

In addition to its own program, the Institute co-operates with outside agencies in special projects. It maintains close liaison with the National Research Council and, in the past, has carried out joint projects with the Applied Chemistry Division and other Divisions of that organization. The researches it conducts fall generally into six broad classifications: mechanical pulping, chemical pulping, paper making, process control, waste utilization, and woodlands research.

## Section 5.—Forest and Allied Industries

This Section is concerned with the many industries employed in the felling of timber in the forest and its transformation into the numerous utilitarian shapes and forms required in modern living. The basic industries provide the raw material for sawmills, pulp and paper mills and for a wide range of secondary industries that convert the products of the basic industries into more highly manufactured goods such as veneers and plywoods, sash and doors, furniture, and a vast range of industries using wood in any form in their processes. These industries, especially the pulp and paper industry and the lumber industry, contribute substantially to the value of the export trade of Canada and thereby provide the exchange necessary to pay for a large share of the imports purchased from other countries, particularly the United States.

### Subsection 1.—Woods Operations

In connection with operations in the woods, the forests provide not only the raw materials for the sawmills, pulp mills, veneer mills, wood distillation, excelsior and other plants, but also the logs, pulpwood and bolts for export in the unmanufactured state, and fuel, poles, railway ties, posts and fence rails, mining timber, piling and other primary products that are finished in the woods ready for use or export. A number of minor forest products help swell the total, such as Christmas trees, cascara bark, balsam gum, resin, etc.

Estimates of woods operations attempt to give *actual* production figures for all items and are based chiefly on provincial Forest Service data for volume. Value, as presently estimated, excludes transportation costs, which formed a large part of the consumption values utilized in former calculations.

#### 7.—Value of Woods Operations, by Product, 1952-56

Product	1952	1953	1954	1955	1956
	\$	\$	\$	\$	\$
Logs and bolts for sawing.....	344,932,434	331,296,157	345,067,657	393,860,833	443,888,332
Logs for pulping.....	28,810,263	28,748,017	33,359,100	38,985,790	33,581,745
Pulpwood <sup>1</sup> .....	317,991,822	280,263,133	290,441,378	330,490,498	385,889,223
Fuelwood.....	33,277,041	38,558,073	36,075,799	34,361,586	37,097,823
Poles and piling.....	15,497,539	10,705,142	9,833,897	17,082,451	23,219,870
Round mining timber.....	12,208,221	4,665,279	3,998,158	3,432,932	3,615,647
Fence posts.....	2,007,683	1,821,996	1,590,369	2,071,988	2,286,222
Hewn ties.....	1,160,020	880,604	468,485	627,082	626,481
Fence rails.....	274,113	246,165	243,611	248,359	292,183
Wood for distillation.....	441,538	361,523	442,381	370,947	487,847
Miscellaneous roundwood.....	518,482	411,788	301,501	408,275	130,445
Other products.....	6,069,598	6,581,011	6,547,571	7,631,973	8,026,684
<b>Totals.....</b>	<b>763,188,754</b>	<b>704,538,888</b>	<b>728,369,907</b>	<b>829,572,714</b>	<b>939,142,602</b>

<sup>1</sup> Roundwood only; wood residues used for pulping excluded.