

Tree growth related to planting size: David beats Goliath

Consider a one-inch linden and a four-inch linden, planted today into the same good site. Each will be tended until it resumes normal growth, by a gardener who will keep the soil in and around the root ball watered to be always moist, never soggy. The one-inch tree is 7 feet tall. The four-inch tree is 12 feet tall. The chart below shows the size of a little leaf linden planted today and its size at the end of each future growing season.

Today's size	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
1" dia. trunk, 7' tall	7'	8'	9.5'	11'	12.5'	14'	15.5'
4" dia. trunk, 12' tall	12'	12.1'	12.2'	12.5'	13'	14'	15'

In April of Year 2, the one-inch tree wakes up and resumes near-normal shoot growth. It adds a foot to its height and canopy radius that year. The four-inch caliper tree, still laboring in shock, grows only about an inch.

In Year 3, the smaller tree regains species peak growth, 18 inches per year. By fall of Year 4, it's an 11-foot tree.

The tree that was four inches in trunk diameter and 12 feet tall in Year 1 is only about 12-1/2 feet tall by fall of Year 4. It will not have an appreciable growth rate until the Year 5 season. Then it begins to "come out of it," adding 6 inches in Year 5 and 10 inches during Year 6. At the beginning of Year 7 it is 14 feet tall and finally able to grow at about 12 inches per year—within but not at the top of its species' normal range.

Its neighbor, smaller to begin with, increased all that while at 18 inches per year. The trees begin Year 7 even up at 14 feet tall. Now the tree that was smaller will gain ground, growing more each year than its partner because it is the healthier tree. Less stressed during its first years on site, it's been and still is less prone to insect or disease damage, plus it has a wider, more capable root system.