

## NURSERY PRACTICE FOR GROWING SYCAMORE SEEDLINGS

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Our nursery is divided into two fields which are rotated each year- -each field growing a crop of pine seedlings every other year. The hardwood seedlings are grown in the field where the cover crop is sown. The reason for this is to eliminate damage from mineral spirits used to control weeds in the pine.

Site preparation for the hardwood nursery beds was the same as that for pine. One to 1 1/2 inches of sawdust was turned under to a depth of 8 to 10 inches. The area was then disked well to break up clods and smooth the soil for fertilizer application. A fertilizer mixture of 1,000 pounds of super phosphate, 100 pounds of lime, 400 pounds of potash, 200 pounds of ammonium nitrate, and 8 pounds of chlordane was added per acre. The area was completely disked again and followed by a rotivator which mixed thoroughly the fertilizer with the soil. The soil was dragged to level uneven areas and then a bed shaper prepared beds 4 feet wide and 3 to 5 inches high, similar to those prepared for pine seedlings.

Two methods are used to sow sycamore seed. In the first, seed are drilled in rows running perpendicular to the length of bed. These rows, 4 inches apart, are shallow with just enough soil added to cover seed. After sowing, the bed is mulched with pine straws to prevent erosion and desiccation.

In the second method, the sycamore seed are hand broadcasted and raked into the soil with a garden rake. The planted bed is mulched with pine straw.

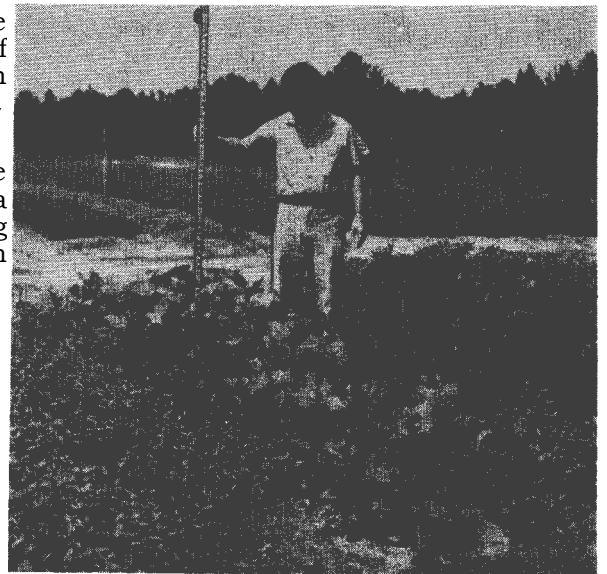
Both methods have given favorable results, but a third method--broadcast the seed by hand and press into the soil with a roller--should be tried. Since germinating seed need a great deal of light, this would probably be the best method.

Sycamore seed should be sown at a high rate since they have a low germination percentage. My seed were estimated to be 30 to 40 percent viable. I was striving for 25 to 30 seedlings per square foot. Last season I ended up with approximately 26 seedlings per square foot. This season there are approximately 32 to 35 seedlings per square foot, but they are only 2 to 3 inches high. The count will probably be close to 30 per square foot at lifting time. Several seedlings will be lost through the weeding process. A count of 25 seedlings per square foot would be my recommendation for quality sycamore seedlings.

Shading is not required to grow sycamore seedlings. A total of 65 pounds per acre of ammonium nitrate was hand broadcasted in three light applications (June 26, July 25, August 29).

Weeds were pulled several times during the growing season. Needless to say, this was a difficult and time-consuming job. Weed pulling could possibly be reduced by treating the soil with weed killer prior to planting.

The seedlings were watered twice weekly with 1 inch of water each time.



There was no noticeable damage to seedlings due to insects and disease.

The seedlings were lifted for planting in January. They had a vast, spreading root system and had to receive severe root pruning before planting.

The seedlings ranged up to 18 inches high, averaging 12 to 15 inches at time of lifting.

### **NURSERY GROWN SYCAMORE SEEDLINGS**

### **MAKE EXCELLENT GROWTH IN PLANTATIONS**

Some sycamore seedlings were grown in the Brunswick Pulp & Paper Company nursery and planted in an old field during the 1957-58 planting season. Results after the first growing season show considerable promise. Ninety-nine percent of the seedlings are surviving and putting on excellent height growth. Heights up to 6.7 feet were tallied with an average height of 3.2 feet for all seedlings.

Sycamore has the ability to adapt itself to a wide range of site conditions throughout the South. It reproduces naturally and makes excellent growth in even-aged stands.

Plantation management for this species looks very favorable.

