

CHAPTER X.—UTILIZATION TECHNOLOGY

77. *General*.—The timber-using industries are beginning to realize that they must accept more exotic coniferous woods to compensate for deficiencies in supplies of indigenous softwoods. Better supplies of some softwoods, especially those which are required for special purposes, are being received from overseas. Certain hardwood deficiencies are being met by the extensive use of tawa and other indigenous hardwoods, which are now filling an important role in the timber economy of the Dominion.

78. *Grading of Timber*.—Insignis pine has been recommended for inclusion among permissible framing timbers in the grades "No. 1 Dimension" and "No. 2 Dimension" in the standard specification for "Light Timber Construction" (part of the New Zealand Standard Code of Building By-laws). No. 2 Dimension is recommended for studding of non-bearing walls, but may be used in roof-framing, subject to a decrease in length of unsupported span. A necessary stipulation is made that insignis-pine framing timber requires to be of 25 per cent. moisture content or less before sheathing is applied. The need for careful stacking to avoid warping and sapstain after arrival on the building-site is also recognized. With proper preservative treatment the uses to which insignis pine may be put are naturally more extensive.

Grading rules for insignis pine and Corsican pine flooring for permanent housing have not yet been established, but trial lots of these timbers have demonstrated their suitability for such purpose. The use of pine timbers for weatherboarding has been commenced.

79. *Specifications for Finished Products*.—Finality has not yet been reached with the manufacture of templates for the profiles of weatherboarding, flooring, and match-lining, for which the standard specifications have been fairly generally accepted as satisfactory, nor with the manufacture of templates for standard joinery and moulding profiles, also covered by specifications prepared by the Standards Institute Committee.

Slight modifications made to the "Commercial Plywood" standard specification appear to have improved the product and made it more acceptable to furniture-manufacturers. A number of changes in the "Household Furniture" specification, especially a reduction in finished thickness requirements to $\frac{3}{8}$ inch out of 1 inch stock, should result in more extensive production of furniture conforming to that specification.

The Forest Service has been active on other Standards Institutes Committees concerned with "Timber Ladders" and "Glues."

80. *Structural Utilization*.—Insignis pine is now making a useful contribution to the building programme, especially for wall and roof framing. The anticipated inclusion of this timber in the revised "Light Timber Construction" specification should dispel any doubts as to its suitability for framing when properly graded and seasoned. Several instances of the use of insignis pine for heavier structural members also are on record.

81. *Mill Studies*.—In conjunction with a study to assist in establishing volume tables for tawa, grading of the sawn product was carried out according to both the grading rules now in use and those proposed by the State Forest Service in the drafted "Hardwood Grading Rules." Analyses are not yet completed.

82. *Utilization of Minor Timbers*.—The increasing use of the minor indigenous and exotic timbers indicated in the last report has been sustained. Tawa is now established as one of the most important timbers for furniture and for handles and other turned products. This timber has increased in use also in flooring and interior finish for houses, for which purposes some of it has been pressure-impregnated with water-soluble preservatives or dip-treated in oil-soluble preservatives. In the absence of facilities for carrying out either of these treatments with tawa, taraire, and other hardwoods subject to attack by the powder-post borer, a reasonable degree of immunity may be secured by voluntary hygiene in furniture-factories in destroying any infested timber in the racks, by quick turnover of timber stocks received from drying-kilns, by using only