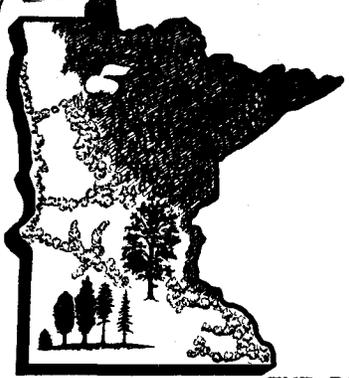


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# MINNESOTA FORESTRY NOTES

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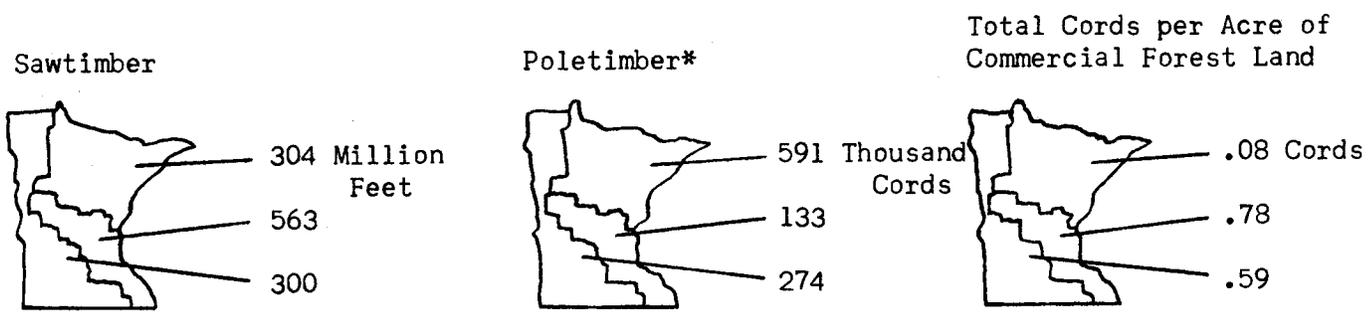
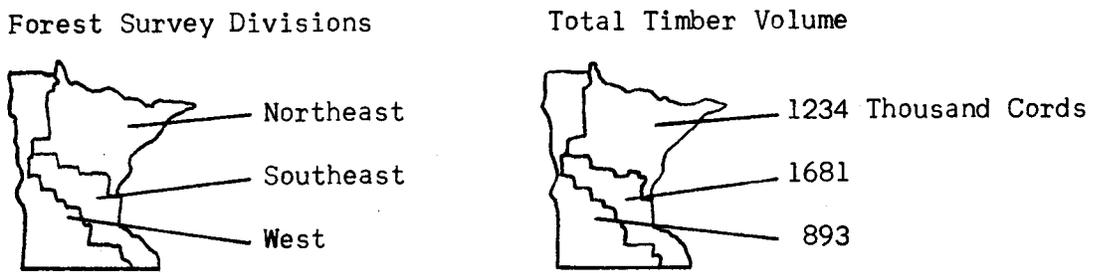
THE DISTRIBUTION AND COMMERCIAL IMPORTANCE OF ELM TIMBER IN MINNESOTA

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The presence of Dutch elm disease, caused by the fungus *Ceratocystis ulmi* Hunt, has been definitely established in southeastern Minnesota. Various conservation groups, municipalities, and individuals have expressed concern over the future spread of this disease and the possible resulting loss of most, if not all, of the State's elms. This report attempts to assess the commercial timber importance of these species to the State as a partial guide for determining the level of expenditures for control of the disease which might be justified from the standpoint of timber production.

The elms as a group account for 353 million cubic feet which is about 14 percent of the net volume of hardwood growing stock (exclusive of aspen) on commercial forest land in Minnesota.<sup>2/</sup> This volume is divided between approximately one billion board feet of live saw-timber (11 inches d.b.h. and larger to a minimum 8-inch top i.b.) and three-quarters of a million cords of living poletimber (between 5.0 and 10.9 inches d.b.h. to a minimum 4-inch top i.b.). Elm volume is distributed by U. S. Forest Survey Divisions as indicated in the figures.

Distribution of Elm Timber in Minnesota<sup>2/</sup>



\*Based on county reports of the Office of Iron Range Resources and Rehabilitation.

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<sup>2/</sup> U. S. Forest Service. Minnesota's Forest Resources. Oct., 1958. For. Res. Rept. 13. LSFES, USDA.

The figures indicate that the elms are most common in the Southeast Division forming a belt concentrated in the river bottoms and lowlands extending from the southeastern corner of the state to Clay County in the Red River Valley on the western border.

An estimate of the potential value of elm stumpage was made, based upon the limited available information as to current market values in Minnesota. This estimate is shown in Table 1.

Table 1. The Estimated Stumpage Value of Elm in Minnesota

| <u>Division</u> | <u>Sawtimber</u><br><u>@ \$5 MBM</u> | <u>Poletimber</u><br><u>@ \$1.50/cd.</u> | <u>Total</u><br><u>Value</u> | <u>Average Value</u><br><u>per cord</u> |
|-----------------|--------------------------------------|--|------------------------------|---|
| Northeast       | \$1,520,000                          | \$ 886,500                               | \$2,406,500                  | \$1.95                                  |
| Southeast       | 2,815,000                            | 199,500                                  | 3,014,500                    | 1.79                                    |
| West            | 1,500,000                            | 411,000                                  | 1,911,000                    | 2.14                                    |
| Total           | \$5,835,000                          | \$1,497,000                              | \$7,332,000                  | \$1.93                                  |

Because the exact price level for a particular sale would be dependent upon many different factors, including considerations such as the relative strengths of buyers and sellers, the quality and quantity of the trees offered, and the ease of access to the stumpage and markets, the values presented can only be considered as an estimate of the average returns to be received over a large number of sales.

The most recent data available for estimating the quantity and value of elm products manufactured in the state are summarized in Table 2.

Table 2. Manufacture of Products from Elm in Minnesota, 1954<sup>3/</sup>

| <u>Product</u>                       | <u>Unit</u> | <u>Quantity</u> | <u>Value/Unit</u><br><u>to Producers*</u> | <u>Total Value</u><br><u>to Producers**</u> |
|--------------------------------------|-------------|-----------------|---|---|
| Sawlogs and Sawbolts                 | MBM         | 7,370           | \$35.00                                   | \$258,000                                   |
| Veneer Logs                          | MBM         | 409             | 70.00                                     | 28,500                                      |
| Fuelwood                             | Cord        | 66,000          | 10.50                                     | 693,000                                     |
| Posts                                | Piece       | 32,000          | .30                                       | 9,500                                       |
| Mine Timbers                         | Cu.Ft.      | 43,000          | .20                                       | 8,500                                       |
| Heading Stock                        | Cu.Ft.      | 2,000           | .25                                       | 500   |
| * Estimated average value for state. |             |                 |   | \$998,000                                   |

\*\* Rounded off to nearest \$500.

A more exacting economic analysis of the commercial timber value that might conceivably be lost should Dutch elm disease spread throughout Minnesota is not presently possible. This would require a comparison of the values created by the use of the species (approximately one million dollars annually) with those of materials utilizable as replacements should the elms be lost. A net loss in value to the economy might occur either from an inability to find suitable substitutes for the elms, or from higher costs of products where suitable substitutes are available but their prices exceed that of the elms. For most, if not all uses, it is felt that adequate substitutions could be made readily at present with a net loss to the economy of Minnesota of considerably less than the species' present contribution.

The loss in value of elm as ornamental shade trees and the costs associated with large scale removal of dead and dying trees in heavily populated areas in the state have not been accounted for in this report. These costs would appear to far outweigh the potential loss of elm in its role as a timber product.

<sup>3/</sup> Horn, A. G. Record of the Timber Cut from Forests of the Lake States-1954. Sept., 1957. Sta. Pap. 53. LSFES, USDA.