

Planting for Survival

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Nurserymen make every effort to produce sturdy, healthy plant material. The fact that so many plants fail to survive on the job site suggests that there is more involved than first meets the eye. Plant selection, planting technique and after care are equally important.

Plant selection involves selection of varieties, as well as selection of the producer and the individual plants themselves.

Varietal selection is often made by the architect or designer of the particular job. Usually these people are from local firms and are aware of requirements or limitation of the plants. Sometimes the designer is the building architect or a firm from a remote part of the country, and varieties are selected entirely by looks or personal prejudice. For instance, Pin Oak and Red Maple are regularly specified for planting on alkaline reclaimed sites. They do not tolerate alkalinity.

As a professional landscape contractor, you are aware of the conditions in your area and of the troublesome plants to be avoided. You can suggest alternatives to your client which will assure satisfaction.

For large jobs, bids for plant material are often circulated nationwide. There are excellent nurseries throughout the country, but selection should be made from a producer in the same climatic zone who is growing on a soil similar to that at the planting site. Examples where this rule hasn't been followed abound. We drown material with sand balls planted in heavy silty clay loam soils. We see red pines from south New Jersey dying when planted in Chicagoland, about the same latitude, but at least two climatic zones different. *Cercis canadensis* is native from Georgia to the Canadian border. But the plants in Dixie are certainly not the same as those up north. If you select material from a nursery in a climatic zone similar to yours, you at least know the stock has survived several seasons in the field and should tolerate your climate.

Soils in most new developments are thoroughly disturbed, compact and poorly drained. In such conditions plants have a difficult time surviving because of excess soil moisture.

The common practice is to put stones in the bottom of the planting hole for drainage, set the plant, fill the hole with soil mixed with peat moss and water regularly. This often results in a drowned plant. This system creates a situation in which water runs into the loose soil faster than it can be absorbed by the surrounding soil. The hole fills with water.

A considerable amount of research has shown that the interface where the mixed soil meets the unmodified soil becomes an unsurmountable barrier to root development.

For proper planting, dig the planting hole large enough to accommodate the ball of the plant and set the plant somewhat higher, with the ball exposed 10-20 percent. Backfill the hole and soak thoroughly. Do not modify the soil placed back into the planting hole. If it is necessary to modify the soil, dig the hole as large as possible, and then make sure the soil changes gradually from the modified to the natural soil. Where rock is used in the bottom of a hole because of very poor soil or no subsurface drainage, provide tile or a french drain so that water drains away from the hole. In such a case, a dry well next to the planting hole may be necessary. Or, if the site has a steep grade, tile may be laid to daylight farther down the slope or into a storm sewer. In severe cases, raised beds or hill plan-



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tings that allow for plants to be set above grade may be the only solutions.

Caring for the newly set plants is often turned over to the property owner, and at a time critical to the survival of the plants. The plants must get adequate, but not excessive, water.

Each plant is an individual and each planting hole may be quite different, especially in a large development. Considerable skill may be needed to determine the amount and frequency of watering needed by each plant.

Sometimes the only way to tell if a plant is too dry or too wet is to dig the hole next to the ball and take a look. Again, do not assume that because one plant in a development drowned, that all the plants that die are too wet. Since the soils in new developments are disturbed there is no way to tell what is underground. Within the same parking lot, for instance, we have found island planters underlain with sand, concrete, railroad ties and yellow clay. They all resulted in dead plants, but for entirely different reasons. Don't be caught generalizing, based on single observation.

Finally, modern landscape techniques allow moving of plant material nearly all year. This doesn't mean plants like such treatment, only that they tolerate it.

If you are in the habit of moving plants out of season, and in full leaf, take the extra precaution such as wilt proofing, tarping, syringing the foliage in hot water, etc. to make sure the plants don't suffer. Because this care is costly, be sure to build it into your contract. And be sure your client knows that plants moved in high stress times of the season need extra attention. If the client is unwilling to provide the care or unwilling to pay you to do it, it may be wise to postpone planting until the plants have a better chance for survival.

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