A CENTURY OF EVOLUTION IN EXTENSIVE FOREST INVENTORIES

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Extensive regional and national forest inventories have of a century ago bear little resemblance to the multifaceted surveys of the present era. Not only has the scope of forest inventories broadened to include much more than the volume of standing timber in the forest, but design of these surveys has gotten much more complex to accommodate the suite of information that is now demanded and the scale at which it must be reported. In this presentation we shall trace some of the major changes that have occurred in the past 100 years from the days on which trees were counted on fixed area strips of sample plots. This discussion will describe the introduction of aerial photography to stratify the landscape by cover classes; the use of probability proportional to size methods of sampling; the use of sampling with partial replacement for the optimal estimation of current stock as well as growth; the problems encountered with using the ground sample for area estimation by cover type; and the recent trend towards interpenetrating annual surveys to improve the timeliness of forest inventory data.