



Nursery News

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Field grown vs. Container grown – Pros and Cons

Which is better, a field grown plant moved with an earth ball, or a container grown plant? As growers, our goal is to provide healthy, hardy, and beautiful plants for you to plant in your landscapes. How plants are grown and handled determines survivability and thrive-ability of your landscape projects and possibly your reputation.

Every plant is different in what happens below the ground—some plants are fibrous-rooted, others course-rooted, and the root medium that surrounds plant roots is as important a consideration in site soil amendment as the plant itself.

It is our good fortune to have field soils laid down by the glaciers and forests of tens of thousands of years ago that contain many physical and chemical soil characteristics perfect for growing trees. Container grown plants have the obvious ease of handling and conveniences of year round availability, but some precautions need consideration for successful transplanting into the landscape.

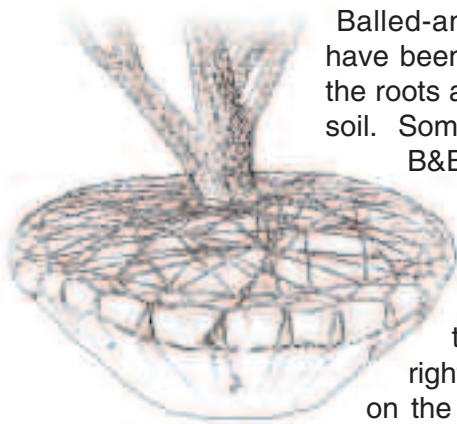
B&B

Balled-and-Burlapped plants have been dug with a portion of the roots and surrounding ball of soil. Some landscapers prefer

B&B material because the plant is in natural soil. B&B works best when skilled crews dig at the optimum time of year, with the right root-ball size based on the above ground portion of the plant. Even though the

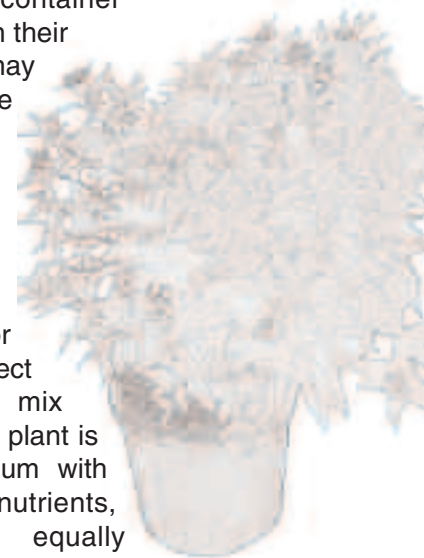
majority of the root area is removed, the majority of weight and stored food is in the harvested roots, which easily regenerate new roots.

Drip irrigation during early plant establishment concentrates the fine feeder roots in the harvest area. Many trees barely show they have been moved if they have been root-pruned and cared for properly in the field, and prevented from dehydrating before and after planting. Establishment is also dependent on site preparation and aftercare - especially over the first year.



Containers

Just like the B&B plant, the container root ball needs to be sized carefully to maximize roots at transplanting. There is nothing natural about a container medium, in fact most container mixes are soil-less, made up of components such as bark, sand, peat, and compost. When the balance of components is tailored to species requirements, containers can be a convenient and desirable alternative to field grown stock for many plants. Though container plants are transplanted with their entire root system, roots may need to be cut before transplanting to induce branching into the surrounding soil. Container plants may suffer root damage while they are held above ground from excessive heat or cold, or poor drainage from incorrect pot size or inadequate mix porosity. When a container plant is grown in a tailored medium with sufficient irrigation and nutrients, transplant success is equally achievable.





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Field grown vs. Container grown – Pros and Cons (cont.)

The following chart lays out the considerations both growers and installers of plants should consider when determining whether a plant is better B&B or in container.

Field Production

Container Production

Seasonal Factors	
<ul style="list-style-type: none"> • Limit harvesting to when plants are not in their fullest growing flush • Field soil buffers extreme temperatures lengthening root growth season 	<ul style="list-style-type: none"> • Year-round harvest and planting • Shifting up to bigger pots spring through fall
Types of Plants	
<ul style="list-style-type: none"> • Best for large caliper trees • Some plants grow best in the field 	<ul style="list-style-type: none"> • Efficient for small shrubs • New production methods allow more kind of plants grown to larger size in larger containers
Planting & Post Planting Care	
<ul style="list-style-type: none"> • Usually only 5-20% of root area left after digging, but roots regenerate quickly in the landscape because majority of root weight and food storage is in harvested roots near crown of plant • Freshly dug trees need careful water management • All but non-synthetic burlap must be removed from ball after placed in hole • Plants must be handled carefully to limit root disturbance 	<ul style="list-style-type: none"> • Container plants have as many or more fine roots as field grown, but in a smaller space, and they dry the media very quickly • Enough water supplied after planting in the landscape is important for rapid root generation • Containers must be removed by lifting plant out or cutting container off • Roots must be untangled or cut to expose healthy roots to new
Handling & Hold Yard Factors	
<ul style="list-style-type: none"> • Root ball protection required • Drip or overhead irrigation can be used to avoid drought, heat stress is less of a concern than containers • Plants should be handled carefully by root ball, soil type plays a factor in how well balls hold up during handling 	<ul style="list-style-type: none"> • Easy to maintain in sales yard, no mulching, but must be protected from blow over, temperature extremes • Heat stress can be a problem because of high temperature of roots in containers, and heat reflected • Less handling damage, most people carry by pots instead of plants • Reduced shipping costs and long distance shipping is possible because of lighter weight and more shipping options by stacking, boxing, racking