BRITISH COLUMBIA FOREST SERVICE

A METHOD OF REGENERATION SURVEY FOR INVENTORY PURPOSES.

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This method of regeneration survey is a modification of the original stocked quadrat method. The unit area is a sector of a circle rather than a square.

Assuming that the standard unit is 1/1000 acres a unit is considered stocked if it has one established seedling. A station as used here is the center of a circle of a radius of 7.45 feet containing 1/250 acres. This circular area will contain 4 sectors of 1/1000 acres each. Stations should be located at regular intervals of not less than 1 chain or more than 2 chains. Where the area of the tract is not to be determined the intervals may be slope distance. If the stations are more than 2 chains apart too much time is spent in travelling for the area examined.

One method of determining the boundaries of the plots would be to use a rod 7.45 feet in length. With one end at the station which is the center of the plot swing through a quarter sector of 1/1000 acre and record on cross section paper as stocked or not stocked. Examine the other three sectors in a similar manner using the rod to determine the boundaries. A staff with a metal point with an unshrinkable line or tape marked at 7.45 feet could be used. With the staff at the center of the 1/250 acre unit the tape could be used to determine the boundaries of the 1/1000 acre sectors.

The tally could be summarized showing the number or % of the mil acres which are stocked or not stocked. The data can be classified by unit areas of 1/1000, 1/500, 1/333, 1/250, 1/200 etc. acres.

If one seedling is found on a 1/1000 acre unit it is considered stocked on this basis. If one seedling is found on 2 of the 1/1000 acre units it is stocked on the basis of 1/500 acre. By combining the units sufficient variety is available to suit all foresters.

The standard U.S.F.S. method is based on 4 square 1/250 acre units with one corner of each at a central point. Areas logged or burned less than 10 years ago are simply classified as recent logging or recent burn. Areas logged or burned for a longer period than 10 years are examined for reproduction. The cruiser stands at the center of the 4 units and estimates the distance to the boundary of each 1/250 acre unit. The distance to the outside boundary of each unit will vary from 15.2 feet to a

maximum of 18.7 feet which is the diagonal of the square plot. A modified method would be to examine 4 equal sectors of a circular area at each station, each sector being 1/250 acre. The arc of the circle being the outer boundary of the sector is a constant 14.9 feet distance from the center. Less error would result from estimating this constant distance than from estimating the variety of distances necessary where square plots are used.

To my knowledge this method of using a sector of a circle for the unit area has never been described or used, probably nobody has thought of it because it is so simple. Where the accepted unit of stocking is 1/1000 acre the method here described should be applicable and more satisfactory than the hybrid methods over which there are so many arguments.

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