



How to Start an Urban Orchard

TREE CITY USA®
BULLETIN

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As incongruous as it may seem at first, restoring one of the earliest uses of trees to our urban landscapes holds the potential of improving human health, fostering greater social interaction, and adding one more benefit to the long list of those resulting from continuous, systematic urban forestry.

Trees for food adds a whole new dimension to urban forestry – and is one more way that trees can benefit the residents of our communities. With the right partnerships, a little planning, and a lot of education, fruit and nut trees can make a huge contribution to the tradition of service already provided by our green canopies.

Trees play a lot of roles in a community. While providing their more traditional services of shade, beauty, stormwater control and energy savings, trees can be selected that also provide a crop of fresh fruit or nuts on public rights-of-way, portions of school grounds and in parks. On private land, urban orchards can be planted on unused lots and church grounds. And, of course, there are residents' yards where a pear tree may work as well in the landscape as yet another maple or linden. The potential, in most climate areas of North America, is almost unlimited.

The Alliance for Community Trees network has been a leader in promoting and developing guidelines for the use of food trees. Much of the material in this bulletin is the result of their pioneering work. The concept has been to “bring back one of the oldest uses of trees,” according to former Executive Director Carrie Gallagher. “Fruit and nut trees have supported human nutrition for thousands of years. In recent decades, as the population has urbanized, people have lost touch with their food sources — even the ones that can grow right in their front yards.” She summarized what we have adapted as the theme for this bulletin:

The pleasure of picking a ripe pear, plum, or persimmon from a tree in a yard or neighborhood garden is not just a sweet seasonal joy. It also offers fresh and nutritious food to communities that may lack ready access to quality produce. It educates people about food sources and growing cycles, and about basic tree biology and agriculture. It brings neighbors together to dig and plant and prune and harvest, and to enjoy the delicious bounty of their trees. And it engages residents to alter their landscape, turning vacant lots and derelict spaces into beneficial gardens that can help turn a neighborhood around.

If your community does not include food trees in its urban forestry program, the following pages can serve as a guide to getting started. Whether it is a new initiative of the tree board or helping out another organization, the possibilities range from full-scale orchards to simply encouraging homeowners to plant a food tree.



Arbor Day Foundation
100 Arbor Avenue • Nebraska City, NE 68410

Basic Essentials – Partners and Education

No urban orchard project is a quick or easy undertaking. It takes careful planning and long-term commitment, but in the end the multiple rewards are well worth the effort. Thinking about potential partners, and the educational needs of your community, are good places to start.

FINDING THE RIGHT PARTNERS

Assistance from partners is needed for at least four essential purposes: funding, labor, expertise and public acceptance. As you consider the resources in your area, you might create a matrix something like this:

POTENTIAL PARTNERS	FUNDING	LABOR	EXPERTISE	PUBLIC ACCEPTANCE
Nonprofits such as food banks, Scout or other youth groups, community centers, faith-based organizations and garden clubs (with Master Gardeners especially helpful)		✗	✗	✗
Businesses, including banks, grocery chains, nurseries, developers, tree care companies, consulting arborists	✗		✗	
Civic groups such as Kiwanis, land trusts, revitalization coalitions, neighborhood associations		✗	✗	✗
Government agencies, especially Cooperative Extension, Dept. of Agriculture, Parks & Recreation, Housing, Corrections, Employment & Training, Public Health, etc.	✗	✗	✗	
Schools at all levels, especially contacting science curriculum coordinators, disability specialists, service-learning coordinators and motivated teachers		✗	✗	✗



EDUCATION WILL BE NEEDED

Two kinds of education will be needed for your project to be a success. Workers will need to be trained in every aspect of tree planting, care and even the use of tools.

There is also the need to educate potential end-users of the produce about healthful eating and the nutritional value of fresh fruits and nuts. Planting and care of the trees will be great attention-getters (which is often otherwise difficult in health education), but workshops and school materials will be necessary to help change poor eating habits that are ingrained in many urban residents today — of all ages and cultures.

Planning Your Project

Having experienced partners with you every step of the way will assure success. Here are some other key considerations to help guide the way.

1 LOCATION

- ✓ Available land is more realistic than an acquisition. What property might be converted to food trees – abandoned lots, a portion of school or church grounds, part of a park or easement, a donated parcel?
- ✓ Is the land near a neighborhood that needs the project?
- ✓ Is there enough space for fruit trees (at maturity, approx. 20 – 35 ft. x 20 – 35 ft. per tree for standard sizes; about half of that for dwarf varieties.)



Avoid disappointment by making your site selection carefully and testing the soil to assure compatibility with the kinds of trees that will best serve local needs.

- ✓ Is a source of water available?
- ✓ The soil! It must be free of contamination and suitable for fruit or nut production. The latter will depend on the trees selected, but a first step is a soil test. The Cooperative Extension agent in your county can explain where tests are available and how to collect samples. Here are some important considerations, but each tree species has its own requirements, and in some cases soil characteristics can be modified:
 - pH (Slightly acidic is best)
 - Texture (Clay? Sand? Loam? Silt?)
 - Drainage issues, compaction or subsurface hardpan (or buried concrete, etc.)
 - What nutrients might be deficient?
 - Percent organic matter

2 RIGHT TREE FOR THE RIGHT PLACE

This well worn refrain in urban forestry is especially important when planting fruit or nut trees. One of the first considerations is matching the tree(s) of your preference with your hardiness zone. Finding the hardiness zone in which you live, and screening trees by this and other characteristics, is made easy at arborday.org/trees.

As with other tree plantings, diversity helps guard against being wiped out by a pest or weather. With fruit trees, the mix must also include pollination partners. Some trees are self-pollinating, but others require a compatible cultivar, preferably growing within 100 feet or closer. For example, Red Delicious apples need Lodi or Yellow Delicious as pollinators. To encourage pollination even more, consider planting borders of shrubs and flowers that bloom early and are known to attract bees and other pollinating insects.

Be sure to purchase your trees from a reputable nursery. Purchasing for fall planting may help with a price break, but spring or fall — ask for a guarantee.



Selecting the right tree for your site, climate and market will help ensure the desired outcome of your project.

Planning Your Project (continued)

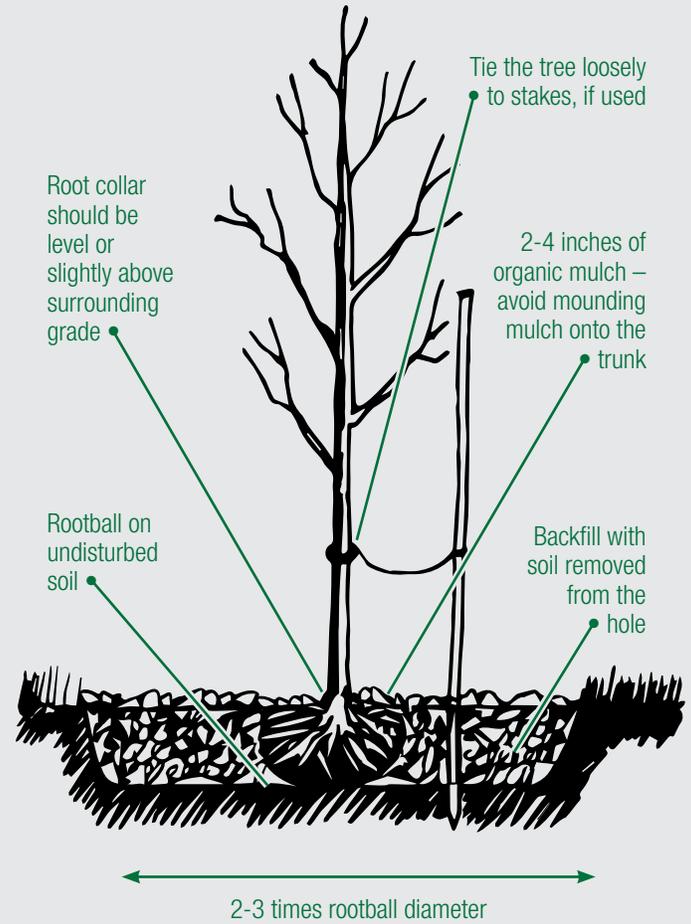
3 PLANT 'EM RIGHT!

Poor, unsupervised planting can undo all the best planning. If there are one or two common errors, they would be the tendency to plant too deeply and planting with roots that are beginning to circle. At right are some points that should be emphasized when training anyone who will be doing the planting. Most of the points hold true for either potted or bare-root planting stock. In addition, prune or straighten and spread out any encircling roots. If stakes are used, tie the tree loosely enough to allow some sway. This stimulates root growth and helps the tree develop stabilizing taper.



TIPS FOR A SUCCESSFUL TREE PLANTING

- Cut and remove all twine, synthetic or natural
- Remove at least top one-third of wire basket
- Remove burlap from at least top one-third of rootball



4 TREE CARE – NOT SO EXCITING

It is easier to get people excited about planting than it is to round up help for routine – but essential – care of the trees. Here are some of the chores that need to be considered in the planning stage. Be able to identify not only who will do what, but who will provide the technical advice for each practice, especially if chemical applications are involved.

- Watering the young trees between rain events, and older trees during prolonged drought
- Weed control
- Mulching and refreshing the mulch as needed
- Pruning during dormancy
- Pest detection and control as necessary

It is best to decide on harvesting and distribution policies early in the planning process.

5 PLAN FOR THE HARVEST

A clear policy is needed to guide the distribution of the produce. Rather than wait the several years it may take to reach that happy point, decide this important part of the process right at the beginning. Much will depend on what you plant, the amount of produce, and the needs of the neighborhood or community, but here are some harvesting and distribution methods that have proven successful:

- Using your own volunteers (or paid harvesters) with distribution to food banks
- Establishing partnerships with area food banks with those organizations responsible for both harvesting and distribution
- Using the produce on-site at schools, health care facilities or other public institutions with the respective students or personnel serving as harvesters
- Instituting a free, “you-pick” policy for area residents



An Abundance of Success Stories

When considering an urban orchard in your community, know there is an example of success out there somewhere that will help. Here are just a few, with links to more on the supplemental information web page listed on page 8.



PHILADELPHIA'S ORCHARD PROJECT (POP)

Blueberry plants, hazelnuts, grapes and a wide variety of other food-bearing shrubs and vines supplement fruit trees at more than 50 orchards throughout Philadelphia. The Philadelphia Orchard Project was founded in 2007 by economic development pioneer Paul Glover. With some 40,000 vacant lots in the city and a high degree of poverty, POP focuses its volunteer and resident labors on low-wealth neighborhoods. The expressed purposes of the orchards are to: provide fresh, wholesome foods that improve nutrition and health; provide air-cleansing and other eco-services; reclaim vacant lots to help make neighborhoods safer, cleaner and more livable; teach marketable skills; and increase food security and reduce reliance on increasingly expensive, imported produce.

SEATTLE'S BEACON FOOD FOREST

The Beacon Food Forest is the creation of a grassroots organization by the same name. The land base is a 7-acre area owned by Seattle Public Utilities and located adjacent to a city park. This ambitious project goes beyond growing an orchard. It attempts to incorporate principles of permaculture (See Tree City

USA Bulletin No. 59). For example, the “food forest” includes large nut trees that will eventually form a canopy over an understory of mid-size fruit trees, berry bushes and food-bearing groundcovers. The goal is to have “a succession of edible plants that mature over time and create the layers found in nature.”





A REPRIEVE FROM PRISON LIFE IN LINCOLN, NEBRASKA

A 2-acre orchard project at the Lincoln Correctional Center proved to be a win-win situation for minimum security inmates. With the help of a grant, the project was sponsored by the Nebraska Statewide Arboretum and the Nebraska Forest Service. Training in planting and orchard care was provided by Cooperative Extension, as shown below with extension specialist Vaughn Hammond providing instruction. Job skills gained through this work were an added benefit intended to help inmates in the future. The orchard included pears, several varieties of apples, pecans and walnuts — all of which supplemented the diet of the prison population and contributed to nutritional education.



ORCHARDS AND TREE CAMPUS USA®

Tree Campus USA encourages tree planting and care at institutions of higher education. It also is a means of developing leadership skills in students with an interest in the environment and providing them with real life experiences (photo above).

Urban orchards are fitting nicely into these goals on some campuses. For example, at Trevecca Nazarene University in Nashville, Tennessee, fruit trees have been added to its urban farm. This provides a hands-on opportunity for students to grow and provide produce as a benevolent service to the city's low-income residents, many of whom live in what has been termed a "food desert." At Arizona State University, fruit trees are being integrated into the school's sustainability efforts by harvesting and using fruit on campus. Eighty date palm trees and 20 sweet orange trees are harvested annually with some produce used by campus food services and some sold to help support related programs. There are also 260 Seville orange trees that produce 6 – 8 tons of sour fruit! Rather than sending this fruit to a landfill, it is now being used by campus food services and community organizations in a variety of recipes.



TREE CITY USA®

Starting or promoting urban orchards can help Tree City USA communities earn points toward the Growth Award in a number of ways. For example, literature, publicity and training programs can qualify under Category A: Education and Public Relations. A partnership between the city or tree board and an orchard group would qualify under Category B: Partnerships. Acquiring land for an urban orchard would gain points in Category C: Planning and Management. For more information, please visit arborday.org and type Growth Awards in the search box.

Roundin' Up the Strays

In every community there are fruit trees scattered around town in yards, parks and vacant lots that are not part of a planned urban orchard. Finding these trees and matching up donors and pickers has been the mission of a number of individuals and organizations throughout the country. The goal is to prevent waste of edible produce; provide an inexpensive source of fresh, healthful food; and contribute to the concepts of sustainability.

Falling Fruit is a volunteer-run 501(c)(3) nonprofit in Portland, Oregon, and a good example. In the system used there, volunteers search for food sources, or tree owners voluntarily enroll their tree or bushes. The results, combined with other databases, are converted into an online map. Interested harvesters can click on any tree or shrub on the map and receive more information about the fruit available at that site.

Although systems vary by community, there are some general guidelines that apply to all:

- Never trespass or harvest without permission. Know any local laws that may apply.
- Be careful about chemicals; check to make sure nothing on or around the tree is a contaminant.
- Take only as much fruit as you need or can donate.
- Respect fences, gates and other property.
- Pick carefully, making sure no harm is done to the tree.
- Say thank you to the owner when possible.



FOR MORE INFORMATION ...

There is considerably more information about fruit and nut tree planting and care, as well as all aspects of creating urban orchards. For helpful links to some of this excellent material, please visit arborday.org/bulletins and navigate to the supplemental information for Bulletin 73.

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