

INSTRUCTIONS
FOR
NURSERY COST ACCOUNTING

The objective of nursery cost accounting is to determine the cost of nursery stock according to species and class of stock.

The following forms will be used:

Form 4012, Time Card
4059, Time Card Summary
4060, Overhead Costs Summary
4061, Distribution of Overhead Costs
4062, Distribution of (class of stock) Labor Costs
4063, Cost of Nursery Stock
4064, Cost of Tree Seed
4065, Depreciation Schedule
4066, Expendable Inventory

In recording nursery cost data the following will apply:

Nursery costs will be kept by fiscal year beginning on July 1 and ending June 30 inclusive. The fiscal year is designated by the last half of the year, as for example, fiscal year 1971 covers the period from July 1, 1970 to June 30, 1971.

"0-0" stock costs cover the period from the start of the preparation of the seed bed to June 30, inclusive.

Stock age changes on July 1.

FORM 4012 - NURSERY TIME CARD

This form is kept for all nursery employees except those with permanent status.

"Soil Maintenance" includes the cost of labor for general soil management in the nursery. Included would be summer fallowing, the preparation for the seeding of soiling crops, labor in the loading, hauling, and spreading of fertilizer applied to fallow ground or a soiling crop, and the labor in obtaining, hauling and spreading of forest soil, and other related items.

"General Maintenance" includes the labor chargeable to constructing or repairing of equipment, buildings, fences, nursery grounds, hedges, shades, nursery roads, irrigation system, and similar items. Also any labor connected with tree packing materials.

"Administration" labor costs would include assistance in inventories; clerical help if not a permanent employee; care of tree seed or cuttings in storage; sick leave, annual leave and holidays for seasonal workers, and others which apply.

Gil Ellis, Southern Michigan Nursery, Howell, Michigan

"Tree Seed" includes all labor spent on procurement, processing and original storage of tree seeds or cuttings. It would include labor in the procurement of fuel for the extractor, or other similar items. The care of tree seeds or cuttings while in storage is charged to administration*

"Seed Bed" labor costs will start with the preparation of the soil for tree seeding or for setting out cuttings and continues until after the seed is sown or the cuttings planted.

"Care" starts after the seed is sown or the cuttings planted and continues until lifting starts.

"Transplanting" costs will start with the preparation of the soil for the transplant beds and ends with the transplanting task completed. Transplanting costs will include the lifting charges for the stock which is transplanted in the nursery **where** the stock is grown*. If the stock to be transplanted is from another nursery, the nursery furnishing the stock will include the lifting and packing charges in computing the cost of the stock and will provide the nursery doing the transplanting with this cost.

"L.P. & S." (Lift, **Pack** and Ship) includes time spent in lifting, counting, transporting, packing and shipping stock for transplanting, sale, gratis or planting on state lands.

FORM 4059 -TIME CARD SUMMARY

Summary of time cards by payroll period. Nursery costs are kept on a fiscal year basis, accordingly when posting the first and last payroll periods include only those days which fall within the current fiscal year.

FORM 4060 - OVERHEAD COSTS SUMMARY

The "Overhead Cost Summary" is a listing of all overhead costs. The summary is made at the end of the fiscal year by tabulating the overhead invoices and bills recorded on Form GO 131 and the "Expendable Inventory Record (Form 4066)". The labor costs which are chargeable to overhead are taken from the "Time Card Summary" (Form 4059). Salaries of permanent personnel are computed and are the last items to be entered on the form.

"Soil Maintenance" costs include agricultural seeds, fertilizer, insecticides, and similar items used for soiling crops.

"General Maintenance" costs include repair parts for equipment, C.S.S. & M costs for buildings, fences, nursery grounds, irrigation system, packing materials, lumber, shades, and other items which apply.

"Administration" includes salaries of permanent employees, all travel vouchers, cost of electricity, telephone, gasoline and oil, office supplies, and any others of this nature.

"Depreciation" costs are taken from the "Depreciation Schedule". (Form 4065)

"Complete Loss of Stock" is taken from "Cost of Nursery Stock" (Form 4063) for the stock which was lost.

FORM 4061 - DISTRIBUTION OF OVERHEAD COSTS

Overhead costs are distributed to all of the various species and classes of nursery stock which occupied nursery space a part or all of the fiscal year. Costs to be distributed are taken from Form 4060 "Overhead Costs Summary".

The area occupied by a species and class of stock is the actual seed bed space and will be computed to the nearest hundredth acres

FORM 4062 - DISTRIBUTION OF (class of stock) LABOR COSTS

Costs to be distributed are taken from the "Time Card Summary" (Form 4059) A separate form is used for each species and class of stock.

FORM 4063 - COST OF NURSERY STOCK

Cost of nursery stock is **a compilation of** all costs. The form is started at the time of seeding and entries made on the various C.S.S. & M items, including the cost of seed, as they are used on this particular species and class of stock.

At the end of each fiscal year the cost of each species and class of **stock** will be computed. After the last C.S.,S & M entry made **on** Form 4063, the Overhead (Form **4061**) and Labor (Form 4062) should be added. A grand total cost for the past fiscal year is then obtained by adding the total column.

For C-0 stock the following is an example of the entries which would be made after the last C.S.S. & M item on Form 4063\$

Date	Item	Unit Cost	Total
6-30-71	(Last C.S.S. & M Entry)		
6-30-71	Overhead (Form 4061)		600.00
6-30-71	Labor (Form 4062)		7,300.00
	Cost C-0 (Species) Stock		10,800.00
	Cost per M (Cost ÷ Actual Count or Inv.) =		

1. **Area** – First determine the total area of each individual species, conifers and hardwoods, by age and by species.

(a) Area is taken from Form 4063 (Example 1) cost of Nursery Stock **and** totaled by age class, listing species on Form 4061. Total age class and compute percentage of area for each species. (See Example 2)

2. Total sheet Form 4061 (A). Add all age groups together and list them on the total sheet (Example 3) finding the percent each age group represents of the total.

3. List the bills for the past year on Form 4060 by "Soil Maintenance", "General Maintenance", or "Administration". Include labor, salaries, and **depreciation** schedule (Form 4065) on Form 4060 and total each column. (Example 4)

4. On the total sheet Form 4061 enter the totals from Form 4060 in the total for the corresponding columns. (Example **3**). Compute the percentage of total costs by age class. Use these costs to determine the percentage of the total cost by species **within** the age classes.

5. Total costs by species within age classes are added to the balance brought forward on Form **4063** (Example 1) and divided by the number of trees from the inventory recorded on Form **4063** to compute the cost for each species in each age class.

Example:

$$\frac{\text{Total Cost (Form 4063)}}{\text{M Trees (Inventory)}} = \text{Cost/M}$$

$$\frac{11,708.34}{1,750/M} = \$6.69/M$$

6. The above is computed on each species in each age class and reported July 1 in the "Cost of Nursery Stock Report".

EXAMPLE 1

NURSERY STOCK COSTS

Page No. _____ of _____
Nursery
Southern Michigan State Forest Nursery

Fiscal Year:
1967-68

SPECIES Red Pine	CLASS 3-0	SEEDED 5-21-65
LOCATION Block 5	SEED SOURCE Northern Lower Michigan	CROP YEAR 1960

AREA
56,000

INVENTORY DATE
July 1975

INVENTORY AMOUNT
1,750,000

DATE	ITEM	UNIT COST	TOTAL
July - '67	Balance Brought Forward	\$5.08/M	\$8,890.00
	Time Inmate Summary, Form 4059, Labor		101.12
	Form 4061, Overhead		<u>2,717.22</u>
	Total		<u>11,708.34</u>
	Cost/M	\$6.69	

EXAMPLE 2

Cons-4061

MICHIGAN DEPARTMENT OF CONSERVATION
DISTRIBUTION OF OVERHEAD COSTS
 (Nursery Cost Accounting)

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Nursery Southern Michigan State Forest Nursery

Fiscal Year 19 67-68

Species - Age 3-0	Area	% of Area	Distribution of Costs					Total
			Soil Maintenance	General Maintenance	Administration	Depreciation % Complete Loss of Seeding		
White Cedar	1,400	1.7	5.57	3.19	50.48	6.65	65.89	
Red Pine	56,000	70.1	229.70	131.71	2,081.80	274.11	2,717.22	
Scotch Pine	1,400	1.7	5.57	3.19	50.48	6.65	65.89	
White Pine	21,000	26.5	86.84	49.79	786.95	103.62	1,027.20	
Total*	79,800	100.	327.68	187.88	2,969.61	391.03	3,876.20	

(To Form 4061A) (From Form 4061 A _____)

*First enter total costs to be distributed from Form 4060 x

EXAMPLE #3

Cons -4061

MICHIGAN DEPARTMENT OF CONSERVATION
DISTRIBUTION OF OVERHEAD COSTS
 (Nursery Cost Accounting)

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Nursery Southern Michigan State Forest Nursery

Fiscal Year 19 67-68

Species - Age	Area	% of Area	Distribution of Costs						Total
			Soil Maintenance	General Maintenance	Administration	Loss of Seeding	Total		
0-0	240,862	24.8	991.04	568.23	8,981.25	1,182.62	11,723.14		
1-0	257,768	26.5	1,058.97	607.18	9,596.90	1,263.68	12,526.73		
2-0	201,214	20.7	827.20	474.29	7,496.44	987.10	9,785.03		
3-0	79,800	8.2	327.68	187.88	2,969.61	391.03	3,876.20		
(From Form 4061)			(- - - - -)	- - - - -	- - - - -	- - - - -	- - - - -		
2-0T	69,600	7.1	283.73	162.68	2,571.24	338.57	3,356.22		
2-1	47,600	6.1	243.77	139.77	2,209.09	290.89	2,883.52		
2-2	72,750	6.6	263.74	151.23	2,390.17	314.73	3,119.87		
Total*	969,594	100.	3,996.13	2,291.26	36,214.70	4,768.62	47,270.71		

(From Form 4060)

*First enter total costs to be distributed from Form 4060 x.

EXAMPLE #4

R 4060

STATE OF MICHIGAN
DEPARTMENT OF NATURAL RESOURCES
NURSERY COST ACCOUNTING

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OVERHEAD COSTS SUMMARY

Fiscal Year 19 67 - 68

Nursery Southern Michigan State Forest Nursery

Date	Item	Soil Maintenance	General Maintenance	Administration	Depreciation & Complete Loss of Stock
	CSS & M Totals	3,948.13	2,012.01	3,548.70	
	Inmate Labor	48.00	279.25	11.75	
	Salaries			32,654.25	
	Depreciation Schedule				4,768.62
	Total:	3,996.13	2,291.26	36,214.70	4,768.62

To Form 4061 Totals

PROCEDURE FOR COMPUTING COST/M USING COST FACTOR

The grand total of Overhead Costs Summary R-4060 will give the operation cost of the nursery for the fiscal year.

The total area in trees is obtained by totaling the areas on the nursery stock costs, R-4063.

Using the grand totals in dollars, from the Overhead Costs Summary, 4060, and dividing it by the total area in trees, from the Cost of Nursery Stock, 4063's, you compute the cost per square foot in trees for the fiscal year.

$$\text{Cost Factor per sq. ft. in dollars} = \frac{\text{Total Operating Cost in \$}}{\text{Total Area in Trees in sq. ft.}}$$

Example:

Area in trees -	947,200 sq. ft.
Total Operating Cost	\$53,515.46
 Cost factor in sq. ft. =	 <u>\$53,515.46</u> 947,200 sq. ft.
 Cost Factor =	 \$0.056 per sq. ft.

Multiply the area (sq. ft.) of each species in each age class by cost per sq. ft., divide by thousands of trees (M) from form 4063 and the cost per thousand to cost of trees brought forward from previous years to obtain the cost per thousand for each species and age class for the current year.

Example:

Austrian Pine - 2,800 sq. ft. and Inventory 20 M		
Cost Factor, .056		
Cost brought forward - \$14.83		
<u>Area sq. ft. x cost factor</u>	= Current Cost +	Cost/M Brought forward = Total Form 4063 Cost/M
Inventory (M)		
<u>2,800 sq. ft. x .056</u>	= \$7.31 +	\$14.83 = \$22.67
20 M		

The current total cost/M is entered on the Form "Nursery Stock Costs", Form 4063.

