

Tree Inventory Program Saves Time

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Nursery stock inventories at the Coeur d'Alene National Forest Nursery in Idaho that once took days to compile by hand are now completed in a few hours with a recently developed computer program, called TREINV.

Using data from inventory plots taken in the seedbeds, the program

computes the present inventory and the projected inventory based on mortality estimates. It compares the inventory figures with last year's inventory (if the trees are more than 1 year old) and with the number of trees that were requisitioned by the National Forest. The nurseryman and the forest officers can see at a glance how much mortality has occurred in the lot and whether there will be too many or too few trees to meet anticipated needs.

It calculates the statistical sampling error for the inventory and the number of plots necessary to sample each lot to two different levels of sampling error.

The program is written in FORTRAN IV and should operate on any computer with this capability. It is well documented and can easily be modified to fit the needs of other users. (Program source deck and test data available from Southeastern Area, State and Private Forestry, USDA Forest Service, Atlanta, Ga. 30309.

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Figure 1.—Printout from the inventory program showing identifying information about the seed and the requisitioned trees and the calculated inventory and statistical data.

NURSERY STOCK INVENTORY												
COEUR D'ALENE NATIONAL FOREST NURSERY												
	SEED		REQUISITION	AGE CLASS	YEAR TO SHIP							
LOT NUMBERS	3-0-DF	-5-0-61	3-2-DF	-5	3-0	70						

SEED DATA												
FOREST ZONE	3	SUBZONE	0	SPECIES	DF	ELEVATION	5000	SUBLOT	0	YEAR SEED COLLECTED	1961	

REQUISITION DATA												
FOREST ZONE	3	SUBZONE	2	SPECIES	DF	ELEVATION	5000	DESIRED AGE CLASS	3-0	FISCAL YEAR TO PLANT	1970	

CALCULATION DATA												
PLOT SIZE (SQ. FT.)	3.5	BED WIDTH	3.5	PRESENT AGE OF TREES IN LOT								2-0
ESTIMATED MORTALITY IN COMING YEAR				10%	TOTAL FEET OF BED IN LOT				1482.			

INVENTORY DATA												
GROSS INVENTORY	876096.	LAST YEAR'S INVENTORY		876000.	DIFFERENCE		96.	PERCENT CHANGE		.0%		
GROSS INVENTORY	876096.	REQUISITIONED AMOUNT		800000.	DIFFERENCE		76096.	PERCENT DIFFERENCE		9.5%		
PROJECTED INVENTORY	788486.	REQUISITIONED AMOUNT		800000.	DIFFERENCE		-11514.	PERCENT DIFFERENCE		-1.4%		

STATISTICAL DATA												
GROSS INVENTORY	876096.	STANDARD DEVIATION				91.38						
NET (PROJECTED) INVENTORY	788486.	STANDARD ERROR				20.83						
MEAN TREES PER FOOT OF BED	591.2	STANDARD ERROR PERCENT				3.5%						
MEAN TREES PER PLOT	591.2	COEFFICIENT OF VARIATION				15.5%						
NUMBER OF PLOTS TAKEN	19											
NUMBER OF PLOTS NECESSARY:	FOR 5 PERCENT SAMPLING ERROR (TWO TIMES IN THREE)				9.5							
	FOR 10 PERCENT SAMPLING ERROR (TWO TIMES IN THREE)				2.4							

