The main problems being studied are the seed bed and other conditions necessary for satisfactory reproduction of the softwoods, the effect of the hardwoods on the growth of the larger softwood trees remaining after the logging operations, the effect of growth of the softwoods and on the the removal of the hardwoods on the reproduction of them, and the rate at which the smaller seedlings already present die off before reaching the upper crown level. It has been found that although there may be a sufficient number of seedlings of small size, only a very limited number are successful in finally establishing themselves and reaching maturity.

## Experiments In N. B.

In New Brunswick, a very interesting experimental cutting of 600 acres of black spruce has been carried out on the limits of the Bathurst Lumber Company. The tract has been permanently reserved by the Provincial Government which co-operated actively in the work. In New Brunswick no spruce under 12 inches in diameter is allowed to be cut except under special authority. There are large areas where black spruce grows in dense stands of an average diameter of 9 or 10 inches, with few trees above the 12 inch limit. It was desired to determine what would be the effect of cutting to various diameter limits. The main part of the tract selected was cut in strips two chains wide to 6, 8, 10 and 12 inch diameter limits successively, with strips one chain wide between which were clear cut. The logging slash was burned, lopped and scattered, and left untouched on one-third of each of the different classes of cutting.

A wide variety of conditions was thus established, and the plan of operations provides for remeasurement at five year intervals. Seven permanent sample plots were established to give more detailed data in regard to the results of the different methods practised, and seeding and planting experiments were carried out

Four studies of the conditions of lands cut-over for pulpwood have been made by the Commission of Conservation in co-peration with the pulp and paper companies on whose limits the work was done. The companies concerned were the Laurentide Company, the Riordan Pulp and Paper Company, the Abitibi Pulp and Paper Company and the Spanish Mills, Limited. These companies bore approximately half the expense.

The studies on the Laurentide and Riordan limits were mainly to determine the amount of reproduction on the cut-over lands, and the relation of the hardwoods to the character of the stand remaining after logging. The studies on the limits of the two Ontario companies related more particularly to the growth made by the small trees left, and the importance of protecting them during logging and afterwards so as to give

an opportunity for a profitable second logging operation.

In connection with all these studies conducted by the Commission of Conservation, a great deal of very valuable volume and growth measurements have been made and compiled into extremely useful tables.

## Quebec Service Active

The Quebec Forest Service have this year assigned one of their staff,

