

STATE NURSERY^{1/}

The nursery site was a Navy practice airfield during World War II. It was transferred to the State in 1945 with the understanding that the airfield would remain as such. We were permitted to use a part of the land for growing nursery stock. The entire tract is about 400 acres. About 80 acres are developed for nursery production.

Soil Bank funds paid for our 2 gravel-packed, 36-inch wells, 65 feet deep located on the southbed of the Canadian River. The water is pumped from these wells through 8-inch cement-asbestos pipe to our supply tank at the rate of about 500 gallons per minute. Power is controlled by pressure switches so that starting and stopping of the pumps is automatic.

The nursery is watered by portable overhead lines except for 11 acres on the north end which has permanent underground lines. Power is supplied by a diesel engine on a 2-stage pump delivering 600 gpm. at about 80 pounds psi.

Actual area under nursery production this year is about 20 acres. The rest is in green crops which will be plowed under at the proper time. Our first green crop is Sudan grass. It is sowed in May or June and plowed down during July or August. Our next green crop is rye and vetch. It is sowed in September and is plowed down during February or March.

Seed treatment and cultural practices for some of the species grown at the State Nursery near Norman

Cottonwood.--Seed is collected from local vicinity trees during May when capsules begin to open. Small branches are clipped from seed-bearing trees and catkins gathered. These are dried 2 or 3 days, then kept fairly moist through germination. There is also some 2-0 cottonwood in Plot A. Most of these will likely be too large to use.

Black locust.--These are grown as a row-crop with 21-inch rows. Local seed. The seed is scarified with concentrated sulphuric acid. Procedure simply entails piling the seed in a conical pile on a clean floor, pouring sulphuric acid over it at the rate of 1 quart for each 80 pounds of seed. The acid is stirred into the pile by shoveling like one would mix concrete. After about an hour of this, the seed is washed with running water and dried.

The seed are sown in a 3-inch band at a rate which will yield about 10 usable seedlings per linear foot.

Osage orange.--This is one of the hardiest species in the plains area. Many shelterbelts in western Oklahoma have 1 or 2 rows of Osage

1/ Copy of nursery tour program prepared by Oklahoma Forest Service. Marion Walker is the nurseryman.

orange. This was often the only surviving species on the difficult sites, where other species succumbed to prolonged drought.

Seed extracted from the fruit by wet maceration and floatation. We learned that better results with this seed has been possible after we allowed the fruit to over-ripen. We do not extract the seed until late February. Fresh seed sowed within a week or two after extraction will germinate promptly.

Catalpa.--This species is planted almost exclusively for post production. Heartwood is durable in contact with the soil. The wood is soft. A long staple can be used to hold the wire.

We use local seed, gathered mostly by nursery crew. Extraction is still mostly a hand job, after tromping and flaying. Final cleaning is over a Clipper Fanning Mill.

Catalpa seed is sown without treatment as a row-crop. Seeding equipment must be modified so that the sprocket on the seed box is turned by a jack-shaft. This gives fast enough rotation of the plates to release enough seed for a stand.

Sycamore.--Seed is collected from trees grown on the nursery. Fruit is left on the tree over winter, gathered only a few weeks before sowing.

Extraction is by dry maceration and fanning.

Sycamore is sown virtually above the ground on moist seedbeds. They are shaded with lath snowfence until the seedlings are about 2 or 3 inches tall.

Sycamore is like cottonwood, a tall tree, and is excellent for farm wind-breaks where soil is deep. They will not survive on shallow soil.

Multiflora rose.--Seed is gathered from rose hedges on the nursery site. Clean seed is stored at below zero temperatures in the cold room at Oklahoma City.

Dry seed is sown in January or February without pretreatment of any kind. Beds are hand weeded.

Mulberry.--Seed is collected from trees on the nursery site. Extraction is accomplished with the Dybvig Seed Cleaner. Extra seed are stored at below zero temperatures in the cold room at Oklahoma City.

Fresh seed or good quality seed germinates quickly, sowed either on beds or as a row-crop. Row-crop seedlings are larger and more uniform in size than bed-grown stock.

The roots are extremely tough and require sharp under-cutting equipment at digging time.