
Observations of Growth Variance in Albizia Seedlings of the Same Generation¹

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At the time these observations were carried on the author was a Medical Technologist at the Benedictine Heights Hospital, Guthrie, Oklahoma. It was while taking care of the various flower beds around the Hospital and Nurses Residence that an interest was developed in the growth of volunteer seedlings of Albizia which came up in several places. The seedlings discussed in this paper made their first appearance during the first week in July 1953, therefore it is presumed that they are of the same generation. The parent trees grow at the west end of the Hospital building.

Shortly after these small plants were discovered, they were taken up and transplanted to a flower bed near the west end of the north side of the Nurses Residence. Others growing in beds back of the hospital, also north side, were found and protected from the gardener's hoe by placing a tin can, having both top and bottom removed, around the plants. One seedling found in a flower bed near the east end of the north side of the Nurses Residence was similarly protected but not moved. The tin cylinders were of gallon size, and pushed into the ground leaving about three inches of can above the soil.

The only reason we had for trying to save these plants was our intention of making a row of them at the west edge of the property. Because of the summer heat we had decided to wait until the fall rains came to put them where we wanted the trees to grow permanently. These plants were not given any particular care other than regular watering when other plants in the flower beds were watered. No fertilizer of any kind was used.

The plants having the can cylinders around them grew very rapidly. Those without this protection grew rather slowly but appeared to be healthy in every way, probably were growing at the normal rate for this type of plant.

There were no fall rains in 1953 so the plants were left undisturbed. When the first leaflet began to appear on the little plants in the spring of 1954, cylinders were placed around some of them. Three or four weeks after this it was observed that these plants were growing very rapidly and luxuriantly as compared to the "uncanned" plants. By the time the *Albizia* seedlings were a year old cylinders were placed around most of the remaining plants, a few being left as controls.

In September 1954 the author decided to take some measurement of these little trees, here are the findings:

1. *Albizia* seedlings, 14 months old, grown without the protection of a tin can cylinder, had reached a maximum height of 6 inches.
2. *Albizia* seedlings, 14 months old, having tin can cylinders around them for about four months, were about 3 feet tall with a trunk circumference of 1 inch.
3. *Albizia* seedlings, 14 months old, having cylinders around them for 5 to 6 months, were more than 4 feet tall with a trunk circumference of 2 inches.
4. *Albizia* seedlings, 14 months old, having cylinders around them for 12 months, were about 5 feet tall with a trunk circumference of 4 inches.
(All of the above plants had been transplanted)
5. One *Albizia* seedling which had not been transplanted and which was protected by a tin can cylinder from the time it was discovered with cotyledons and primary leaves 14 months ago, is much more than six feet tall with a trunk circumference of 8 inches.

From the data above it is obvious that these *Albizia* seedlings grew more rapidly when protected by a tin can cylinder. The rate of growth was influenced by the time in the life of the plant the cylinder was placed around it, and whether the plant had been transplanted or not. No attempt was made to discover the reason behind the results.

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