

THE FORESTRY SITUATION IN THE UNITED STATES

All the numbers of this bulletin so far issued have dealt with the forestry situation in the State of Idaho. In order, however, fully to appreciate the present forestry conditions and to anticipate possible developments in the future, it is necessary to have at least an elementary conception of the general forestry situation in the United States.

Nearly half of the land area of the United States, some 822 million acres, was originally forested. The stand of timber, mainly high grade material, probably far exceeded in volume the estimate of 5,200 billion feet B.M. During the

last 75 years enormous inroads have been made upon the forests so that the original forest area of 822 million acres has been reduced to 138 million acres of virgin timber, 250 million acres additional of comparatively inferior culled second growth and 81 million acres of devastated land, a total of less than 470 million acres.

Needless to say this extravagant use of one of our most important natural resources cannot continue indefinitely. As a matter of fact, at the present rate of cutting it cannot continue for over forty or fifty years at the most. A comparison of the annual drain upon the forests and the annual growth, separately for hardwoods and softwoods is given in the following table:

Species	Total Drain(1) on the Forests Millions Cu. Ft.	Annual Growth Millions Cu. Ft.	Ratio of Drain to Growth	Total Drain (1) of Saw Timber Millions Bd. Ft.	Annual Drain of Saw Timber Millions Bd. Ft.	Ratio of Drain to Growth
Hardwoods	11,260	3,236	3.5	19,136	5,104	3.7
Softwoods	13,526	2,803	4.8	41,058	4,770	8.6

(1) cut and destroyed

Average 6.1

It is particularly important to note that we are cutting softwood saw timber 8.6 times faster than we are growing it. In order that the nation may in the future be supplied with softwood saw timber it is essential that the coniferous forests be perpetuated and even extended. This is an extremely important point, especially in so far as it has a bearing upon the forestry situation in the State of Idaho. The forests of Idaho are almost 100% softwood which means that

eventually there will be a market at a fair price for all the saw timber the state can grow. A certain element of risk in the practice of forestry in this state is therefore eliminated. Neither the state as a timber producer nor any private agency contemplating the step of putting their holdings on a sustained yield basis need have any concern as to a market for their product forty or fifty years hence. The use of softwood timber is on the increase and will undoubtedly continue

In the preparation of this bulletin the data presented in "Separate from the U.S. Department of Agriculture Yearbook, 1922, No. 886" has been freely drawn upon.

to increase. It is a most striking fact, and one of great economic significance that 95% of the coniferous forests upon which the world depends for its construction material is in the north temperate zone. Hence the products from the forests of the north temperate zone will not suffer through competition from similar products from any other part of the world.

Even if we take the average ratio of drain to growth for both hardwoods and softwoods we are confronted with the astounding fact that we are cutting saw timber 6.1 times faster than it grows. There are two ways out of this dilemma and obviously only two. In the first place it might be possible to reduce our consumption of saw timber until the amount consumed equalled the amount now grown, or secondly we could increase the amount grown to equal the amount consumed.

To reduce the annual consumption of saw timber to the amount now annually grown would certainly be most undesirable. The American standards of living and much of our industry have been possible only because of cheap and abundant timber supplies. If we reduced the total consumption of wood to 6 billion cubic feet (the amount grown annually) it would, without question, result in lower standards of living and fewer homes. It would check expansion and development and literally throw millions of people out of employment.

The alternative is to increase the production of timber until it equals the amount consumed. It might at first seem possible to in-

crease the forest area until even with low annual yields per acre, the total yield would be increased to equal the annual cut. On a total growing area of 250 million acres of forest land, the United States is now producing 6 billion cubic feet of wood annually, equivalent to an average of 24 cubic feet per acre annually. At this rate the area necessary to meet our present timber needs would be over 937 million acres or nearly half of the entire area of the continental United States. This is considerably more than the entire area capable of growing trees, including all farm land. Obviously this method of increasing the annual crop of wood is out of the question.

As a matter of fact therefore, the only way in which the forestry situation in the United States can be solved, is to increase the annual yield of wood per acre. As before mentioned, there are 470 million acres of forest land in the United States which are potentially very productive. All the data available on the growth of American trees and forest types checked by European experience lead to the conclusion that under intensive forestry, our entire area of 470 million acres could ultimately produce an average of 58 cubic feet per year to the acre, or a total for the country of 27 billion cubic feet. Included in this would be 70 billion board feet, or 15 billion cubic feet of saw timber, seven times the present growth of such material. The total of 27 billion cubic feet would exceed our present consumption by $4\frac{1}{2}$ billion cubic feet, but it would exceed the present drain on our forests by the relatively narrow margin of approximately 2 billion cubic feet.

The change from "mining" our forest crop to the practice of intensive forestry cannot be brought about in a short time. It will take time to reestablish forests on the 81 million acres of devastated land, to bring 250 million acres of comparatively inferior or second growth forest to maximum bearing and even to bring under forest management the remaining 138 million acres of virgin timber. Even though we should start on this enormous task tomorrow we should have started too late to have entirely prevented a future timber shortage. The longer we wait the more acute this short age will be and the greater its effect on the general economic conditions of the country.

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ADDITIONAL NOTES

The Coming Shortage In Timber

Dr. Wilson Compton, Secretary-Manager of the National Lumber Manufacturers' Association, in a recent address before the Southern Pine Association in New Orleans, said:

"Yellow pine timber stumpage in original stands within eight or ten years in the South will be worth, on the average, between \$19 and \$21 a thousand feet, some more, some less. Now it is worth \$10 to \$12. Ten years ago it was worth between \$5 and \$6; twenty years ago, between \$1 and \$2, and forty years ago, perhaps 10 or 15 cents a thousand feet.

"Douglas fir stumpage in 1890 regularly sold for perhaps a few cents a thousand feet. In 1900 it was about fifty cents; ten years later, \$2; to-day from \$3 to \$5. In 1930 Douglas fir will, on the average, be between \$8 and \$10 and within ten years thereafter, between \$16 and \$18."

This increase in stumpage prices will, of course, be reflected in lumber prices which Dr. Compton

thinks are due to go up faster than other commodities.

It is now too late to prevent by any possible measures of tree growing the inevitable scarcity and high price of timber. The conservation measures to supply the timber of tomorrow should have been started forty or fifty years ago. The longer the delay, the worse the situation will become.

The very first step which can and should be taken at once is absolute control of forest fires which alone are responsible for the fact that there is not now a large amount of second growth timber coming on to replace the virgin stands. Fire protection alone is not all of forestry but if the country had had adequate protection from forest fires for forty years there would now be no occasion for a timber shortage.

IDAHO SELLS SECOND CROP OF TIMBER From American Forests and Forest Life, January, 1924.

An interesting example of the importance of protecting unmerchantable timber at the time of cutting and holding it for a second cut is furnished by the State of Idaho when it recently sold timber on twelve forties of cut-over land for more than was realized from the first sale, fifteen years ago. The sale is all the more significant in view of the fact that more than two-thirds of the stand consists of tamarack, red fir, and white fir, species which in this section of Idaho are considered inferior. Only 5 percent of the stand is western white pine, 29 percent western yellow pine, and less than 1% western red cedar.

The state sold nothing below 12 inches in diameter, and the purchaser enters into a contract with the state to protect all young growth from injury during logging operations; also to pile and burn all slash incident to cutting.