

Canada supplied, in the form of pulp and paper, a little less than 5 per cent of Europe's fibre requirements for paper. However, about 85 per cent of Canada's shipments to Europe went to the United Kingdom. A growing demand in Europe, Canada's present modest participation in that market, and the fact that almost all of Europe's forests are being utilized, suggests a substantial opportunity for Canadian industry in that market. A realization of this potential, however, is far from being assured.

EUROPEAN MARKET POTENTIAL

"In this connection it is important to recall the changing trends in wood utilization that have taken place and will likely continue and the fact that wood production is of course variable. Technological developments have resulted in our making larger amounts of goods from a given amount of wood from the forest. The substitution of plywood and fibre board for lumber, corrugated containers for wooden boxes, sawmill chips for round-wood in pulp production and similar developments has resulted in making raw materials go farther. These developments have not run their course and other wood-saving techniques will likely be discovered and adopted. At the same time, yields of wood may be increased by a variety of means. There is probably less scope for these developments in Europe than in North America. However, I believe it would be misleading to assume that production of forest products in any region is fixed. The view has frequently been expressed in Canada in recent years that further expansion of forest-products production in Europe would not be possible or would be possible only to a small degree. According to a survey carried out by FAO, however, capacity for paper production in Western Europe is expected to rise by 5.7 million tons, or 25 per cent, between 1960 and 1965 and pulp capacity by 6.4 million tons, or 40 per cent.

"This suggests that participation by Canada in the European market in the near future rests more on the ability of Canada to supply superior products and to service the market efficiently than on a shortage of wood in Europe. A good deal of interest is being shown in that market by Canadian industry at present, both in the pulp-and-paper field and in lumber and plywood, and some progress has been made. An advantage Canada holds in the industrial field is the capacity to accommodate large pulp-and-paper plants. The expansion of existing plants where feasible and installation of new large plants in areas that can support them would seem to offer some advantage for the long term. A review of timber requirements and supplies in Europe is now being carried out by FAO and the completion of this study, which is expected in the near future, should give us a better perspective of opportunities there.

NEED FOR STUDY OF SUPPLY

"The study of this broad subject and the interpretation of it is one area where economic studies can contribute to forestry work. At the same time, a more detailed assessment of the supply situation in Canada than has been done up to now would seem to be justified. Studies that have been done give broad totals only. While this information is useful, an assessment of economic supply by product would be

more so in indicating Canada's potential. By economic supply I mean, of course, the quantities that can be produced at various costs.

"I have spent considerable time on one type of study and I should now like to mention several other aspects of the field of economics as it applies to forestry. The approach in economic studies is the assessment of various programmes or practices on income on the one hand and the costs of the proposals on the other. The income used in the assessment will be personal income for an individual, corporate income for a company, or national income for a nation-wide or region-wide programme. The costs of proposals must, of course, include all costs. This is mentioned here simply because a seemingly simple programme may require additional actions in a number of fields. The effect of a particular practice varies, of course, from place to place, depending on circumstances. A primary step, therefore, in economic studies is the understanding of local conditions. A description of a local economy--its resources, capital, population, transportation system, market outlets, etc.--may reveal opportunities for change that will improve its income position....

BENEFIT COST ANALYSES

"The assessment of various forestry programmes is a complex matter. Nevertheless, they should be made within a well-defined and sound framework. A study published by the 'Resources-for-Tomorrow' Conference, *Guide to Benefit - Cost Analysis*, presents a useful approach to this problem and one which can find application in forestry. Stated in the simplest terms, it is a method of comparing the benefits and costs of a number of projects in a way that will allow ranking them in a rational manner. From my limited knowledge of the field, I believe that much greater use has been made of this and similar approaches in other resource fields than in forestry. A good deal of work, for example, has been done with water-resource programmes. One difficult problem in forestry is the time element. The valuation of goods to be available many years in the future is not easy. Yet little is accomplished by pretending that this problem does not exist. There are many demands for capital and it is important to put available capital to its most efficient use. If this is to be done, time must be taken into account in a realistic way.

"It may be just chance that, in the study on benefit-cost analysis mentioned above, there is little reference to forestry. One chapter of the publication is devoted to the presentation of examples of evaluations in several fields. Eight examples are presented, but none of them are forestry examples. This seems an odd omission in a country in which forests are so important and in which I believe forest finance is a part of the training of every graduate forester. There are a great number of opportunities for investment in forestry in Canada and the choosing of the appropriate investment requires careful and complete appraisal....

PLANNED STUDIES

"It may be worth while at this time to outline the areas in which the Economics Division plans to carry out studies. Four areas of work were outlined when the Division was established, but the Division