

# Transplant Shock

When planted bare-root, balled, or caged, nearly all plants and trees are **root pruned** to some extent at the time of transplanting, and this reduces root food reserves. As well, root pruning cuts the amount of absorptive surface for the taking up of water and nutrients from the soil. It can take as long as 7 weeks for new roots to be initiated from the callus formed after a root is cut. It can take as long as 13 weeks before the regenerated roots absorb measurable amounts of water from the soil outside the root ball, or root basket. And at least 20 weeks until soil moisture is absorbed at similar rates from the root ball and back-fill soils.

As a result of this loss, most plants undergo drought or water **stress** after transplanting; and depending on the caliper (diameter) of the tree at the time of transplanting, the stress can continue for several growing seasons, (usually one year for each inch of caliper). The period of reduced vigor may not be too obvious during the last few years of the stress period, particularly on large transplants, but it is still measurable.

To help offset transpiration loss, **water trees well** after transplanting. Make sure to water near the drip-line of the tree and not close to the trunk. Watering too close to the trunk will be of little benefit and may encourage rot fungus development. Once again, a **fertilizer** should be applied over the entire root area of the tree and beyond to compensate for the loss of roots and for the greatest benefit.