

A How-To for Starting a Permaculture Nursery and Why You Should

by Douglas Bullock

My brothers and I grew up in a small California town with abundant open space, some large lots and horse pastures. Down the road from our place lived a man we called Crazy John who had a modest house on a big lot packed with unusual trees he had collected from around the world - almost a jungle. John also had a small nursery where our parents would occasionally take us to buy trees for the yard.

Sometimes John would give us kids a big sack of seeds to plant. Big seeds. Weird seeds. More like curiosities than seeds, really. He told us to plant them somewhere, but I don't think we ever did. Years later when we were into plants, fruit trees, and exotic stuff, we noticed some really eye-catching things here and there around town. We would stop and talk to people and they would invariably say, "Well, you know, there used to be this guy..."

Most people thought John was a bit "touched" because he often carried on about international conspiracy theories and the like. And his place definitely didn't fit in with the suburban landscape growing up around him. But people didn't mind his eccentricities. He had good plants and trees, he knew about microclimates, and he made a difference.

If you want to make a positive impact on the world as John did, I encourage you to start a home nursery. Spreading useful plants is a good thing, and you will learn and grow tremendously from doing it.

Save money and get the right plants

One major benefit of starting a small nursery is that you will develop the skills to propagate the huge number of plants required to flesh out the skeletal/framework plantings that so many permaculture sites start with. If you really want to stack species and mimic natural systems, which is the ideal in a permaculture system, it takes masses of plants over years of development. Purchasing these quantities of plants from commercial sources may provide instant gratification, but it can be prohibitively expensive. On the other hand, it doesn't take long to root hundreds of shrub cuttings or graft all the fruit trees you could ever want, and it costs very little money.

In addition, you may not be able to get the best plants for your site through local or mail-order nurseries. The species and varieties currently in vogue may have been chosen for characteristics such as compact growth, large flowers, or purple foliage. Though these may be considered attractive, they are not necessarily desirable characteristics for your site.

More suited to the permaculture model may be plants that are generally adaptable, nitrogen-fixing, bee forage providers, cold or drought hardy, tolerant of wind or salt, or providers of massive regular yields of a valuable product under adverse conditions. You may be looking for plants that contain strange extractable chemicals, fountain of youth elixirs, or other such qualities or yields that fit your needs and conditions-and you may just have to grow them yourself due to unavailability or extreme prices on the open market.

Propagating your own plants also allows room for error, which is inevitable. When you have

just one specimen of some cool plant, the tendency is to protect and coddle it, planting it in what you believe is just the right place. This is natural. However, occasionally we are ignorant of some cultural facet and we make mistakes, sometimes losing the plant.

When you have 50 or 100 of some little plant or tree, on the other hand, it is easy to try them in all kinds of situations and give some to friends who probably will plant them in ways and places altogether different than you ever would have tried. Some may languish or die, but others will thrive in areas you wouldn't expect, outperforming your wildest dreams. These plants may even become a part of the local ecosystem-resources for future generations of humans, animals, plants, and fungi-and eventually becoming fossil records for others to ponder. What could be better?

How do I start?

Sources of plants, seeds, and cuttings abound in this world. Of course you can buy some suitable plants from nurseries and seed companies, (see references), but there are many other sources as well. You can get seeds, cuttings, bulbs, and even plants from wild places, vacant lots, other peoples' gardens, etc.

Plants are just about the most basic thing you can talk about. I have found that barriers of race, culture, age, politics, and sex seem to evaporate when speaking enthusiastically with someone about plants, especially the cool plants in their yard. You are likely to get a positive response if you ask, "Just what do you call that weird tree with all that smelly fruit anyway, and can I have a few seeds to grow at home?"

Making connections with other permaculture people and local people interested in plants can greatly expand your sources, especially if you have propagated extra samples of interesting things to trade. Friends and acquaintances will often give you surplus plants, and let you take cuttings or collect seeds from their gardens. If you join widespread groups like [Permaculture Plant and Seed Exchange](#), [North American Fruit Explorers](#) (NAFEX), or other seed exchanges (see references), you can learn a lot and your sources will become even more far-flung and diverse. Other possible sources for plant material include areas slated for construction or clearing where you can dig up transplants before the bulldozers move in.

The modern age with its postal system, express mail, parcel services, jet air lines, and tourist travel to exotic destinations allows all manner of plant acquisitions from around the world. Having a small nursery on your site and being familiar with propagation techniques will enable you to grow out the unusual plant material that mysteriously arrives in the mail, or that somehow finds its way into your snorkel tube, to be discovered only upon return from their paradise to your paradise.

After you have acquired seeds, cuttings, or a few specimens of a plant, you can proceed to propagate them. If you don't know much about propagation techniques, there are good books on the topic (see references) that will tell you what you need to know, like how and when to graft, which seeds need stratification or scarification to germinate, etc. In the process of propagating your nursery stock, you will learn a lot about the plants and their requirements.

Where to put it?

The best placement for a small nursery stock propagation area, shadehouse, or greenhouse

is very close to your center of activity, in Zone I. This way, you can easily check for pests and moisture levels daily or even more often. During the growing season, I check for moisture and slugs first thing every morning as I drink my tea.

Large container stock that doesn't need to be watered or checked as frequently can go a bit farther away, in Zone II. Field stock-plants and trees rooted in nursery rows in the ground for later transplanting-should be in your best soil. Growing nursery plants in the ground requires less irrigation and care and allows you to grow plants to specimen size and to grow large numbers of plants for broad scale planting with relatively little effort. This needn't take much room-maybe just a row or two at the edge of the veggie garden-but in general, field stock can do with less attention, so it can go farther out in Zone II or III.

Grafting

Grafting is a method of attaching fruiting wood (scion wood) of a desired variety of fruit tree onto existing rootstock of the same or a related species. This technique is extremely useful for producing true-to-type multiples of a given variety or cultivar quickly. Grafting is also a way to adapt a particular variety of fruit tree that you like to local conditions, by choosing rootstocks, according to moisture requirements, disease resistance, ultimate size, soil type, etc.

Selecting appropriate rootstocks allows you to make use of marginal land and microclimates in ways not normally possible. On several occasions, I've seen the same cultivar of a given fruit tree, when grafted on different rootstocks, take levels of inundation or drought that I found hard to believe, while still producing lots of high-quality fruit. For example, a European plum on Pixie roots will survive months of standing water and still fruit, while on Siberian-C peach roots, the same plum will endure extreme drought and thin soils. Some of our pear trees grafted onto quince rootstock and planted at the edge of our marsh do fine with their roots under water for six months of the year!

Whether you graft large-nutted pine species onto native pines, tip graft your durians, or approach graft your melons and cucumbers, the world of grafting will expand your options enormously. What you can and cannot graft, delayed incompatibility, delayed bleed through of rootstock characteristics, and graft hybrids (chimeras) are all fascinating aspects of nursery work that continue to show us more about plants, their relationships, and life on Earth.

Natural Nursery Areas

Other good sources of plants that are often overlooked are naturally occurring "nursery" areas. Whenever you are travelling, or out and about locally, keep your eyes peeled for places where plants are naturalizing - that is germinating and growing vigorously on their own. You may see this in the wild, or in large older landscapes, wild parts of parks, campuses, botanical gardens, estates, abandoned arboretums, vacant lots, or overgrown backyards. Often these plants may be transplanted to your nursery or your site, saving you time and energy. In any wild or naturalizing area, be sure that you harvest ethically and sustainably, leaving representatives of the best plants to regenerate that population. Of course, this caveat doesn't apply to ecosystems in imminent danger of destruction.

As your site develops, natural nursery areas will happen more and more frequently. Stay alert for these areas so as not to mow, or weed out valuable plants inadvertently. A natural nursery area often indicates that conditions are near-perfect for those particular plants. Pay

attention and try to recreate these conditions in your new planting areas.

You will become attuned and knowledgeable

Nursery work allows us to interact with plants in many ways and learn things we cannot even imagine. It is one of the best ways to learn about and become intimate with plants and their needs. It almost forces you to focus on aspects of these little green beings that often escape notice.

Whether it is their seeds, germination requirements, leaves, flowers, bark, root structure, pests, seedlings, soil fertility, or water needs, you will find yourself studying and observing the plants in your nursery so closely that you won't soon forget what you're looking at. Latin names will come more easily, family relationships will become apparent, and provocative new planting themes and strategies will drift through your thoughts.

As human beings, we have these great bodies, and minds, specifically designed, it would seem, not just to observe, but to interact. Just think, you could have been born as powdery mildew or something nameless, but you ended up human this time around! On a practical level, one of the best ways to interact with the natural world is to start a small nursery.

Besides the practical, economic, and educational benefits of propagating plants for your permaculture paradise, nursery work is fun-and you could become famous as well! When you discover that new variety of your favorite fruit in the natural nursery area of your permaculture system, then propagate it in your Zone I greenhouse, then hit your local farmer's market with a thousand of them, you can name it whatever you want! Whether it's "Cosmic Bob's Earthly Delight," "Gem of Lemuria," or "Jan's Honey Nugget" is up to you ... immortality can be yours!

And remember, if you ever see one of these tags...

WARNING: Asexual reproduction using scions buds or cuttings whether for sale or own use is prohibited by US patent laws. Infringers will be prosecuted and [this nursery] offers a \$2,500 REWARD for evidence used in the arrest and prosecution of violators.

...don't you ever because you mustn't and it's naughty!

References and Sources

1. Dirr, M. [The Reference Manual of Wood Plant Propagation](#). 1987. Athens , GA.
2. Facciola, S, [Cornucopia](#). 1991 - Vista, CA.
3. [North American Fruit Explorers \(NAFEX\)](#), c/o Jill Vorbeck, 1716 Apples Rd., Chapin, IL 62628.
4. Forest Farm, 990 Tetherow Rd., Williams, OR 97544-9799 (Catalog \$3) - (541) 846-7269
5. [Permaculture Plant and Seed Exchange](#), 3020 White Oak Creek Rd, Burnsville, NC 28714 USA.
6. [Western Australian Nut and Tree Crops Association \(WANATCA\)](#), The Tree Crops PO Box 27, Subiaco, WA. 6008, Australia.
7. [California Rare Fruit Growers Inc.](#), Fullerton Arboretum-CSUF, Box 6850, Fullerton, CA 92834-6850.
8. Nurseries - see also extensive listings by Lee Barnes in [Permaculture Activist #34 "Bioregional Plant Allies"](#)

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Douglas Bullock and his brothers have propagated and planted thousands of fruit and nut trees, along with countless understory shrubs herbs and vines. At every opportunity they eat themselves silly on plums, raspberries, apples, and all manner of fruit grown on their land.