

and Europe, the next largest market, utilizes 25 p.c. of the lumber and 30 p.c. of the pulp and paper. Outside of North America and Europe, the Union of Soviet Socialist Republics and Japan account for a large proportion of world production and consumption. World demand for forest products has risen in the postwar period but at varying rates; for instance, that for coniferous lumber has risen by  $2\frac{1}{2}$  p.c. a year since 1950, newsprint by  $4\frac{3}{4}$  p.c. and paperboard and other papers by  $5\frac{1}{2}$  p.c. In most regions of the world, prewar consumption levels were not reached again until part way through the 1950's, whereas consumption in North America was much less affected by the War. However, demand trends in the highly developed economies have had an influence on other regions. Traditionally, wood was a major fuel, was the basic construction material for buildings and ships and found wide use as pitprops in mines; now, in the more advanced countries, mineral fuels, especially oil and natural gas, have generally displaced wood as a fuel, metals have replaced wood in the construction of ships and certain types of buildings and metals and other minerals are offering keen competition in housing, mine supports and railway ties. Happily, a major and continuing use for wood developed in the paper industry late in the nineteenth century at a time when the rags and other materials previously used were becoming scarce and therefore prohibitive in cost.

**Paper and Paperboard.**—Utilization of paper and paperboard has been growing steadily since wood became the major raw material for pulping. Most of this development took place in North America and Europe, although paper was invented in China nearly two thousand years ago. Per capita consumption in North America of some 450 pounds a year is three to four times higher than that in Europe and Oceania and very much higher than the average consumption of five to ten pounds a year in Asia and Africa. In general, demand for paper and paperboard is closely related to national income.

Changes in demand for different grades of paper vary considerably. Recently, the large newsprint sector has been rising at a slower rate than most other grades. Consumption of newsprint is directly related to newspaper publishing where growth is dependent on circulation and weekly or daily issue, advertising linage, number and size of pages, etc. North American demand for newsprint, which increased by 2.7 p.c. each year between 1950 and 1956, advanced only 1.3 p.c. a year since then.

There has recently been a notable increase in the output of paperboard, foodboard and wrapping papers, the major material for which is woodpulp. This increase reflects the rapid growth in packaging in North America as a result of the expansion in self-service stores, especially supermarkets—a type of selling that is now spreading throughout Europe, Japan, Australia and New Zealand. However, the packaging sector is extremely competitive and new products using other materials are being introduced continually. The use of polyethylene film has become commonplace in recent years and unit costs have dropped sharply, cutting into the consumption of wrapping, sack and bag papers. At one time paperboard displaced lumber in the manufacture of various types of boxes and cases and now plastics are beginning to compete with paperboard. In the marketing of liquids, paper containers successfully challenged glass bottles and containers, particularly in the marketing of milk, and now both are competing with metals and plastics. Smaller quantities of woodpulp are used in the manufacture of rayon, acetates, cellophane and like materials. Of course rayon since its invention has been competing with such natural fibres as cotton, silk and wool in the textile field but now both groups are meeting increasing competition from non-cellulose synthetic fibres. No matter in what form the final product of wood is consumed, demand for Canadian timber will be high.

**Lumber and Other Wood Products.**—Over-all consumption of lumber in North America has not changed greatly in the past ten or fifteen years, although demand has risen somewhat from a low point reached in 1960-61. Thus, per capita lumber consumption has been declining at the same time as the economy and population have been expanding. Building construction takes a sizable portion of the lumber output but housing provides by far the largest market and housing demand depends principally on the rate of family formation, plus such factors as mobility of population, and the replacement and conversion