

NURSERY MANAGEMENT INFORMATION SYSTEM

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ABSTRACT

The Nursery Management Information System has proven to be productive. More enhancements for the program would aid in overall nursery data handling and management.

The Nursery Management Information System, designed by Fort Collins Computer Center, is on-line and working at Lucky Peak Nursery. Fort Collins worked with many nurseries to come up with ideas to start the system. After the nursery pilot program started, several suggestions were requested and approved. As interest grew and new ideas were incorporated, the system expanded to its present state.

Some of the benefits of the program are as follows:

1. Being able to store data on 1 and 3 discs is more efficient than having 3 to 5 various files, card systems, and annual reports to store data. You don't have papers that are illegible, half mangled, and put into file boxes that are inadequate and hard to find. The data discs require little or no maintenance. The data diskettes are small and easier to store. This naturally increased our office storage space.
2. The retrieval capabilities are excellent; anyone from a WG-2 to a GS-12 can read the user's manual and with very little training, retrieve and input desired information.
3. Applying current data, via NMIS, to seed and seedling program has been a significant time saver compared to the old way. In the past, we had individuals hand print the current data on various card files. By using NMIS, we are able to apply various activities in 15 seconds to 8 minutes, over several lots at one time.

The system has enabled us to be more responsive to our users by having a faster data storage and retrieval system. When we complete a task, we are able to apply the information immediately to a data disc.

This system has almost unlimited potential when it comes to report generation; it's quite an accomplishment to have everything you want in one place. With the various reports we are able to sort, select, and display data that would have taken 1 to 3 days to compile previously. When a forest asks for specific items about their seed or seedlings, we can quickly

respond. Since no two forests ask the same questions, by having these capabilities, it's saving time for the nursery management.

I have several good examples why we are pleased with the system.

1. While lifting and packing was in progress, we were able to train a person in a couple of hours to input data. This same person, at the end of the day (everyday), posted everything that was lifted in a matter of minutes. Before NMIS, it would have taken a couple of hours work. We were able to communicate with the forests faster, using stock transaction reports. We were able to utilize the stock transaction sheet to input the testing data we acquired from the shed. By having this capability, everything we needed was handy and ready for communication.

2. During and after the spring sowing, we trained a person who does most of our fertilizing and spraying of herbicides, on the use of computer. Then, this person was able to enter cultural treatment into data storage after each treatment occurred. This protected the cultural information from being misfiled or misplaced and allowed for retrieval of up-to-date information.

We also have other programs that have resulted in cost savings. Our Supervisor's Office computer specialist has designed two effective programs for our needs. One program is size calculation. This program enables us to enter data into the computer which then calculates the mean height and caliper, standard deviation, and percentage of sample within 1 standard deviation of the mean. Another program is the bed inventory program. It determines net and gross bed volumes, gross seedling density, and "good" trees per row foot. Last year's inventory information was compiled, calculated, and organized for our annual report 3 weeks earlier than in years past. It took one week last year to calculate average height and caliper, plus posting of this information. In years past, the same job took an average of 3 to 5 weeks.

Another program we have available is the sowing formula, (this is a modification of a Wind River program). Input data for this program is gross seed per pound, purity, germination, cull rate, survival factor, density desired, and amount requested. Output data is pounds to sow, square feet of bed needed, bed foot needed, seed to drop per row foot, and planned production. Sowing calculation was done in 1 1/2 days, in the past it would have taken up to a week.

We utilized the word processing capability of the TI 990 this spring to make our tags that go on the field stakes. The stake tags took about one day to input into the computer, cut to size, and put in a plastic sealer. In the past, we used a hand labeler and metal tape. Besides saving time, our hands don't get near as sore. All sources are stored and can be quickly duplicated to make extra tags if needed.

CONCLUSIONS

Even though the format for the data entry and some reports are not exactly as we would like it, we feel that the computer programs we do have are a beneficial and cost effective tool for Lucky Peak. Initial feed back from forests about the seed and seedling history reports is positive. Further programs in areas such as soil maintenance and seed extraction will enhance the operation of the nursery.