

# The 'Perfect' Installation



**Does the 'perfect' woody ornamental installation exist? Obstacles in overall design, plant selection and site selection can be overcome**

BY JOHN C. FECH

**Y**ou're to meet your clients about this year's tree and shrub plantings and you know there are a few problems to discuss, which often happens. What to do with the landscape's limitations? As with most conflicts, it's best to be open and honest.

## One plan, two opinions

The first conflict might occur with the interpretation of the landscape architect/designer's plan. In some cases, significant changes in the landscape have occurred between the time of the drawing and the installation date. Surrounding trees could have been pruned or removed; construction activities may have compacted, added to or removed the soil; or the adjacent property may have new plant materials.

If no serious changes have occurred, focus on inspecting the site.

Just as several meteorologists may issue different weather forecasts based on the same weather data, designers and landscapers may interpret the landforms in a different way. For example, the designer may feel that a pagoda dogwood would thrive and provide screening in a certain portion of the landscape, while the landscaper imagines coniferous species such as hemlock, arborvitae or vanderwolf pine.

If this occurs, the best way to resolve the situation is to contact the designer to get his or her thoughts on the merits of the pagoda dogwood in meeting the program's wish list

*continued on page 92*

## Avoid these mistakes!

**TOP:** This tree didn't have a chance because the hole that was dug for it was too small.

**MIDDLE:** This tree was planted with too much mulch surrounding it.

**BOTTOM:** This tree was planted too deep. If roots don't grow horizontally, you'll be asked to come diagnose a diseased or dead tree.



continued from page 90

of goals and objectives devised with the client. Often either the designer or you may have overlooked some factor in the decision.

If you and the designer don't agree on the plant material choices, the best approach is to consider a third party for an unbiased opinion. Other landscapers, independent horticultural consultants and university extension horticulturists can usually offer a reasonable set of choices, especially when no conflict of interest is at stake.

#### Installation obstacles

Once the plant material has been chosen, expect to encounter unforeseen problems. Larry Spangler, landscape foreman in Lincoln, NE, reports that this is always the most frustrating part of the installation process.

"I remember one job where we moved three scotch pines three



## Safe, effective goose control is here!

**F**lightControl® is the only product that effectively protects your properties seven days a week, 24 hours a day. FlightControl works like a "Biological Fence", herding geese off the areas where you don't want them. FlightControl is odorless, weather-proof, and does the job without harming humans, vegetation or wildlife.

*Get rid of the geese, get FlightControl!*

**FLIGHTCONTROL®**  
THE KEY TO GEESE MANAGEMENT

Call us: 800-468-6345 or visit: [www.flightcontrol.com](http://www.flightcontrol.com)

Environmental Biocontrol, Intl. a division of DCV, Inc.

## Plant options: pros and cons

There are several choices when installing woody plant material: bare root, ball and burlap (B&B) and container grown. Each has advantages and disadvantages:

- ▶ Bare root material is inexpensive, but can only be planted in spring and can dry out during shipping.
- ▶ B & B material costs more and is a bit tender during shipping, but can be planted from April to November in most areas.
- ▶ Container grown plants are also more expensive and can develop circling roots, but offer ease of movement and can be planted most anytime the ground is not frozen.



times. Every time we dug a hole, we hit a sprinkler line!" he said. "Finally, we called out the sprinkler installer and worked it out with him."

Other unforeseen problems include discovering hardpan or gummy soils, unmarked utility lines and buried concrete. In these situations, keep in mind the lateral expansion of the new plant's root system. If the soil won't allow horizontal growth, the tree will die in a few years and you'll be called out to diagnose a sick tree or remove the dead one.

Consider each site individually; each one has its own set of desirable attributes and limitations. In the hurry to get the plant in the ground, utilities are often overlooked, so ask the utility company to mark underground lines and look overhead to make sure that the tree will not grow into overhead lines. An underground sprinkler design map also helps prevent damaged lines.

### Size does matter

If a client is trying to reduce the cost of installation, be conscious of the room allotted per plant when using small plants. "Little" plants look lost and naked in the landscape for the first two years, leaving a large volume of void space in the planting beds. In this situation, the tendency is to scoot the plants a bit closer together than is recommended in order to prevent this open appearance.

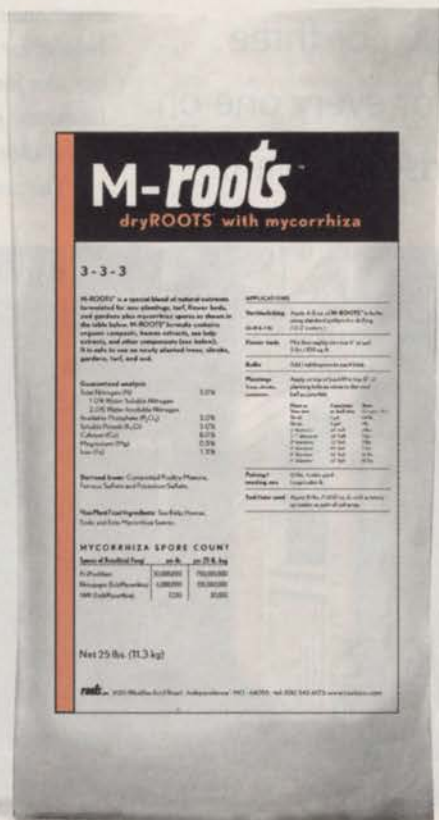
But placing plant materials too close together has three results: 1. Eventually it creates an overcrowded planting bed, forcing a need to relocate or remove 3- to 4-year old plants. 2. It may or may not save money for the client. If the plants are located at the minimum spacing or even less than the minimum, more plants will be required to fill the space. 3. Shrubs and trees that are too close will require frequent pruning.

How big should the material be? Your client may be screaming for BIG, BIG, BIG, because those large trees or shrubs have immediate impact. However, the larger the plant, the smaller percentage of roots are brought with it from the

*continued on page 94*



## Is it worth an extra few dollars of insurance?



**roots inc.**

3120 Weatherford Road · Independence · MO · 64055  
tel: 800 342-6173 · www.rootsinc.com  
Circle No. 161 on Reader Inquiry Card



*continued from page 93*

nursery to the landscape. A 1-in. tree will generally retain about 20% to 25% of its original roots during planting, while a 4-in. tree might retain only 5% to 10%. Generally, the smaller plants have a higher establishment rate.

Another concern in striving for the "perfect installation" is the availability of plant material. Large plant material and trendy popular species have been especially hard to obtain in recent years. Dave Lanoha, owner of a large midwestern nursery, complains, "It's really hard to get certain plants these days. And if you can get

You may want to start listing two or three plants for every one on the landscape plan.

them, you can't get as many as you need or the quality of the stock is unacceptable. I guess it's supply and demand."

The unavailability of large plant materials presents a real dilemma and two basic solutions:

1. You can plant smaller stock and coax your customer to be patient. It may be possible to offer some type of incentive program to encourage patience. There are some customers who you can't afford to lose, so offering some free annuals or a complimentary landscape design may be worth the effort or investment.

2. Consider alternative plant materials that will serve the same purpose. You may want to start listing two or three plants for every one on the landscape plan. This is helpful for the problem of unavailability, but also for convincing clients to buy the landscape project even if they object to the first choice of the landscape designer.

The scale of the project may also influ-



This is a bad location because of the hot, dry, rock mulch. Plus, the tree was planted too close to the sidewalk and the building.

## Look for ideal planting sites

What makes an ideal site? Look for: well-drained, moderately fertile soil at least 3 feet deep, wide enough to contain the eventual lateral expansion of the root system, the number of hours of sun received on the site would be the exact amount that the tree or shrub requires, necessary room for the projected height and width of the plant slope of the land to meet the moisture needs or tolerances of the plant.

ence the choice of whether to install small stock or to select alternatives. A newly constructed building, office complex or shopping mall will look quite stark if small stock is installed, while an older residential planting with established surrounding plants might allow for small plants.

### Right plant, right place

The most important factor in siting plant materials is to remember the catch phrase of the '90s: "Right plant, right place." Weather, sun and shade, drainage, soil moisture, soil nutrients, soil pH, winds, existing plant materials and the function of the site are crucial to the success of the planting and must be considered. For example, lilacs may survive in moderate shade, but will not produce many blooms. River birch and pin oaks may survive several years in high pH soils, but will eventually develop chlorosis.

Here are some rules of thumb to follow:

Dig a wide hole to facilitate the rapid lateral expansion of the root system. This

*continued on page 96*



*continued from page 94*

is accomplished by loosening the soil on each side of the root ball. Try to dig the hole two to three times as wide as the root mass, but don't let that tree or shrub sink after planting. Set the root mass on a firm foundation — one that has not been disturbed by digging.

Remove wire and burlap (or at least some of it). Burlap that extends above the planting hole can act like a wick, drawing water away from the root system. Just snip it off and discard it after the plant is in the ground.

Likewise, the wire basket can also be a bit of a problem, possibly inhibiting lateral root growth. Snip off most of the basket after planting and discard it.

Plant above grade in heavy soils, at

To stake or not to stake? If the site analysis indicates that this is a windy site, then it helps to stake it.

grade in well drained soils. Clay soils hold water tightly, creating poor drainage. You can alleviate this by placing the tree several inches above grade in the planting hole, allowing some of the rain or applied water to be shed from the root mass.

This is not an issue in well drained soils. In either case, make sure all of the roots are covered with soil.

Spread the roots out laterally, especially with container or bare root stock. The goal is to mimic nature and encourage the roots to spread laterally. If roots have started circling in the container, carefully spread



Turf and trees should be separated. Mulch will prevent weed growth, keep roots cool and hold soil moisture.

them out straight in the hole. Do not cut them off to fit the size of the hole. If they don't fit, dig a wider hole.

Consider soil type and amend accordingly. You might think that adding compost or leaf mold into the planting hole would be beneficial, but it isn't for large woody plants.

While this facilitates the establishment of annuals and perennials, woody plants have large, wide root systems. It is impractical to properly amend the entire root system. It's more reasonable to grow vegetables and flowers in amended soils, due to their smaller root systems.

To stake or not to stake? Are stakes really necessary? If the site analysis indicates that this is a windy site, then it helps to stake it. Tie the tree loosely to a support, and use wide strapping or inner tubes to attach the tree to the stake. Old sweat socks or pantyhose will work just fine. If the site isn't windy or likely to be vandalized, don't bother. It isn't worth the extra work.

#### **Think you're done? Think again.**

Good follow-up care such as fertilizing, watering and adding mulch is essential.

Woody plants don't benefit much from fertilizer until a year or so after planting. In fact, some research indicates that later root growth is actually inhibited by fertilizer addition. So wait before adding nutrients.

Water is crucial, however. Small trees (1-in. trunk diameter) should have about a gallon per week, medium-sized trees (2-in.) should have 2 to 3 gallons per week in the absence of natural rainfall. After a year, taper it off gradually.

Mulch is important as well. Cover the soil with a 2-in. layer of wood chips to prevent weed growth, keep the roots cool and hold in soil moisture. Start about 3 to 6 inches away from the trunk and extend it outward as far into the turf as the customer will stand. Three to four feet on each side of the tree is a good target.

— John Fech is with the University of Nebraska in Lincoln.