FOREST SURVEY METHODS.*

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A complete Forest Survey includes (1) A more or less accurate plane and topographic survey of the tract under examination; (2) A careful estimate of the amount of timber upon it; (3) A determination of the rate at which the timber is growing, and (4) A study of the conditions of light, moisture, soil and other factors which influence both the present and the future condition of the forest crop.

DEGREE OF ACCURACY REQUIRED.

The accuracy of the methods employed to bring together information of this sort will, of necessity, be determined by (1) The use that is to be made of it, and (2) The time and money allowed for the collection of the necessary data. For example, if a woodsman is given a month to look over a township and is required to bring in a report on the amount of standing timber, and the cost of logging it without regard to the conditions most favourable for the securing of another crop from the cut-over area, his report will deal almost entirely with the amount of lumber that is likely to be obtained and the cost of logging it per thousand feet, board measure. It will say very little, if anything, about the leaving of seed trees to fill with their progeny the openings made in the forest by the loggers; the age, density and condition of the seedlings which have already established themselves; the precautions necessary to protect the seedlings from destruction by fire and browsing animals; the effect of opening up the forest upon the trees that remain, as regards liability to windfall and increased rate of growth; the effect of leaving undesirable species in possession of the soil; and other matters that must be considered when it is proposed to prevent the destruction of our rapidly diminishing forested areas.

If, however, it is proposed to diminish the possible revenue that may be obtained by the present destructive methods of lumbering, and to so manage the woodlands that they will always regulate the flow of water in the streams and yield a perpetual supply of timber, it will be necessary to establish permanent roads for the removal of forest products and the protection of the growing stock from fire. It will also be neces-