

## COMPUTER USAGE AT SUPERTREE NURSERY #1

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Abstract. -- After several years of manually recording detailed information on nursery operations, databases have been established using personal computers. Database storage programs have reduced work hours and enabled managers to run a more efficient nursery operation.

Successful nursery management can be built on a permanent basis only where records are kept of what is done and what is accomplished. Every operation in the nursery should have a purpose - there should be no room for slipshod, half-hearted measures on the basis that "it can't do much harm and it might do some good" (Armson and Sadreika, 1979). With high production levels, fewer people, tighter budgets, etc., successful nursery management requires a highly efficient operation.

The once extra summer help, extra permanent person, and part-time help that provided the means to file, record, etc., permanent records are a thing of the past. Budget cuts and man-power reductions are here to stay. However, upper management still asks the same questions and requires the same reports. What's the answer? I suggest that a mechanical aid, the computer, may replace that lost personnel.

At Supertree Nursery #1 we selected personal computers (Apple II Plus and Apple IIE)<sup>2</sup> as an aid to handle all the necessary information associated with a crop that includes over 150 planting selections and over 50 mm seedlings. Practical application to nursery records, daily operations, etc., was left up to each IP nursery manager since formal software packages directly related to our nursery management were not available. A computer-oriented individual at STN #1 selected Ashton-Tate Dbase II 2.2 software version to set up our database files. Initially, "simple" files were created to store weather data, soil analysis information, equipment and crop inventories, chemical records, etc. Recently, we have expanded our files to include command files that speed the calibration of our seeders, calculate inventories with cull percentage, and provide other time- and money-saving operations.

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<sup>2</sup> The mention of a company or trade name does not imply endorsement by the International Paper Company.

Computers have aided us in establishing and updating equipment and property inventories, for budgeting purposes, for evaluating lifter operator performance, in keeping daily lifting-packing information, seedling sales, customer addresses, etc. Accounting procedures are now handled via the Apple IIE long distance watts line communication with the main frame.

Computer usage at the nursery is not without some problems. Panic sometimes occurs when a sudden electrical storm causes a power failure; telephone lines return garbage on long distance hookups; and repairs take 2-4 weeks to complete depending on nursery location to service centers. Two PC units are needed where heavy usage occurs. Backup disks are made of all information for permanent offsite storage. Knowledgeable, quality people are essential for efficient operation and successful elimination of problems.

Recently, small hand-held data storage units (ex. Omnidata Polycorder, or MS) have become available to further aid computer usage. Data collected in the field was once recorded with pen and pad, but is now entered into data recorders. The data are then transferred directly to computer disks for processing. Inventories and measurements that once required hours of time processing now take only minutes. Reports to managers are returned more accurately and efficiently.

What can we expect in the future? Probably the "new improved" method, "extra strength" model, Part II, and more. You as nursery managers really hold the key.

Just as the J. E. Love Company seedling harvesters replaced all those hand lifters, the computer will replace some of that lost personnel.

#### REFERENCES CITED

Armson, K.A., and V. Sadreika. Forest tree nursery soil management of related practices. Toronto, Ontario, Canada: Ministry of Natural Resources, 1979.