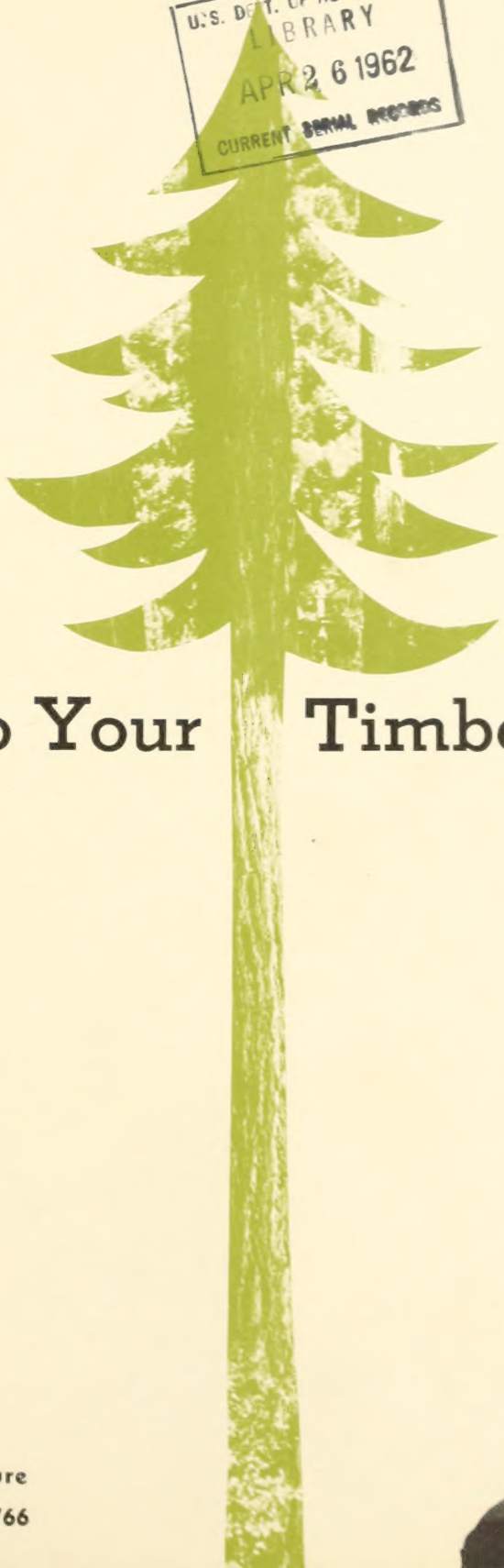


Look to Your Timber, America

Forest Service
U. S. Department of Agriculture
Miscellaneous Publication No. 766

"Tomorrow the Nation's
need for timber
will be strikingly greater
than today
or at any time in the past.
We have the potential
to meet that need
if we fully apply
our forestry knowledge
and skills promptly, with
vigor and determination.
To meet
future timber demands . . .
will require
not only early action
but an intensity
of forestry practices
that will startle many of us.
There are no grounds
for complacency.
What we do
in the next 10 or 20 years
will determine
whether we shall grow
enough timber to enable
our children and their
children to enjoy the
timber abundance
that we ourselves know."

Richard E. McArdle, Chief, Forest Service,
U. S. Department of Agriculture

From foreword to "Timber Resources for America's Future"
USDA Forest Resource Report No. 14—January 1958

This is a wonderful age of science. Man is hard at work building satellites to circle the Earth and harnessing atomic energy. You may well wonder how timber fits into such a scientific atmosphere, why we should know or even care how the trees grow today, why we should be concerned at all about timber in the future.

Even with the great advances, science still has not found a satisfactory substitute for the wooden crossties upon which America's railroads run. Magnify this single use of timber by the thousands of uses of timber products which help to make our lives warmer and fuller, and the importance of America's timber resources comes into focus.

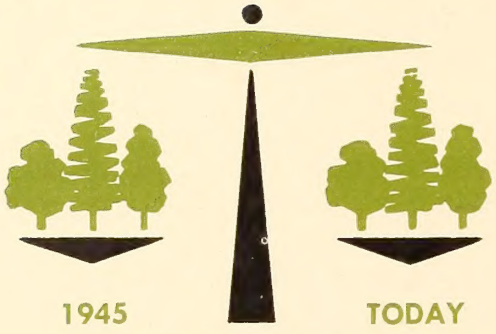
The forests are serving this Nation well today; they can continue to serve the American people in the years ahead. But prompt and substantial expansion and intensification of forestry are required—if the Nation is to meet the anticipated greater needs of the future for the ever-growing population (275 million people or more in the year 2000) and the ever-increasing industrial and scientific activities (1,200 billion dollars of goods and services in 2000).

Timber in our modern world . . .

Since trees do not grow to cutting size, do not produce crops of timber overnight—since forestry is a long-time proposition—we must plan now and act soon to assure that this Nation will have all the timber that will be needed in the year 2000, only four decades away.

To do the job that must be done to satisfy these needs of tomorrow, we must know where we stand today—we must capitalize on every opportunity that exists.

No acute shortages likely . . .

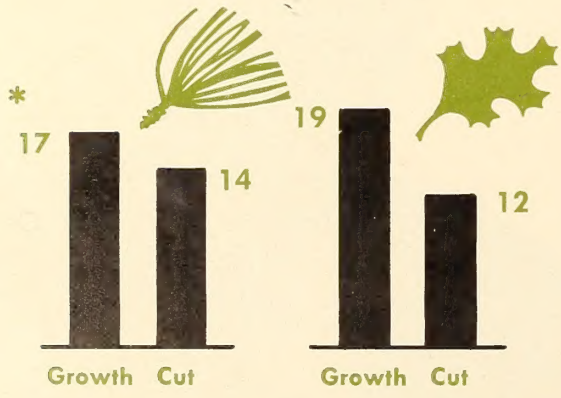


Volume Holding Its Own

The Nation has about the same volume of wood today as it had in 1945, when the last timber appraisal was made. This volume includes all sizes of the so-called growing stock (trees 5 inches in diameter at breast height—d. b. h.—and above) and all kinds of trees: Pine, fir, and other softwoods as well as oak and other hardwoods. Fortunately three-fourths of this volume is sawtimber consisting of the larger trees. This class of timber furnishes over 80 percent of the wood products used in this country.

Timber Growth Increasing

Annual sawtimber growth, nationwide, is 9 percent more than in 1944. Growth of eastern softwood sawtimber (trees 9 inches d. b. h. and above) and of eastern hardwood sawtimber (11 inches d. b. h. and above) is definitely up, with the greatest increase occurring in the South. These growth increases more than offset a slight decrease in western sawtimber (all trees 11 inches d. b. h. and above). As the old, slow-growing timber which is now being cut in the West is replaced promptly by young, faster growing trees, western growth should also increase.

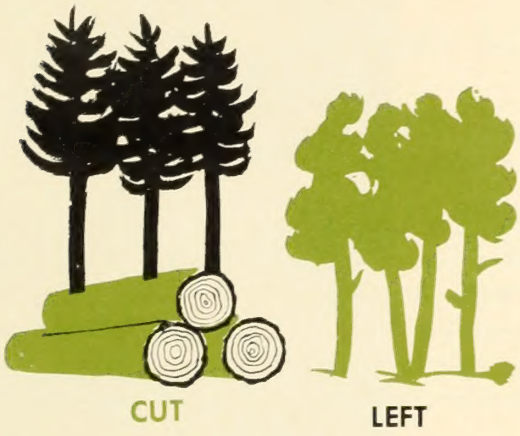


Eastern Growth Exceeds Cut

With the growth of yellow pines in the South setting the pace, the growth of eastern sawtimber currently surpasses the amount of eastern sawtimber being cut. In effect, the East is growing one-fifth more softwood sawtimber than it cuts, and nearly three-fifths more hardwood. All of the preferred kinds of trees, however, do not have a favorable growth-cut balance. Nevertheless, the growth-cut picture in the East indicates a good possibility of strengthening and improving the timber resource.

*Figures in billion bd.-ft.

No surplus either . . .

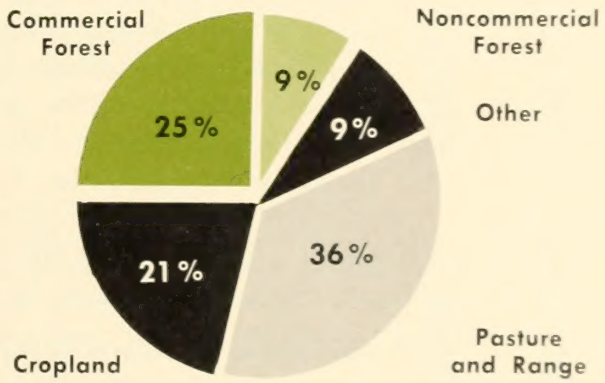


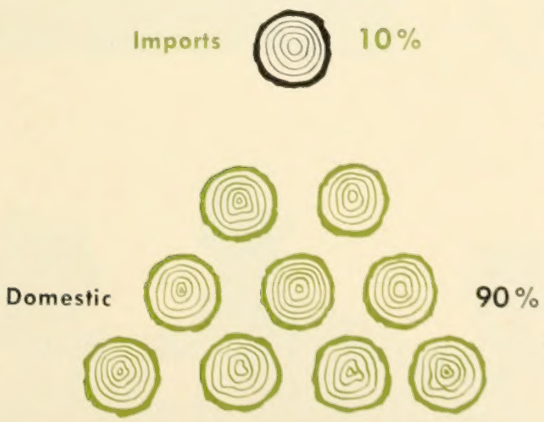
The Best Trees, Most Heavily Cut

For the most part, we are cutting the larger, better quality trees. The smaller, poor-value trees being left are less desirable and less useful. While there is no timber famine in the offing, some shortages can be expected especially of softwood sawtimber, the kind we use most in America. This heavy reliance upon softwood sawtimber is expected to continue.

Just So Much Land

Until recently, it was thought that the United States had enough forest land to grow all the timber crops the Nation needed, if the land were effectively used. This is no longer a certainty. Increasing population, expanding industry and agriculture, enlarging communities, more and more highway, power, and reservoir developments are reducing the area of commercial forest land. The long-time downward trend in the Nation's forest acreage is likely to continue. Further significant reductions may adversely affect future timber supplies.

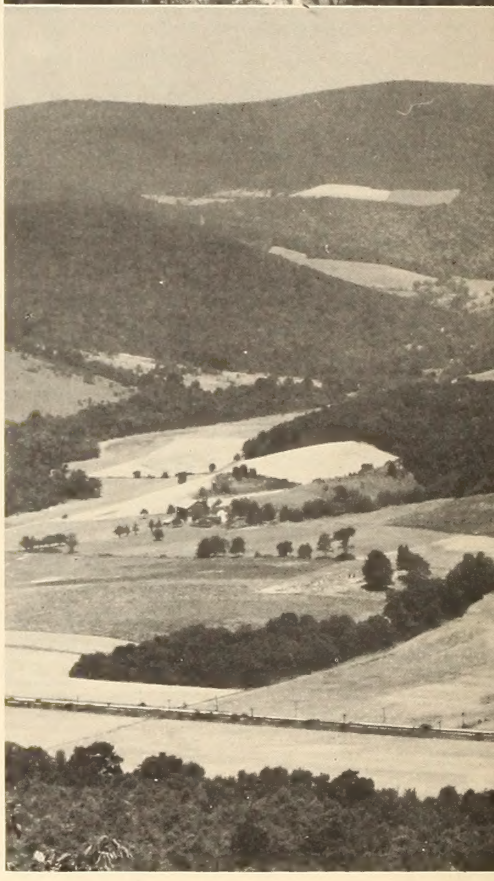




Our Own Timber, Our Main Reliance

We produce about 90 percent of the timber products we use. The remainder is imported chiefly from Canada in the form of softwood products such as pulpwood, woodpulp, and paper; and we are importing some high-quality hardwoods from Central and South America. Canada might increase her exports but hardly enough to satisfy our expected increased demands. Other Free World countries have little softwood timber to spare. And we cannot look in the foreseeable future to the Soviet Bloc for timber products. Our main reliance must still be on our own timber resources. Will they stand up to the demands of the future?

Let's look ahead to 1975... and to 2000



More People

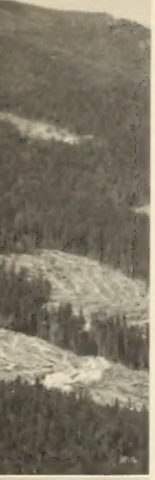
In 1952, when we took a look at how much timber we used, our population was 157 million. Today it is close to 175 million. By 1975, our Nation may have 215 million and by 2000, 275 million or even as many as 360 million people.

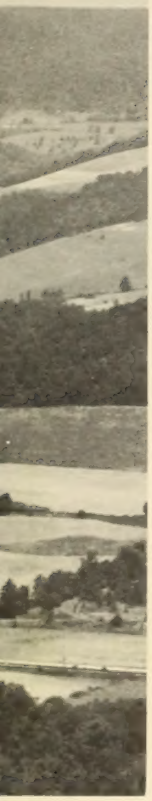
More Goods and Services

The national output of goods and services — gross national product — rose from 100 billion dollars in 1900, figured at the present-day value of the dollar, to 354 billion dollars in 1952. This was a threefold increase in 50 years. A gross national product of 630 billion is expected by 1975 and by 2000 it may reach 1,200 billion dollars or more.

More Timber Products Needed

Just think! More than 100 million additional people by 2000—all to be provided for in a continually expanding economy. More and more lumber, pulpwood, and other timber products will be needed in the years ahead. The question is—how much more?

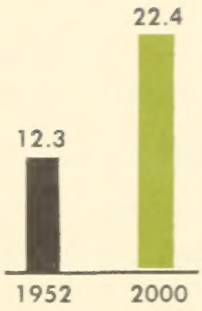




Timber for the future

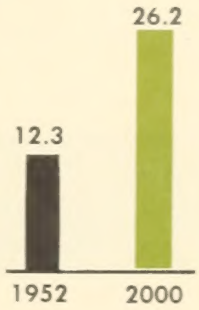
A Medium Projection

Wood is now holding its own in the market place. If it maintains its present relative place in the economy (the amount used per person remains about the same as it is today and prices rise no faster than the prices of competing materials) the demand for wood may reach 22.4 billion cubic feet by 2000, providing the population is 275 million by then. This demand would be 83 percent greater than present consumption.



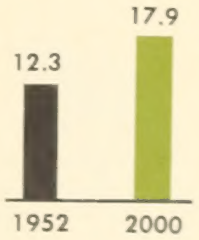
An Upper Projection

If our population should increase to 360 million by 2000, the demand for wood might be as much as 26.2 billion cubic feet, or more than double present consumption.



A Lower Projection

On the other hand, if wood prices rise faster than prices of competing materials and population is no more than 275 million by 2000, there will probably be less wood used per person than there is today. Even so, our demand for wood may be 17.9 billion cubic feet or 46 percent greater than the amount being used today.

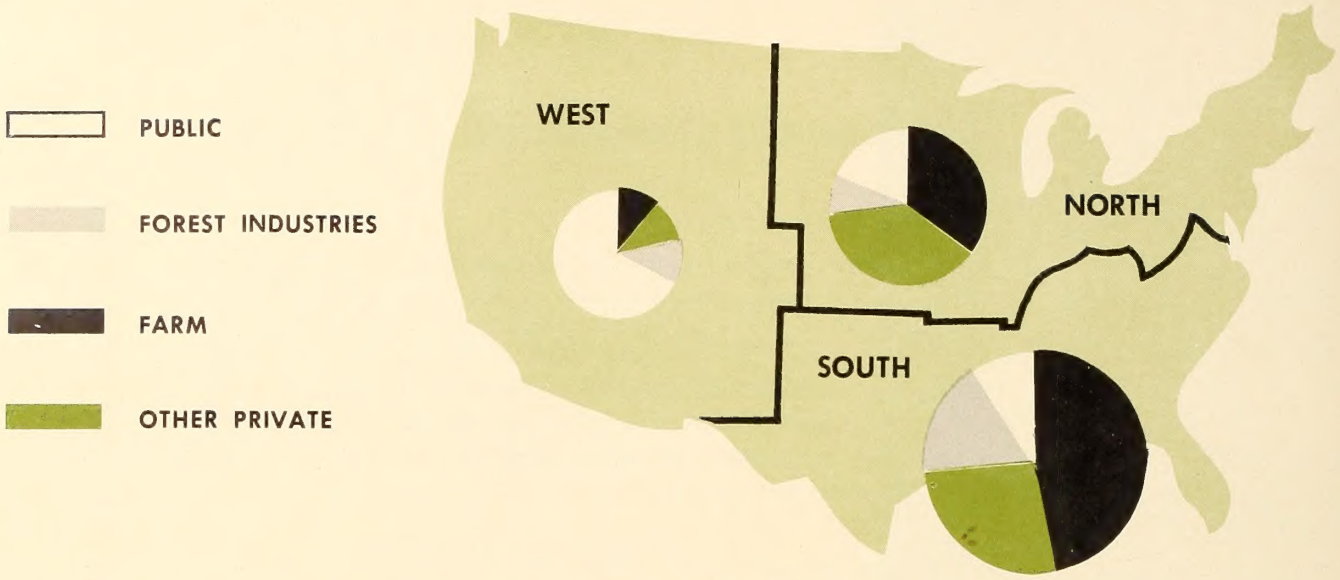


Timber Supply Outlook

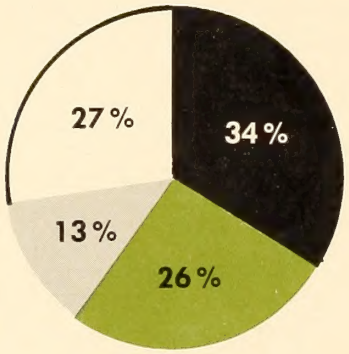
In the future, America's dependence will still be upon sawtimber size trees—those larger and better quality trees we find most useful today. To maintain per capita consumption and meet medium future demands, it will be necessary to more than double growth of sawtimber from today's 47 billion board-feet to 105 billion board-feet by 2000.

We have the potential . . .

AMERICA'S



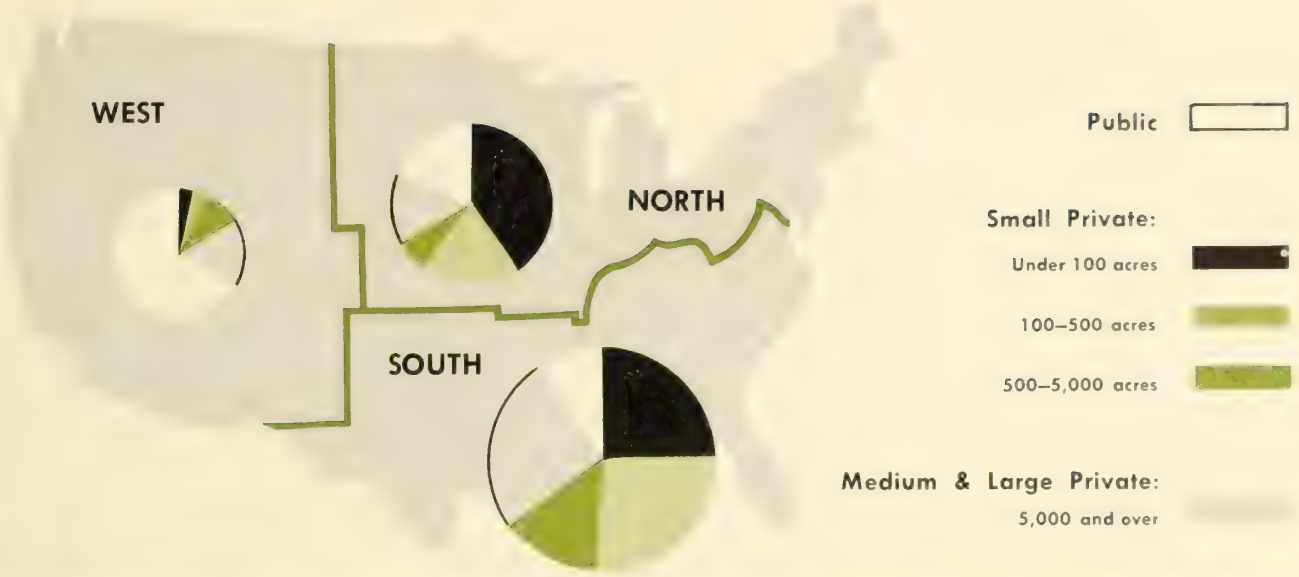
AREA BY TYPE OF OWNERSHIP



In the United States and Coastal Alaska, we have 489 million acres of commercial forest land.

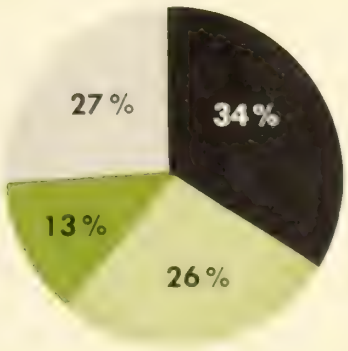
No one actually knows how much timber the Nation's forest land can produce. But the land has the potential to grow the amount America will need 40 years from now if we apply our full forestry knowledge and skills promptly.

The forest industry holdings and public ownerships (with the largest acreage in the National Forests) represent fairly extensive areas of timberland per ownership. Most of the Nation's commercial forest lands, however, are in comparatively small tracts owned by farmers, businessmen, professional people, housewives, retired folk, and others not associated with any forest industry. It is these lands in particular, involving 4½ million ownerships (three-fourths of them farm forests), upon which the spotlight of the future must be focused. They will be called upon to supply an ever-increasing amount of the raw materials for industry.



AREA BY SIZE CLASS OF OWNERSHIP

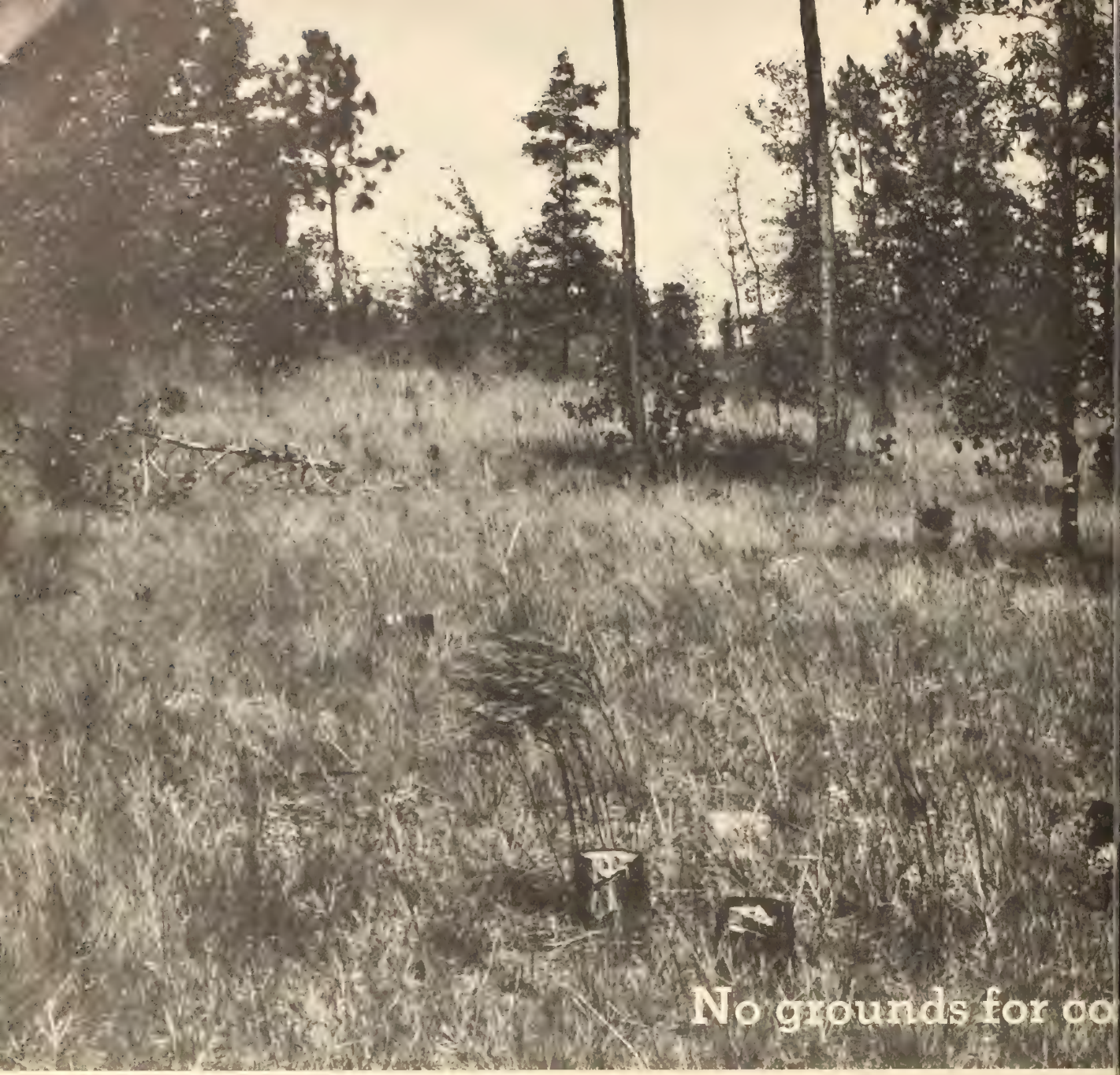
SIZE CLASS OF OWNERSHIP



The real key to our future timber supply lies in the hands of those one out of every ten American families who own small forests. . .

The forests of industry and those in public ownership alone do not have the capacity to sustain future demands. In time there is bound to be a significant shift from West to East in the relative timber cut since the forests of the East make up three-fourths of the Nation's timberlands and have a greater timber-growing capacity than the West.

Add to this the fact that the condition of recently cut lands is poorest on the farm and other small private ownerships, especially in the South. It then becomes evident what a tremendous job faces several million Americans who, up to now, have not been particularly interested in making and keeping their timberland productive.



Our Nation could make more effective use of her timberland. There are too many acres with too few trees; 114 million acres are growing little or no timber. This means that 1 out of every 4 acres of America's commercial forest land is idle. Much more intensive forestry is needed to get these lands to producing the timber they should. Recently cut lands have a prominent place in this picture of poor productivity. Some of these lands are being kept in good growing condition. On many, however, so few trees are left after cutting that conditions for growth are poor.

. . . we

nplacency here . . .

F-421524

need more of this

. . . and this

Destructive agents kill 13 billion board-feet of sawtimber annually or enough to supply the wood needed for 1 million average homes. The Nation could do a more effective job of reducing this extraordinary toll.

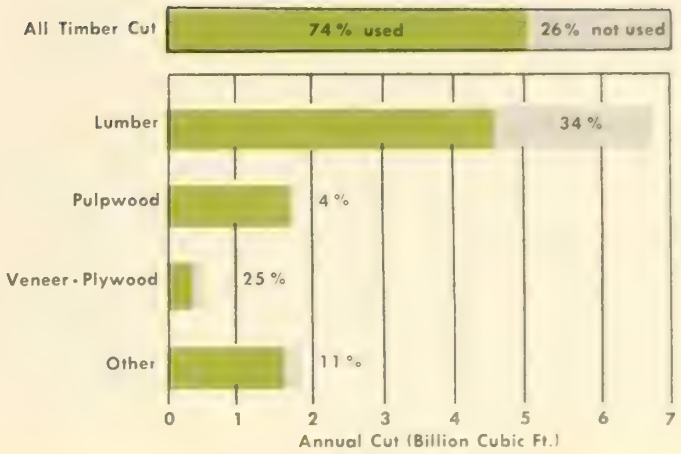
Although insects kill more trees each year than does fire or disease, over the long run disease is the most destructive agent. In its long-range effects on sawtimber growth, disease outranks both insects and fire more than two to one.

INSECTS AND DISEASE

FIRE

We have made great progress in preventing and controlling forest fires, but even so only 15 percent of our commercial forest area is adequately protected against a really bad fire year. Fire, potentially the greatest forest enemy, still destroys tremendous quantities of timber. Even more significant, fire opens the way for insects and diseases and the greater losses they inflict.

Although great strides have been made in efficient use of timber, about one-fourth of the timber cut each year is not used for any purpose. Thirteen percent of the timber cut annually is left unused in the woods. Although 60 percent of plant residues are now used, most of this is burned for industrial fuel. In addition, our timber stands contain billions of board-feet of salvageable dead timber and sound material in cull trees.



No grounds for complacency here, either . .

America's timber is declining in quality; the more desirable trees are losing ground to the undesirable, poor-quality trees. Quality loss is most serious in the East, especially in hardwoods, where one-fifth of the volume is in trees

POOR QUALITY

WOOD LEFT UNUSED

not merchantable because of crookedness, knottiness, or rot. Remarkable advances in wood technology in recent years have not eliminated the need for high-quality timber. There just isn't any satisfactory substitute for quality in many of the products we have become accustomed to and will want in the future—millwork, siding, fine furniture and veneer, and many paper and wood fiber products.

Meeting future needs . . .

F-465202

. . . a big job for millions of people

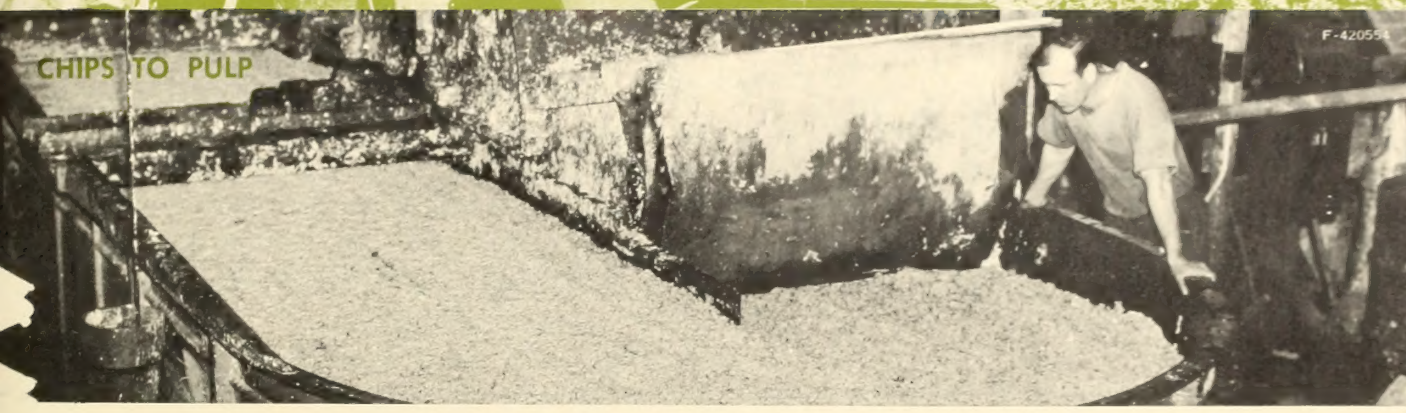
More Americans, young and old, participate in planting trees than in any other single forestry activity. Yet this keen interest and the greatly increased rate of planting in recent years are not enough in themselves to accomplish in the required time the tremendous tree planting job that still faces this Nation. Fifty-two million acres, an area the size of Maryland, Indiana, and Maine combined, must be planted—the sooner, the better—if they are to produce the wood they should. More than four-fifths of these now idle lands are in the East, mostly in small private ownerships.

For additional millions of acres on which, today, too few trees are growing, planting would make the difference between good production and poor. And on many areas now being cut where nature will take too long to bring trees back to the land, man should do the job.

At least three-fourths of the recently cut lands owned by forest industries and the public are being left in reasonably good growing condition. Some farmers and other small forest owners likewise take real pride in their timberlands, and use every practical measure to insure good crops for future harvest. The truth is, however, that on over half of America's recently cut farm and other small private forests, conditions for timber growth are far from good; they are most serious in the South.

To improve growing conditions and the quality of timber on these lands, all of our forestry knowledge and skills must be brought into play—in harvesting, in thinning and other partial cutting, in pruning, and in removing useless growth that is choking out desirable trees. Rebuilding the millions of small forests, representing over half of all the commercial forest land, is one of America's most important forestry jobs.

. . . will require early action



. . . intensified effort

Over the years losses due to fire have been reduced, and we are beginning to make progress in holding down insect and disease losses. But these problems are far from being licked. Our protection effort must be greatly intensified all along the line. This means hitting fires when they are small and controlling insect and disease attacks before they spread. We need better equipment for the control of fire and other destructive outbreaks. We need to extend our road system into isolated areas to afford access for protection crews and for prompt salvage of killed timber. We need to grow trees that are more resistant to insects and disease and to keep our forests healthy so that these enemies have less chance to gain a foothold. In short, we need to get this forestry job done faster and better.

Some forest industries, backed by research and experience, have made substantial progress in more efficient use of wood. However, too much timber that is cut is still being left unused in the forest and in the mill.

Logging and plant residues can, of course, never be completely eliminated nor can dead trees and culls, now little used, be completely salvaged. Yet in building up the Nation's timber supply to meet the ever-increasing demands of the future, we must take advantage of every possible opportunity to make the timber we have go farther.

Better markets, introduction of new timber products, and development of new equipment for harvesting and processing, all make fuller and better timber use. Progress in each of these fields will help in meeting future timber needs.

Timber growth should be doubled . . .

It can be done . . .

Interest and action—these are always the important elements in getting a tough job done. We have only to look at the recent progress of American forestry for proof that timberlands do respond to proper care and protection. Important advances have been made in protection, utilization, and research. Then too, we have seen that idle lands can be successfully planted to trees. These are hopeful signs, evidence of what many forest owners, foresters, and other interested individuals, working together, have accomplished. But this progress is not enough. Because forests take a long time to reach harvesting size, we must act now if we are to have enough timber to meet expected needs.

Now we must do a much bigger and better job of forestry than most of us have thought about. Forests in public and industry ownership cannot by themselves supply all the timber this country will need. The millions of small holdings with over half of the Nation's forest land must also produce their share. We have the ability and the know-how. If we have the will to do it and act promptly, the job can be done!

GPO : 1958 O—470120

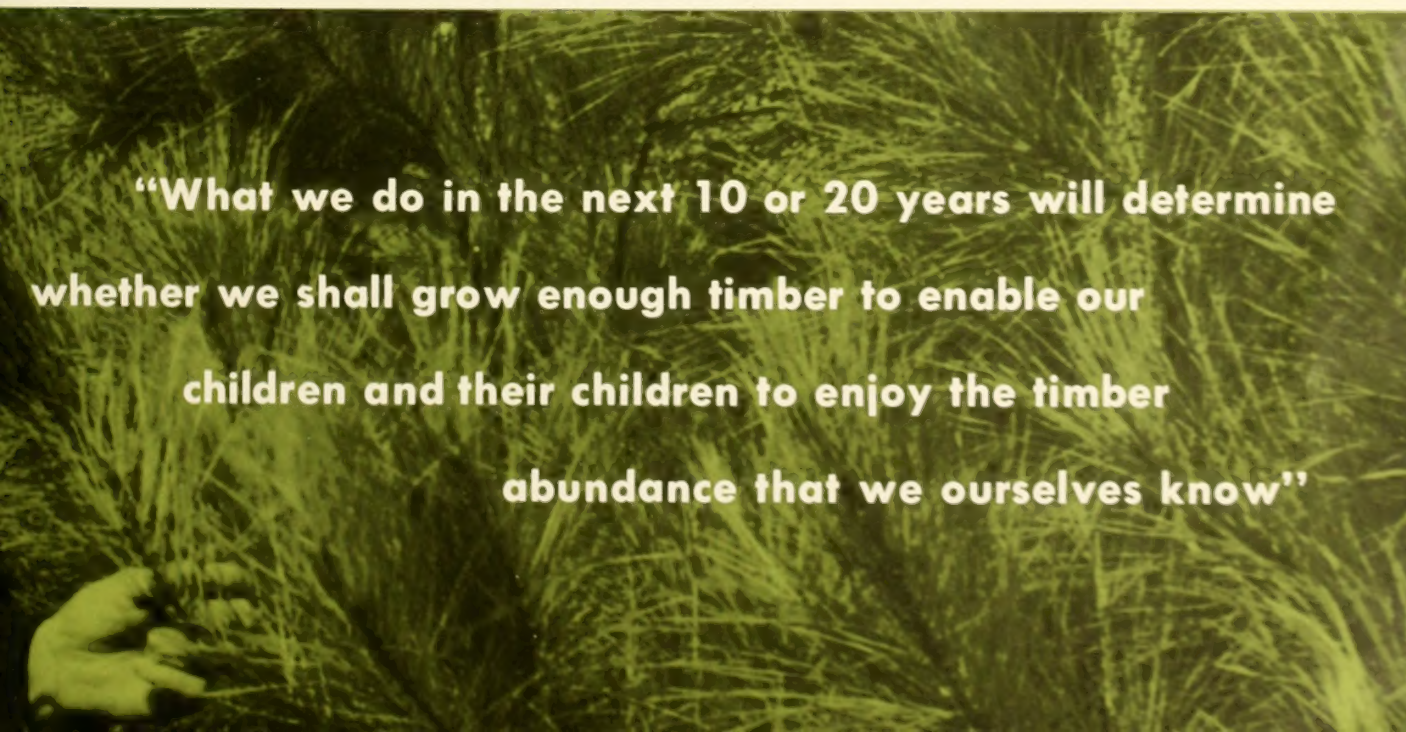
Plant billions of trees instead of millions every year.

Keep all recently cut lands productive.

The four best possibilities:

Strengthen control of disease, insects, and fire everywhere.

Use more of the timber being cut and more dead and cull trees.



This booklet is based on "Timber Resources for America's Future," a comprehensive appraisal of the timber situation in the United States prepared by the Forest Service, U. S. Department of Agriculture. (For sale by Superintendent of Documents, U. S. Government Printing Office, $7.00) The study leading to the appraisal was made by the Forest Service with the collaboration of State Foresters, other State agencies, forest industries, and other private and public organizations.

November 1958