

Points of Interest - Nursery Tour

1. Historical Exhibit - This exhibit consists of rare nursery photos taken primarily during the 1930's. These photos enhance parts of Dr. May's presentation. Here's a chance to see "go-devil" implement and some other very interesting things. (location - inside packing shed cooler)
2. Pesticide Storage - This facility has more safety in its design than any other building that the Forest Service has built in the Southern Region. With nurseries a minor use group, it is imperative that we do a first class job in all our pesticide use. If you are sensitive or allergic to pesticides, skip this part of the tour. (location - Lower section of Combination Pesticide Fertilizer Building)
3. Cone Kiln, Tumbler, and Sandpine Cone Steamer - These items are located at the packing shed. A system for doing the seed extraction with a forklift and two people is being developed for our facility. The equipment has been purchased; unfortunately, we do not yet have building into which this will be housed. The rest of the seed equipment is located in the seed extractory building. Some product demonstrations may also be held inside the packing shed. (location - packing shed)
4. Seedling Testing - Demonstration of Root Growth Capacity and Stress Testing of seedling lots. The large capacity chamber for RGC testing was built from plans obtained from the USFS Missoula Technology Development Center. Data collection is done with portable data recorders. (location - RIP room)
5. Vacuum Seeder for Longleaf Pine - 15 drill vacuum seeder for longleaf pine. (location - equipment shed between seed cooler and seed extractory)
6. Seed Extraction Machinery - (location - Seed Extractory)
7. Video of Electronic Seedling Counter - This video details how the counter is operated, working mechanisms, and design process. Also this video will give insight into MTDC and what the center is capable of doing for nurseries. There **will be a limited number of copies of the video and also documentation on some of the work being done in the area of machine vision.** (location - conference room of shop)
8. Reforestation Improvement Program (RIP) - This stop is set up to show some of the types of data being collected at the nursery and how it is processed. A large amount of weather data is also displayed here. (location - office annex)
9. Grafting Area - Shade house and grafting facility for establishment of a second generation seed orchard. Root stock sown 4/89. Grafting done winter 1990. (location - shade house and garage by office annex)
10. Telemetry Display - In the nursery office is a telemetry system being used by the Stennis Space Center to access environmental data being collected at two weather stations on the Black Creek Seed Orchard Site. This work is a part of a project between NASA and the Forest Service on aerial detection of subsurface gravel using thermal properties. Ron Birk (Lockheed Corp) and his assistant Steve Tate have accepted a request to explain the equipment to anyone interested in remote sensing and data access. (location - office)

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11. Water Quality - This work involves using a lysimeter (water catcher) at a depth of 10 feet in the soil to determine quantitatively how much pesticide and fertilizer is leached to a depth of 10 feet. Data may also help determine degradation rates in the Ruston type soil at the nursery. 10 feet is well above the water table and could give the nursery time to modify practices if pesticides are found in the monitoring zones. The system is inexpensive to install and can give data in an area where a data gap does exist in the scientific community. Six lysimeters have been installed at all Forest Service Nurseries. (location - south east corner of nursery field 2 just across from the office.)

12. Wood Yard Grit Mulch and Amendment - Mulch material used at the nursery. It is the material removed from the water flumes used to float logs into the Leaf River Products mill at New Augusta, MS. (location - north end of nursery field 3)

13. Fertilizer Rate and Wrenching Study - This study is being done to determine how several rates of top dressing 34-0-0 and several wrenching strategies effect size, morphology, and survival of loblolly pine seedlings. Scientist,- John Brissette, SFES (location - south end of nursery field 2)

14. Electronic Seedling Counter - This machine was developed by Missoula Technology Development Center for doing inventories in Forest Service nurseries. This machine will count all the seedlings in a drill within plus or minus 5 percent accuracy and also measures stem caliper in 1/8 millimeter increments for the seedlings counted. Data can be downloaded from an onboard radio shack computer to a personal computer. Onboard computer produces graphic display of caliper data. Plans are being made to develop an 8 row counter. This technology could also be developed to measure seedling heights and possibly remove cull seedlings. The device is mounted on a 3 point hitch. (location - south end of nursery field 2)

15. Soil Management - Brief display of crop rotation plan and amendments used at the nursery. (location - south end of nursery field 6)

16. Equipment Demonstrations - A number of commercially available equipment demonstrations will be done in nursery fields 2 and 6. Included will be a bed shaper, seeders, wrenchers, lateral root pruners, et alia. The Nurseryman's Association appreciates these manufacturers taking the time and effort to display the machinery they have available. In the event of a rain, some demonstrations will be cancelled or moved to a more suitable area that was not disk prior to the rain. (location - nursery fields 2 and 6)

17. Fall Sown Loblolly and Slash Pine - One Bed of unstratified loblolly seed and one bed of slash seed was sown in late October of 1989 in case seedlings might be needed for demonstrations on this tour. The germination was poor and seed was washed around on the beds by rain before germination. These seedlings were saved to give anyone interested an idea of how fall sown loblolly and slash pine would develop. (location - south end of nursery field 1)

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18. Electronic Weather Stations - These weather stations record hourly weather data. One is located out of the irrigated fields. The other is located in the seedbed where seedlings for the Reforestation Improvement Program are being produced. (location - south end of nursery field 7).

19. Growth Data Collection for Reforestation Improvement Program - This is a listing of the data types being collected for a data base as part of the joint effort between the National Forest System, State and Private Forestry, and Forest Service Research. (location - north end of nursery field 4)

Other Areas Outside the Walking Tour Range

20. Future Site of Black Creek Seed Orchard - (location - south of nursery field 19)

21. Root Growth Capacity Outplanting Site - This area contains 16 species/sources that were lifted November 14, 1989 - March 1, 1990 and stored for 0, 1, 2, and 3 weeks. Lifting was done on 3 week intervals. Each planting consists of 10 trees. The effect of storage, lifting date, and Christmas freeze may be observed in this area for a many southern species and seed sources. The primary purpose of the outplanting is to gain data for comparing root growth capacity with initial survival and growth. There are over 600 signed outplantings in the area. (location - northwest ridge of Black Creek Seed Orchard near electronic weather station)

22. Longleaf Pine Plantation in Third Growing Season - Planted January 1988, by machine. Shear and windrow site prep. (location - south of nursery field 12)

23. Longleaf Outplanting - The seedlings in this area were outplanted in 3 consecutive years. Seedlings are in their second to fourth growing seasons. An electronic weather station is used to monitor weather, and seedling survival and growth is regularly monitored. This is part of the Reforestation Improvement Program and data collected will go into a data base relating to seed and seedling data.