V I R G I N I A

FORESTRY SPECIALIST 1928
- Wilbur O'Byrne

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Forestry Va

ANNUAL REPORT

EXTENSION WORK IN FORESTRY

December 1, 1927 to November 30, 1928

By

Wilbur O'Byrne Extension Forester

John R. Hutcheson, Director Extension Division

Virginia Polytechnic Institute

(1) Organization.

The organization of the Forestry Department remains unchanged. Under a joint agreement participated in by the United States Department of Agriculture, the Virginia State Forest Service and the Extension Division of V. P. I., one full time specialist is employed. He reports to the State Forester as regards subject matter and to the Extension Director as regards method of presentation.

(2) Changes in the relation of extension work in forestry to allied projects in other branches of the institution.

With the beginning of the present school year instruction in landscape architecture and wood technology have been added to the college curriculum. Instructors in both subjects have been added to the faculty and instruction in landscape architecture is now under way. Instruction in wood technology is to be started as soon as a survey of the wood-using industries of the state has been completed. In the meantime, however, the instructor is available to handle correspondence along his line which, like many of the landscaping questions, have in the past come to the Extension Forester simply because they seemed to be more closely allied to his work than any other subject then being taught. Being able to refer correspondence in these two subjects to specialists in these lines not only relieves the forestry specialist of that much outside work but places it in hands that are qualified to give expert attention.

The Survey of Wood-Using industries is the first serious attempt along this line since the study made in 1912 by H. H. Simmons of the U. S. Forest Service in cooperation with the State Department of Agriculture and Immigration. It should be of considerable assistance in finding more advantageous markets for woodland products that are now permitted to go to waste or shipped to distant points at great expense. And taken in conjunction with the study of wood waste carried on early in the year by the United States Department of Commerce should result in bringing to the state additional wood-using industries. It is especially desirable that there be an increase in plants capable of using low grade material that is now largely wasted on account of the expense of getting

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it to existing markets. I have been informed that the report covering the wood-waste study is now in the hands of the printer and should be available in a short time.

A change that promises infinitely greater bearing on extension work in forestry is the addition of a course in Farm Forestry to the curriculum of the agricultural college. Instruction in this course has not yet been started but I have been given every assurance that it will be started just as soon as necessary adjustments can be made.

I believe it is impossible to overestimate the beneficial effect of including instruction in forestry in the prescribed course of study for the agricultural students. Not only are most of the county agents totally uninformed regarding the fundamental principles underlying forestry, but taking their cue from their college, which has so far ignored the subject, they fail to take the matter seriously. This attitude is similar to that of the busy and preoccupied farmer, and might be summed up somewhat as follows: "Sure! Sure! Something ought to be done, but let 'George' do it. I'm just as busy as I can be." Several of the agents have asked why forestry was not being taught at Blacksburg; with the implication that if it was as important as I tried to make them believe it was, it would be taught. I feel confident that the psychological effect of having forestry so recognized by the college will be tremendous. That it should be taught in the agricultural college of a state in which over 60 per cent of the land area is timber covered or lying idle for the lack of such cover is, I believe, generally admitted.

(3) Program of work for 1928:

(a) Problem: To the average Virginia farmer, merchantable timber is something that "happens" rather than a crop that is capable of responding to intelligent treatment. The very ease with which pine reproduction can be secured has cheapened it. The general attitude is well typified by the man who, when approached on the subject of planting pines on some worn out land he owned, responded: "Plant little pine trees? Why, I've been fighting the damn things all my life." The idea that "pine bushes" were merely young pine trees and that land which could not be farmed profitably was better off with

pine trees growing on it was an entirely new thought. The more progressive farmers, of course, appreciate the situation but are frequently so busy with development work they already understand that they simply have not gotten around to putting their woodlands in order.

Where the question of what to do with the marginal and submarginal lands, land which agricultural leaders say should be removed from cultivation, has been given consideration, it is usually taken for granted that "all you have to do is to quit cultivating a field and it will spring up in a pine thicket." There was a time when this was almost literally true, but the large full crowned old pine trees that once towered above the rest of the forest or occurred along fence rows, ditch banks and property lines are disappearing rapidly and with them go the millions of pine seeds that gave rise to these "old field" stands. Some young growth will still come in on most of the abandoned farm land but it is frequently so scattered that it is practically valueless. Not only do such stands yield but a fraction of the quantity of which they are capable but what there is will be rough and knotty and frequently made up of inferior species.

So long as saw timber was the principal product taken from the forest, only the larger and more valuable trees were removed. This usually left an abundance of seed trees. While it is true these seed trees were apt to be the culls, both as to species and quality, they did scatter seed. On many of the present day cuttings where pulp wood or stave bolts are removed either as the principal operation or following a sawmill, even these cull trees were taken out. The result is that many abandoned fields and cut over woodlands either fail to reseed at all or do so so scathingly as to result in young growth of little prospective value.

We hope and work for better markets; markets to utilize the small and low grade material that was formerly wasted. The markets arrive and become a Frankenstein to lay waste our forests. But only because they are improperly used.

The answer is the education of the land owners. Many of the operators and dealers in pulpwood, stave timber and even saw timber, have very little permanent interest

in the region where they are operating and still leave in the piece of land they are working on. They say, and with some justice "why should I go to the trouble and expense of leaving seed trees from among those that are most profitable or of taking care to protect and preserve the young growth if the man who owns the land is not sufficiently interested to make it worth my while."

The Forestry exhibit at the State Fair this fall contained a showing of loblolly pine cones (both open and green) seeds with the wings attached and seeds with the wings removed. It was astonishing to see the number of people who had never seen a pine seed and had not the vaguest idea where they came from or how they were disseminated. Many of these people had lived among pine trees most of their lives and had observed the squirrels "cutting pine burs" yet had never associated the fact with the presence of pine seed. I believe that over 90 per cent of the people who stopped at the booth were seeing a pine seed for the first time. Many of them came back bringing friends to see this new and interesting sight.

Throughout the bright tobacco raising section large quantities of cord wood are utilized each year in curing the crop. (It requires approximately 25 cords of wood to cure the tobacco raised on one acre of land). This demand for large quantities of cordwood affords a wonderful opportunity for utilizing the material that should be taken out in thinning operations and make this desirable practice very attractive. Here again we run into long established practices and prejudices which must be broken down. It is generally believed that the best tobacco is grown on land that has recently cleared of a scattering stand of pines and broom sedge. The most popular method of getting this clearing done is to have a "cutting" which in many respects resembles the old fashioned husking bee. The usual practice is to block out the areas to be cut and turn the gathering into a contest. And the contest is physical rather than mental.

It would be difficult to find a region where conditions were more favorable for the making of thinnings and improvement cuttings, yet on account of the force of habit and the deep seated prejudices mentioned above, it has been extremely difficult

to interest even the more progressive farmers. It constitutes, however, one of the most attractive fields in the state for constructive work and I expect to continue to plug away at it until I find the "key log." Once these prejudices are broken down and the idea that land which must "rest" for so many years is in reality lasting, has been recognized, I feel sure that much of the idle land will be set to timber and that more intelligent handling of timber land will become general.

A great handicap to the educational work is the spirit of discouragement that pervades the tobacco raising section. Tobacco is an exacting taskmaster and when the entire family has worked to the point of exhaustion and receive for it only a bare living, it is small wonder that this feeling exists. Many of the growers would welcome a new money crop but what they need is one that can be relied upon immediately. After they have let a hand to mouth existence that was built around an annual crop, they do not readily grasp the idea of a crop which takes several years to mature nor does such a crop make adequate provision for the immediate future. Once they have worked out the problem of making a good living on the farm without being so completely dependent upon tobacco, they will be much easier to interest in a project that, regardless of how good a thing it may be in the long run, does not contribute materially to the present embarrassing situation.

According to the most reliable figures available, there are one and a quarter million acres of idle land in Virginia; land which cannot be farmed profitably and which for one reason or another is not seeding in to desirable tree growth. Much of this idle land occurs on farms and could be reclaimed by planting at very little outlay. This year, for the first time, forest planting stock is available in quantity from the state forest nursery. For this reason the importance of reforesting idle lands has been stressed to a far greater extent than had been anticipated at the time the 1928 plan of work was prepared. Idle lands and the advantages and technique of planting them with pines, procurable from the State Forest Nursery, formed the central idea around which exhibits were built at the State Fair and three county fairs.

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Although somewhat disappointed in the number of applications for little trees actually taken, I feel sure that the general interest was such as to contribute very materially to the interest in and the understanding of the forest crop. Some of the application blanks taken home by visitors at the booth may still be heard from either this year or in subsequent seasons.

There is a great deal of feeling on the part of many farmers that they are taken advantage of by the sawmill operators who purchase their timber. They do not know how to estimate their own timber and cannot be sure whether the estimate the operator gives them is what he thinks is there or whether it is what he wants them to think is there. They see the spread between the price they get for their timber and the price the operator gets for his lumber and jump to the conclusion that the sawmill operator is profiting at their expense. Whether the price usually paid for standing timber is adequate or not is not the question here. The important point is that the farmer is suspicious <u>because he is ignorant</u>. Almost without exception the farmer would like to have the state estimate his timber but only in the rarest instances is he at all interested in learning to do it himself. The project in timber estimating has failed utterly to make an appeal and will probably be dropped from next years list, at least from the leading place it was scheduled for this year.

(b) Goals. The ultimate goal of all forestry work in the state is to convince timberland owners, state, corporate and private that as such they are tree growers; not merely tree sellers or wood products manufacturers, and to instruct and assist them in the technique of growing timber crops, harvesting their timber crop to the best advantage and finding the most advantageous markets, especially for that class of material which has been largely wasted in the past. The Extension Foresters' field is primarily with the farmer-timberland-owner and includes, as a corollary, the task of correlating the handling of the timber crop with the other activities the farmer must carry on.

The goals set up for accomplishment during the year include;

(1) At least one thinning demonstration started in each county specializing

in rich sugar tobacco. This has not been accomplished. The specialist can hardly go into a county to work without an invitation from the county agent or an invitation from a farmer within the county backed by the acquiescence of the county agent. This project will be continued until the goal has been reached.

(2) To establish enough thinning demonstrations in three counties to cover the entire county from the point of view of accessibility. Several demonstrations have been conducted in three counties but the turnouts at the demonstrations were extremely unsatisfactory. Will be continued.

(3) To get not less than 15,000 little trees planted. There is every indication that this number will be considerably exceeded as a special effort was made along this line at the State Fair and three county fairs. Actual planting, however, will not be done until spring.

(4) To get adequate seed trees left on not less than four operations. The promises were given, whether they will be carried out remains to be seen.

(5) To get stock fenced from 6 over grazed woods. Only two definite promises secured.

(6) To get before the farmers of Southwest Virginia the urgency of marketing their chestnut. Several newspaper articles were prepared but the slump in the tie market, especially for chestnut ties, made it extremely difficult for the average timberland owner to do much. Almost every one, throughout the chestnut region, is thoroughly alive to the desirability of disposing of his chestnut as fast as the market will absorb it, so this project may well be discontinued.

(7) To give wide distribution to information regarding the seeding habits of pines. This has been done.

(c) Methods: The formal demonstration has not proven as satisfactory as had been hoped. The number of people attending has been small and treatment that is proper to be used on a given tract must be varied so much to meet the changed conditions encountered on others that those who attend are frequently unable to apply

what they are demonstrated. For this reason personal service will probably remain a very important part of the work. When the timberland owner discovers that what is wanted of him is merely common sense applied to his woods operations, he is encouraged to go ahead on his own account and whether what he works out is ideal or not, the fact that he is using his head as well as his axe indicates a healthy attitude which in itself look treestone advance.

Since forestry is an art that must take forest conditions as they are found and develop them toward an ideal, and since only in the rarest instances are these forest conditions and accompanying market conditions found to be identical with those of other tracts, blanket recommendations are apt to be misleading unless followed with understanding. And since this understanding is so frequently lacking it is usually desirable, if not actually necessary, to make an examination of a tract and study the marketing possibilities before determining how far it is practical to go in each particular instance toward putting into effect constructive forest practices. These examinations constitute more personal service work than is contemplated in the extension policy but under existing circumstances can scarcely be avoided.

In order to give circulation to forestry items, both news items and timely suggestions, and in order to be certain that such items be correct and consistent, a short bulletin or slip sheet has been started. Issues 1 and 2 are attached to this report. It is planned to have this sheet, which has been termed the "Scrap File", appear monthly. Whether it retains its present form, size and style, depends largely upon the reaction of the county agents. The few replies received so far have been distinctly favorable but a more thorough check up is planned after a few more issues have appeared.

(d) Other extension agencies: The county agent as the local representative of the extension service, is the principal means of contact. Like the typical farmer, however, he finds so much to do along lines with which he is familiar that he is prone to postpone active interest in the forestry project to a time when he has more leisure.

Home demonstration agents, as a rule, have little interest in the economic aspect of forestry. Beyond requesting forestry work for some of their short courses they have very little use for the services of the forestry specialist except for their advice in regard to shade trees and shrubs, which is really not forestry at all.

Negro agents have not been used to any appreciable extent. Recent conversation with two of their number, however, led me to believe that they offer a promising avenue of approach.

(c) Results: Formal demonstrations have been rather conspicuous failures. I am convinced that my plan of work contemplated too many projects for one man to handle. During the regional county agent conferences planned for January it is planned to cut these down to not more than two for any one region and perhaps to confine activities to those counties where the agents concerned are willing to cooperate to the extent of undertaking a concerted and definite campaign. Several very nice pieces of work have been started which should be of considerable value to the owner of the land, and may in time serve as result demonstrations but to date they give very little to show. The planting campaign so far has consisted entirely of inducing the landowners to make application for the planting stock. It is planned to devote most of the planting season next spring to supervising the initial planting of as many of these applicants as can be reached in the rather limited time that planting may be done.

One peculiarity frequently observed is that the landowner who contemplates the sale of his timber is extremely reluctant to have the forestry specialist see his woods before he makes the sale. He seems to have a premonition that he is going to hear something that will interfere with his plans. But after the sale is made and everything that will bring a dollar is cut, the forester is welcomed and expected to transform the wreck into a valuable property over night. It is then that we hear most about how long it takes to show results.

Commercial wood using concerns throughout the eastern part of the state are

making rapid strides in the adoption of approved forestry practices. The Camp Manufacturing Company under the direction of a firm of consulting foresters is employing the "Selection" system of cutting on their entire holdings and are leaving seed trees even them operating on land from which they have purchased all of the timber. The Chesapeake Corporation, at West Point, have been logging seed trees on their own lands for several years and are this year reforesting some of the poorer farm lands included in the tracts they purchase. The Hummel - Ross Fibre Corporation are to employ a technically trained forester after January 1st and many other concerns are taking a very active interest in forest fire prevention and control. Interest in the western portion of the state has, so far, been restricted largely to fire protection. It is hoped and believed that the example of these concerns, all of which are known to be progressive and profitable, will go far towards stimulating interest along similar lines on the part of farmers. And once they want assistance with their woodland problems as they now want assistance in their poultry, farm crop, trucking and livestock activities, there will be no trouble in organizing most any kind of a demonstration.

(4) Club Work:

Forestry clubs were organized in Charles City and Norfolk counties with a membership of 43 and 30 respectively. Work with last year's Nothbridge club members was continued without enrollment as it was agreed that since the work was merely a continuation of incomplete projects from the preceding year the boys were scarcely entitled to full credit. The agent, however, was anxious to hang on to the boys and give them the benefit of the work.

The Junior project in forestry has been so modified as to permit each member to elect which division of the project he preferred to take up first and a planting project was added. This change was not inaugurated until after the entire enrollment had started work on the tree identification project, which was formerly required of beginners. By making this change, which was done as a matter of expediency only, it is hoped that the promise of a financial reward, ultimate if not always immediate, would

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help hold the member's interest better.

It is worthy of note that the only completions we have had in the strictly study project have been where the agent arranged for a prize to be given for the best collections of wood samples (in the case of boys) or of mounted leaves (in the case of girls). I hope to try out both the planting and thinning projects next year and see whether they hold a greater appeal.

Instruction in forestry was given at the following short courses: Bedford, Sweet Briar, Williamsburg (By Mr. Gooch of the Virginia State Forest Service), Fredericksburg, Cape Henry and Rockbridge. The Rockbridge Camp was most note worthy for the flood that resulted, on Thursday, in driving us out of camp to spend the night in a barn while the floods subsided. The other camps were quite successful and the club members seemed to be much interested in the work.

(5) Miscellaneous Work:

Forestry being still a vagy new idea of the aferage Virginia farmer much of the specialist's time is devoted to work that produces no tangible results. The agent frequently knows little more of what it is all about than the farmer he is attempting to assist. All too frequently the forestry specialist is called in after the timber land has been pretty thoroughly wrecked. In many instances the growing stock on the land has been reduced to a point where there is almost nothing left to work with. In lieu of a willingness on the part of the owner to expend sufficient funds to replant the area or to carry on a strictly cultural improvement cutting, about all that can be done is to point out the true situation and indicate about how long it will be necessary to wait until the stand will have developed to the point where the owner will be able to realize enough from the operation to justify, in his opinion, some improvement work.

Many people fail to recognize that forestry deals with trees growing in a forest rather than shade, roadside and street trees. The forestry specialist is continually called upon to assist in problems along this line. The city council at Emporia requested the county agent to have him come down and outline a planting plan

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for one of their principal streets. The Vaux Springs Valley Garden Club requested an illustrated lecture on street and lawn trees. Individuals in almost every section in which forestry work is carried on ask for advice regarding the selection, planting, pruning and general care of shade and street trees. These calls are all answered when it can be done without interferring with more important work.

Almost two years ago the Women's Club of Lawrenceville was addressed upon the subject of roadside planting. This summer, while working in Brunswick county, the writer had the satisfaction of seeing that the ladies, under the supervision of county agent J. B. Lewis, had planted the roadside for almost two miles.

The usual number of reports regarding dying pines came to the office and were investigated. In two instances the Southern Pine Bark Beetle was found to be responsible and careful instructions were given for preventing further spread. In all other cases the unhealthy condition appeared to be due to some other cause. Where the trouble could be located proper instructions were given.

One very important phase of forestry work in Virginia, as in all other states where timber occurs in more or less extensive bodies, is protection from forest fires. The responsibility for this work rests with the State Forest Service but the Extension Forester, because of his connection with that Service, but more particularly because he recognizes fire protection as the prerequisite to successful forest practice, overlooks no opportunity to back up the State Forest Service in that great work. Intentional burning to improve the forage, kill ticks, kill weevil or for any other of the reasons frequently assigned, is largely a thing of the past in Virginia, but there are still a great many fires due to carelessness. Many of these fires are the aftermath of clearing operations and frequently indicate the need of education more than legal action. The Extension Forester, speaking as an outsider and working as he does in many counties in which the State Forest Service has not been able to place an organization, is able to assist materially in this educational work.

(6) Outlook:

Viewed from month to month or even from year to year progress in the adoption of better forest practice by the average land owner frequently appears to be discouragingly slow. The farmer is probably, with the single exception of the lawyer, the most conservative class of people we have. He is very prone to continue to do and think as he has always done and as his father before him has done. The idea that trees are a crop to be cared for, tended and harvested with a view to future crops of timber and are not merely an encumbrance on the face of the earth, is a new idea. Also he is, or thinks he is, busy. So we should not be so surprised that he fails to fall into line as readily as we think he should. When feeling discouragement at the slow progress, one has only to look back a little further; compare the attention he is accorded at a gathering of farmers with that of a few years ago, consider the number who have put into practice some of the precepts or demonstrations you thought at the time were bearing no fruit. It seems to me that we are just commencing to see results.

The State Forest Nursery has this year, for the first time, been prepared to furnish forest planting stock in considerable quantity. Several farmers have expressed a willingness to try out a few of these and I expect to spend considerable time next spring seeing that they get them properly set. I feel quite sure that a few successful demonstrations of planting will greatly stimulate interest in this branch of the work.

No material changes are contemplated in the phases of the work to be stressed during the coming year except to give up any special effort on the timber estimating project. Should the price of lumber improve and revive interest in selling timber, however, the timber estimating work might make a greater appeal.

So far as I have been able to judge, the greatest response, so far as the project work is concerned, has come from addresses at meetings and the personal contacts made before and after such meetings. Correspondence, seeking general information, has been stimulated best by articles in Farm Journals. Increased use of both of these mediums is contemplated for the coming year.

Assistance Desired:

Excessive pasturing, especially in merchantable hardwood forests, is very general throughout the dairying and beef cattle raising sections. The writer has felt the need of a project to handle this problem but so far has not been able to devise anything that satisfies him. Many states in the north and middle west must have the same problem. If any of them have worked out a satisfactory project, the writer would like to have an outline.

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COOPERATIVE EXTENSION WORK
IN
AGRICULTURE AND HOME ECONOMICS
STATE OF VIRGINIA

VIRGINIA AGRICULTURAL AND MECHANICAL COLLEGE AND POLYTECHNIC INSTITUTE AND UNITED STATES DEPARTMENT OF AGRICULTURE, COOPERATING

EXTENSION SERVICE

Blacksburg, Virginia.
December 13, 1923.

Dear County Agent:-

It has come back to me that some of you did not entirely understand my motive in getting out the "Scrap Pile"; issue No. 2 of which is enclosed.

Primarily, of course, my purpose was to give circulation to timely suggestions and news items that would bring to the attention of our farmers desirable forest practices at a time when they should be done, also to point out the increasing amount of interest that is being taken in the timber crop by land owners, public, corporate and private and to show them that it is to their interest to do the same. I also had in mind helping you to make the best possible use of the newspaper space at your disposal by furnishing properly prepared items on a subject in which economic pressure is forcing a rapid increase in interest, but a subject to which the average farmer has given scant attention.

It was my thought that the "Scrap Pile" serve you somewhat in the capacity of a Clip Sheet. The first two issues represent my idea of what such a sheet should be. I have no pride of authorship so if you have any suggestions as to how it could be improved please let me have them. If you do not find it helpful, it will be discontinued.

I would appreciate an expression of your opinion.

Very truly yours,

Wilbur O'Byrne

Wilbur O'Byrne,
Extension Forester.

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COOPERATIVE EXTENSION WORK
in
AGRICULTURE AND HOME ECONOMICS
State of Virginia

V. A. Agri. & Mech. Col.
& Poly. Inst. Va. State
Forest Service & U. S.
Dept. of Agriculture

EXTENSION SERVICE
Farm Forestry Work
Dec. 1928.

THE SCRAP PILE

Flue Wood

It takes approximately 2½ cords of wood to cure one acre of bright tobacco. Only an exceptionally good piece of woodland will yield anything like 2½ cords per acre per year. If he expects to stay in the business therefore, every grower of bright tobacco should have at least one acre of high class woodland for every acre of bright tobacco he raises. This will not supply cook stove or heater wood; just the wood he needs for curing his crop.

If there is more woodland than is necessary to supply cord wood, it may be made to serve as an additional money crop. Cut the rough trees, the crooked, injured and over-crowded trees, and the varieties that are least valuable; they will make just as good flue wood as any. What is left will grow faster for the thinning and every tree will make a salable product; lumber, veneer logs, telephone poles, piling etc.

They Grow Them Tall in Oregon

A spar tree of great height was recently topped in the operation of the Manary Logging Co. of Toledo, Oregon. The high-climber cut the tree off 214 ft. from the ground and at that point it was 34 inches in diameter. The section topped off was 125 ft. long making the tree 339 ft. tall. (Virginia Forest Warden)

Land That Washes is Gone

Fertility that is lost by continuous cropping can be brought back by the proper use of manure, cover crops and fertilizers. But land that is permitted to wash away is gone and nothing can bring it back. It is scattered all the way from the nearest ditch to the ocean.

If land is too poor to too steep to pay to terrace, keep it in permanent pasture or timber. If trees do not come in naturally, in a good thick stand, plant them. But don't let the land wash away. Your children may be able to use it if it is there to use!

Hunters Cause Forest Fires

Several years ago some elk were turned loose in Giles county. They have now increased to the point where a short hunting season is justified. This year the season lasted for three days, November 15, 16, 17 and the mountains were full of hunters. During those three days thirteen forest fires were started. Fortunately, the Forest Wardens were on their toes and held the area burned over to less than 200 acres in all.

COOPERATIVE EXTENSION WORK
IN
AGRICULTURE AND HOME ECONOMICS

Va. Agri. & Mech. Col.
& Poly. Inst. Va. State
Forest Service & U.S.Dept.
of Agri. Cooperating

EXTENSION SERVICE
Farm Forestry Work

THE SCRAP PILE

Some place around almost every farm or shop there is to be found a scrap pile. Is a board needed to stop a hole in the fence, to put up a shelf in the pantry, or to close up a crate? Get it from the scrap pile. Is a bolt needed to make a repari to the wagon or a hub cap for the Ford? Get it from the scrap pile.

It is planned to have the "Scrap Pile" serve just this function to the county agents. In it will be reported items of interest which it is hoped may assist in stimulating interest in the forest crop within their territory. While these items are intended primarily for the agent's column of the county paper, it is hoped they will be utilized in any way they may be of service, with or without credit.

We (editorial) make no claim for originality. In fact we announce from the start that we expect to copy shamelessly and we hope every one will do as well by us. You know the kind of material you like to have for your column and you know how hard it is to always have something of interest if it is all left to you. Won't you help me out by making suggestions as to what to include and how to put it up, and by sending items of interest.

We are making no announcement regarding the frequency or regularity of issue. If you approve and find the material helpful, and if you will help by sending in suitable material, the "Scrap Pile" should become a permanent institution and help us all.

Have you cut your Winter Supply of Wood?

If not, you had better not wait longer; that is if you like dry wood. While you are at it, cut enough for next year, you know it will be dry then. If you have a surplus, there are lots of people glad to buy well seasoned wood.

And when cutting that wood use your head as well as your axe. Thin where the trees stand too thick. Cut crooked, forked and injured trees. Leave the straight, healthy ones to grow into something that will be worth more than fire wood. A crooked stick will make as hot a fire as a straight one, but will not make a barn log.

Fire is the Destruction of Timber.

The trees bore a heavy crop of leaves this year and the leaves are coming down fast. A wet, early fall is frequently followed by a dry, late fall. Hunters are in the fields by thousands, and most of them smoke. Look our for fire in your woods.

Idle Land Pays no Taxes

The State Forester announces that there are over half a million little trees in the State Forest Nursery this year. These trees were raised to distribute to farmers and other land owners for the purpose of reforesting land that is nowlying idle. If you are paying taxes on some idle land, why not plant it to trees - the best poor land crop. Ask the County Agent or write to either the State Forester at Charlottesville or the Extension Forester at Blacksburg for particulars.

Grow Your Own Posts

Black locust trees planted in gullies will stop the land from washing, rebuild the soil, and make fence posts in 15 years. They are as easy to raise and set as cabbage plants. Stop those gullies and make them work. Ask the County Agent for instructions.

Prepared by Wilbur O'Byrne,
Extension Forester.

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COOPERATIVE EXTENSION WORK
IN
AGRICULTURE AND HOME ECONOMICS

Va.Agri. & Mech. College
& Poly.Inst., Va. State
Forest Service, & U. S. Dept.
of Agriculture, Cooperating

EXTENSION SERVICE
Farm Forestry Work

4-H FORESTRY CLUB

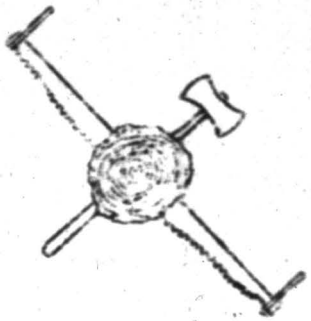
A Project for Foresters in the Making

"He who cares for the woods as well as uses them, who sows as well as harvests, is a forester and his work in the woods is forestry."

OBJECT: To teach boys and girls, and through them their parents and neighbors, better methods of handling woodlands. To teach them practical methods of establishing forest growth on lands now lying idle, lands that are washing, and lands that are now being cultivated at a loss.

METHOD: By supervised study of the more important native tree species and by demonstrations, applying this knowledge to the management of timberlands.

PROCEDURE: Follow outline given in this leaflet.



Prepared by
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Extension Forester

WOOD FOR THE MEN AND WOMEN OF TOMORROW

If you young people are to have the same abundant supplies of wood and the numerous things that are made from wood that the present generation has, the forests that supply the raw material must be given better care. We Americans have been drawing on a crop of timber that was put here by the Creator for us to use while we were getting started, but we are nearing the end of that supply. And just as wild game (the first food supply) has been replaced by domestic animals, so must these wild forests be replaced by grown forests. Timber requires from 20 to 60 years to reach merchantable size so we cannot delay starting the crop until the actual shortage arrives.

Just think for a moment where we would find ourselves if we were suddenly deprived of wood. Wood, in one form or another, probably plays a more important part in our lives than any other commodity and new uses are being discovered constantly. In commenting on this rapid development, Collier's Weekly recently said: "The world is rapidly entering the Wooden Age. From the earliest times to the present, men have known nothing better to do with wood than to build with it and to burn it. But now the chemist has come in and found that wood is a handy material to make things of. First, he made paper, then he made cloth, next he may be making food."

Our wood in the past has been drawn from what seemed to be an almost limitless virgin forest, and we are still getting our high grade timber from the few remaining unexploited regions. But these areas are getting smaller and more remote. The time will soon be here when we will be dependent upon timber that is grown as a crop. It is because this crop must be started soon if it is to be mature by the time the present supply is exhausted, that we are beginning to practice forestry. And it is because the boys and girls of today will be the men and women of tomorrow that it is necessary for them to know something about the handling of this new crop.

The project has been arranged in three divisions:

Division I is intended to assist in getting acquainted with the more important trees; where they grow best; what each is used for; what the wood looks like; how it works, etc.

Division II is intended to show how a piece of woods that is already established may be improved by judicious cutting.

Division III is intended to demonstrate methods that may be used in starting a forest on land that is not being profitably utilized for some other purpose.

STANDARD REQUIREMENTS

FOR

JUNIOR FORESTRY PROJECT

1. Open to boys and girls of club age.

2. Do the work as recommended for one of the divisions outlined in the following pages.

3. Keep a record of the work done, including the number of hours worked, costs, receipts, etc.

4. Make a report to the county agent on or before November 1 covering the following points:

   (a) A narrative report, describing the work, telling where it was done, anything of interest that happened in connection with the work, what you enjoyed most about your forestry project, why you are doing it, etc.

   (b) A record of the work done as explained under 3 (above).

   (c) Division I: A description of your collection, including a list of the species.

   Division II & III: A drawing or map showing the location of the plot in relation to your home and public roads, or other well known landmarks.

DIVISION I

GETTING ACQUAINTED WITH THE TREES

This division is planned for all club members who want to learn more about trees, their names, what the various ones are best suited for, where and under what conditions they grow best, how and under what conditions they reproduce themselves, and what the wood looks like, how it works, etc.

Not less than 20 species will be studied under the following heads.

(1) Identification - To be able to recognize them at sight.
(2) A note book record of each species.
(3) Boys: Collecting and mounting wood samples.
Girls: Collecting and mounting leaves, etc.

Identification:

To be able to recognize all of the common forest trees of a region and give the common name and botanical name of each is quite an accomplishment. In meeting the requirements of this division, each club member is expected to identify at least 20. To help him become familiar with them, he might collect samples of the leaves, press them between folded newspapers placed under a heavy book until dry, and mount them on sheets of blank paper. A specimen of the flower or fruit would make the specimen all the more complete.

Trees are identified by their leaves, flowers, fruits, buds, and bark. To assist in this work, each member should secure a copy of a pocket manual entitled "Common Forest Trees of Virginia" issued by the Virginia Forest Service. A copy will be sent upon request to the State Forester, University, Virginia. The leader may send one request to cover the entire membership.

Note Book Record:

Each tree studied should be recorded in a special note book, taking a separate page for each tree. The record should give the common and botanical name, the character of wood, some of the more important uses, the kind of soil on which the tree seems to thrive best, whether occurring in pure stands or mixed with other trees; and any other interesting facts regarding the particular tree.

Wood Collection:

The wood collection is intended primarily for boys but may be made by a girl if she so desires. Girls are not apt to have the necess. tools nor are they, as a rule, accustomed to handling them.

The purpose of preparing the collection is:

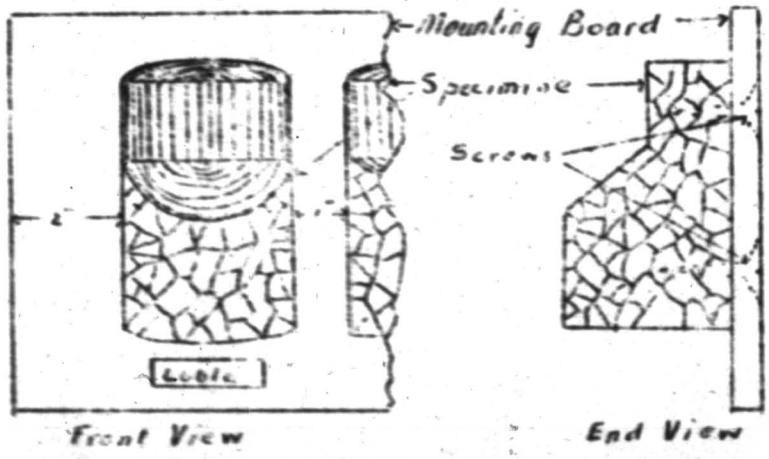
(1) To help you recognize the commercial woods.
(2) To teach you how they "work" and how they "take finish."
(3) To illustrate the variety in grain that may be brought out by cutting in different ways.
(4) To exhibit at the school, community or county fairs.
(5) To keep as a souvenir of your year's work, and as a sampl with which to compare pieces of wood you may wish to identify.

The collection will consist of wood samples of the 20 trees studied; cut to uniform size and shape, finished with clear shellac or varnish, mounted and labeled.

Preparing the Specimens: Specimens should be cut from live trees and should all be of the same size; 3 inches in diameter and 5 inches long is a good size. Cut the lower end square. Then place in a vise and split the specimen down about 1½ inches. Then turn the specimen on its side and saw on a bevel to meet the first cut. Allow the wood to season, then smooth all cut surfaces with chisel, block plane and sandpaper and finish with two coats of white shellac or clear varnish.

Mounting the Collection: Secure a board 7½ inches wide, ½ inch thick and long enough to hold the entire collection, about 7 feet. Allow 1 inch between specimens and twice that to each end of the board. Two screws 1 inch long through the back of the board and into the specimen will hold it in place.

Below each specimen, place a neat slip of paper giving both the common and botanical name of the tree from which the specimen was taken.



(⅓ Natural size)

Leaf Collection:

The leaf collection is intended primarily for girls, as the handling of tools is somewhat out of their line. Those that wish to do so, however, may elect to make the wood collection instead.

The purpose of preparing the collection is:

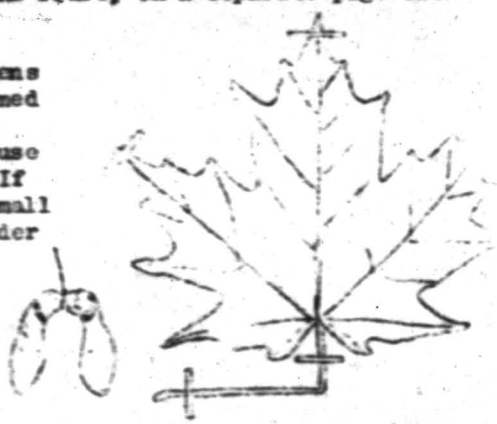
(1) To make you thoroughly familiar with that most useful of distinguishing characteristics - the leaf.
(2) To acquaint you with the kind of seed each tree produces and how it is scattered.
(3) To exhibit at school, community and county fairs.
(4) To keep as a souvenir of your year's work.

The collection will consist of the leaves and, so far as possible, the flowers and fruit or seed, of 20 trees. Wherever it is impractical, for any reason, to include a specimen of the flower, fruit, or seed, a sketch or drawing should be substituted.

Preparing the Specimens: Specimens should consist of fully matured but average size leaves. Avoid abnormally large or very small leaves or those that have been damaged. Trees which have leaves of more than one shape, such as sassafras and mulberry, should be represented by one leaf of each shape. In the case of trees having compound leaves, such as hickory and buckeye, be sure to get the entire leaf - not merely a leaflet. One leaf is ordinarily sufficient, but it should be as typical as possible and should have the entire stem attached. Spread the leaves flat between layers of newspapers or blotting paper and place a heavy weight on them to prevent wrinkling. Allow leaves to remain in the press until thoroughly dry - not less than one week.

Mounting: A loose leaf composition book makes a very satisfactory mount for the specimen. Use a separate sheet of paper for each species. At the upper corner place the common name with the botanical name immediately beneath. The note book record of where the tree thrives, what it is used for, and other notes of interest may be placed, together with the drawings of flower and fruit, on a separate page facing the specimen.

One method of mounting the specimens is to secure a small amount of the gummed paper used to fasten packages in many stores, cut it into narrow strips and use these to hold the specimen in place. If mucilage or paste is used, use a very small quantity and be sure that it is all under the leaf.



DIVISION II

THINNING AND WEEDING YOUNG STANDS

This division is planned primarily for boys. There is no reason why girls should not undertake work in this division if they so desire. Swinging an axe is usually regarded as rather strenuous work for a girl, but I have known girls that could keep up with any boy. The purpose is to show, by a demonstration in the woods, how the usual stand of dense young timber may be improved by thinning where too thick; by weeding where trees of small value are interfering with those of greater promise; and by removing injured, distorted and weed trees. In this way a partial harvest of fuel wood, pea-stakes, or other small products can be taken from the forest's "weed growth" and at the same time release the space and nourishment necessary for their existence, for the use of trees of greater value.

The requirements call for not less than ¼ acre of young timber to be handled according to the instructions outlined under one of the following subdivisions. Larger boys, say those of sixteen years and over, should be able to handle ½ acre or more.

Where the plot is laid out in a large body of timber, it is suggested that a square or rectangular plot be used. An acre of ground contains 43,560 sq. ft. or 4,840 sq. yds. If laid out in the form of a square, each side should measure 208.7 feet or a little less than 70 yards. A square plot containing ½ acre should measure about 147½ feet on a side while one containing ¼ acre should measure about 104.4 feet on a side.

Choosing the type of improvement cutting to be used: The type of cutting to use depends upon the stand you have to work with. If it is a thick stand of young trees of the same kind, (usually either pine or poplar), follow instructions under SUBDIVISION-A. If you have a patch in which there are several species, without enough of any one to make up a full stand, follow instructions under SUBDIVISION-B.

Choosing the time to make an improvement cutting: Woods work is usually carried on during the winter. At that season the leaves are off the underbrush, making it easier to see what you are doing; chiggers and ticks are not active, and swinging an axe is rather strenuous work for warm weather. The one exception is where you are trying to get rid of hardwoods. Trees cut in the late summer sprout less vigorously than those cut at any other season.

Pine should never be cut during warm weather if it can possibly be avoided. The Southern pine beetle is usually active from May 1 to October 1 and is apt to be attracted to a cut pine, one that has been struck by lightning or otherwise injured. These weakened trees serve as an incubator and succeeding generations spread to surrounding healthy trees. Take no chances with the "bugs."

SUBDIVISION-A. Thinning Crowded Stands.

This is supposed to be the first thinning in a dense stand of young trees. Such stands will usually be made up of one of the following species: loblolly pine, short leaf pine, scrub or spruce pine, or yellow poplar. The purpose of making the thinning should be:

1. To increase the growth rate of the trees which are to make up the final crop, by relieving them of unnecessary competition.

2. To prevent waste, by removing the trees which are due to be crowded out and utilizing them while they are still sound.

3. To start getting periodic harvests instead of waiting until the end of the rotation before enjoying any return.

Procedure:

1. Lay off the plot to be thinned and mark the corners with stakes, piles of rock or other convenient markers.

2. Cut all undergrowth, such as gum, sourwood, oakbrush, etc

3. Cut scattering trees of the wrong species if they can be taken out without making too large an opening for the crowns of the remaining trees to fill in a few years. - Boys, this part of the work calls for good judgment. Put your heads to work on it.

4. Cut all dead, crippled and suppressed trees. - A suppress tree is one that has been outstripped by its more vigorous brothers and will soon die on account of the shade it is forced to live in.

5. Cut all sound wood into four foot lengths and rick it up for measurement. A standard cord is a pile 4 feet tall and 8 feet long.

6. See that the brush is cut fine and spread flat on the ground where it will rot quickly.

7. Measure the plot in fractions of an acre and complete the record of your work.

In making a thinning of this kind remember that it is the strong vigorous tree with a full crown that is making the fastest growth but that rough, limby trees, although making rapid growth, are making knotty and therefore inferior, lumber. Try to strike the happy medium.

SUBDIVISION-B. Weeding and Thinning Mixed Stands.

This subdivision represents the first cutting to be done in a dense young stand made up of a mixture of species. The purpose should be:

1. To remove the less valuable species and aid those of greater value. - Remove the weeds that interfere with the crop.
2. To remove injured and defective trees of all species and thereby improve the sanitary condition of the stand.
3. To remove the excess where the stand is too dense.
4. To prevent waste and to start taking a periodic harvest.

Some trees yield more valuable wood than others. Some grow rapidly; others grow slowly. A long straight stem is more valuable than a short, limby or crooked one. A tree that has been overtopped until its top has become snarled cannot grow into a valuable tree. These and other common sense points should be kept in mind in deciding what is a "weed."

Procedure:

1. Lay off the plot to be cleaned up and mark the corners with stakes, piles of rock, or other convenient markers.
2. Remove all sound, dead wood, both standing and down.
3. Cut and remove all diseased and crippled trees. A tree showing punks or mushrooms is sure to be diseased. Sprouts coming up from the stump where a diseased tree has been cut may be perfectly healthy.
4. Cut and remove trees with rough wide-spreading tops. They are holding back other trees and producing little or nothing of value.
5. Select the best formed and thriftiest trees of the better species, such as yellow poplar, white oak, chestnut oak, red oak, black walnut, basswood and ash; and give them the advantage over the others. Give them room to grow by cutting out all others that interfere with them.
6. Cut sound wood into four foot lengths and rick it up.
7. See that the brush is cut fine and spread flat on the ground.
8. Measure and compute the area of the plot. Compute the number of cords per acre taken out. Complete the record of your work.

In making a thinning of this kind, remember that the valuable tree has both a long and straight stem. Making them reach straight up to sunlight develops this kind of a stem. A tree which receives too much light from the side spreads out instead of growing tall. One that grows in the shade of another tree will bend toward the light or grow very slowly.

DIVISION III

Building a Forest

This division is planned for both boys and girls. Its purpose is to show by actual demonstration how land now lying idle, land subject to erosion (washing) and land which is being cultivated at a loss, may be changed from a liability to an asset by planting it to forest trees; to demonstrate what a simple and inexpensive process forest planting is, and to teach the fundamental principles of such planting. It may be handled as either a one year or two year project. As a one year project, the planting stock will be purchased or otherwise procured and set out where it is desired to have a forest. As a two year project, the club member will procure the seed (collect it if possible) and raise the seedlings the first year and transplant the seedlings from the seed bed to the planting site for the second year.

The requirements call for not less than ¼ acre of planted area where a spacing of 6 feet each way is used or of 1 acre of planted area when a spacing of 8 feet each way is used.

Because of the tremendous variation in soil, in climate, and in tree species occurring in different parts of the state, it does not seem practical to attempt general instructions. For the present the writer will endeavor to meet with those clubs electing this division and prepare instructions to fit their particular conditions. Where possible it is suggested that not less than four club members arrange to work together, as much of the work can be carried on more satisfactorily by two or more persons than by one person working alone.

It will be necessary, of course, for any one working under this division to secure permission to use not less than the required amount of land, so located that it can be protected from browsing stock. If the two year project is decided upon, it will be necessary to have in addition a small plot of good, well drained soil to use as a seed bed. Under normal conditions a bed 4 feet wide and 25 feet long will raise an abundance of planting stock for four members. The seed bed may be located on the planting area but in most instances it will be more satisfactory to use a corner of the garden or of a field near the home of one of the participants.

This is an extremely interesting project and one that will become more interesting to you as time goes on, no matter where you may be. The writer, in the spring of 1921, planted about three acres to pine trees near Charlottesville. Whenever he is in Charlottesville he wants to go out and see how "his" trees are getting along. Some of them are over 20 feet tall now. The side branches have come together and shaded out the grass and briars that were so much in the way when the little trees were being planted. Those little trees that looked so small seven years ago are now a real forest.