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FORESTRY

ITS PLACE IN THE ECONOMIC LIFE OF THE SOUTH

TWO ADDRESSES MADE AT THE EIGHTH
ANNUAL MEETING OF THE

North Carolina Forestry Association

IN WILMINGTON, N. C., JAN. 25, 1918

SCIENTIFIC LAND CLASSIFICATION THE BASIS
OF PRACTICAL FORESTRY AND STOCK
RAISING IN THE SOUTH

By Clement S. Ucker

AND

FOREST PROTECTION AN ECONOMIC
NECESSITY

By J. A. Mitchell

OFFICE OF THE SECRETARY
CHAPEL HILL, N. C.
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PREFACE

In his foreword to "Wild Life, Forests and the War," Dr. Wm. T. Hornaday says: "Notwithstanding the anxieties and efforts inseparable from war with a great military power, other paramount duties of the American people should be resolutely performed. The nation is sufficiently populous and resourceful to do this. Even with war upon us, taxes must be paid, children must be educated, and the general welfare of the people must be promoted. Likewise the resources of nature must be protected from neglect and destruction. It is imperative that our national heritage of forests and wild life should be resolutely safeguarded."

The North Carolina Forestry Association was organized in 1911. Its purpose was and still is: "To promote the protection of the forests of North Carolina from fire and from destructive insects, and to promote their perpetuation by wise use and by the reforestation of cut-over and abandoned lands." It has held annual conventions every year since then, as well as a number of intermediate meetings. It has been one of the principal motive forces in securing an excellent forest law for North Carolina. It intends to continue the fight for forest protection until that law is supported not only by an adequate appropriation, but by the opinion and co-operation of all the good people of this State.

After reading the two addresses included in this pamphlet, it will be seen that no apology is needed for bringing this subject before the public at this time of national stress. As Mr. Mitchell says, "The elimination of waste is a national necessity. With a rapidly diminishing natural resource like our forests, poor utilization and unnecessary destruction are equally criminal. It behooves foresters, timberland owners, and lumbermen, therefore, as a patriotic duty, as well as a vital necessity, to work together to eliminate them."

If this little book brings home to its readers as clearly as did the speakers to the forestry convention, the fact that forestry must become as much a part of our economic life as are agriculture and stock-raising, then its purpose will have been accomplished and its publication justified.

Forestry: Its Place in the Economic Life of the South

SUMMARY

IN THE WORDS OF THE AUTHORS

Mr. Clement S. Ucker, vice-president, Southern Settlement and Development Association, Baltimore, said:

"I have been more and more struck with the wanton waste, the absolute lack of preparation for the future which characterizes the use of our natural resources in America. This does not apply alone to our forests but it applies to our streams, our mineral deposits—it applies even to the original fertility of the soil itself."

"This (South Atlantic and Gulf Coastal Plain area) also happens to be the great yellow pine belt of the United States. It also happens that about eighty-six per cent of the world's naval stores, turpentine and rosin, comes from this area and according to the best figures obtainable, at the present ratio of increase in population and in destruction of the forest, twenty-five years will see its final passing. No substitute has as yet been secured for naval stores—turpentine and rosin—and it is doubtful if one will be found."

"When the naval stores and timber operators had passed they had left behind them a by-product, viz: Cut-over lands. Then came the land exploiter.

"Generally speaking the land owner found himself face to face with one of three courses.

"First: Let his lands go back to the State for taxes and be considered for all time as having shirked his responsibilities.

"Second: If you will pardon the language,—find an 'easy one' and unload the problem on him. But that did not solve the problem, for it still remained in the hands of the vendee as much a problem as in the hands of the vendor.

"Third: Put it to a present day beneficial use on a broad

scale against the day when there would be a sufficient demand for his land to make it really worth while to sub-divide it."

Dr. Geo. M. Rommel, Chief of Animal Husbandry, Bureau of Animal Industry, U. S. Department of Agriculture, was quoted as saying:

"The area of these lands is estimated at approximately 76,000,000 acres, to which the cutting of timber is adding about 10,000,000 acres each year. Eventually the total extent of the cut-over timber lands of the South will be in the neighborhood of 300,000,000 acres, which is greater than the present unsettled public domain of the United States.

"To develop these lands as farms will not only require immense sums to equip them, but equally great amounts to clear them and make them ready for crop production. With the present shortage of agricultural capital in the South, it does not require the exercise of much imagination to realize what would be the effect of an attempt to develop them at this time as farming regions.

"To get enough competent men to develop these areas for cattle or sheep ranching will be a serious problem but not an insoluble one."

Mr. Ucker again said:

"Taking into consideration the climate, location, rainfall, and luxuriant vegetation, the South Atlantic and Gulf Coastal Plain area was intended by nature for this very pursuit and it would have, no doubt, long ere this been satisfactorily engaged in this line had it not been for the presence of the Texas fever cattle tick. But, some day we are going to finish the task of eradicating the tick; we are going to secure the enactment of some legislation with respect to primary sanitation as a means of prevention of cholera amongst hogs; and we are going to control the predatory dog. We are going to improve our pasture grasses and import better blood and teach our people that while they should not raise less cotton, they should also raise more livestock and grain and forage.

"After the range always comes the plow. That has been the experience in the West. Range lands have passed into plow lands. It has been found more profitable to raise grain than to raise livestock.

"Always I have foreseen that sooner or later the problem

of reforestation comes before us. If I should personally remain in this work I should have liked to have handled it in due course, not as a State matter but as a matter of topographical sub-divisions.

"The public domain is gone. Our land hunger for the future must be satisfied from those areas that, while they have passed into private ownership, are nevertheless idle. What shall be done? Will the Federal government stand placidly by and allow fraud and misrepresentation, or will the Federal government seek to regulate the thing in co-operation with the states?

"It seems to me that the day has now arrived when we are face to face with land classification as a basis for further agricultural development; and with land classification there undoubtedly comes reforestation.

"I would have them divide the lands into A, B, and C classes.

"Class A—Those immediately available for general agriculture.

"Class B—Those adapted to grazing, and with the grazing where practicable, reforestation.

"Class C—Those which will not be during our generation or the next, fit for either farming or grazing, those I would devote to reforestation.

"The naval stores and yellow pine industry of the South Atlantic and Gulf Coastal Plain area, should, by all means, be saved to the nation and to the world. Practical development on a broad scale, coupled with conservation, should follow topographical and not State lines.

"We should work for Federal action with respect to land classification, as well as co-ordinating state action in this direction. The whole forestry question in the South should be discussed, especially with respect to the Coastal Plain area, at the earliest practicable date, by a general gathering at a central point for such purpose, to which should be invited Federal representatives, representatives of all the states and the owners of the large areas of unused, idle, cut-over lands."

Mr. J. A. Mitchell, forest examiner, U. S. Forest Service, said:

"It behooves the owner of cut-over land, as a business prop-

osition, to see to it that his land is producing something to meet the demands upon it in the way of taxes and carrying charges. There are three possibilities: *Agriculture, grazing, forestry.*

"Forestry has no quarrel with either agriculture or grazing, In fact, for their mutual good all three should go hand-in-hand. That every acre of land should be put to its highest use on the earliest date at which it is economically possible goes without saying. What foresters as well as the community at large rightfully object to is the unnecessary idleness of vast areas pending intensive development. This is particularly true at this time of national stress and intensified demand for forest products.

"In the South alone it is estimated that ten million acres are cut over annually—an area that would require, on a 160-acre basis, 62,500 families to colonize, to say nothing of live stock and capital. It is evident, therefore, that regardless of agricultural possibilities much of the cut-over land of the South will remain undeveloped for a good many years for a lack of men, stock and money to develop it. In view of this condition, it would seem to be a matter of good business as well as a patriotic duty to grow another crop of timber on lands not subject to immediate development.

"What the South needs is a definite workable forest policy, backed by the people, the State and the Federal government. It should know:

"(1) What its potential timber resources are.

"(2) Which soils are best suited to agriculture, grazing or timber production.

"(3) The possibilities and tendencies of agricultural development from an economic standpoint.

"(4) The best methods of insuring, protecting and increasing a crop of timber on lands unsuited or not immediately needed for agricultural or other uses.

"All this can best be accomplished by the joint efforts of private owners, the State and the Federal government.

"These efforts can be greatly facilitated if the states will recognize their responsibilities. To this end the Federal government, private owners and citizens who have the welfare of the country at heart, should combine to urge the state legislatures to adopt effective legislation and to support it with adequate appropriations."

Scientific Land Classification the Basis of Practical Forestry and Stock Rais- ing in the South

By CLEMENT S. UCKER

Vice-President Southern Settlement and Development Association
Baltimore, Maryland

In accepting the invitation which was extended to me through Mr. Holmes, I did so in complete consciousness of the fact that I was but poorly qualified to discuss this question from the standpoint of the scientific or statistical forester. At the same time I was fully conscious of the fact that I would have very little time to devote to research work in the interval. I come to you, therefore, not as a forester, not as one who has long given time to research and to thought upon forestry problems, not as one prepared to give you data, statistics and comparative deductions, but to make certain pronouncements with respect to the necessity for reforestation or conservation of those forests still remaining.

My work for the past four years in the Southern country has led me into many bypaths and as the months have passed onward, I have been more and more struck with the wanton waste, the absolute lack of preparation for the future which characterizes the use of our natural resources in America. This does not apply alone to our forests but it applies to our streams, our mineral deposits: it applies even to the original fertility of the soil itself. We have been, and are, a spendthrift nation. The wealth which we have accumulated has been largely, if not entirely, from our natural resources—that which stuck to our fingers in spite of our efforts to rid ourselves of it.

My connection during the past four years has been with the Southern Settlement and Development Organization, a Maryland corporation, enjoying a special charter by act of the Maryland legislature; a quasi public service corporation, if you will, inhibited by its charter from operating for profit, from owning or vending lands; created for studying agricultural

and industrial development. It was first conceived by the late Mr. Finley, of the Southern Railway, who foresaw the necessity for conservative agricultural development in the Southern territory as against the day when the natural resources should have passed away and the vast areas left behind by the "ax-man" should pass into beneficial use. Our charter, the mandate to myself and my associates, was "to make a thorough, complete and scientific study of the area embraced in the states of Maryland, Virginia, West Virginia, Kentucky, Tennessee, North and South Carolina, Mississippi, Alabama, Louisiana, Georgia and Florida—twelve in number—and to devise the most practical method of developing their idle, agricultural lands and their latent industrial possibilities."

One of the first deductions forcing itself upon my mind, was that broad constructive development—empire building, if you will, rebuilding would be better—should follow topographic, divisional lines rather than artificial or state lines.

Physically, the South is divisible into three separate areas, being somewhat similar in this respect to Caesar's description of ancient Gaul. These are the Mountain section, the Piedmont section and the Coastal Plain area, and this division is pretty well maintained, at least in equivalent, even in the Mississippi Valley. A further critical investigation indicates that eighty-five per cent of the cry in the Southern country for assistance in development comes out of the Coastal Plain area. From the standpoint of the practical developer, one would not be presumed to devote his efforts to the mountain territory to the exclusion of the lowlands, nor would he endeavor to make a more or less doubtful effort with respect to the abandoned plantations of the Piedmont section. Therefore, our work for several years past has lain almost exclusively in the Coastal Plain area of the South Atlantic and Gulf States and in the thought that if there could be firmly builded and securely anchored in this territory a constructive movement, that it would eventually spread into the Piedmont and Mountain regions.

Let us glance for a bit at the South Atlantic and Gulf Coastal Plain area—that section which lies along the ocean and the gulf, from Norfolk on the north to Galveston on the south, and which may be readily traced by a line from Norfolk to Richmond, to Raleigh, to Columbia, Augusta through Ma-

con to the Alabama line, then across Alabama and Mississippi, embracing Louisiana and Southeast Texas. This gives us southside Virginia, eastern North Carolina, eastern South Carolina, south and central Georgia, all Florida, southern Alabama, southern Mississippi, Louisiana and southeastern Texas. This also happens to be the great yellow pine belt of the United States. It also happens that about eighty-six per cent of the world's naval stores, turpentine and rosin, comes from this area and according to the best figures obtainable, at the present ratio of increase in population and in destruction of the forest, twenty-five years will see its final passing. No substitute has as yet been secured for naval stores—turpentine and rosin—and it is doubtful if one will be found.

The questions naturally arise, "Need we save them? Are they necessary to the world's progress?" I am told that there is a fringe of this timber throughout Mexico and Central America, disappearing in South America. Its extent, its availability, we know little or nothing of so far as I am able to ascertain from inquiry and research. I am told that the other fourteen per cent of the world's naval stores is had mainly from France from trees that have been grown through reforestation, involving long and careful effort, on the sand dunes of France.

Let us glance for a moment at the actual transformation scene prior to the eighties. The territory whose boundary I have outlined for you was pretty nearly an unbroken forest. With the passing of the white pine belt of the North, it became profitable to exploit the timber of the Southern yellow pine belt. With the increased demand for turpentine and rosin it was discovered that the saw man could profitably follow the turpentine box, so-called.

According to my information, it had been the practice growing out of a popular belief that a turpented tree was unfit for lumber, to abandon it. We then witnessed a steady progress southward; Norfolk, Wilmington, Charleston, Savannah, Jacksonville and Pensacola have successfully been the seats of the naval stores industry and the mill men have followed after and have kept just a few years behind the crest of the turpentine still. These lands have been owned in large

areas. It was necessary to acquire them in large areas to finance their operation.

When the naval stores and timber operators had passed they had left behind them a by-product, viz: Cutover lands. Then came the land exploiter. In some instances he was successful. In and about Norfolk, Virginia, have been some very successful operations but for a highly specialized purpose. About Wilmington, North Carolina, and about Charleston, S. C., there have been marked successes with enormous prices or rises in land values. In Florida a number of ventures were made along highly specialized lines—citrus fruit, pecans, tobacco, cotton, truck—with varying degrees of success but generally speaking the naval stores and timber operators have manufactured "cut-over land" faster than demand for homes could absorb the excess. The result was the timber operator suddenly found himself, as was the case in Florida, by reason of the good roads movement, the better school movement, or "The Renaissance" period in county court houses, with a few hundred thousand acres of land in a county that had but recently voted anywhere from five hundred to fifteen hundred thousand dollars in bonds. We have never found a successful method of retiring a county bond issue except by tax on land. Therefore, the non-active or practically non-active timber companies or naval stores companies or land companies found themselves with a non-productive liability on their hands and an ever increasing tax bill. The situation became acute in Florida and it will become acute in eastern North Carolina whenever the day of good roads is really upon you.

Now over all of this land there has roamed the inbred, underfed, neglected, tick infested cow, belonging to some one who was, generally speaking, raising cheap beef on the other man's land at nothing per acre. The owner had no use for his land and the cow owner considered that he had an ancient, immemorial vested right to free pasturage, and he was not particular and is not now particular whether the cow is tick infested or otherwise. It is nearly all profit to him. Generally speaking the land owner (as described), found himself face to face with one of three courses.

First: Let his lands go back to the State for taxes and be considered for all time as having shirked his responsibilities.

Second: If you will pardon the language,—find an “easy one”, and unload the problem on him. But that did not solve the problem, for it still remained in the hands of the vendee as much a problem as in the hands of the vendor.

Third: Put it to a present day beneficial use on a broad scale against the day when there would be a sufficient demand for his land to make it really worth while to sub-divide it.

Now I ought to have said that it does not require a wonderful amount of calculation to ascertain the total amount of tomatoes, or snap beans, or cabbage, or strawberries that one hundred million people comprising the population of the United States might consume under normal conditions. One can easily compute the day when an excess acreage results in overproduction and the ruin of those so engaged and even with the abnormal condition presented by our population flocking to the city and our efforts to raise on highly specialized areas at tremendous distances from the consumer, a part of our food, presents a problem in transportation and distribution which is, to say the least, extremely vexatious and difficult of satisfactory solution and I think shows today the very decided trend to its inevitable end, viz.: That each community, as far as possible, must supply, within a reasonable radius, its own needs.

Eliminating the highly specialized forms of agricultural activity, it would, according to the calculation made by Dr. Geo. M. Rommel, chief Animal Husbandry Division, Bureau of Animal Industry, United States Department of Agriculture, announced in a paper read before a meeting of the Southern Cut-Over Land Bureau at New Orleans on September 27th, last, take a million farmers to develop these now available cut-over lands in eighty-acre tracts; or about one-sixth of the present farming population of the United States.

I take the liberty of quoting at length from Mr. Rommel's address:

“The area of these lands is estimated at approximately 76,000,000 acres, to which the cutting of timber is adding about 10,000,000 acres each year. Eventually the total extent of the cut-over timber lands of the South will be in the neighborhood of 300,000,000 acres, which is greater than the present unsettled public domain of the United States. The utilization of these lands is therefore very much in the nature of a

public obligation, and the immensity of the problem leads me to discuss the subject somewhat extensively even at the risk of repeating some of the statements made at your conference in April last. I shall also take the liberty of touching on some subjects which do not pertain directly to the necessity for increased meat production but which are vital in a consideration of the use of these lands for live stock raising.

"Permit me to state in simple terms the principles of the problem as an introduction to the elaboration of the argument. The cut-over lands of the South need constructive development based on economic possibilities and economic needs. To develop them for live stock production means (1) a minimum requirement for capital, (2) a minimum need for man power and (3) the production of human food for which there is now, and has been for a decade and a half, the keenest need and of which there is very little danger of over-production. To develop them at this time as farming regions, on the other hand, means, (1) exceedingly heavy demands for capital from resources already taxed to the utmost, (2) a large demand for man power on a supply already undermanned, and (3) the production of crops in a market already adequately supplied.

"The questions of equipment and man power seem to me among the first which must be considered. You gentlemen are concerned with the effective utilization of areas of many millions of acres. Live stock ranches of a hundred thousand acres are common, and ranches of several hundred thousand or even a million acres are in successful operation. The equipment expense, therefore, to put into operation the ranching business on these undeveloped southern lands, can be worked out by studying the requirements shown by the business as already established elsewhere in the United States. In proportion to the total area involved, there does not seem to be anything insurmountable in this phase of the problem.

"We may take a similar view of the question of man power. The ranching business is like any other business—the big, constructive leaders are rare, but, again, like any other business, there are sufficient well trained men to take hold of any new development of the business which is justified by circumstances, which promises to be successful and which is backed by sufficient capital to develop it.

"Now let us supply these two factors to the development of the cut-over lands on a purely agricultural basis under present conditions. Use the 160-acre homestead factor and suppose we start in with the 76,000,000 acres now on our hands. Where, in the first place, would the money come from to develop more or less half a million additional farms in this territory? We must not ignore the fact that the great obstacle to the diversified farming movement in the South is not the colored brother, nor the landlord's indisposition to grow anything but cotton until the boll weevil wakes him up, nor even the cattle tick. It is the fact that many, if not most of the banks in the South which make a business of agricultural loans have only sufficient capital to finance the cotton crop. To develop these lands as farms will not only require immense sums to equip them, but equally great amounts to clear them and make them ready for crop production. With the present shortage of agricultural capital in the South, it does not require the exercise of much imagination to realize what would be the effect of an attempt to develop them at this time as farming regions.

"To get enough competent men to develop these areas for cattle or sheep ranching will be a serious problem but not an insoluble one. To get approximately half a million farmers to develop 160-acre homesteads or a quarter of a million to develop 320-acre homesteads is a practical impossibility. There are approximately six million farmers in the United States. If the drafting of a small percentage of their employes into the army is working a hardship on the owners, what hope is there then to get nearly ten per cent of the owners of farms elsewhere to undertake the agricultural development of these cut-over lands? Men of no experience in agriculture could not be depended upon if they were available, and this phase of the question seems to settle itself with the mere statement of the facts."

Therefore, my activities and those of my organization have for more than two and one-half years, been given to advocating the only broad beneficial use which we believe is applicable to this territory in our day, viz: The production of live stock.

A few words with reference to our present day outlook in that particular.

On the fifth day of September there was handed to Mr. Hoover's special committee on meat supply, the United States livestock industry committee these figures, and they are presumed to be entirely reliable. They were collected by the United States government at considerable pains.

The decrease in beef animals since the beginning of the war, or August 1st, 1914, has been twenty-eight million, hogs thirty-two million and sheep fifty-six million. I noted recently figures put out by the banking institutions in New York City to the effect that if the war in Europe were to stop today, forty million head of livestock would be required as a foundation herd to rehabilitate Europe. It is said that our western ranges are carrying all that they may. Recent careful investigation discloses the fact that our relief, if any, must be found on the individual farms. The operation of the six hundred and forty acre homestead law, that is the recent enactment by Congress increasing the area of the individual homesteader from the old one hundred and sixty acres to six hundred and forty acres, it having been seen that the remaining portions of the public domain were of less potential soil value and needed to be increased in area, has operated to take away from the range man the last remaining mile of his range. Taking into consideration the climate, location, rainfall, and luxuriant vegetation, the South Atlantic and Gulf Coastal Plain area was intended by nature for this very pursuit and it would have, no doubt, long ere this been satisfactorily engaged in this line had it not been for the presence of the Texas fever cattle tick. But, some day we are going to finish the task of eradicating the tick; we are going to secure the enactment of some legislation with respect to primary sanitation as a means of prevention of cholera amongst hogs; and we are going to control the predatory dog. We are going to improve our pasture grasses and import better blood and teach our people that while they should not raise less cotton, they should also raise more livestock and grain and forage.

That is what I have been and my associates have been striving for step by step—endeavoring to organize the land owners, to band them together and bring before them the proposition

confronting us, hold the proposition up to them, the owners of these areas of idle land. The key was in their hands and I am bound to say that in the lower Mississippi territory, in Florida, in Georgia, they have responded nobly and they are today engaged in the solution of their problem. Unfortunately the Carolinas have not been apparently quite so enthusiastic or I should rather say that there have been some men with just as much enthusiasm but the enthusiastic men have been fewer than in the states further South.

After the range always comes the plow. That has been the experience in the West. Range lands have passed into plow lands. It has been found more profitable to raise grain than to raise live stock.

That, in a few brief words, gives an outline of the successive steps that we have thought out and embarked upon in relation to this so-called Southern problem. Always I have foreseen that sooner or later the problem of reforestation comes before us. If I should personally remain in this work I should have liked to have handled it in due course, not as a state matter but as a matter of topographical sub-divisions. I would like to have asked the United States Forest Service co-operating with the forestry bureaus or departments of the states of Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana and Texas to have met at some central point, to have invited the land owners themselves and to have there established a nucleus of an auxiliary organization that should have had for its ultimate purpose a thorough and complete study of this problem of the coastal plain area.

If we wait for the various states to solve it, some may never do so, others may do so, some may even make a success of it; but so long as it is intermixed with one of our distinct American institutions, practical politics, I doubt whether we get very far with it as a state matter.

Harking back to my remarks regarding the statement made by Dr. Rommel, is it not logical that, as the months grow into years, for highly cultivated general farming, only the better areas should be used? That then brings us to the question of land classification. I want to say a word here with reference to the activities of the Federal government in the disposition of her public domain. How she held out to every man one hun-

dred and sixty acres conditioned upon his residing upon it, cultivating and improving the same for a period of five years. She charged him but fourteen dollars registration fee and gave him a deed in fee simple, but she maintained, or at least intimated that any one hundred and sixty acres of her domain was as good as another; or, in other words, that one hundred and sixty acres in Iowa was no better than one hundred and sixty acres in Arizona, and many was the homesteader who honestly tried for five years and failed, and abandoned his homestead—broke. I apprehend that if a private citizen had held out as a purely commercial venture the same inducement, or pursued the same course, he would have interviewed the Federal grand jury in due time.

The public domain is gone. Our land hunger for the future must be satisfied from those areas that, while they have passed into private ownership, are nevertheless idle. What shall be done? Will the Federal government stand placidly by and allow fraud and misrepresentation, or will the Federal government seek to regulate the thing in co-operation with the states?

It seems to me that the day has now arrived when we are face to face with land classification as a basis for further agricultural development; and with land classification there undoubtedly comes reforestation. If I were to suggest a practical plan of operation for the South Atlantic and Gulf Coastal Plain area, I would suggest the enactment by the Congress of legislation creating a commission to be composed of one representative from the department of agriculture, one from the department of labor and one from the department of the interior which has been charged with the disposition of the public domain of the United States. These three should constitute a permanent Federal classification and colonization commission. It is true that they would have no jurisdiction except in government owned land, but they should stand ready to aid and assist whenever the State of North Carolina or the citizens of that State see fit to avail themselves of the co-operation. I would have them divide the lands into A, B, and C classes.

Class A—Those immediately available for general agriculture.

Class B—Those adapted to grazing, and with the grazing where practicable, reforestation.

Class C—Those which will not be during our generation or the next, fit for either farming or grazing, those I would devote to reforestation.

Now comes the crisis of the entire reforestation problem upon lands under private ownership not within National forests. Who will defray the expense? Personally, my mind is very conclusively made up that the State must either remit the taxes and furnish ample protection for a period of forty years or else the owners of such lands must eventually relinquish them to the State for taxes and the State will find itself under the necessity of engaging in this form of activity; unless, on the contrary, we are going to admit that we are going to continue to allow the owner or his agent to exploit the poorer areas for practical development to the unsuspecting home-seeker.

Now, to sum up: The nation looks to the Southeast for its additional supply of meat and meat products. This is the unanimous conclusion on the part of thinking investigators; therefore, the sooner the better.

The naval stores and yellow pine industry of the South Atlantic and Gulf Coastal Plain area should, by all means, be saved to the nation and to the world.

Practical development on a broad scale, and coupled with conservation, should follow topographic and not state lines.

Land classification, nation wide, is an absolutely essential basis for intelligent and efficient development and conservation, and it applies with double force to the South Atlantic and Gulf Coastal Plain area, to the longleaf yellow pine belt, because today this is the true undeveloped frontier of the United States; it is the last great remaining area of low priced land: capable of high development left on the North American continent.

North Carolina is carved about equally from the three great topographic divisions—the Mountain, the Piedmont and the Coastal Plain. In the Mountain section the Weeks law—so named from Senator Weeks, of Massachusetts, its author—is in operation. It permits the Federal government to acquire lands by purchase for national forest purposes, and was only

enacted after the legal minds of both houses of Congress reached the conclusion that to stand the constitutional test it must be based upon the fiction that it was essentially necessary to conserve the stream flow, and thereby the navigability for war purposes of the streams having their head waters in those regions. Perhaps the State of North Carolina should take like action. I am unfamiliar with the present North Carolina laws and constitutional provisions.

With respect to the Piedmont: it is largely a matter of educating the individual farmer or plantation owner; educational efforts should be intensive in that area, counties should set the example, especially along the public highways.

In the Coastal Plain area, the problem is the same as in the Coastal Plain area of every other Southern state. To my mind it must be solved as a topographic whole.

We should work for Federal action with respect to land classification, as well as co-ordinating state action in this direction. The whole forestry question in the South should be discussed, especially with respect to the Coastal Plain area, at the earliest practicable date, by a general gathering at a central point for such purpose, to which should be invited Federal representatives, representatives of all the states and the owners of the large areas of unused, idle, cut-over lands.

Forest Protection an Economic Necessity

By J. A. MITCHELL

Forest Examiner, Office of State Cooperation,
U. S. Forest Service

More and more forcibly each day is the fact being brought home to all of us that a world crisis is at hand, that the old order of things is passing and that out of this baptism of fire we call "War" a new race, new institutions and a new people will emerge. Whether it be a better world to live in or a worse, whether we as a nation are purified or destroyed, depends on the way in which we rise to meet the new burdens and responsibilities that are daily being thrust upon us. The world is moving at a tremendous pace—the events of years are being crowded into days and the demands on our national resources have increased by leaps and bounds. Production can be speeded up; but as our natural resources are fixed or limited by natural laws, present output can be increased only by discounting the future. *Elimination of waste is, therefore, a national necessity.* This is particularly true of the lumber business as of all other industries essential to the winning of the war and to our national welfare. With a rapidly diminishing natural resource like our forests, poor utilization and unnecessary destruction are equally criminal. It behooves foresters, timberland owners and lumbermen, therefore, as a patriotic duty as well as vital necessity, to work together to eliminate them.

In the lumber industry as in all other lines of endeavor, the loss incident to poor utilization is beginning to be recognized and efforts are being made to eliminate it. The greater waste resulting from forest fires, however, being less obvious, is generally overlooked in the struggle for maximum production.

Without doubt, fire is the greatest of all wasters, both of property and of our forest resources. It is also the least excusable, since it can largely be prevented. In the case of property, loss by fire is guarded against to some extent and

fire insurance is a matter of course. In our forests, on the other hand, fires are allowed to burn uncontrolled, with the result that annually millions of dollars worth of timber and second growth, and thousands of dollars worth of property are needlessly destroyed—to say nothing of the frequent loss of life and of the damage to the range. In the West the fallacy of harmless burning has been exposed, investigation showing that fire, no matter how light, does some damage, not to reproduction only but to mature timber as well. To the casual observer this may seem insignificant. The damage, however, is cumulative and the aggregate loss is enormous. In addition, soil fertility is depleted and worthless plants replace useful ones, as the result of frequent fires.

But the *great* menace unquestionably is to the future of our timber supply. In the piney woods, particularly, repeated fires are fatal to the establishment of reproduction; while in the hardwoods the trees, though not always killed, are stunted and deformed and laid open to fungus and insect attack. As young growth seldom has an immediate commercial value, its loss is usually ignored—the fact that a *crop* has been destroyed being overlooked. The loss in such a case is as real as if merchantable timber were destroyed—the destruction of a ten-year-old stand postponing under present conditions, the date of a possible harvest from fifteen to twenty years, if not indefinitely. At the same time, the land burned over has, to all intents and purposes, been rendered unproductive for a corresponding period. Herein lies the importance of fire protection from an economic standpoint, for no potentially productive land should be allowed to lie idle. The community has a right to and will, sooner or later, demand that it be producing something.

Throughout the country good roads, schools and public improvements of all kinds are being demanded. In the long run these will pay, for with improvement comes development; and with development a market for both land and products, and a corresponding increase in values. In the meantime, it behooves the owner of cut-over land, as a business proposition, to see to it that his land is producing something to meet the demands upon it in the way of taxes and carrying charges.

There are three possibilities: *Agriculture, Grazing, Forestry.*

Forestry has no quarrel with either agriculture or grazing. In fact, for their mutual good all three should go hand-in-hand. That every acre of land should be put to its highest use on the earliest date at which it is economically possible goes without saying. What foresters as well as the community at large rightfully object to is the unnecessary idleness of vast areas pending intensive development. This is particularly true at this time of national stress and intensified demand for forest products.

Nor will this intensified demand end with the war. As was recently pointed out by Raphael Zon in an article on "Forestry After the War," the forests of Europe are being depleted at an appalling rate, the neutral countries already being forced to guard their remaining supply by the most stringent restrictions. As a result, the forests of America and Russia will be called upon to furnish the material for the rebuilding of Europe; and restrictions and regulations of exploitation will be necessary as a matter of self-protection. The longer we continue our present wasteful practices and neglect to protect our present and potential forest growth, the more stringent will these regulations be when necessity forces them upon us.

In the South alone it is estimated that ten million acres are cut over annually—an area that would require, on a 160-acre basis, 62,500 families to colonize, to say nothing of live stock and capital. It is evident, therefore, that regardless of agricultural possibilities much of the cut-over land of the South will remain undeveloped for a good many years for a lack of men, stock and money to develop it. In view of this condition, it would seem to be a matter of good business as well as a patriotic duty to grow another crop of timber on lands not subject to immediate development. This is particularly true since in most cases fire-protection, supplemented by adequate stock laws, is all that is needed to insure a second crop that will yield a fair return on the investment. In the South, where growth is rapid and reproduction readily established, this is especially true.

What the South needs is a definite workable forest policy,

backed by the people, the State and the Federal government. It should know

(1) What its potential timber resources are.

(2) Which soils are best suited to agriculture, grazing or timber production.

(3) The possibilities and tendencies of agricultural development from an economic standpoint.

(4) The best methods of insuring, protecting and increasing a crop of timber on lands unsuited or not immediately needed for agricultural or other uses. All this can best be accomplished by the joint efforts of private owners, the State and the Federal Government.

Speaking for the Forest Service, it stands ready to lend its aid:

(1) In co-operating with the states in fire protection under the Weeks law.

(2) In assisting groups of large timberland owners by advice in the solution of their common industrial forest problems.

(3) In co-operating with State agencies in assisting the farmer and small woodland owner through county agents and demonstration work under the Smith-Lever law.

(4) In making investigations as to the proper management of forest lands and the relationship of forestry to fire and grazing.

These efforts can be greatly facilitated if the states will recognize their responsibilities. To this end the Federal government, private owners and citizens who have the welfare of the country at heart, should combine to urge the state legislatures to adopt effective legislation and to support it with adequate appropriation.

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