

Pot-in-pot nursery production

can be as high as \$20,000 an acre, said Craig Hopkins, manager of pot-in-pot production at Woodburn.

The money goes toward sockets and pots, drainage tiles, drip irrigation supplies, including an expensive filter, and the labor for installation. Growers who previously dealt only in field-grown crops may also have to shell out additional dollars for potting and soil-mixing equipment.

“It’s a substantial investment,” Hopkins said.

But it’s one that worked out well for Woodburn Nursery. They now have 200 acres in PIP production.

A return on the initial investment won’t be realized for an average of four to five years, according to information from the University of Kentucky, a pioneer in studying pot-in-pot production.

Pot-in-pot growers dig into their pockets more often for labor, too, because of year-round management, planting and shipping. But the university’s research shows that even with higher labor costs, the profit per acre is higher than field-grown production because crops turn over faster.

“We’re planting constantly, and we’re selling constantly,” Hopkins said. “The big advantage is that we can send it out anytime if the demand is there.”

Continuing labor shortages may put a crimp in pot-in-pot expansion, though. Lord, for instance, has no plans to convert more acreage to PIP.

“Potentially, would I? Sure. But I

can’t overstress the scarcity of labor,” he said. “Until that changes, it would be difficult to get excited about an expansion.”

Installation and operation

Installing a pot-in-pot system sounds easy: Dig holes or a trench, lay drainage tiles and irrigation line, place the sockets and backfill.

In reality, the job, no matter if it’s done by hand or machine, takes a hefty amount of time and labor, and the subsequent money to pay for it.

Before starting, the field has to be graded at a slight slope to keep water draining away from the pots so it doesn’t pool around the roots. That can be a serious problem in anything but the best-draining soil. At Brentano’s, the field is crowned to follow the lay of the land and drainage occurs at both ends.

“Some people have chosen to not put drain tube under every row,” Brentano said. “To us it’s cheap insurance when it’s amortized out over the life of the system.”

Both Hopkins and Lord agree and have also laid drainage tiles below each row of sockets. Alongside the sockets, either buried or on top of the ground, is 1-inch irrigation tube with emitters that stretch up and over the sockets into the pots and are easily removed as the pots are pulled out.

If done by hand or auger, the installation process is a painstaking task. Holes must be dug at the same depth and sockets carefully leveled so that plants grow

straight. Machines obviously speed up the process, but workers still must go back through the fields to make sure sockets are level and tuck in and smooth the soil. At Woodburn, they’ve simplified the job by building a machine that steers itself by GPS, digging the trench and placing sockets within an inch or two of accuracy, Hopkins said.

Up and running, the pot-in-pot system uses less water because irrigation is aimed directly at roots and there’s no waste. But it needs constant monitoring.

“Irrigation is the hardest part,” Brentano said. “We’re out there all the time, every day. You can’t have a plugged emitter. All valves have to open when they’re supposed to open. It doesn’t allow you to take Sundays off.”

A worthwhile alternative

Pot-in-pot also doesn’t allow you to make changes very easily. The three nurserymen recommend thinking hard about the future before putting acreage into the system. Switching from PIP to another crop or pot size means pulling out all the sockets, irrigation and drainage and starting over — a costly choice.

“Once you’ve installed it, you’re tied to a particular size and quantity,” Lord said. “That makes changes difficult. It’s pretty much a permanent decision.”

In the last 20 years, that decision happened often. Landscapers, retailers and homeowners helped fuel what’s no longer a trend as they demanded containerized trees whenever they wanted them. Nurseries saw the benefits of a system that allowed year-round sales.

Now, according to the University of Kentucky, more acreage nationwide is devoted to pot-in-pot than field-grown crops. Though still considered by some the new kid on the block, PIP has taken its place as a traditional alternative in nursery production. ☺

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