COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS

VIRGINIA POLYTECHNIC INSTITUTE AND THE UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

STATE OF VIRGINIA
Blacksburg

P. I. AGRICULTURAL
TENSION SERVICE

BLACKSBURG, VIRGINIA

December 31, 1954

Mr. W. H. Daughtrey, Assoc. Director
Virginia Agricultural Extension Division
New Aggie Hall
V.P.I. Campus

Dear Director Daughtrey:

Submitted herewith is the Annual Report of the Extension Forestry Department covering the period from December 1, 1953 through November 30, 1954.

This report covers the full years activity of the three associate foresters in the department and the work of J. W. O'Byrne, project leader, who retired June 30th, 1954.

The major activities of the Farm Forestry Project (project 18) are recorded in the attached report.

Respectfully submitted,

F. W. Patton, Associate
Extension Forester

FWP:nn

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STATISTICAL ANALYSIS OF WORK

	Gill	Lyon	Patton	Total
Days at Headquarters.....	122	175	128	425
Days in Field.....	159	124	163	446
Miles Traveled				
Personal Car.....	16,000	6,150	18,500	40,650
State Car.....	6,000	10,180	7,800	23,980
Farms Visited.....	161	57	201	419
Counties Visited.....	120	44	24	188
Interviews.....	625	112	576	1,313
Reconnaissance Survey (acres)...	4,600	2,890	5,075	12,565
Acres Marked.....	110	200	172	482
Meetings Attended.....	33	17	20	70
Attendance.....	530	514	860	1,904
Demonstrations Held.....	22	17	21	60
Attendance.....	455	320	733	1,508
Youth Group Meetings.....	19	5	12	36
Attendance.....	350	130	345	825
4-H Club Camps.....	2	4	4	10
Attendance.....	260	800	825	1,885
Special Camps.....	2		1	3
Attendance.....	60		97	157
Times on the Radio.....	20	13	9	42
News Articles.....	23	8	17	48
Talks to Groups.....	28	34	14	76
Letters Sent.....	300	180	474	954
Circular Letters.....	5	1	18	24
Number Sent.....	260	175	2,875	3,310
Leaflets Sent.....	1,565	34,256	20,791	56,612
Bulletins Sent.....	177	2,976	5,823	8,976
Record Books Sent.....	60		125	185
One-Day Forestry Schools.....	5	1	2	8
Tours or field days.....	3	3	4	10

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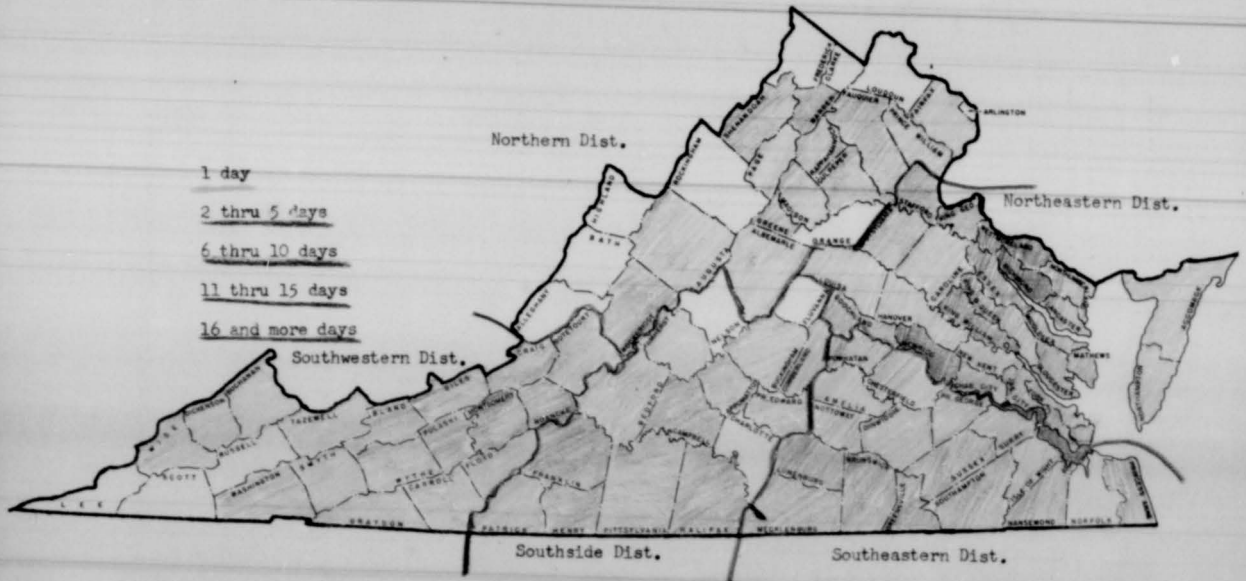

The above map indicates sections of state where major emphasis is being placed on forestry. Areas in blue, green, and red are considered heavily worked counties.

INTRODUCTION

The Extension Service is primarily responsible for the farm forestry program in the state, under the provisions of the memorandum of understanding between the College of Agriculture, V.P.I., and the U. S. Department of Agriculture. In Virginia 51 percent of the states 14,800,000 acres of woods is found on about 125,000 farms. It is with this 7,600,000A of farm woods that the extension personnel is directly concerned.

The farm woods have many duties to perform. They help control water run off, reduce soil erosion, act as windbreaks, furnish material for farm buildings, fuel wood for the home, and curing tobacco, in addition to contributing a source of revenue that reaches nearly $15,000,000 a year. The farm woods actually help bolster the economy of the farm as well as the community and the state.

At present the farm woods are not contributing to the income of the farm as they should. While this woodland is potentially the most productive forest land in the state, it is more depleted and mismanaged than that held by other types of ownership. This is due to a number of reasons, such as being easily accesible for cutting; short farm tenure; need for money on the owners part; and lack of knowledge as to potentialities of proper timber management. A survey made in 1946 showed that only 3% of the farm timberland was well managed and only 12% was receiving fair treatment. While management practices seem to be improving on many farms throughout the state, far too much timberland is being mismanaged. The forest survey conducted by the Virginia Forest Service and the U. S. Forest Services in 1953 revealed that in the period between 1940 and 1953, the cubic volume of pine had decreased

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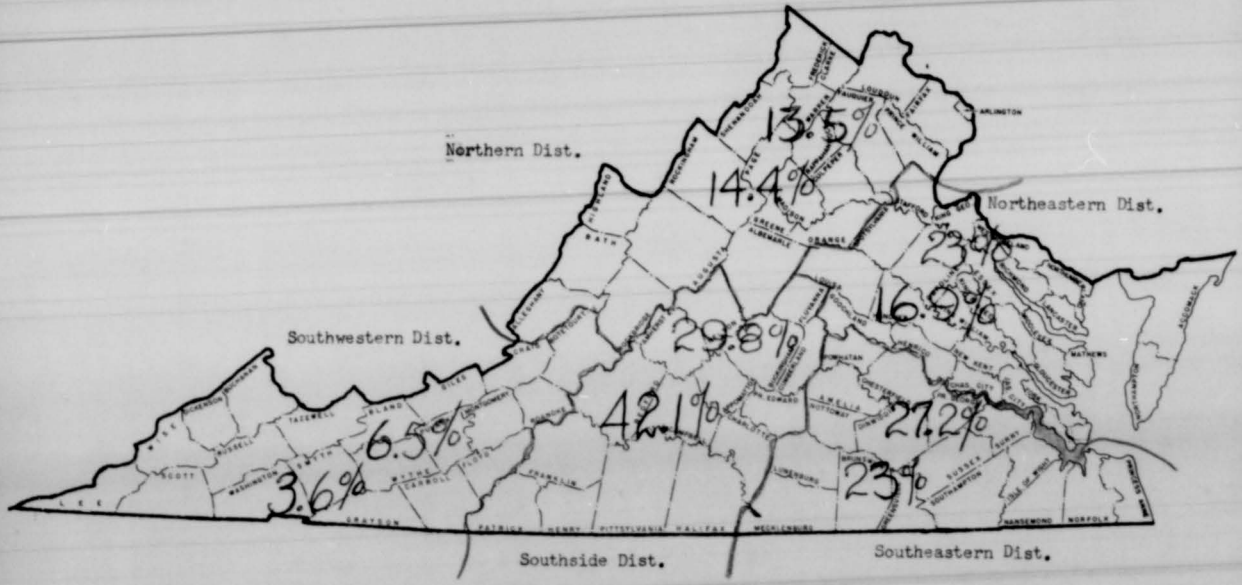

Percent of States output of pulpwood by Districts

■ 1946 ■ 1953

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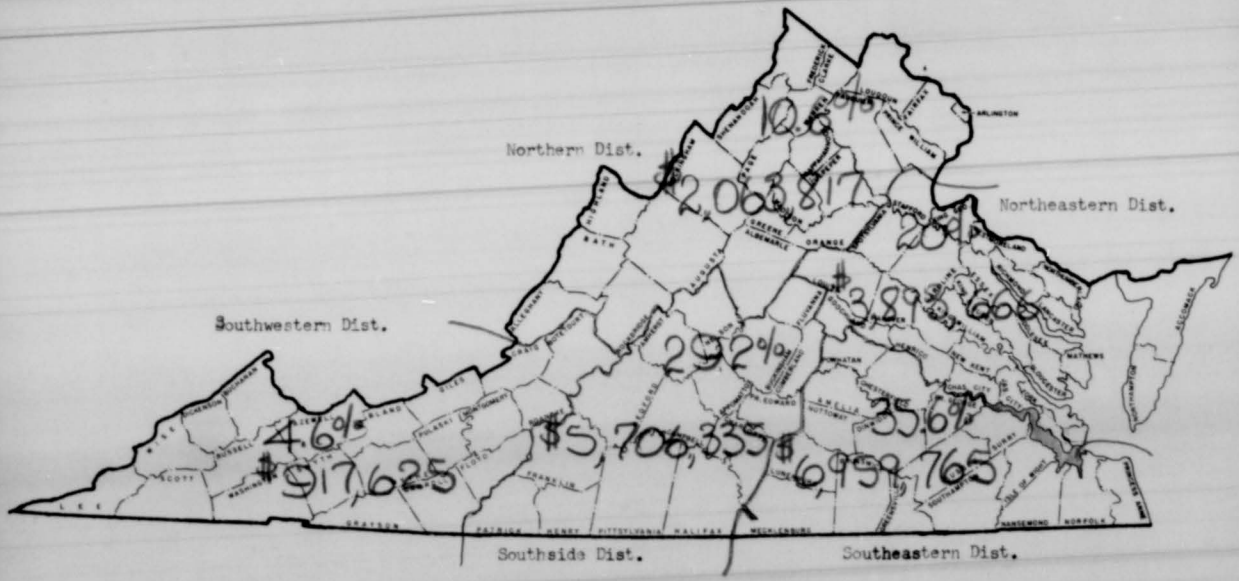


Stumpage value of woods products by Districts and per cent of states total by Districts

16% while the volume of (mostly unwanted) hardwood had increased 38%. Corresponding figures for sawtimber size trees show a reduction of 22% for pines and 27% increase for hardwoods. These figures give considerable cause for concern as -

(1) Most of the wood using industries in Eastern and Piedmont Virginia demand pine.

(2) Much of the increase in hardwood volume is in low-grade trees for which no adequate market is available.

(3) Pine grows rapidly and matures earlier than does the hardwood, gives large yields per acre in shorter period of time, and is less exacting as to soil fertility.

As shown on the map on the following page, the pattern of cutting pulpwood has changed here in Virginia since 1946. More wood is now being taken from the central portion of the state than in the sections near the plants and the source of supply is now at some distance from the mills that process the paper pulp. Too, there is considerable activity by the large wood using industries in the field of reforestation. The map in the tree planting section shows that in the Southeastern District, where three pulpwood plants draw from there is more tree planting than in any other district.

THE FORESTRY PROGRAM IS UNDER THE DIRECTION OF THE COUNTY AGENTS IN THEIR RESPECTIVE COUNTIES. They form their forestry committees, plan work suitable to their particular situations and publicize forestry with assistance of the extension forestry specialists. THE OBJECTIVE OF THIS EXTENSION FORESTRY PROGRAM IS TO -

(1) Make the landowners aware of the benefits derived from proper forest management.

(2) Encourage good land use and reforest areas found to be

better suited to forestry than to present use.

(3) Show landowners better forestry practices through permanent demonstration areas.

(4) Demonstrate methods needed to carry out the recommended practices.

(5) Promote more and better use of home grown timber.

(6) To encourage the youth of the state to appreciate forestry through working with the 4-H and F.F.A. organizations.

It has been the policy of the forestry department to select a few major activities each year and work on them intensively in order to carry out some of the objectives of the Extension Forestry program.

The following is a discussion of the work during the past year. The general procedure used has been to discuss each phase of the work as follows: (1) The situation, (2) Activities of the forestry specialists, (3) Activities at the county level, and (4) Results or examples of work carried out by landowners in the state.

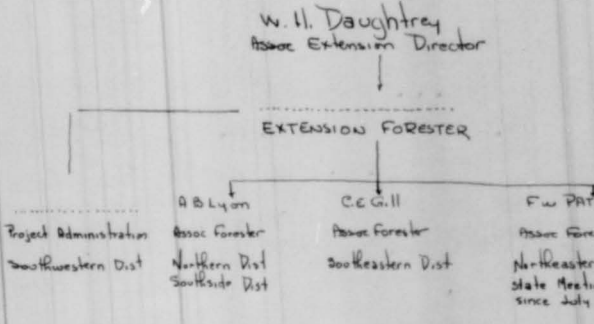
THE VIRGINIA AGRICULTURE EXTENSION ORGANIZATION FOR CONDUCTING EDUCATIONAL FORESTRY WORK IS under the V.P.I. Extension Service, which is a division of the V.P.I. College of Agriculture. The county agents and local farm agents represent V.P.I. as "in-the-field" instructors in every county in the state. These men live in their respective counties, and work with the farm people, and it is to them the farm people have looked for advice over many years.

The majority of the county agents have had some technical forestry training, either as students in college or at special forestry schools held for this purpose. While their training has given them

some basic facts it does not qualify them as forestry technicians. To assist the county agents with their forestry problems, there are four forestry specialists with headquarters at V.P.I. There is a specialist assigned to each of the Northeastern and Southeastern Extension Districts, one for the Northern and Southside Districts, with the project leader assuming responsibility for the Southwest District. This latter position has not been filled since July, when the Extension Forester retired.

The specialists are called on by the county agent to assist with forming county forestry committees, timberland inspections, community improvement meetings, 4-H forestry assistance, vocational agriculture forestry assistance, and many other activities where the county agents training limits his subject matter work.

Below is the Extension Forestry organization chart.



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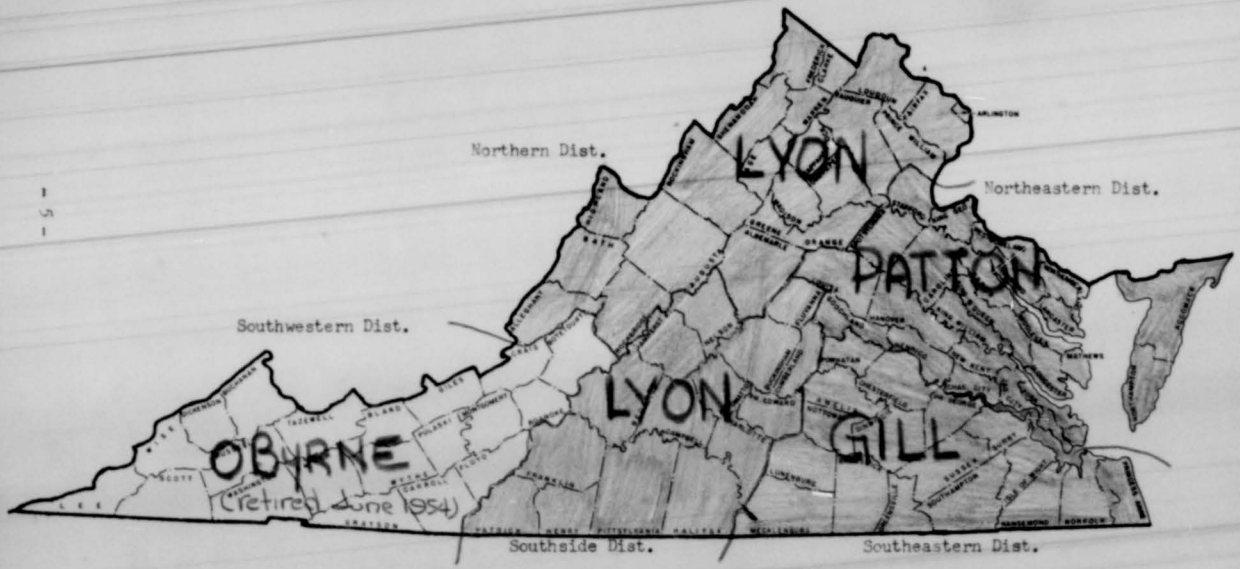


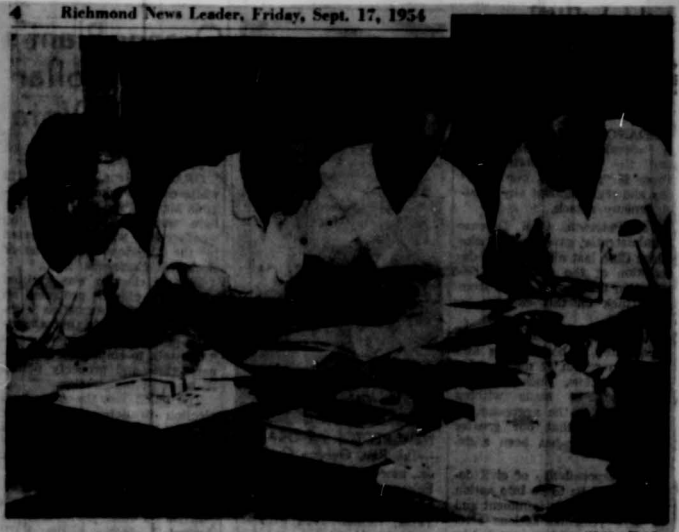
AREA WORKED BY FORESTRY SPECIALISTS - 1954

COUNTY FORESTRY COMMITTEES

Experience during the past few years has shown that an active forestry committee is necessary in a county, if the agent is to put on an effective forestry program. In many counties where the agent wants to put on a forestry drive, but fails to have a good committee, finds his efforts usually in vain. On the other hand county agents with good committees, made up of farmers, woodworking plant operators, representatives of farm organizations and professional workers, find that the committee will help do the work and make the county forestry program a success. In the counties where the forestry clubs were organized it is felt that those with good forestry committees are functioning best.

The forestry specialists have devoted considerable time in an effort to get county committees formed. Assistance has been given in working up forestry data for county agents, advising them on the need of various types of work needed and giving assistance at some of the first meetings. Both Gill and Patton have assisted with the forming of 5 new committees and Lyon has 4 new ones that are now active. In a number of counties there has been some planning work in connection with the formation of committees, but as yet the work has not been completed. This is particularly true in a number of cases where Gill and Lyon have been working with the local farm agents. While the end results are not yet apparent, there has been a distinct improvement in this subject matter field.

In all cases the county agent calls the groups together to form the committees and then the groups elect their officers. Usually the county agents end up with the secretaries job, since his office usually handles the correspondence of the committee.



BOSWELL, BALDERSON, BOWEN AND MURPHY (from left) AFTER ELECTION (Staff Photo)

Richmond County Club Plans Forestry Contest

WARSAW, Sept. 17.—Randolph Balderson, of Newland, was elected last night as president of the Richmond County Forestry Club.

Other officers chosen by the county forestry committee were Thomas Boswell, of Emmerton, secretary, and James Bowen, of Newland, treasurer.

The new officers will be in charge of a contest that starts October 1 and runs until Sept. 30, 1955. Purpose of the contest is to improve, maintain and increase the forest resources of the county. This is to be done by planting forest trees in burned and cut-over forest lands, planting trees in idle, open land, killing scrub hardwood trees to release more desirable trees and using approved cutting methods to improve existing stands of timber, club officers said.

Adults will be required to improve three or more acres and school-age entrants one or more acres to be eligible for prize money. Contest application blanks may be obtained from Richmond County Agent R. A. Farmer.

LYNCHBURG OFFICER RETIRES—Rear-Admiral Richard P. Glass, USN, of Lynchburg

Municipalities Session Set In Roanoke

ROANOKE, Sept. 17.—(AP)—Aggressive municipal government leadership will occupy the attention of delegates to the forty-ninth convention of the League of Virginia Municipalities here next week.

The convention activities will get under way Sunday with registration and a reception for delegates and their guests.

Official business of the convention will open Monday when President W. Stirling King, Richmond Councilman, will give the president's address and Executive Secretary Harold I. Baumes will present his report.

ALSO ON AGENDA

Also on Monday's agenda are reports from the league's uniform traffic code, utilities and legislative committees; the showing of the film, "Operation Ivy," the story of the hydrogen bomb, and a discussion of civil defense by William Bailey, public information officer for the Federal Civil Defense Administration.

Mayor W. F. Duckworth, of Norfolk, will address a luncheon

Leaf Market Gains, Losses

PERMANENT DEMONSTRATION AREAS

During the past year 35 acres were established. These demonstration areas vary from one-half an acre to several acres in size. For the most part these areas are established as method demonstrations and later on used for result demonstrations. In establishing these areas costs of work, material, etc., are kept for use in presenting the data at the time the method demonstration is held. A record as well as pictures are kept on file for a future date when a result demonstration may be held. Such data is important to determine the practibility of the work and in evaluating the results. Some of the phases of the work covered on these areas are (1) Chemical control of scrub hardwood; (2) Chemical control of scrub hardwood followed by spot planting; (3) Spot planting of recently cut over areas; (4) Thinning dense timber stands; (5) seed tree cutting; and (6) Scarification to encourage reproduction after cutting.

The forestry specialists have assisted county agents materially in selecting representative areas and in securing material for establishing the areas. Too, in many cases the specialists have actually done the work. Not that the agent or his people didn't want to assist, but rather the specialist who has the know how can do the work more quickly. Too it is important to have all areas done in a similar manner so that the work, time and cost figures will be comparable.

FORESTRY DEMONSTRATIONS

The county agent and his forestry committee usually plans forestry demonstrations in the county. Here the Richmond County Farm Agent points out the reason for killing this scrub hardwood tree, while the landowner applies the 2,4,5-T.

In all cases the county agents were instrumental in publicizing the demonstrations and getting a crowd to observe the methods used to improve the woods. Often the county agents have included one of these demonstration areas in a farm tour, so that many farmers interested in other phases of farm management are exposed to some forestry.

One of these demonstrations located in Westmoreland County on the W. Tayloe Murphy farm is outstanding. After observing the result of a chemical tree killing demonstration on two acres of his woods, he decided the cost was reasonable and the results were desirable. Below is a report that Murphy submitted after doing 110 acres of tree killing.

REFORESTATION PROJECT
W. TAYLOE MURPHY FARM
WESTMORELAND COUNTY, VIRGINIA

The work of hardwood killing on a 117 acre tract on King Copsico Farm in Westmoreland County was begun on May 3, 1954.

Although there was a fair stand of what is considered merchantable hardwood timber on the entire tract, the value of the tract has been established as worthless inasmuch as a local sawmill man had refused to accept it as a gift.

The work was begun at a point marked X on the attached plat and the section marked "A" was completed between May 3rd and May 15th. The section marked "B" was completed during the period May 15th to May 29th and the large tract marked "C" between May 29th and July 2nd.

A crew of five men were used - two using bush axes to clear undergrowth, one using an axe to cut the smaller trees. This operation cleared the way for the fourth man using the power saw to score all trees left by the men with axes.

The fifth man followed with a knapsack sprayer filled with chemical and oil, well mixed, at the rate of twenty gallons of #2 fuel oil to one gallon of 2,4,5-T.

On the 110 acres which were completed a total of 7 gallons of chemical and 140 gallons of oil were used.

The total cost of clearing and treating 110 acres amounted to $1,554.93, or $14.13 per acre. The work was done with no supervision of the crew and was carried on into extremely hot weather. I am convinced that if the work had been done during April and May and a good working forman provided, the labor cost would have been 30% less, bringing the total cost to something less than $11.00 per acre.

In figuring cost it is of interest to know that we secured an opinion from Fairbanks-Knapp & Co., Certified Public Accounts, as to how the cost of this work should be treated taxwise. It is their opinion that the total cost of such forest rehabilitation is fully deductible for income tax in the year in which the expense is incurred. This deduction would, of course, reduce the net cost 25% or more.

The vital question, of course, is what results can we expect from this work.

Forrest Patton has worked closely with me in this experiment, and it is our opinion that if results approach the ideal, the 112

acres now worthless will in thirty years produce one million feet of merchantable pine timber. If, on the other hand, it should produce only one fourth of this amount, it would still have a value approximately twice that of a two thousand dollar Bond with accrued interest for the 30 year period.

The exact amount of additional work and expense for the next two or three years, to insure a good stand of pine, is not now foreseeable. On most of the acreage there appears to be a sufficient stand from natural seeding. Some planting next spring will undoubtedly be necessary and probably 8% of the treated trees will need re-treatment. We are of the opinion that the required future work will not bring the total net cost above the two thousand dollar figure which I have used above.

In addition to our local people who have shown interest in this experiment, the Agricultural Department of the Virginia Electric & Power Company in co-operation with Forrest Patton is now building a file with colored pictures of this and other forestry work and will be in a position shortly to furnish a program for any groups who are interested.

I believe that forest rehabilitation on a large scale is vital to the economy of Tidewater Virginia, and I will appreciate advice and suggestions as to how we lay people in this area can best help to bring this about.

Aside from the fact that it is time and money well spent, we certainly have an obligation to prosperity to leave our forests as good, or better than we found them.

Signed - W. Tayloe Murphy.

BREAK DOWN OF MATERIAL & EQUIPMENT COSTS

Labor		$1,361.28
Gasoline		16.48
Power Saw (1/4 of $257.95)		64.49
7-gals. 245T		84.00
Sprayer (1/2 of $8.00)		4.00
4-Bush Axes (1/4 of $20.00)		5.00
1-Axe (1/4 of $4.00)		1.00
140-gals. #2 fuel oil		18.68
	TOTAL	$1,554.93

FOREST IMPROVEMENT

Most every farm in Virginia, that has a tract of timber on it, has a timber problem. Far too long little attention has been paid to stands of timber that needs improvement of some type. Most of the emphasis during 1954 in relation to forest improvement was placed on killing scrub hardwood trees that are preventing reproduction of desirable trees; spot planting of recently cut-over areas to assure a desirable stand of timber for the future; and leaving good seed trees for a seed source to help reproduce a new crop of timber.

During the year 27 demonstrations were held in the KILLING OF SCRUB HARDWOODS. Some of these were held in connection with the establishment of permanent demonstration areas, while others were held in connection with forestry field days and meetings with small groups of landowners.

In areas where tree killing has been carried out and natural reproduction is present the results are almost unbelieveable. The 1st area treated with a chemical tree was killed by the Extension Forestry Specialists was in James City county in 1949. The area was a typical cut over pine-hardwood area.

Extension Forester Patton, and county agent C. W. Richards, killed one acre of scrub trees to give the pine reproduction a chance to growth. The work took 2 1/4 man hours and $3.15 worth of ammate was used. A picture taken in the area is shown on the next page the day the work was done and then five years later. There is little doubt that the money spent will return the landowner a high rate of interest.

PERMANENT

DEMONSTRATION

AREAS

One of the first permanent demonstration areas set up was in James City County in 1949. The 62 scrub hardwood trees on an acre were killed at a cost of $3.05 for ammate and a $1.05 for labor.

In June of 1954, the same area appeared as shown at the right. Some of the seedlings have increased from 1 1/2 feet to 16 feet in height. A check area by where no trees were killed showed little change other than the pine trees were being killed out by shade and root competition.

SPOT PLANTING of cut over land is becoming an important step in forest land improvement. Too, many areas are still being stripped of all the seed trees of desirable species. As a result we have hundreds of thousands of acres that are reverting to little more than trash.

To over come this condition the forestry specialist are continually endeavoring to convince people through demonstrations, newspaper publicity, and over the radio and T.V., to spot plant these cut over areas. In many instances the planting alone is insufficient, as too many scrub hardwoods are left behind by the timber cutters. In such areas a combined tree killing and planting may be required.

COUNTY AGENTS are becoming aware of this problem and have, during the last year, increased their efforts to get more people to spot plant their cut over land to pine seedlings. Last year over 2500 tree seedling application blanks were distributed by the county agents and their assistance.

IN KING GEORGE COUNTY, County Agent Hall is becoming very active in encouraging his landowners to spot plant cut over timberland. During the past spring, summer, and fall, he observed many tracts of land being cut over. This fall he has been calling on the owners of the cut over tracts and encouraging them to plant trees. Late in November, he reported more tree seedling orders placed than ever before in the county. Such activity on the agents part will boast the forestry program far ahead of its present position.

THINNING AND WEEDING is one forestry practice that seems to be gaining in the Southeastern District more than any other section of the state. This type of work is a desirable practice in growing pine and poplar under even-aged management. As a rule thinning is one operation that many landowners can carry on in the winter months with labor that is available the year round. Too, the material that is taken from the woods is not heavy enough to require special equipment. With these two facts in mind, plus the fact that the material cut would die and be lost, Extension workers at both State and county level are still encouraging this work.

IN LUNENBURG COUNTY, Patton with the aid of the county agent and veterans class established a thinning demonstration in 1949, South of Kenbridge on the Hawthorne tract. At that time 3 cords of pulpwood was cut from a 1/4 acre plot. In March of 1954, Mr. Gill marked the area again for another thinning. This second thinning yielded a cut of 2 cords. This made a total harvest of 5 cords of pulpwood from the 1/4 acre or the equivalent of 20 cords per acre. Placing a value of $5.00 per cord on the pulpwood gives a value of $100 per acre that might be obtained from similar stands. In addition the thinned area still has about the same volume as the adjoining unthinned area. This demonstration clearly shows the value of thinning, both from the cash received and by the good growth of the remaining crop trees.

HARVEST CUTTING

There are many types of harvest cuttings. Some are called selective cutting, others are seed tree cuttings, shelter wood cutting, and many others. In many instances foresters are finding the seed tree cutting method one of the best to be used in areas where even aged or nearly even aged management are desired. Extension Foresters and the Virginia Forest Service Foresters encourage such cutting from the Middle Piedmont East in the State. During the last few years, we have been able to get more and more farm owners to leave good seed trees when cutting their timber.

During the past year members of the Extension Forestry Department marked a number of demonstrational seed tree areas as well as showed a great many people how to select seed trees at field days, forestry demonstrations, and forestry schools.

County Agents too, are encouraging landowners to mark their own trees or to have the Virginia Forest Service, who makes a small charge for this service to do the marking.

The picture story of Mr. R. D. McFadon on the following page speaks for itself. The area was marked by Extension Forester Patton in 1948 and the timber was cut in February 1949. Some 15 seed trees, with a volume of 2000 bd. ft. per acre were left. In 1953 these seed trees were measured and found to have nearly 3800 bd. ft. per acre in them. In addition, there is a full stand of pine reproduction on the land.

PROPER CUTTING METHODS

In 1948 a 15A tract of timber was marked on Cabin Point Farm, near Erica in Westmoreland County. At the time 18 seed trees were left on each acre to assure sufficient seed to start a new stand of timber.

Six years later this picture was taken of the same tract. The owner shown in the picture is sold on making heavy cuts in small areas in his pine timber. Since the first cut he has made 4 similar cuts. Each time he makes sure pine comes back in the cut over area.

FORESTRY CLUBS

In 1953, D. J. Kelly, the King William County Agent started a forestry club very similar to the 100 bushel corn club and the pasture improvement clubs that have been carried on for a number of years. This club which ended its first year in February was widely acclaimed by industrial foresters who are familiar with it. This club does encourage farm or landowners to get forestry on their land by offering liberal prizes. It is our theory that once a man sees how simple forest improvement is, he will continue the work started. In King William County, many farmers after improving the required three acres (see next page for details) or the juniors one acre, continued to improve their woods.

Many other county agents have heard of the clubs and are now encouraging it in their counties. In addition to King William County, Westmoreland, Richmond, Essex, Gloucester, Southampton, and Brunswick counties are now actively engaged in this club, with some 300 landowners enrolled. Landowners in the club in Gloucester County represent 30 percent of the farm forests.

The Extension Foresters assist the county agents by making farm woods inspections for contestants, setting in on forestry committee meetings as an advisor, and helping encourage forestry by furnishing newspaper, radio, and T.V. publicity.

The King William Club, as previously stated, was the pilot county for the club. Some 42 contestants entered the club the first year. They competed for prize money first, and thought of

FORESTRY CLUB CONTEST ANNOUNCEMENT

1954

PURPOSE

The purpose of the King William Forestry Club Contest is to improve, maintain, and increase the diminishing forestry resources of King William county.

PERSONS ELIGIBLE

All farmers, landowners, 4-H Club members, and F.F.A. members will be eligible to enter this contest.

ENTRANCE FEE

No entrance fee to applicants - Prizes to be paid by sponsors listed below.

MINIMUM ACREAGE

The minimum acreage to be entered in the contest is, adults - 3 acres and Juniors - 1 acre.

CONTEST STARTING AND CLOSING DATES

The contest shall run from January 1st, 1954 to December 31st, 1954.

SUGGESTED FORESTRY PRACTICES

The following are suggested forestry practices which may be used singularly or as a combination in the contest areas:

a. Tree planting - planting of approved species of forest trees.
b. Forest Stands Improvement - by use of 2,4,5-T or Ammate to eliminate undesirable hardwoods from forest stands.
c. Spot Planting - burnt over and cut over forest land.
d. Spot Planting of cut-over areas where nuisance hardwoods have been killed and natural reproduction is lacking.
e. Seed trees - leaving 8 - 10 good seed trees per acre and scarification of the surface soil.
f. Thinning of young fast growing pine stands to maintain growth of remaining trees.
g. Construction of fire lanes through woods or along property boundaries for fire control or protection.

TECHNICAL FOREST ASSISTANCE:

The applicant can call on any of the following for technical assistance:

1. V.P.I. Extension Forester

2. Industrial Forester

3. Virginia Forest Service Forester

the improvement of the farm woods secondly. However, after the contest was over, it was found that many felt that the prize money was secondary. One member was so impressed by the work of killing scrub hardwood trees to release pine reproduction, that he has now completed 70 acres of woodland improvement. Furthermore, he now tells people of his success in forest improvement which in turn has influenced some of his neighbors to do good work.

At the award dinner, which was put on by the Chesapeake Corporation of Virginia, (one of the clubs enthusiastic backers) the speaker of the evening expressed his opinion that this club had done more to promote forestry than any other step taken by any agency or group of people.

D. N. Sutton (left) presents the 1st prize check to R. T. Jones of Sweet Hall, Virginia. Mr. Jones eliminated many hardwood trees from a tract that had been previously cut-over. He also sacrificed 13 acres to make a seed bed so seed from well-selected trees would start another crop of pine.

Learning By Doing With

By F. W. PATTON

Associate Extension Forester, Blacksburg, Va.

"..... the greatest step taken in forestry in King William County in recent years."

THE FOREST FARMER

A Forestry Club In Virginia

Learning by doing is the oldest and one of the best methods of teaching known. It applies to both youth and adults. With this in mind, D. J. Kelly, County Agent for King William County, went to work.

In the fall of 1952, Mr. Kelly wrote his District Extension Forester as follows: "It is Monday morning and I am having a brain storm regarding our forestry problem in King William County. In thinking over the problems that our farmers are faced with, forestry is one of the first major projects that needs working on. Second, to accomplish something in forestry in King William County, I believe we must intensify our efforts to get close cooperation between all agencies that deal with forestry. Third, to progress, I believe this project should be kept alive by the individual farmers participating and actually doing the work."

"To get this reforestation and improvement project under way, would it be possible for us to start a Forestry Club similar to the 100 bushel Corn Club or the Pasture Clubs that have been so successful?" This started the wheels in motion.

Soon after, a forestry committee was formed. Membership of this committee included representatives from pulpmills, sawmills, banks, local businesses, civic clubs, farm organizations and public agencies. All of these groups furnished valuable information as to the work that they would like to be carried out. From this committee came ideas on the rules, prize money and the judging of the contest.

The final decision was that adults would improve at least three acres and junior members of the club would improve at least one acre of woodland to be eligible for prizes that would total $250.00.

During the month of January 1953, forty members made application to the club. Of this number, twelve were 4-H or F. F. A. boys who were interested in forestry.

During the spring months members of the club spot planted cut-over land where reproduction was absent, scrub hardwood trees were killed with Ammate or 2, 4, 5-T to make room for more desirable trees, fire roads were opened up, abandoned fields were planted and pine stands were thinned. Forestry was being practiced and most of the landowners were surprised at the small amount of work required to make a big improvement in the woods. Here people were learning by doing.

The Forestry Clubs contest ended January 1, 1954. Of the forty-two that started, only twenty-eight completed the work necessary to compete for the prizes. On February 3rd the Chesapeake Corp. of Virginia entertained the members of the club at a banquet in the Country Club in West Point. Here, D. N. Sutton, lawyer and guest speaker declared that "This is the greatest step taken in forestry in King William County in recent years."

Since then other county agents have heard of the club. Many of the agents have already started plans for their clubs and contests that will start September 1, 1954 and end September 1, 1955.

Learning by doing is becoming popular in Virginia. Especially if you are a prize winner. Even though the prize isn't won, the woods have been improved and in time the prize money will be reaped from the home woods. You can't lose if you improve the woods.

Below Left: Many landowners killed scattered hardwood trees to release existing reproduction or seedlings spot planted in cut-over areas. Center: Open areas unsuitable for field crops or located in inaccessible places were planted to pine. Right: By leaving 10 to 20 good seed trees per acre many farmers will get another stand of pine and still have a fair volume of high quality lumber to cut after pine reproduction is secured. Several contestants used this as a good forestry practice.

FARM WOODLAND INSPECTION

Visits to farms are made by forestry specialists where county agents have forestry problems call for the advice of a professional forester. While these inspections are time consuming it is felt that these visits are necessary and justified if the landowner is to get the advice necessary to carry on a good farm forestry program. Too, the county agent is helped by his observations and by the thinking of the forester. Often times he can advise landowners with similar problems without calling in a forester. Many of the problems that were found on the farm woods were growth studies, fire damage, disease control, insect control, scrub hardwood control, and general evaluation of the farm woods as a part of the farm and home program.

During the past year, 419 farms were visited. In addition to solving many forestry problems such as insect control, timber growth and etc., definite recommendations were made on 12,565 acres of woodland. Many of these visits resulted in better cutting practices and increased income from the farm woods.

In making close inspections a confirming letter is usually sent to the county agent with a copy for the landowner. Such material can be used later in demonstrations, recommendations for tree farm awards, and in the sale of the timber.

In one case the Extension Forester walked over a 38 acre woodland area that was to be cleared for increasing the farms open land. After measuring a few trees and discussing their volume, the landowner immediately saw that the timber was worth far more than the

$6,000.00 that he had placed on the tract. The forester, who agreed that the area should be cut, advised him to ask for sealed bids from a number of large sawmill operators rather than sell to the first prospect (which was his plan). As a result of the 1 hour visit increased the sale price to $12,551.00

Below is an example of the results of a farm visit back in 1954.

FARM AGENT, GEORGE WILLIAMS OF GREENSVILLE COUNTY, first began working with James Tucker, a tenant farmer, with little except a large family. In 1939 through the aid of a government loan, Tucker purchased a run-down farm. Shortly after the purchase an attempt was made to sell all the timber on the place when the highest offer received was $1,650. In 1945 forestry specialist Patton was called in for assistance. After looking into the problem it was decided that rhrough the use of particular forest management practices and through doing their own cutting, Tucker and his sons could, within a very few years, obtain much more cash from their woods, get material for the necessary buildings that were needed on the farm, while at the same time greatly improve the woods. Through selling a variety of products such as fuelwood, pulpwood, veneer and sawlogs, Tucker was able to sell low-grade trees and also an unusually large portion of each tree. The returns received have proved to be correspondingly large. Since 1939 the income received from the woods has averaged around $1,500 annually. An eight room dwelling and many farm buildings have been built with materials largely secured from the woods. Tucker in addition is now treating his own fence posts which he secured principally from suppressed pines too small to sell for

pulpwood. Throughout these years the condition of the woods has steadily improved, increasing the capitol value of the farms, and the future income that will be received from the woods. During a recent all-day tour of the woods which was planned by George Williams, farm agent, and forester, Gill, but conducted principally by James Tucker, result demonstrations of planting, thinning young pine stands, harvest cuttings, and the release of desirable young seedlings were visited and discussed.

Forestry Assistance

to Virginia Landowners

CIRCULAR 632 by F.W. Patton Nov. 1954

Blacksburg

November 15, 1954

rtheastern Extension District
odland Inspection
stmoreland County

Mr. Bruce Massey
Hague, Virginia

Dear Mr. Massey:

This letter is to confirm my recommendation that I made while in your woods with you last week.

This 48 acre tract of timber is approximately 65 years old. For the most part site is good for growing timber, especially loblolly pine. For this reason you do have a high volume on about 24 acres, where no cutting has ever taken place. As far as I can see there is no fire damage to this timber. The reproduction found on the tract is of no value as it is mostly undesirable.

My recommendations, if you remember are two. One that I think should be followed, but if you can't do this then follow the second plan. My first recommendation is as follows. Since there is little chance of reproduction on this tract due to the density of the under growth I recommend that the area be scarified with a bush and bog harrow. This will kill out a high percentage of the scrub hardwood, and expose the mineral soil so the pine seed that falls will have a chance to germinate. In this plan I am not recommending that you leave seed trees, as they will probably blow down as the ground is very wet natured. To assure another stand of timber, the money to be derived from the sale of the seed trees should be used to replant the area with 600 trees per acre. In areas where large undesirable trees are left, the trees should be killed with 2,4,5-T and fuel oil.

If the first recommended practice cannot be followed then 10 seed trees per acre should be marked. Due to the soil condition during wet spells these trees should be left in clumps of 10 to 15 trees to help reduce wind throw during wet, windy weather. The spring following the cut, some of the scrub hardwoods should be killed to release any pine reproduction found on the area. By following this practice about a 50 to 60 percent stand can be expected in the next 25 years.

Mr. Bruce Massey

Again I urge you to secure the services of a consulting forester to determine the value of the timber before you place the timber on the market. In case you follow plan two the seed trees should be marked and the volume estimated for use of timber estimators working for the sawmill operators.

Hoping that you find this information useful, I am

Sincerely yours,

F. W. Patton, Associate
Extension Forester

FWP:nm

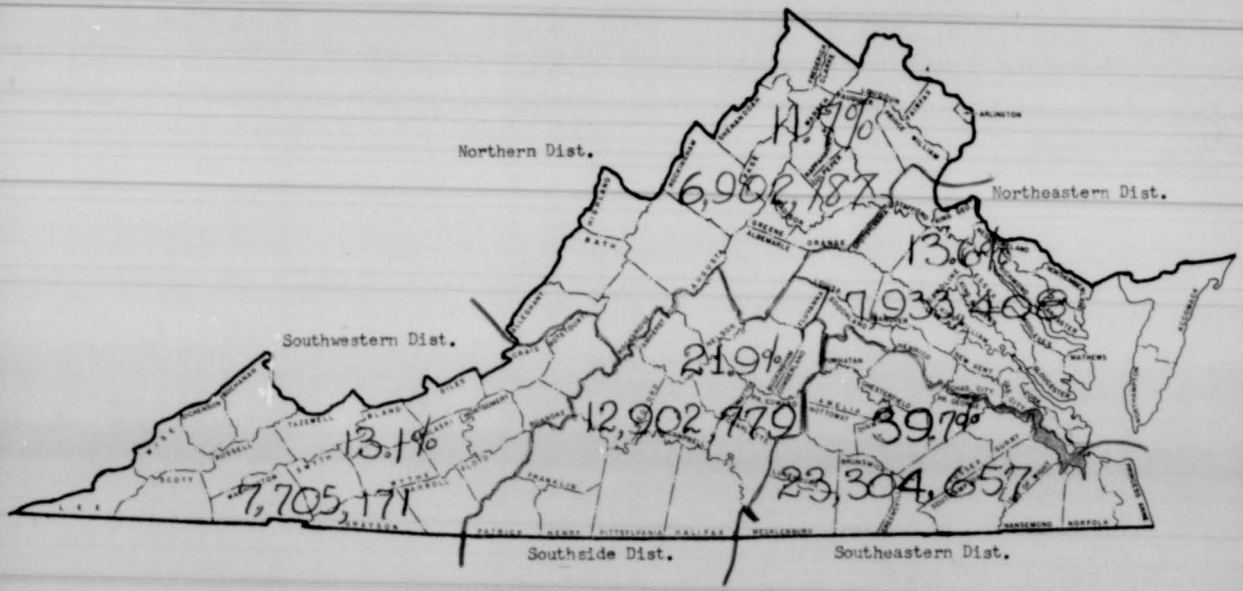
cc: County Agent
Virginia Forest Service
Office File

TREE PLANTING

In an effort to promote more tree planting throughout the State, Extension Foresters have cooperated with the Virginia Forest Service in placing orders for trees and encouraging planting of trees in recently cut over areas an on abandoned and idle lands. During 1954 some 21 demonstrations were held in 19 counties. These demonstrations stressed tree planting and often times chemical tree killing.

There is a definite need for this work as the forest survey showed that the more desirable pine and poplar was being taken from the timber stand faster than they were reproducing. To assure a future timber income of the farms in Virginia, tree planting must be carried on. To make people more conscious of this need, tree planting has been discussed at every meeting held and in nearly every demonstration held. During the month of November a special effort was made to get the need of tree planting before the public. During this time 4 newspaper matts were sent to all the papers using the matt service of the Extension Service Editorial Department; 4 news stories were prepared to accompany these matts; 4 radio tape recordings were cut for the tape service; a packet of 6 lessons on tree planting was sent to all county agents; two T.V. shows were prepared for distribution for county agents who wished to put on their own T.V. shows; and forestry data for every county was furnished the county agents.

75,000 free tree seedlings were made available to 4-H boys and girls, through the Extension Foresters and 4-H Club Agents



Number of forest tree seedlings planted by districts and the percent of the total number planted by districts from 1921 to 1954.

offices. This program definitely has encouraged tree planting in the past and is still encouraging many to consider forestry as an important part of farm work.

County agents helped the Extension Foresters and the Virginia Forest Service in distributing tree application blanks for pine seedlings and by encouraging landowners to order trees. They too, have told landowners of the A.S.C. program in forestry, which has encouraged many landowners to take to planting trees.

An example of tree planting that started years ago was found in Westmoreland County this last year. In 1944, when Patton was a farm forester, he held a planting demonstration on the farm of R. D. McFadon. After watching these trees grow for 5 years Mr. McFadon decided to plant considerable poor land to pine rather than to continue operating it at an annual loss. In 1949 he planted 18 acres of trees. This year a result demonstration was held at this area. As a result some 10,000 trees were ordered by 3 people attending the meeting, and many more are interested in forestry since this meeting.

COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS

VIRGINIA POLYTECHNIC INSTITUTE AND THE UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

STATE OF VIRGINIA

October 21, 1954

P. I. AGRICULTURAL
TENSION SERVICE

BLACKSBURG, VIRGINIA

TO: COUNTY AGRICULTURAL AGENTS AND LOCAL FARM AGENTS

FROM: EXTENSION FORESTRY DEPARTMENT

SUBJECT: TREE PLANTING PROGRAM

As most of you know our desirable timber is being cut faster than it is growing. In many areas good stands of timber are not reproducing themselves with good species after a cutting operation. To overcome these conditions foresters in both private and public organizations are recommending that a vigorous planting program be pushed. While the planting of seedlings is not the complete answer to farm forest improvement, it is a step in the right direction.

The tree planting season in the eastern section of the State is from mid-December through mid-March. In the rest of the State it is from late February on through to the middle of April.

In most counties the A.S.C. payments offer an incentive to farmers to plant more trees. Some counties are going so far as to pay 80 per cent of the planting cost. Many farmers do not know of the payments being made under the new program. If they did, we are sure that they would take advantage of the payment. In the meetings during the coming month any mention of these payments might encourage some landowners to reforest some of their cut-over, burned or idle and abandoned land.

To assist you in a planting program we have prepared newspaper mats and newspaper stories that will be sent out by the editorial department to newspapers using these services. Too, a 5-minute and a 15-minute radio tape is being prepared for release during the first week in November.

Those that use T.V. can also request a prepared show on tree planting for use during the first two weeks in November. This show has 14 pictures and comes complete with a script. The first ones requesting this show for each T.V. station area will get it. In making your request state the T.V. station and the date you want to put on the show.

In addition to the above, you will find the May issue of the Virginia Farm Economics. On pages 19 through 25 are many facts on forestry. In addition to this it may interest you to know that _____ forest tree seedlings were planted in your county last year. With a little effort many counties could double the number of trees planted last season.

The Extension Forestry Department will welcome the chance to assist you and your forestry committee in developing a tree planting program for your county. If we are to have a successful tree planting program this coming spring, our plans should be complete and the trees ordered by January 15th.

Yours very truly,

F. W. Patton, Associate
Extension Forester

FWP:nm

An Educational Service of The Virginia Polytechnic Institute and the United States Department of Agriculture with County Governments Cooperating

WOOD PRESERVATION

Immediately after World War II considerable emphasis was placed on the preservation of wood to be used in buildings and fence construction. Little work has been done prior to 1946 in this field. However, an all out effort by Extension Forestry Specialists, timber treating industries, and preservatives processing plants has brought the need of using treated posts, lumber, and timbers to the people of the State. During the past year work has been reduced on wood treating, but still 60 demonstrations in post and lumber treating were conducted. In addition a test and demonstrational post setting was established at the branch experiment station near Ethel, Virginia in the Northern Neck. Data on the treated posts are on file in the office of the District Extension Forester, who treated the posts in 1953.

There is still an interest in treating wood, as the Extension Foresters Office sent out several hundred copies of leaflets 12 and 13, which deal with treating of wood, and exhausted the supply of the two Old Woodchopper Series dealing with the use of pentachlorophenol and osmose salts. Too, several companies supplied Extension Forester Patton with 65 gallons of copper napthenate to carry on work in treating fish trap poles. Work on this project was halted when 180 of the posts to be treated were stolen from the drying area. However, it is planned to carry out this work during the coming year.

County agents are still advising farmers on the use of the various preservatives in treating lumber. During the past year,

WOOD PRESERVATION

Demonstration of post and lumber was not stressed as much as in previous years, but still there is a demand for such work in many counties. Home treated posts cost about 1/2 the commercially treated. This is due to lower labor costs and no transportation charges.

where needed, the county agents requested help in the holding of post treating demonstrations and fence construction - treating demonstrations.

In Stafford County the young farmers club, who started a treating plant in 1953, continued to get more orders for treated material than their limited time could produce. In one year this group paid off their indebtedness and are now operating at a profit. This operation is the product of a joint effort of the county forestry committee, the young farmers club, and a commercial concern.

COUNTY FORESTRY SCHOOLS

All day forestry schools were conducted in Brunswick, Lunenberg, Powhatan, Mechlenberg, Westmoreland, Richmond, Spotsylvania, Prince Edward, and Halifax counties. This was the third consecutive year that similar schools have been held in Brunswick county. The interest continues high and the results are good.

The program as shown on the next page is typical of those cassired out during these schools when the morning portion is conducted indoors and the afternoon is spent in the woods inspecting and discussing the results obtained from the application of particular forest management practices.

As indicated on the program more than the Extension Foresters or the county agents time goes in to making these schools a success. Many cooperating agencies, industries and landowners must work together to put on an interesting program. However, the forestry specialist and county agent usually does the planning and the others are called in to assist only at the school.

FORESTRY TRAINING SCHOOLS

Eight schools were conducted for 4-H, Vocational class members and landowners during the last year. Approximately 373 persons received instruction in these classes. Here a mixed group match wits in timber estimating.

COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS

VIRGINIA POLYTECHNIC INSTITUTE AND THE UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

STATE OF VIRGINIA

. I. AGRICULTURAL
NSION SERVICE

Montross, Virginia
February 11, 1954

BLACKSBURG, VIRGINIA

To All Westmoreland County Timber Owners,
Agricultural Professional Workers and
Others addressed:

This is to invite you to our first Westmoreland County Forestry Field Day to be held in the Case Building at the Murphy Seed Service, Mt. Holly, on Thursday, February 18th beginning at 10:00 A.M.

THE PROGRAM

MORNING SESSION: Beginning at 10:00 A.M.

Introduction - Stanley J. Dawson, County Agent
My Forestry Enterprize - R. D. McFadon
Review of Forestry Practices to be seen, Needs and Why - Pete Straight, District Forester
Forestry Club Discussion - Forrest Patton, Associate Extension Forester

LUNCH: Provided free by Peoples Bank of Montross

AFTERNOON SESSION: Beginning at 12:30

First stop at R. B. Davis' Woods (on road to Erica) to observe Hardwood Killing Demonstration.
From Mr. Davis', the group will go to Mr. R. D. McFadon's farm to observe demonstrations in open field planting (1950); area typical to many cut over areas where spot planting is necessary; area thinned in 1944 and ready for another thinning; area cut in 1947 where seed trees were left with good reproduction and finally an area to show selection of seed trees and timber estimating.

A prize will be given to high scorer in timber estimating.

Adjourn at 3:00 P.M.

Yours very truly,

Stanley J. Dawson
County Agent

Nicholas P. Ptucha
Assistance County Agent

SJD:rs

(SAMPLE ANNOUNCEMENT SENT OUT BY COUNTY AGENTS OFFICE)

FARM FORESTRY SCHOOL

BRUNSWICK COUNTY

TRIAL JUSTICE COURT ROOM

JANUARY 21, 1954

MORNING SESSION

9:00----------INTRODUCTION--------FRANK MARSHALL, COUNTY AGENT

9:05----------OUR FORESTRY NEEDS IN BRUNSWICK COUNTY------W. W. WESSON, CHIEF WARDEN BRUNSWICK COUNTY

9:20----------FILM, "WHEN A FELLOW NEEDS A FORESTER".

9:50----------HOW TO SELL AND AVAILABLE MARKETS------J. C. LUCY-----WILLIAM PERKINSON

10:20----------RECESS

10:30----------PANEL DISCUSSION (QUESTIONS AND ANSWERS)------STAFF

11:45----------LUNCH-----W. F. W. BUILDING

AFTERNOON SESSION

LELAND LUCY'S FARM

1:00----------WOODS:

STATIONS----------APPROXIMATELY 30 MINUTES

1. NATURAL HISTORY OF FORESTRY----------STEIRLY
2. SEED TREE SELECTION, SCARIFICATION, SEEDS, ETC.-----YANCEY
3. TREE POISONING, GIRDLING, RELEASE CUTTING, CUTTING FARM PRODUCTS----------GILL
4. MANAGEMENT, REFORESTATION, THINNING (LAND USE)---ELLIS--(MINNICK)
5. FIRE PREVENTION---------WESSON

If weather is too severe school will be January 22.

4-H ACTIVITIES

Work with 4-H clubs continues to take up a lot of the forestry specialists time. Most of the work, however, comes during the summer when the Extension Foresters are called on to teach forestry at most of the 4-H camps. During the past year 10 camps were attended with 1,885 4-H members receiving instructions. A variety of subjects were taught. These included (1) Tree identification, (2) Tree growth, (3) Tree planting, (4) Timber thinning and (5) Forest improvement.

In addition to work in camps some assistance has been given 4-H agents in holding meetings in schools, preparing 4-H club material and in securing trees for tree planting.

Assistant county agents and county agents are gradually working forestry into their county programs. During the last 10 years there has been a gradual increase in enrollment and as younger men come into these positions.

The State winner in 4-H forestry this year was from Richmond county. Young Bruce Bellfield has been active in his club and carried many projects. Bruce has done a good job over the last few years in his home farm woods. He carried out tree planting projects, killed scrub hardwood trees and above all has influenced a number of other boys in his club to pursue forestry projects.

4-H FORESTRY PROJECTS

Each year for the past 5 years the demand for tree seedlings have increased for 4-H planting. Here a local leader and two 4-H members plant trees in an abandoned field. The Virginia Forest Service gave 4-H members 60,000 tree seedlings free in the spring of 1954.

FAIR EXHIBITS

One method of publicity used, and not approved by many, is the exhibits used at the various fairs held throughout the State. Fair exhibits were used by Patton at fairs in Spotsylvania, Warsaw, West Point, and Farmville. People from 22 counties were represented at these area affairs. While it may be true that no whole sale change in forest management was made by these exhibits, it is felt that many not reached by other methods were reached by these exhibits.

In most instances the county agents in the counties, gave assistance in erecting the exhibit and taking care of it at the fair.

PUBLICITY AND TEACHING MATERIAL

NEWSPAPER PUBLICITY is one of the best means of reaching people, provided the write-ups are interesting and well illustrated. In addition to information furnished the Extension News, some 46 newspaper releases were prepared for many of the dailies and weeklies. Good working relations with both editors and employees is necessary if much of the material prepared is to get into print. In many cases where the newspapers were unable to supply photographers to cover forestry meetings, demonstrations, etc., Patton took the pictures and rushed them to the papers. In one case the Richmond Times Dispatch held its press for 15 minutes until pictures taken at the King William Forestry Club meeting could be processed for the State Page. Such interest on the part of any large newspaper is worth holding.

The Tidewater Review, the weekly newspaper for the West Point area, ran a forestry section in their December 9th issue. Much of this material, including the news releases and the pictures and captions were prepared by Patton, and county agent D. J. Kelly, with some help from the Virginia Forest Service. Local and wood using industries also helped make this project available by taking advertisements promoting forestry.

To help promote the tree planting program a number of matts were prepared and sent to all newspapers using the V.P.I. Extension Division matt service. Many favorable comments were received from the Virginia Forest Service personnel in regard to these releases, as this is the first time the Extension Forestry Department has

promoted such a campaign. The public has also reacted favorably as many requests regarding tree planting came in to both state and county offices.

Examples of the above mentioned new stories are shown below and on the following page.

TREES FOR TOMORROW—This was the scene at a recent Henrico County forestry [illegible] forestry took the spotlight in many Virginia rural areas this month. Above, O. B. [illegible] of Laurel, plants a loblolly pine as Guy R. Davis, Henrico County agent; Henry S. Wood, of Virginia Carolina Chemicals, Fred Underwood and Ellis Vick look on. The trees were planted in an area where scattered hardwoods had been killed.

James A. Hand, of Sweet Hall, was a member of the 1953 Forestry Club. Here he is shown in the portion of his woods that he thinned for saw logs. Mr. Hand in addition to removing sawlogs for buildings also thinned an area from which 16 units of pulpwood was removed. In both areas a good stand of timber was left to grow for future harvest.

Time to Order Tree Seedlings

The time to order forest tree seedlings is at hand.

F. W. Patton, associate forester at VPI, points out that the tree planting season in the eastern section of Virginia is from mid-December through mid-March. In the rest of the State it is from late February to the middle of April. He advises ordering early, as tree orders are placed on the first-come, first-served basis.

Application blanks for ordering trees are available at county agents' offices throughout the State, and at Virginia Forest Service offices.

Patton points out that desirable timber in Virginia is being cut faster then it is growing. A recent survey shows that our pine timber has been reduced 25% since 1940. In many areas good stands of timber are not reproducing themselves after a cutting operation.

To maintain a desirable stand, many landowners should spot-plant recently cut-over or burned-over land. Often, if these areas are not spot-planted to desirable species, useless species may take over. Abandoned areas should be planted as they often do not have a seed source of desirable trees.

In most cut or burned areas, about 300 to 500 trees will be needed to plant an acre, while open fields will need about 1,000 trees per acre.

Nursery prices per thousand trees are: loblolly pine, Virginia pine, shortleaf pine and black locust, $4.00; red pine, white pine, red cedar and black walnut, $6.00.

The Tidewater Review, West Point, Virginia

Thursday, December 9, 1954

A Forestry Program Well Worth The Effort

No area of Virginia is more dependent upon its forest resources for much of its cash income than this section of Tidewater Virginia, and this newspaper has taken advantage of opportunities many times before to promote good forest practices. This week's REVIEW is making an extra effort to bring before landowners and owners of forest tracts important methods recommended for more profitable forest production.

The REVIEW is doing this in cooperation with the King William Forestry Club and D. W. Kelly, county agent, who has shown a profound interest in this work.

For nearly three and a half centuries Virginians have used their forests—harvesting them for lumber, fuel, naval stores, veneers, poles, fence posts, wood pulp, chemicals and hundreds of other useful products. That harvest began when the first Virginians stepped ashore at Jamestown and set about building the settlement that became the first permanent English colony in the new world. Forests are at least as important to modern day Virginians as they ever were to the brave men and women who settled Jamestown.

It is interesting to note that the annual lumber production in Virginia has averaged nearly one billion board feet for the past 45 years. Annual wood growth is said to be greater than the volume removed for use and destroyed by fire, insects and disease. This is a splendid situation, and it behooves us to keep up the good work.

The King William Forestry Club is pleased with the response thus far shown in the effort to promote profitable tree farming and good forest practices. It is again staging a contest in the county to enlist as many participants as possible in the program.

THE REVIEW is proud to devote a four-page section as well as other space in this edition in the effort being made by the King William Forestry Club.

BULLETIN preparation took up a considerable amount of time of both O'Byrne and Patton. Since there was a need for more up-to-date forestry bulletins, this time can be well justified.

Prior to Mr. J. W. O'Byrne's retirement he worked closely with the U. S. Forest Service, the Virginia Forest Service, the State Board of Education, and the Conservation Commission in the writing of the bulletin Forestry in Virginia. In June the completed manuscript was sent to the Editorial Department for publication. This bulletin will, according to latest reports, be issued in January.

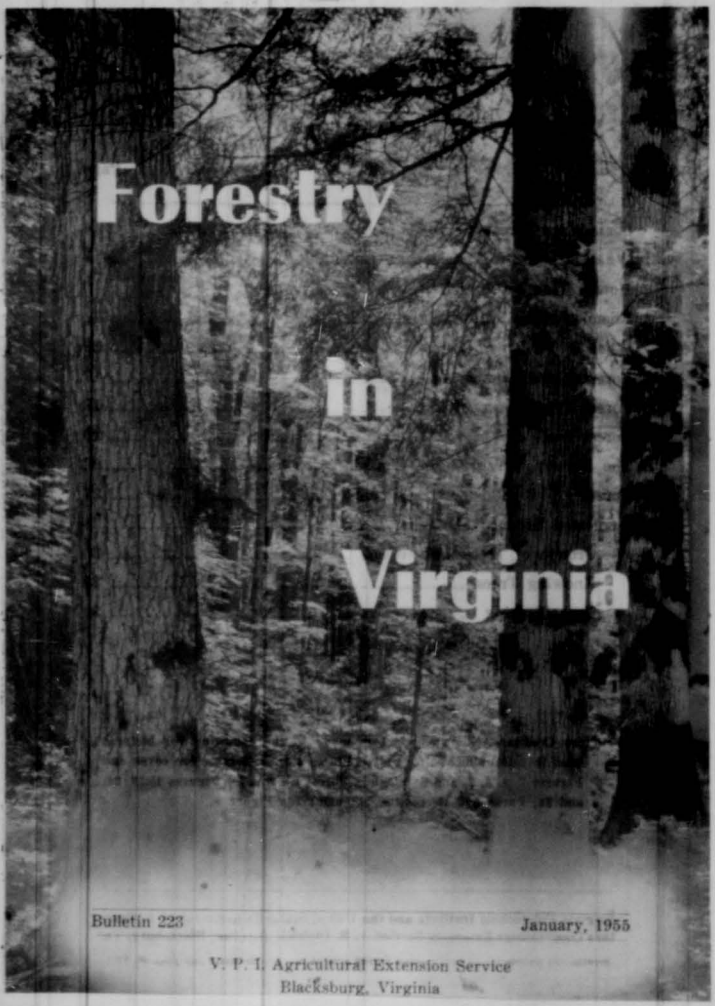
To meet the needs of the high school students who are studying forest management, Patton has been preparing material on Forest Management in Virginia. The text closely parallels the information covered in the Forest Evaluation Sheet now being used by FFA students on how to evaluate their woods. This bulletin should be ready for release next September.

Another bulletin often requested but not available through the Extension Service is Forest Trees of Virginia. To assist 4-H members taking tree identification another bulletin Know your Virginia Trees has been worked on to some extent.

The completion of these three bulletins and the modernization of the present forestry leaflets will improve the teaching material considerably.

In addition to the bulletins mentioned above, Patton prepared a forestry guide to be distributed to the professional workers of the Northeastern District. This release was mimeographed and appeared

under the name - Along the Timber Line with the OLD WOODCHOPPER. It was well accepted by the professional workers and in a number of cases used by vocational agricultural teachers as a teaching guide and by many forestry committees.



COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS

VIRGINIA POLYTECHNIC INSTITUTE AND THE UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

STATE OF VIRGINIA

November 8, 1954

P. I. AGRICULTURAL
TENSION SERVICE

BLACKSBURG, VIRGINIA

TO: ALL MEN AGENTS

FROM: F. W. PATTON

RE: FORESTRY CIRCULAR 632.

Enclosed with this letter you will find a little leaflet entitled, "Agencies Furnishing Forestry Assistance to the Land Owners." These copies are for professional agricultural workers in your county. Additional copies may be obtained from the Extension mailing room. This leaflet, more or less, gives the assistance which is furnished by the various agencies throughout the state in regards to forestry matters. During the past few months considerable correspondence has been carried on with different county agents who seemed in doubt to whom they should refer forestry requests. It is hoped that this leaflet will answer most of these questions.

Also enclosed you will find a list of consulting foresters who operate in Virginia and nearby states. The foresters from the nearby states are those located nearest Virginia. In cases where the landowner wants to secure someone for entire stand or clear cut timber estimates, it would be wise to call on some of these foresters as they are in the business of timber estimating. The charges of these men would probably vary, depending on the distance that they will have to travel and the amount of work to be done. For this reason, it is usually desirable to request a forester nearest the area to be worked and also find out his charges before he is employed.

By having a leaflet plus a list of consulting foresters, it is hoped that we can get a more effective job done in forestry in the state in months to come.

Very truly yours,

F. W. Patton, Associate
Extension Forester

FWP:nm

Enclosures

T.V. AND RADIO: Spreading forestry information by video and audio means has long been considered a very effective means of reaching people who do not read the newspapers to any extent. To reach such people the specialists worked with the editorial department in the preparation of both radio and television shows.

During the year 32 radio talks were made on radio stations throughout the state. In addition 10 radio tapes were made for distribution to all radio stations using the tape service from V.P.I.

There are 6 T.V. stations in the state that have farm and home shows. These shows are popular and many farm people watch these shows for other information such as weather, market reports, etc. These naturally draw people who other wise would not be reached. The forestry department put on 14 T.V. shows during the year. Most of these shows were based on pictures taken by Patton throughout the state. Too, shows with the script were made available to county agents throughout the state. These were used extensively.

After a T.V. show over WTVR in Richmond, Patton received 75 requests for more information on wood preservation, which his show covered. These requests came from places from as far as 200 miles from the station. In addition to these direct requests county agents in this area got requests for additional information. From this, one can conclude that T.V. can be an effective motivator.

VPI Agricultural Extension Service employees use TV to tell farmers about the increasing damage done by the southern pine beetle to pine stands in southeastern United States. Shown above in a Richmond station are (left to right): Forest W. Patton, associate forester at VPI, and Guy Davis, Henrico county agent. A leaflet outlining control of the pest is available for county agents and the Extension Service at VPI, Blacksburg. Ask for "Pine Bark Beetles."

During the year 11 T.V. programs were put on . Most of the programs were made up by using pictures that Patton had taken in the field. However, better response was found to come from programs where some other activity was carried on, such as demonstrating with actual live material.

VISUAL AIDS: During the year some 150 kodachrome slides and over 125 quality black and white pictures were taken and put to use by Patton. These pictures covered a number of forestry practices that were started during the year and others that were started a number of years ago.

The kodachrome slides will be on loan to county agents to assist them in putting on better forestry programs or making some forestry slides available so that they may be included in talks on farm management.

The black and white pictures can be used for a number of things such as, exhibits, newspaper stories, case histories on farm improvement, etc.

In addition to forestry pictures Patton cooperated with the Extension Soil Conservationist, Agronomy Department, 4-H Department, and the Animal Husbandry Department in picking up pictures of merit as he found them. Many of these pictures were used in newspaper stories and department publications.

COOPERATION WITH OTHER AGENCIES INTERESTED IN FORESTRY

The Extension Forestry Program is closely tied in with forestry work being done with other organizations, and groups throughout the State. Extension workers have cooperated closely with the Virginia Forest Service, the Virginia Forests, Inc., the State Board of Education, Soil Conservation Service, the Southern Pulpwood Conservation Association, and various wood using industries throughout the State. This cooperation, has helped all of the various groups to get a better job of forestry done in each one's respective field.

The Virginia Forest Service, during the past year, furnished 65,000 seedlings for forestry demonstrations and 4-H Club plantings. In addition, the Forest Service has been very cooperative in furnishing tree planting equipment and technical assistance at a number of demonstrations that were held. This technical assistance in planning and conducting demonstrations, forestry schools, and tours, made these meetings a success. In return for this assistance Extension workers at V.P.I., and in the counties, brought direct attention to woodland owners the work that the Virginia Forest Service was doing in their tree marking, planting, and fire control programs.

The cooperation between the Virginia Forests, Inc., and the Extension Service has been on both the State and county level. County agents are members of the Virginia Forests, Inc. Forestry Committies throughout the State. Often times, it is the work of the county agent and his various forestry committies that have kept these groups active. The Virginia Forests, Inc., have distributed book covers and considerable printed material on forestry to schools through their county committies. The work of the county agents and the Virginia Forests, Inc., who sponsors the Virginia Tree Farm Program, has been particularly close. The county personnel and the Extension Forester Specialists nominate woodland owners who have been doing good forestry work for tree farmers. In addition to nominating these landowners, the necessary woodland inspections are often made by extension personnel. Extension Specialists have contributed articles to the bi-monthly publication of the Virginia

Forests, Inc. In addition, pictures for articles in forestry and the assistance at meetings have been given by both county and state extension personnel. By maintaining close cooperation with the Virginia Forests, Inc., many more people have been reached, than if the two organizations were working separately.

The Virginia State Board of Education and Forestry Specialists have worked closely together in developing a forestry program that is being carried out in Vocational Agriculture throughout the State. Forestry specialists, with Lyon taking the lead developed the woodland evaluation sheet, which is a portion of the forestry contests held each year. In addition, the forestry specialists have assisted Vocational Agriculture Teachers, at the county agents request, in teaching forestry to Vocational Agriculture boys throughout the State. This mutual cooperation is responsible for getting many boys interested in the forestry program on their respective farms.

The Southern Pulpwood Conservation Association, the Extension Forestry Specialists, and county agents in a number of counties, have worked closely together to put on effective forest improvement demonstrations. Such cooperation has lead to a better understanding between a number of pulpwood producers, landowners, and Extension Personnel.

Industrial foresters and Extension personnel have also worked closely in developing and carrying out the activities of the forestry clubs. By having close cooperation the success of the clubs are assured as far as prize money and recognition meetings are concerned.

Recognizing the need for more diversified industrial development in the Southwestern counties of Virginia in order to take care of the labor surplus resulting from the closing or curtailment of many coal mines, the Extension Forestry Specialist, Lyon, assigned to the Southwestern Counties cooperated with the DIVISION OF PLANNING AND ECONOMIC DEVELOPMENT in analyzing the present and potential forestry situations in six of the Southwestern counties. To date no definite solution or progress can be reported, however, it is definitely felt that wood-using industries can be encouraged to establish industries in this area.

In cooperation with county agents from Montgomery, Pulaski, and Giles Counties, a meeting was held in Pulaski for the purpose of exploring the need for the possibility of locating a hardwood pulpmill on New River. Attending the meeting were representatives from four Chambers of Commerce, the N & W and Virginian Railroads, and Appalachian Power Co., the U. S. and Virginia Forest Service, and a representative from T.V.A. A committee was appointed to investigate all possibilities that might secure some type of a wood-using industry for the area represented at the Pulaski meeting.

ASSISTANCE GIVEN TO OR RECEIVED FROM OTHER SUBJECT-MATTER SPECIALISTS AND RESEARCH PERSONNEL.

During the year, assistance was requested from the Director of THE VIRGINIA EXPERIMENT STATION to formulate plans and make recommendations for the marking and sale of timber located on the Cyrus McCormick Estate in Rockbridge and Augusta Counties, which the V.P.I.

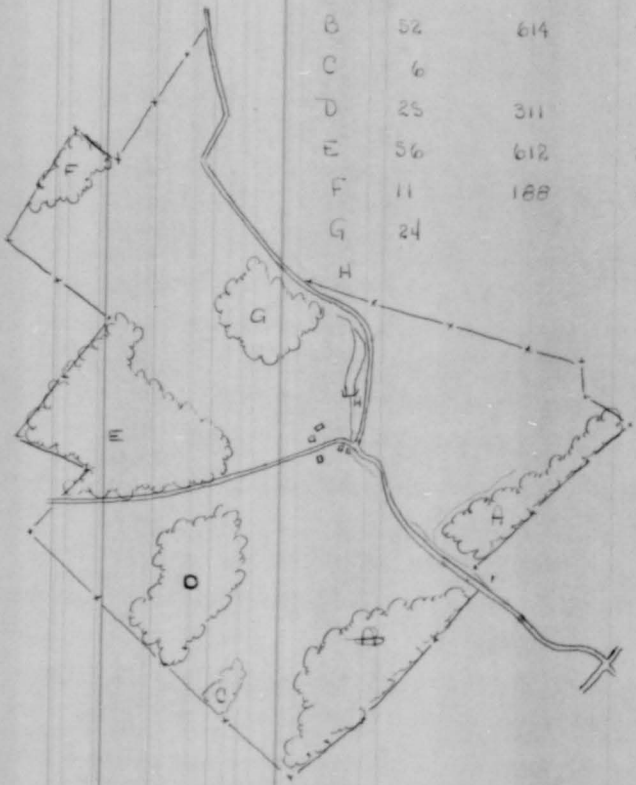
Educational Foundation received from the McCormick heirs.

A reconnaissance survey of the 217 acres was made by A. B. Lyon, in company with the Director of the Experiment Station and personnel of the Virginia Forest Service. It was found that the timber was divided into 8 separate tracts. With the exception of one small tract of 6 acres, the volume of timber was extremely high per acre, much of which was mature. The attached map shows the size and location of the various tracts.

On three of the areas, the grazing of cattle and sheep over an extended time, had destroyed all desirable reproduction. In order to demonstrate how desirable reproduction could be restored to a heavily grazed woodland, it was decided to select area A, comprising 31 acres and by use of a bush and log, scarify the area to encourage reproduction of oak seedlings. The Virginia Forest Service agreed to scarify the area with their equipment. This work was accomplished during September 1954, in order to take advantage of the 1954 crop of acorns. It was recommended that no cutting be permitted on this area for at least two years or until satisfactory reproduction has been established. Area G is in need of similar treatment. Fencing of both areas A and G to eliminate grazing was recommended.

It was decided that a commercial cutting operation be made in areas, B-D-E and F. These areas were marked and estimated in November 1954. The attached sheet shows the volume by species marked on each area. A total of 1,725 trees were marked for an

	Acres	trees marked	volume
A	31		
B	52	614	347 M
C	6		
D	25	311	122 M
E	56	612	286 M
F	11	188	126 M
G	24		
H			



FARM MAP

PROPERTY LINE	STREAM	SPRING	FARM DWELLING	OWNER	McCormick's Farm
FIELD LINE	DRAIN (PERMANENT)	WELL	TENANT HOUSE	COUNTY	Rockbridge
FENCE	DRAIN (NOT PERMANENT)	PUBLIC ROAD	BARN	ACREAGE	
CROP LINE	MAJOR GULLY	PRIVATE ROAD			
RAILROAD	WOODS LINE	FIELD LETTER			
POND	SWAMP OR MARSH	FIELD ACREAGE			

FILE NUMBER	SCALE IN FEET	PHOTO NUMBER

Form 55 V.P.I. AGRICULTURAL EXTENSION SERVICE 11/22/54

RM

average of 510 board feet per acre. Prospective buyers were sent invitations to bid on the timber and as a result $33,499 was received for the timber.

Following the cutting of the timber, it is recommended that certain improvement measures be done such as spot planting, chemical killing of undesirable trees, scarification of portions of area D in order to promote reproduction of natural reproduction, and fencing of area D to exclude livestock.

The accomplishment of such improvement measures will result in the establishment of needed demonstrations which can be used to show results of forestry practices to interested groups visiting the farm. If such work is not done, the cut areas will revert to stands typical of unmanaged stands which are found throughout the Shannandoah Valley counties.

In cooperation with the AGRICULTURAL ENGINEERING DEPARTMENT, joint demonstrations were conducted to show proper fence construction and to demonstrate the methods of treating fence posts; Such demonstrations were held in five counties.

Assistance was given to the EXTENSION SOIL CONSERVATIONIST during observance of Natural Resources Conservation Week. Four T.V. and five radio programs were made. In addition, newspaper stories and mats were sent to newspapers in the State.

The forestry specialists reported to the ENTOMOLOGY AND PATHOLOGY DEPARTMENTS any known outbreaks of tree diseases and insect attacks. The specialists from that department analyzised the situation and made recommendations for control to the county agents where the outbreaks were found, and also advised the forestry spec-

ialists of their findings. Close cooperation between the forestry and the entomology and pathology departments has no doubt prevented some serious outbreaks that might have reached epedimic porportions.

From time to time assistance was also given the forestry teaching staff. Classes were given instruction in the field and classroom, when the regular instructor had to be out of town or was unable to take charge of the classes. The work gave the Extension Specialist an opportunity to meet students that may someday be working in the extension organization in the field or with cooperation agencies.

CONCLUSION

During the year all signs pointed to progress in forestry interest and practices throughout the state, with the most progress showing up in the Northeastern and Southeastern Districts. This interest stems from the fact that the District Extension Foresters have been able to concentrate their work in a smaller area and the District Agents have been helpful in encouraging county agents to do more in the forestry line. In a number of cases the county agents no longer are being used as "horse doctors" as veterinaries are in their territories and this work is not as pressing as it once was.

During the year most of the major activity goals of the 1954 plan of work were reached by the forestry specialists and county agents. Forestry clubs were organized, forestry schools were held and publicity through radio, T.V., newspapers, and bulletins were stepped up.

If District Foresters could be placed in each District and a few assistant agents in forestry be placed in heavily wooded counties the Extension Division could put on a forestry program that would help increase the income of the 127,000 farmers who control some 7,600,000 acres of farmwoods. Such a step would bring credit to both V.P.I. and the Extension Service.

1st Carbon to Director.

VIRGINIA AGRICULTURAL EXTENSION SERVICE

FARM FORESTRY PLAN OF WORK

For

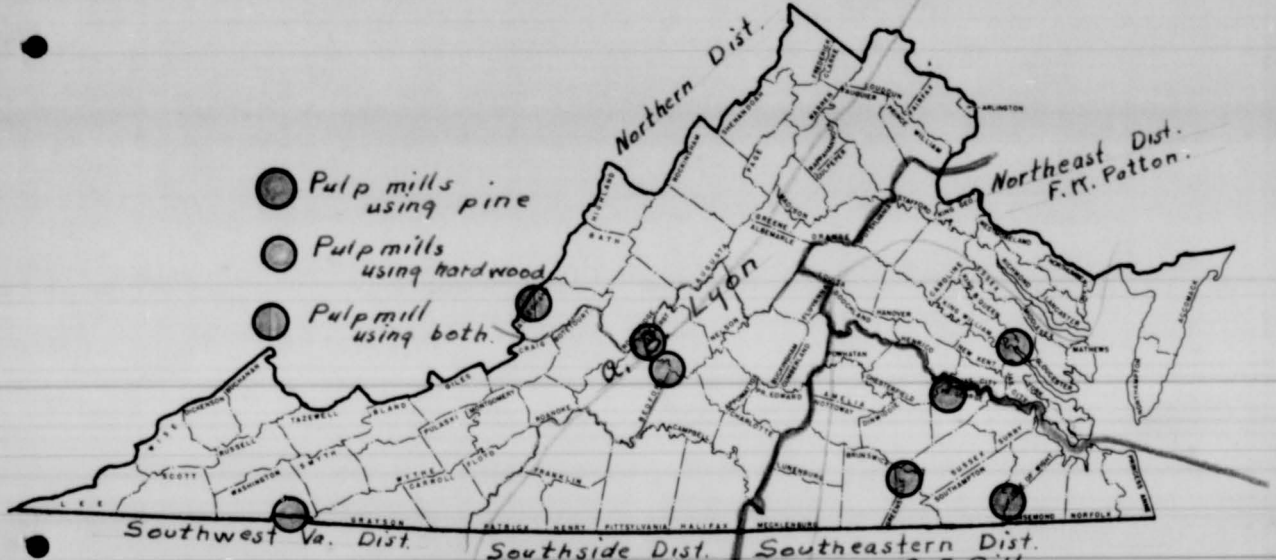
Calendar Year 1954

Major phases of project or subdivision of subject covered	Name of Worker	Percentage of time devoted to entire project by each worker
Supervision of general farm forestry program of state and direct responsibility for three administrative districts in western part of state.	Wilbur O'Byrne Extension Forester	100%
Responsibility for intensified program in twenty-five counties in Northeast section of State.	Forrest W. Patton Associate Extension Forester	100%
Responsibility for intensified program in seventeen counties in Southeast section of state.	C. Edward Gill Associate Extension Forester	100%
General farm forestry in the three western administrative districts and special work in managing mountain hardwoods and marketing products thereof.	A. B. Lyon Associate Extension Forester	100%

Date submitted: 1/16 1954 Signed W. O'Byrne
Project Leader

Date approved: MAR 9 1954 1954 Signed W. W. Armstrong
Acting State Director of Extension

Date approved: APR 7 1954 Signed Clarence Ferguson
Director of Extension Work,
U.S. Dept. of Agr'l.


Northern Dist.
Northeast Dist.
F. M. Patton.
Pulp mills using pine
Pulp mills using hardwood
Pulp mill using both.
C. Lyon
Southwest Va. Dist.
Primarilly Hardwood forests
Southside Dist.
Shortleaf + Virginia pine — Hardwood forests
Southeastern Dist.
C. E. Gill.
Primarilly Loblolly pine forests.

ARRANGEMENT OF PLAN

I. Analysis of the Situation

In spite of the fact that farm forests occupy better soils than do the state average of forest lands, that they enjoy many advantages in transportation, labor supply and markets, farm forests are, on the whole, more seriously depleted and more mismanaged than are those under any other major form of ownership. Nor is this situation peculiar to Virginia. Report Number 3 from a Reappraisal of the Forest Situation (in the United States) shows the acreage of Commercial (potentially and actually productive) forest land and the degree of management being practiced on each, to be as follows:

Ownership	Area		Percentage of various management levels			
	Million acres	%	Good	Fair	Poor	Unproductive
Public forests	116	25	58	15	14	13
Industrial	51	11	7	17	66	10
Farm forests	139	30	5	12	72	11
Non-farm small	155	34	7	14	63	16
Total	461	100	18	17	52	13

No comparable figures are available for Virginia, but it is almost certain that, while our industrial situation is much better than this average, the farm situation is equally bad. And no program yet devised has been successful in interesting the rank and file of farmers in better management of

the large acreage under their control. This is bad for the forest owner, bad for the State, and bad for the industries depending on those forests for raw materials.

Virginia's Land-Use Pattern

	Acres	Percent	Percent Forest Land
Land area of state	25,535,400	100	
Forest Land:			100
Publicly owned	1,455,600	5.7	10
Industrially owned	1,437,700	5.6	10
Farm Forests	7,621,000	30.0	51
Other private	3,897,700	15.2	26
Parks and unproductive	420,300	1.6	3
Total	14,832,300	58.1	
Non-forest Land:			
Crop land	5,954,700	23.3	
Pasture land	3,424,300	13.4	
Abandoned, but open	380,100	1.5	
Marsh and waterways	272,300	1.1	
Cities, rights of way, etc.	671,300	2.6	
Total	10,703,100	41.9	

Thus of the thirteen million acres of commercial forest land in private ownership, 59% is in farm forests, divided among more than 125,000 operating farms, with an average of less than sixty acres per farm; 30% is in

small non-farm ownerships, largely belonging to non-residents; and 11% belongs to lumber, pulp and other industrial organizations. These figures show a material reduction over previous reports in the amount of non-resident small ownership, and a corresponding increase in both industrial and farm holdings. This is a logical and healthy development. Non-resident small forest holdings are an anomaly. They are too small to support a full time forestry organization and they are usually too remote, in either space or interest, for the owner to manage them on a part-time basis.

Although it is customary to speak of farm woodlands as being the responsibility of the Extension Service, a more workable differentiation, as between the Extension Service and the State Forest Service, is one based on the attitude of the owner. Disregarding the million and a half acres owned by industry (most of which is now under management by trained foresters), the responsibility for developing the potential of privately owned forest land rests on the Extension Service and the State Forest Service. Owners who are willing and able to undertake the job of managing their own properties, need education in order that they may do a creditable job. This is the field of the Extension Service. Owners who are unable or unwilling to assume that responsibility, need service and are the responsibility of the State Forest Service. This plan of work is based on that assumption. Also on the assumption that responsibility for the educational program in

a specific county rests on the county agent in that county rather than on the forestry specialist, whose duty it should be to "back-stand" the county agent and help him, rather than assume local responsibility for the job.

Because most county agents had no forestry training in school and see many things to do along lines in which they were trained, they have been slow to add forestry to their program of work. It is not that they regard forestry an unimportant; they have just not gotten around to preparing themselves to do a creditable job. To give them such training, and the confidence to use it, forestry work in 1954 will continue to stress getting forestry into the plans of work of the individual county agents, and then giving them all the assistance they will use. After all, the essentials of growing timber do not differ from those for growing other crops. They are:

1. Proper land use - as between cultivation, pasture, and timber growing.
2. A full stand of desirable trees on all land dedicated to growing timber.
3. Systematic cultivation (culling, weeding, and thinning) of the developing crop.
4. Harvesting the matured crop at the most profitable stage, and with due regard to prompt reestablishment of an acceptable stand.

Farmers readily grasp steps 2, 3, and 4 and acquire sufficient technique to do a creditable job without difficulty, provided they become interested. They have not, as a group, been willing to face up to step 1. Still firmly established in the subconsicious mind is the thought that forest land is wasteland; and as such, is a constant challenge to the owner to "clear it up" and "do something with it." Building up a forest to something approaching its potential, represents and investment, and no one wants to make such an investment without reasonable assurance that the crop will be permitted to go through to maturity. The first step in a sound farm-forest program then, is a definite decision as to how the land is to be used. This involves farm management as the preliminary step.

The Experiment Station has in progress a series of Economic Land Classification studies which attack the land-use problem by counties, but very little has yet been done to carry this down to the individual farm. Inspite of surpluses in most of the staples and millions of acres coming out of their production, land clearing continues. To the extent that this clearing is in accordance with good land use, and is accompanied by the reforestration of land found better suited to forestry, it is a good thing. But this is a problem of land use, farm management and economics before it can become a forestry problem. Our plans this year, therefore, include closer cooperation with our own Farm Management specialists and Soil Conservation Service in farm plans, with Farm Unit demonstrations as the logical

starting points.

II. Facts Basic to the Virginia Farm-forest Program:

1. Approximately half of Virginia's potentially productive forest land is on farms, and almost half of the "land in farms" is in forest.
2. Although potentially more productive, these farm forests are generally less productive than are non-farm forests.
3. Virginia, because of its location and excellent transportation facilities, is peculiarly subject to excessive drain in times of stress. Three times in less than 40 years, Virginia forests have been drawn on to help support a major war effort. They show the strain.
4. Although a resurvey made last winter, shows an over all increase in sawtimber volume over that reported in 1940, the increase is in hardwoods of inferior quality and small sizes, whereas pines showed a decrease of 27% and a continued lowering in tree sizes.
5. So far as quality timber is concerned, Virginia forests are at low ebb. Not only are processors constantly forced to use smaller and lower-grade material, but many of them experience difficulty finding even that.

6. Times without number, when depression or other catstrophies have struck, Virginia farmers have saved their farms from foreclosure by selling their timber. And it is standard practice to "take to the woods" in emergencies, so long as there is anything salable. But inspite of these services, there has been little conscious effort to maintain the forest as an asset.

7. The scarity of good timber, coupled with an active demand, makes for a seller's market. No longer need the owner sell on the buyer's terms. He can dictate what is to be sold, and how it is to be cut. It is his timber. What is done with it is his responsibility. No one else can do it.

III. Changes and Trends which Influence the Program:

1. In 1948 the Association of Land-Grant Colleges and the State Foresters Association adopted a joint statement of policy in which the state forestry departments were recognized as the logical agency to (1) operate the forest fire protection organization, (2) grow and distribute forest planting stock; (3) administer state owned forest land, (4) enforce forest laws, and (5) provide service for forest owners. To the Land-Grant College was assigned educational and demonstrational work with farmers. This

has always been the division of responsibility recognized by this department. It is gratifying to see it thus formalized.

2. The 1948 session of the General Assembly provided for two additional forestry specialists. These men have been used, and it is planned to continue them, in the two eastern districts - one north of the James River and one south. They are being used for a greatly intensified educational program in their respective districts. They are men with very different personalities, so approach the job differently. Between them, we are developing an effective program.

3. The recollection of war-time difficulties in meeting military and civilian needs has become somewhat dimmed. Most people, however, - both landowners and industry - still recognize that our timber supplies have been seriously depleted and must be rebuilt. With the labor situation what it is, however, farmers and other small owners have not done much about it. It is believed that, with an easing of the labor market, it will be possible to get more forest improvement work started.

4. Prior to World War II a few wood-using industries employed foresters, but largely as window-dressing. The war turned their attention to the production of lumber, pulpwood and other critical items. Following the armistice the work of these men again shifted, but this time to more constructive programs - both in the management of company

forests and in providing technical assistance to landowners from whom they purchase forest products. The only weakness in their program is the natural tendency to overemphasize the particular product in which their company is interested. In general they are doing a good job. We cooperate with them closely.

5. Recognizing the need for more funds for forestry work, large operators (both pulp and lumber) sponsored and pushed through the General Assembly, two bills which place assesment on them - one an acreage tax for fire protection, and the other one a severance or processing tax to finance expansion of the Timber Marking Service. The same group, through Virginia Forests, Inc., has also played a leading part in the Keep Green, Tree Farm, and More Trees for Virginia programs.

6. More than thirty foresters are now employed by the State Forest Service in the Marking Service. The fee has been raised by easy steps from the initial charge of 15 cents per M. for marking saw timber, with corresponding increases for pulpwood, fuelwood and such; but is still less than the cost of operations. This is strictly a Service program, and it is the writer's belief that charging a fee is a sound policy and that the fees should continue

to be increased until the program becomes self-supporting: also until private practicing foresters take over the bulk of the work, particularly for non-residents.

7. The trend toward setting sawmills in a permanent location and trucking logs to them continues. This is particularly true in the southeast district and is believed to be a healthy development.

   a. It provides a steady market for the few logs that should be harvested annually under good farm-forestry - logs for sale, and logs to be customed sawed for home use.

   b. It discourages the cutting of small trees, because both seller and hauler become conscious of the expense of handling small logs, and their low out-put.

   c. It results in better manufacture and grading of lumber, because the mills are apt to be more carefully set-up, and there is usually greater volume.

   d. It makes for closer utilization in the woods, better selling practices, better logging practices and greater interest in the future production capacity of the land.

8. We have on the staff a forester (Lyon) who has had experience in the management of mountain forests, the operation of a

hardwood sawmill, and selling the products therefrom. For the first time we are prepared to give first-class training in these fields.

IV. Adjustments Needed:

1. The county agents need a think in terms of the farm as a unit, rather than as a group of separate enterprises. This is the guiding principle in the Farm Unit Program, and must include the wooded portions of the farm before it becomes what is implicit in the name.
2. Every county agent in a forested county should include enough forestry work in his plan of work to acquire the training and confidence to enable him to advise farmers in routine forestry jobs. Beyond that he has recourse to the specialist.
3. Make more general use of farm needs and available markets for fuelwood, pulpwood and other small products, to thin, weed, and cull farm woods systematically.
4. The forestry specialists need to pay more attention to people. No man can be educated unless he wants to be and, in the final analysis, it is the owner of the land who determines what will be done thereon.
5. We desperately need forestry research along several lines.
   a. Economics of cutting practices; to strike a better balance between what is silivculturally desirable and what is

economically feasible.

b. Economic studeis to determine the value of land for growing timber as compared with other uses.

c. Equiptable distribution of taxes on land in different uses.

d. Relative advantages of long rotations for sawlogs, short rotations for pulpwood and comparable products, and combinations of the two.

e. Methods of encouraging desirable reproduction after cutting.

f. Methods of controlling hardwoods and honeysuckle where it is interfering with desirable growth.

g. The effect on the soil of growing repeated crops of pine where the natural forest was predominately of hardwoods.

h. Unexplained sickness and death of various species, in various sections, and what to do about it.

i. Losses due to insects, and their control.

j. Methods for preparing and treating on-durable woods for fence posts, including service tests and designs for equipment -- Tests of new preservatives, low value species, short cuts in preparing the posts, etc.

V. Major Problems:

1. A lack of knowledge on the part of both county workers and farmers as the advantages of a constructive forestry program.

2. Lack of stable land use policy on most farms, with much of it producing nothing of commercial value.
3. Low stocking of desirable trees and overstocking of undesirable trees.
4. Destructive cutting, both for sale and for home use.
5. Premature cutting of trees - as they become salable, instead of when they reach financial maturity.
6. Poor utilization at home.
7. Poor harvesting and marketing practices.
8. What to do about littleleaf disease.
9. Interesting County Agents in the forestry portion of the farm job.
10. Lack of County participation in development and execution of forestry program by counties.
11. Protection - Fire, Grazing, Insects and Diseases.

In addition to these fairly definite problems, we will continue to give assistance and demonstrations along other lines where county agents believe it represents a valuable service in itself, or may serve as an entering wedge for a better program later. We expect also to give such assistance to Vocational High School and Veteran instructors as may be requested, and to participate in forestry schools conducted by the State Department of Education when requested.

Pending the time when there may be a full-time Safety Specialist, we

will continue to do what we can to keep a safety program going, especially just prior to and during National Farm Safety Week in July and National Fire Prevention Week in October.

VI. Goals

Setting up numerical goals in a project which is still in the missionary stage seems pointless. We are still largely on a propoganda and come-when called basis. Our ambition is to get the forestry project so well established that there will be enough demand to permit the outling of a year's work with schedules and time-tables worked out in advance. Patton is trying it this year. The first job, however, is to get forestry into the county plans of work, and to this end, we expect to make the rounds of forested counties where interest lags, with the District Agents when possible, to discuss the situation, pick up leads, and keep forestry before the county agents. Since the county agent is the Extension Service so far as his particular county is concerned, the starting point with any project must be his interest.

Farm-forestry is a farm problem first, and a forest problem second. A good forestry program for an individual farm involves:

1. Determination of areas which are better suited to growing trees than to cultivation or pasturage. This is a question of farm management and must be decided by the farmer. Unless he does so, or at the very least concurs, he is not apt to follow it up.

2. The amount and kind of timber available, the rate at which it is growing, and the rate at which it should be growing.
3. The requirements of that particular farm for lumber, fuelwood, posts and other forest products - both current and prospective.
4. The amount and kind of surplus products available for sale, after item 3 has been provided for.
5. The amount of labor that may be available from time to time.
6. The equipment available on the farm, and the skill and experience of the farmer and his labor.
7. Local markets for various products, and possible new markets.
8. How, and how much forestry can best be integrated with the management plan for the farming operation. In this the farmer looks to the county agent, the farm management specialists, and the agronomist, before he looks to the forester. Farm-forestry is farming first, and forestry second.

VII. Specific Projects We Expect to Push

1. The intensive educational projects in the two eastern administrative districts.
2. Forest improvement - including reduction of undesirable growth, preparation of seed bed, planting and fencing out livestock.
3. Setting up permanent demonstrations.
4. Take full advantage of the 1954 Agricultural Conservation Program.

5. Emphasize fuelwood, mine props and pulpwood as products to carry the cost of improving depleted woodlands and thinning young stands: This is particularly applicable where bright tobacco is grown.

6. Cooperate with Agricultural Engineering Department in fence construction and post treating demonstrations.

7. Continued pressure on the declining practice of burning broomsedge, weeds and crop residues. It is pretty well overcome in the better farming sections, but is still too common in some poorer areas.

8. Better utilization of home grown timber, including preservative treatment.

9. Better marketing practices.

   a. Better understanding of present markets.

   b. Search for new outlets for dull items.

10. Protection from fire, grazing, insects and disease, especially littleleaf.

VIII. Methods and Procedure.

Realizing that we have not succeeded in enlisting the active interest of all of our county workers, and that a new approach is needed, we have prepared a statement of "The Forestry Situation in Virginia" and accompanying Forestry program as shown below.

It is our plan to present this statement and program to the District Agent and Administrative officers for their approval; to the State Forester and his District Foresters for their information and criticism then, at a suitable meeting or meetings, present it to the assembled county workers. The statement and Program follow.

THE FORESTRY SITUATION IN VIRGINIA

And the Place of Farm-Forestry

Virginia forests and their dependent industries bring an annual income (1950 census) of $75 million for raw products laid down at primary processing plants. Manufacturing these raw products into consumer goods adds $173 million, making a total cash income of $248 million supported by Virginia forests.

Of a gross area of 25½ million acres, Virginia has 14.8 million acres (58.1%) in forest growth and of this, 51% (7.6 million acres) is reported on some 127 thousand farms - an average of 60 acres per farm reporting forest land.

Depending on that forest land for raw materials, are more than 3,000 wood-using industries, which among them, provide 25% of the industrial employment in the State. So in seeking to build up the productivity of farm woodlands, we are seeking to not only increase farm incomes through the sale of more and better forest products, but are providing for the expansion of an industry which already gives jobs to ¼ of the industrial workers. And the unique feature of

this resource is that it can be forever renewable; provided it is managed to that end.

Unfortunately, however, it is not being so managed to any large extent and, for the State as a whole, the timber resource is deteriorating. Two surveys of this resource have been made in Virginia, one in 1940 and the second in the winter of 1952 - 1953. These surveys show that in this 13 year interval, the volume of pine sawtimber declined 22%. At the same time the volume of hardwood sawtimber (much of it low grade) increased 27%. So while the total volume shows an increase of 3½%, much of this increase is in grades, sizes and species not now accepted by industry.

Ownership of Virginia Forest Land and It's Status:

These 14.3 million acres of forest land are divided roughly:

1.4 million acres - 10% - in public forests

1.4 million acres - 10% - in industrial holdings

7.6 million acres - 51% - in farm woodlands

3.9 million acres - 26% - in non-farm small holdings

.4 million acres - 3% - in parks and unproductive land.

The 20% in public and industrial ownership is in large holdings; most of it under the management of trained foresters and well cared for.

The 26% in miscellaneous non-farm small holdings is a sort of no-mans-land. The individual tracts are too small to justify the employment of competent management, and they are too remote for the owner to provide it personally.

This is the class of ownership from which the expanding industrial forests are largely recruited.

The 7.6 million acres on farms is a different story. It makes up almost half (49%) of the land in farms. It is potentially the most productive forest land in the State. And it enjoys advantages in the way of location, transportation, markets and labor supply, that the others lack. Yet these farm woodlands are, generally speaking, more depleted and more mismanaged, than are those in any other category. This partly because they are so accessible, and partly because of short farm tenure, but chiefly because of a lack of knowledge and interest on the part of the owners - a lack of interest inherited from generations of land-clearers who, finding no market for their timber, thought of trees only as an encumbrance.

Virginia Forest Economy:

Compared with other states, Virginia ranks:
12th in income from forest products, with $248 million
9th in value of raw forest products, with $75 million
14th in values added by manufacture, with $173 million
In addition to this cash income, is the value of products used on the farms.

Accurate figures here are lacking, but they are not less than:

1½ million cords of fuelwood	@ $10 per cord	$15 million
10 million fence posts	@ 20¢ each	2 million
150 million feet of lumber	@ $50 per M. ft.	7½ million
Value of products used at home		$24½ million
Value of raw products sold (½ of total)		37½ million
Total value of farm forest products		$62 million
Average value per farm (127,000 farms)		$490

Averages in this, as in many cases, are not too significant, but it is conservative to say that the value of products sold could be trebled if farm woodlands were managed on a crop basis, instead of being merely exploited from time to time as the accumulation of nature's bounty becomes salable, not mature, merely salable. This would mean an annual income of over $1,000 per average (60 acre) farm. This average figure is too high in most of the mountain counties, but is too low for the coastal plain. A more usable figure could be based on annual income per acre, which might figure out something like $15 to $30 per acre annually in the coastal plain, $5 to $15 per acre in the mountains and somewhere between for the Piedmont.

Forest Management Gets Under Way:

As research brings improved techniques; as management comes to realize its value; and as wood-using industries become more dependant on grown timber, the quality and intensity of forest management on large holdings increases. It is inconceivable that small holdings will be permitted to lag far behind. The owners cannot afford it, and the general economy will not tolerate it.

Small Holdings Problem:

The 3.9 million acres in small non-farm holdings are in an anomalous position. There is no constructive program for them: nor does one appear feasible. They seem destined to pass to individuals and organizations better able to provide a brand of management that will keep them reasonably productive.

Contrasted with small-non-farm holdings, the 7.6 million acres of woodlands on farms are relatively stable, so far as being an integral part of operating farms is concerned. Short tenure and subdivision will always present

problems; but so do they in soil conservation and other continuing programs looking to permanent improvement of farms. Involved are sociological and economic problems, as well as forestry. We have the techniques to make forest land vastly more productive, but seem to lack the missionary zeal to convince the landowner that applying them is a profitable use of his time.

Farm Forestry:

Farm forestry, we define as standard forestry techniques and principals adapted to the area of forest land, the material requirements, and the labor supply available on individual farms. It is first of all a question of land use and economics.

1. Certain areas of most farms are better suited to timber growing than to cultivation or pasturage.
2. Farm woods are capable of adding materially to the farm income, if given the same degree of care and thought that must be accorded any successful enterprize.
3. Woods work and the marketing of forest products, has a flexibility of labor and income that is enjoyed by no other farm enterprize.
4. Many farmers are seeking a means of enlarging their business. The farm woods offer such an opportunity without enlarging the farm. They own the land, and managing it calls for little more investment than the slack time employment of farm labor, work-stock and equipment.

We believe that it is the responsibility of the Extension Service to help farmers develop this asset. To that end a program for the care and development of farm woodlands, and the harvesting and marketing of their products is presented herewith.

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FORESTRY PROGRAM
Virginia Agricultural Extension Service

GOAL

To develop a strong State-wide educational program of forestry that will focus attention on small areas of woodland and help increase the productivity and income producing ability, especially of those forming an intergral part of operating farms.

Problem	Solution	Method
Lack of knowledge on part of landowner and county agents of advantages to be had through better management of farmwoods.	Increased educational work with and through county agents and others in direct contact with farmers.	Demonstrations, meetings, newstories, radio.
Land Use: lack of a stable land use program based on broad economic considerations rather than price fluctuations.	Closer cooperation with farm management and agricultural economics people in setting up land use programs on individual farms.	Coordinating with farm management and cooperating with county agents in weighing forestry against agriculture. Forest evaluation and management contests.
Idle and unprofitable land.	Plant to forest trees after decision as to good land use.	Cooperation with Virginia Forest Service and TVA. ACP practices, 4-H Projects.

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Problem	Solution	Method
Low stocking of desirable trees on land being devoted to forestry.	Better cutting practices. Leave better seed trees. Seed bed preparation. Control of competing growth. Fence out livestock in hardwood forests.	Mark timber to be cut or saved. Scarify or rake to expose soil. Tree killing and spot planting. Demonstrations and contests.
Destructive cutting: a. Harvest cut. b. For home use.	Cut low grade trees, at least as closely as good one. Sell products rather than standing timber. Save trees that are growing well and have good form, and those that are needed for seed. Use low grade trees for low grade uses.	Encourage farmers to harvest own timber with off-season labor. Mark trees to be cut or saved. Emphasize variety in products sold; this in the interest of full use and highest market price.
Short sighted cutting-sacrificing timber just as it reaches its most profitable growing stage.	Get carrying charges from thinning and culling. Postpone cutting crop trees until they have passed period of profitable growth.	Encourage owners to harvest own timber - cut small amount annually. Cut selectively and save trees that are growing well.

Problem	Solution	Method
Low and irregular income from forest.	Harvest timber with off-season farm labor. Sell products rather than stumpage. Find markets for dull items. Work toward sustained yield. Build up quantity and quality of growing stock. More and better use of home grown forest products.	Demonstrations. Marketing and grading schools. Study markets. Figure growth rate of young timber. Save fast growing young trees and seed trees. Custom sawing of lumber. Fence post preservation.

Forrest Patton has prepared a schedule for the year and will try out notifying his agents when he can be with them.

He hopes to conduct the following:

1. Forest Improvement
   a. Ten demonstrations of hardwood control.
   b. Five demonstrations of spot planting on cut-over areas.
2. Five seed-tree cutting demonstrations near well traveled roads.
3. Three fence post treating demonstrations; one of them combined with a fence construction demonstration.
4. Schools on forest evaluation in three counties.
5. Get 10 county forestry committees set up and functioning.

Edward Gill sets up as his major jobs:

1. To find and get started, permanent demonstrations in his remaining counties.
2. Work with each individual agent in his district, both white and negro.
3. Hold three forestry schools - In Brunswick, Mecklenburg and Powhatan.
4. Hold wood treating demonstrations in all areas not yet covered.
5. Get increase in 4-H forestry projects.
6. Gather and distribute better marketing information, especially that pertaining to hardwoods.

Conservation Program

To do this he expects to:

1. Introduce and push the program given above.
2. Assist agents to secure and use county forestry committees.
3. Locate areas and cooperators suited for use as permanent demonstrations.
4. Stress forest improvement.
   a. Control of undesirable growth - hardwoods, honeysuckle, etc.
   b. Adequate seed trees.
   c. Seed bed preparation.
   d. Planting where natural seeding fails, or appears doubtful.
5. Press for better marketing.
   a. For best possible returns.
   b. To encourage best species in next stand.
6. Better use of home grown timber, especially preservative treatment.
7. Increased 4-H Club and Camp work.
8. Cooperate with all agencies working for better forest management and farm life.

A. B. Lugo expects to concentrate on:

1. Setting up county committees to :
   a. Formulate a County forestry program.
   b. Help put on demonstrations in:

1. Improved cutting practices, including reseeding of area.
2. Planting idle land and depleted forest lands.
3. Preservative treatment of posts.
4. Control of undesirable growth.
5. Fencing out livestock from hardwood forests.

c. Help locate and carry out demonstrations.

d. Sponsor tours, demonstrations and field days.

e. Encourage 4-H participation.

2. Assisting county agents conduct forestry training school, using the Evaluation and Management score card.

III. Cooperation:

Cooperation is less a definite commitment than it is of maintaining friendly and understanding relationships, of being sure than in thinking and teaching our own subject, none of us inadvertently advocate a practice that would infringe on another. Also there is the problem of overlapping programs. A case in point are the "demonstrations" being conducted by the State Forest Service. In theory, that is definitely in our field, yet, if the county agent is not interested and will not do the job, we can scarcely question the propriety of someone else doing it.

Also when we or they are in the field, and someone brings up a question involving the other's responsibility, it is poor public relations to refuse advice merely because it is in the other's field. Because this has led to some misunderstandings, it is planned in the future that when the question is more than a routine opinion expressed in a discussion, that memoranda be exchanged.

It is hoped that during the year we may be able to work out a more difinite understanding between the Extension Service and the State Forest Service, so that the respective fields may be more clearly defined. It is my belief that such agreement should follow the policy statement approved by the Association of the State Foresters and the Land Grant College Association in the fall of 1948. This would make the Extension Service responsible for the educational and demonstration phases of farm-forestry, and make the State Forest Service responsible for Service work, both farm and non-farm, and leave them free to develop a program for the four million acres of non-farm small holdings for which there is now no program, except for fire protection and the Marking Service.

With the above in mind, the following tabulation represents cooperative relationships which have been built up through the years and which are to be nourished and strengthened as opportunities present themselves.

XI. CALENDER:

COOPERATOR	ASSISTANCE GIVEN	ASSISTANCE RECEIVED
Virginia Forest Service	Reforestation: Advertising and distributing trees.	Furnish planting stock.
	Fire Protection: Backing efforts, and coordinating forest fire protection with farm fire protection.	Leadership in all forest and field fire protection.
	Forest technique: Consult from time to time; pool best thought and present it uniformly.	Pool information.
	Forest education: Work together to develop forestry teaching in public schools, vocational high schools, and veterans training program.	Pool information
	Forest management: Advertising service of service foresters and referring landowners to them.	Service for farmers who want more help than is contemplated in Extension Program.
4-H Club Department	Subject matter, and assisting with teaching of subject matter to Club members and at camps.	Disseminating information and publicity in 4-H Club paper.
TVA	Reforestation: Assistance in distributing and planting forest trees.	Supply planting stock free of cost in seven southwestern counties.
	Forest management: Assistance in lining up demonstrations and publicizing results.	Assignment of foresters to work in Virginia part of valley.

COOPERATOR	ASSISTANCE GIVEN	ASSISTANCE RECEIVED
TVA	Consultation on technical matter presentation so we may be together.	Pool information.
	Assistance in preparing leaflets and other educational matter.	Publication and use of leaflets, etc.
Other VPI Depts.		
Soils	Prepare forestry chapters for county soil survey reports.	Help collect data and include forestry chapter in soil survey report.
Agronomy, Farm Management and Livestock	Cooperation in securing good land use as between cultivation, pasturage and forestry.	Same
	Combat use of fire to get rid of broom sedge, weeds and crop residues.	
Wildlife	Forestry assistance for their program.	Wildlife assistance for our program.
U. S. Forest Service	Cooperation in developing desirable forest practices and for presenting them in unified manner.	Bulletin, posters, etc., for entire program. Assistance in determining stumpage values.
	Distribution of the results of their research.	Subject matter.

COOPERATOR	ASSISTANCE GIVEN	ASSISTANCE RECEIVED
Soil Conservation Service	Assistance to planning technicians on forestry questions.	Assistance in planning good land use - also contacts with farmers needing forestry help.
State Department of Education	Preparation of teaching material on forestry questions for teachers.	Use of school forests for demonstrations and of school buildings for meetings.
	Instruction to Vo-Ag. and Veterans groups.	Promotion of forestry program.
Farm Security Administration	Providing forestry assistance for clients.	Assistance in getting recommendations followed.
Wood-Using Industries	Assistance in lining up merchantable timber.	Assistance with marketing problems.
	Cooperation in developing desirable forest techniques.	Assistance with marketing problems.
	Helping farmers understand industry forestry programs.	Assist with demonstrations.