

and not "ordinary income" subject to the high rates which heretofore have been applied. This comparatively inconspicuous action of Congress a couple of years ago in recognizing the logic and equity of the capital gains principle for the taxation of "timber income" and its significance to the future of private forestry on a larger scale, is almost a new charter for private forest enterprise. More than any other single factor it is accountable for the widening industry interest in the possibilities of Tree Farms.

Much has been said about the phenomenal possibilities in wood utilization. I am told that American Forest Products Industries, an organization which has the closest approach to a nation-wide spokesmanship for industrial forest uses, has prepared a group of more than 250 wood research projects, believed to be of sufficient present promise to justify exploration by the industries themselves. These researches, if undertaken, would go extensively not only into the mechanical and physical uses of wood but into wood chemical derivatives, wood treatments, cheap wood plastics, and the mysteries of lignin. The President of American Forest Products Industries is quoted in the press as having stated that the potential post-war development of these industries depends on two factors. First, coordination between all elements of these industries, and second, "unremitting research aimed at improving present products and in developing new ones." As an interested and somewhat informed observer, I would echo his enthusiasm for an important forestry objective.

In Virginia where I have operated a large farm for nearly ten years, hybrid corn has almost literally transformed the face of agriculture. Ten years ago in Loudoun County where I lived, hybrid corn was not only a novelty but a mystery. The corn crop averaged about twenty-five bushels to the acre. Today, hybrid corn has captured northern Virginia, and the average acre yield is more than forty bushels. On my own farm, we have at times exceeded one hundred bushels which is not phenomenal but better at least than twenty-five. The

which they are practiced in the woods operations. But with all this and looking back over a quarter century, I think there is a great significance to the fact that representative national spokesmanship for the principal forest industries within a little more than a year has publicly declared itself as favoring the incorporation, into forestry codes to be administered under appropriate state laws, of timber cutting and forest practice rules for continuous forest production based on the tested local or regional experience of forest owners; and the establishment and strengthening of public agencies under state law qualified and competent to administer and enforce forest laws.

This is not an end. But it is more than a beginning. It is in this direction that the states of the Pacific Northwest are headed. The Oregon forest law is a good start. The new Washington law, I think, is still better and provides at least the structure of a competent state forest code and the means of applying and enforcing it. I am not familiar with the Idaho and Montana laws, but I am sure they will be not far behind. The extent in the long run to which Federal forestry control will be involved will, I think, be determined and should be determined by the extent to which individual states show a competence to deal constructively with their own.

Among the new forestry indications, I have mentioned the tree farms movement, already well under way in several states and gaining impetus. Behind all this of course is the still unsolved problem of forest fire protection. No one witnessing the raging forest fire events of last summer will seriously say that that problem has been solved. It may be an insoluble problem and the most that may be expected is that over a period of years we continue to make gains in fire protection and control.

Within the last three years, a stronger economic base has been put under private forest ownership. This is in the recognition in our Federal Revenue System, of increases in the growth and value of standing timber as long-term "capital gains" subject to moderate taxation

FORESTRY IN A NEW ERA

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a text to speak from and as far from as is necessary.

Most speeches on forestry which I have heard in the last quarter of a century, and I have listened to many, have for the most part been either debates over disputed public forest policies or declamations of the advantages of trees and the magnitude of our forestry resources and of the industries using them. But trees grow in the woods and not in the closets of forest philosophers or in the debates which divide foresters, or in speeches by college presidents.

One of my first jobs as a youth was as a log scaler in a small hemlock and hardwood logging camp in northern Michigan. It logged with high wheels and big Percherons. It had infested bunk houses and culinary facilities which would not pass the test of any food sanitary regulations nowadays that I know of. But with all that I learned a love of the woods. And the love of the woods, as you well know, is one of those deep-seated affections which time and circumstance do not alter. So I would rather not take your time or mine either in an unlimited adventure in statistics or a diverting lyric of the beauty of trees or of the annoyance of seeing them cut down, or in an amiable "sparring bout" over public forest policies which have been a source of prolific debate for over half a century.

No one knows better than I do how easy it is to put a statement of good forest practices on paper and how hard it is to convert it into habitual practice in the woods. Also no one knows better, I think, than I do the extent to which unwholesome and sometimes destructive local forest conditions are concealed in the more hopeful national forest industry averages; or the ease with which policy resolutions are adopted in meetings, and the difficulty with

Twenty-five years ago after the First World War the National Lumber Manufacturers Association, of which I was then a part, made a survey of the extent to which private forest owners were practicing forestry on their own lands. This survey found three such ownerships,—one in the West, one in the South, and one in the North, in addition of course to a number of small farm woodland ownerships. In 1933 during the reign of the National Recovery Administration, a similar survey showed between six and seven hundred such ownerships. Today there are few substantial forest ownerships either in the South or the West or the North which are not in one way or another seriously exploring the possibilities of permanent productive use of their forest lands.

A few days ago I received a copy of what is identified as "National Box Score" of Certified Tree Farms included in the system of American Tree Farms which as an officer of American Forest Products Industries I helped to initiate a few years ago. This box score shows, of certified tree farms alone in five states of the South and five states of the West, a total registration of 945 ownerships with an aggregate tree farms area of 11,134,950 acres. This is not a solution, but it is progress. Much of it dates back to a hot afternoon in Washington, D. C., in the summer of 1933 when the Lumber and Timber Products Industries submitted to the National Recovery Administration what later became famous as "Article X—Forest Conservation Code" with these significant words: "This is an industry undertaking. It will be so administered."

I see by the program that I am designated to speak on "Forestry in a New Era." I suppose that in an unguarded moment I myself suggested that title. But I shall use this assigned subject as

Some ideas of hybridizing and growing stock improvement through the various genetics arts, are being widely applied. They are being more widely explored in an experimental basis in forestry largely, I believe, by the U. S. Forest Service. Their possibilities in forest industrial usage should be more widely considered. This may turn out to be the best way of making two trees grow where one grew before and making both trees more resistant to deterioration.

In Georgia some years ago lived and worked a chemist known to many of you in person and to all of you, I think, by his distinguished name, Charles H. Herty. He was slight, soft-spoken, and modest and a great companion. Often I have sat on the end of the same log with him. He had faith in southern pine.

SOCIAL IMPLICATIONS OF FORESTRY IN THE INLAND EMPIRE

BAKER BROWNELL

Director of *The Montana Study*¹

I.

In the old days North Dakota was heavily forested, you will remember, and Paul Bunyan cleared it off in four weeks. He split the lumber into matches for the Swedish army, according to his contract, and then, because the King needed North Dakota for a Swedish kingdom, Paul did something that no lumberman up to that time had done: He removed the stumps. It was not a simple matter to remove them, but Paul met the emergency in his usual, original way. It seems that Babe, the blue ox, did not like to get his feet wet. So Paul Bunyan and his men got out the hose and flooded North Dakota with three feet of water. Then Babe was turned loose. The big ox roamed all over the state, stepping on the stumps to keep his feet out of water. So heavy was he that he drove each stump six feet into the ground. And thus North Dakota was made ready for the Swedish farmers.

Paul Bunyan is a symbol or prototype of American lumbering. His contract did require him to burn the brush and remove the stumps from North Dakota, but that, I believe, is the only instance in his long history of lumbering-off the continent where he concerned himself with the crucial problems of land-use and social stability that followed his axemen from Maine to Oregon. And his solution of them, even in North Dakota, I think you will agree, could have been better. Though Paul was likeable and hearty and could get out the timber in a big way, he was really a wrecker. He ranged across America like a fire destroying the forests. And though the lumber was marketed it did not change

¹A three-year research project financed initially by the Humanities Division of one of the great foundations and sponsored by the state university system of Montana. Mr. Brownell is on leave from Northwestern University, where he is a Professor of Philosophy.

the fact that he left behind him wastelands of eroded, useless soil, dead rivers and rotting communities. Only once did Paul Bunyan meet his match in felling timber. That was when he encountered the great fire in the Bitterroots. Paul retired after that. It is said that he now devotes himself to hunting and fishing. I hope he obeys the game laws.

If Paul had attended a good school of forestry in his youth he might have turned out different. I do not know. In any case the Paul Bunyan era of lumbering in the United States is over. Or if not, it ought to be. We have learned, I hope, that we cannot leave our forestry policy to him.

As we look back at the Bunyan era of forestry it is not difficult to make fundamental criticisms. First, he killed the land. Where he passed, the land stopped producing. The forests in effect stopped growing. The character of the watershed disintegrated. The soil as forest, farm or grazing land failed. He laid his axe into the roots of our sustained economy. He gathered one harvest, the virgin timber, and left the place blasted thereafter. If ever the land was brought into production at all, the cost was borne by his successors, and a terrible cost it was. I refer, of course, not to the homestead settlers of the Midwest, but to the commercial lumbering that swept across the Lake States, through the South and over the forested regions of the West.

Second: Where Paul Bunyan passed, the human communities were left to die. Their development became virtually impossible and the ghosts of dead towns now haunt America. For one town like Elma, Washington, which somehow saves itself from extinction, there are hundreds of lumber towns dead or dying all over the United States. High among the social problem areas of America are