ANNUAL REPORT

FARM FORESTRY EXTENSION WORK

NORTH CAROLINA

December 1, 1951 - November 30, 1952, Inclusive

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Table of Contents

Farm Forestry Extension - Summary of Accomplishments - 1952

One of the major highlights of 1952 was the signing of a new "Memorandum of Understanding" between the N. C. Agricultural Extension Service and the N. C. Division of Forestry, Department of Conservation and Development. Immediate steps, taken to implement this agreement, have resulted in more cooperative relationships, coordinated efforts, particularly in marketing phases of the program, and the elimination of confusion and overlapping in educational work.

During 1952, farm forestry extension specialists assisted county agents in conducting 768 separate field meetings, tours, field days and indoor meetings on various phases of forestry, attended by 37,995 persons. In addition, they, in company with county extension personnel, made 1,621 farm visits to advise and train farmers and 4-H Club members on forestry practices, 246 visits to industries and timber operators to assist with problems and gather market information, and visited 440 other landowners and local leaders in carrying out the forestry extension program.

Forest tree planting, one of the major phases of the program, was pushed with vigor this year. Four-H Club members set a record number of seedlings - 1,214,250 -, beating the record set in 1950 by slightly over 25,000. In addition, extension personnel placed 2,927,375 seedlings with adult farmers and others. On a state-wide basis extension personnel were responsible for placing 57% of all tree applications and 27% of the total number of trees distributed.

As a result of a series of machine planting demonstrations held in January and February, 14 mechanical planters were purchased by North Carolina lumbermen and larger landowners, both for their own use and for use by farmers and others on a rental basis.

Christmas tree seedlings planted as a result of extension efforts totaled 300,550 in 1952 as compared to 84,600 in 1951. At the end of the year plans had been completed to conduct a Christmas tree market survey and pass on information gained to growers.

A survey made in the summer of plantings of trees donated by various paper companies to 4-H Club members and adult farmers revealed that 92 to 95% of the trees donated had been planted. In addition, 75 to 85% of all trees donated were alive at the time of inspection. This proved that extension is doing a thorough job in placing these free seedlings.

Pulpwood harvesting and marketing were stressed at field meetings and demonstrations over the state with excellent results. 1951 North Carolina pulpwood production broke all previous records when 1,304,540 cords were shipped from points within the state. This was a 27% increase over 1950. Figures for 1952 were not available at the time this report was written, but a further increase was expected.

Four-H Club forestry constituted one of the major phases of the program. 2,673 club members completed forestry projects in 1952 - a new record. County extension personnel in 99 counties reported that 29,820 club members received definite forestry training. Forestry extension specialists assisted with training 18,351 of these.

Interest was exceptionally high in methods of wood preservation, particularly the preservative treatment of fence posts. Sixteen combination demonstrations in fence post treatment and fence construction in cooperation with the Agricultural Engineering Extension Department were exceptionally well received. A considerable number of farmers are now set up to do their own treating. Many more are using treated posts and building materials. Commercial treating plant operators were having a hard time keeping up with demand in 1952.

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I. Introduction and Background

North Carolina's farm forests play an important part in the farm and forest economy of the state. Woodland constitutes 52% of the total acreage in farms, and 200,176 out of a total of 288,508 farms reported woodland acreage in 1949. Furthermore, farm woodland acreage increased by 497,000 acres from 1944 to 1949. The average area in woodland on farms reporting was 48 acres.

In 1949, 9,418 farms reported selling $7,265,807 worth of standing timber, or an average of $771 per farm reporting. An additional 8,000 farms reported selling $2,608,550 worth of forest products. Fuelwood, posts, poles and sawlogs cut for home use in 1949, are conservatively valued at $11,529,000 on the farm. Thus, farmers harvested for home use or sale a conservative total of $21,403,357 worth of forest products or standing timber in 1949. This represented an average return of $2.20 per farm woodland acre.

Farmers own 48 1/3% of all North Carolina's forest land. They own more forest land than any other class of forest owners. The wood-using industries, which rank second in number of persons employed and third in annual value of products sold depend on farm woodlands for a large percentage of their raw materials. In 1948, the Southern Forest Experiment Station

estimates that the delivered value of raw forest products from farm forests plus the value of products cut for home use on the farm totalled $60,000,000.

Farm forests also serve to control erosion, equalize stream flow and provide food and shelter for game birds and animals.

In spite of this sizable contribution, farm forests, on the average, are producing at only one-third of potential capacity. In 1949, the average farm forest acre in North Carolina produced about $1.00 worth of products or standing timber for sale, plus $1.20 worth of products for home use. In this same year, farm woodlands in fully productive condition which received systematic management and protection produced from $3.75 to $9.50 worth of products for sale, plus additional material for home use.

Building farm woods production from one-third to full capacity requires very little cash investment where the owner is able to do his own work. Labor during the late fall or winter months is one necessity. The second requirement is the application of good judgment in carrying out such practices as planting forest tree seedlings on idle land and cutover or thinly stocked woodland, removing cull and crowded trees for home use or sale, harvesting mature trees so as to reserve adequate growing stock or sufficient seed trees, applying businesslike marketing methods in selling standing timber or forest products and protecting the woods from fire, livestock, insect and disease damage.

The majority of our farmers have not made the change-over to full production as yet. There are three main reasons for this:

1. They do not realize how much increased income and other benefits are earned when timber is handled as a crop compared to returns under present slipshod management methods or lack of management.

2. They do not know how to apply the various practices required in

their own woodlands.

3. As youngsters they received little or no training in good timber-growing methods and developed little or no appreciation of the importance of the farm woods to the individual farmer.

II. Program Objectives

Farm forestry extension personnel assist county agents and, through them, other agricultural workers and local leaders to plan and conduct forestry programs in the individual counties with the following objectives in mind:

A. To make all farm woodland owners and operators aware of the increased income and other benefits received when forest trees are grown and managed as a crop compared with returns from mismanagement or no management.

B. To acquaint them with practices needed to bring into fully productive condition every acre of woodland and every acre of idle land on farms best suited for forest tree crops and to create a strong desire on their part to adopt such practices.

C. To show them how to apply such practices in their own woodland.

D. To create an appreciation on the part of farm youth of the important contributions forest trees and forests make to the individual farmer, farm, community, county, state, and nation. To train farm boys and girls to carry out improved forest practices on the home farm.

The balance of this report will be devoted to showing what farm forestry extension personnel did during the 1952 program year to carry out these objectives.

III. Organization and ~~Personnel~~ Procedure

Farm forestry extension is a cooperative project between the Agricultural Extension Service of the North Carolina State College of Agriculture

and Engineering of the University of North Carolina and the Agricultural Extension Service of the United States Department of Agriculture. It is conducted under the provisions of the Smith-Lever Act, the Clarke-McNary Act, Section V, and other supporting laws, both federal and state.

Farm forestry extension work is under the general supervision of Mr. David S. Weaver, Director of the North Carolina Agricultural Extension Service.

The following personnel were employed during the program year:

State Level:
John L. Gray, In Charge, Forestry Extension, State college, Raleigh
John E. Ford, Assistant Extension Forester, State College, Raleigh

District Level: There are six extension districts with a forestry extension specialist assigned to each district, as follows: See Map I.

Eastern District - W. T. Ellison, Jr., Washington
Northeastern District - J. C. Jones, Nashville (December 1 to December 31, 1951)
- J. H. Phillips, Jr., Nashville. Mr. Jones resigned effective December 31, 1951, to enter private business. Mr. Phillips was appointed effective January 1, 1952, to replace Mr. Jones.
Southeastern District - R. S. Douglass, Clinton
Northwestern District - W. M. Keller, Winston-Salem
Southwestern District - G. W. Smith (December 1, 1951 to September 30, 1952). Mr. Smith resigned effective September 30, 1952, to accept a position in private industry. No replacement had been assigned by the close of the extension year.
Western District - F. E. Whitfield, Asheville

Each district forestry extension specialist is responsible for assisting county agents in his district to develop and conduct forestry extension programs and for answering requests for information and assistance. State-level specialists assist, guide, and train the district specialists in carrying out their duties.

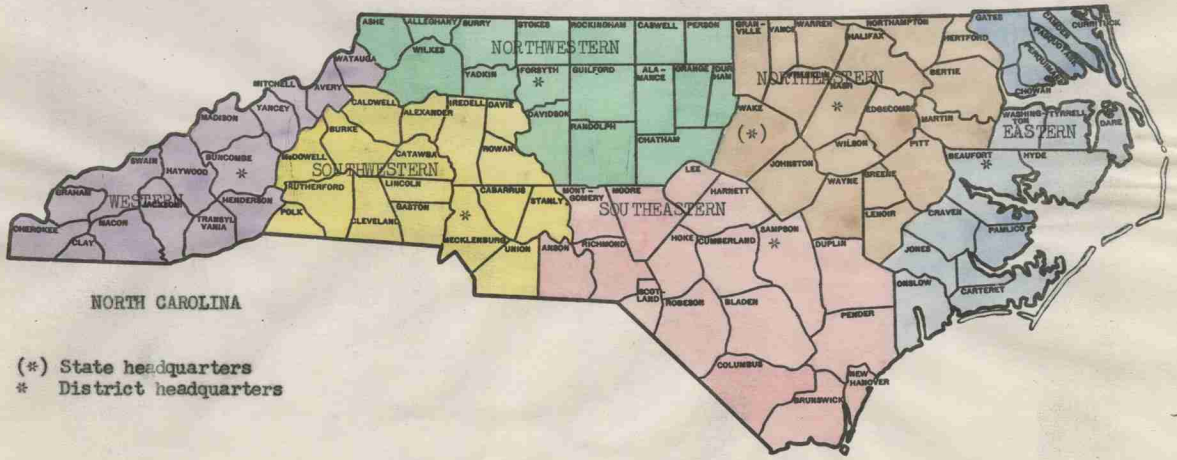
IV. Major Activities and Accomplishments

A. Forest Planting

1. Planned Goals Achieved - The 1952 Plan of Work called for 1,200

Map I

Extension Districts
Showing Territory Assignments and Headquarters
for Forestry Extension Specialists



NORTH CAROLINA

(*) State headquarters
* District headquarters

adult farmers to plant 3,000,000 tree seedlings and 1,200 4-H Club members to plant 1,250,000 tree seedlings on idle, eroding and cut-over land as a result of the combined efforts of county agents and farm forestry extension specialists. The plan called for extension personnel to place a combined total of 4,250,000 seedlings with 2,400 adult farmers and 4-H Club members.

The record shows that 1,015 club members planted a total of 1,214,250 tree seedlings and 1,202 adult farmers planted a total of 2,927,375 seedlings, or a combined total of 2,217 individuals planted 4,141,625 trees. Thus, for all practical purposes we met our planned goals. We feel that these goals would have been exceeded had the supply of white pine and shortleaf pine available from North Carolina Division of Forestry nurseries not been exhausted over a month before the end of the 1951-1952 planting season.

In 1951-52, 3,816 applications for 15,101,800 trees were received by the public nurseries. Extension personnel were responsible for placing 57% of the applications and 27% of the trees.

State, district and county summaries of trees placed by extension personnel are shown in Section VIII by sources. All trees were produced by the North Carolina Division of Forestry or the Tennessee Valley Authority.

The only trend noticeable this year was an increase in planting of species suited for the production of Christmas trees. In 1950-51, 67 farmers and club members planted a total of 84,600 red cedar and Norway spruce seedlings. In 1951-52, 165 farmers and 4-H Club members planted a total of 300,550 of these species. This is significant, and plans have been made to investigate Christmas tree marketing methods and potentialities in 1952-53.

2. Extension Methods and Teaching Devices Used - Application blanks, price lists of trees available from the North Carolina Division of Forestry nurseries and the Tennessee Valley Authority nursery, and a letter explaining

details on free-seedling offers to adults and 4-H Club members were sent to all county agents in the early fall. Monthly reports showing progress by counties in placing free trees with 4-H Club members and adult farmers were sent to county extension personnel in counties concerned. Copies of these reports also went to the extension editor, who released them in story form to the radio and press at regular intervals. Copies were also sent to the district agents and to 4-H specialists. They used them to encourage agents to push the program in the counties.

Farm forestry extension personnel assisted county agents with holding 135 field planting demonstrations and discussed planting at 6 indoor meetings. They prepared 15 news articles; 20 circular letters, with 2,426 copies being sent out; and 5 fair exhibits. They took part in 25 radio broadcasts and visited 298 farmers and 4-H Club members to advise them on planting. In addition, an envelope-size booklet, entitled "Plant Forest Trees," was prepared and 30,000 copies printed.

In January and February a series of machine-planting demonstrations were held in fifteen southern Coastal, Sandhill and Piedmont counties. The Webster Machine Company of Cornelia, Georgia, cooperated by furnishing a truckload of their machines and an operator. As a result, fourteen of these machines were purchased by lumbermen and large farmers, who plan to use them on their own lands and also make them available on a rental basis to other landowners. These machines are expected to boost planting rates considerably during the coming season in these counties.

Brittain Brothers Lumber Company of Statesville bought one of these machines to plant 30 acres of their own land. They reported that three men averaged setting 2,200 seedlings per hour in planting this area. This is eleven times the average number set per man-hour using hand tools.

In Haywood County, a new technique in tree planting education was tried during the week of March 17. With assistance from the district forestry extension specialist and state extension forester, County Agent Wayne Corpening and his staff made up 9,000 packages, one for every public school child in the county. Each package contained a live white pine seedling, instructions for ordering and planting forest tree seedlings, an order blank, and a letter to the child's parents explaining the need for forest planting and advantages of planting trees.

On Arbor Day (Friday, March 21), with extension, state, T. V. A., and industry foresters serving as speakers and instructors, Arbor Day programs were held for the entire student bodies in each of the county's 26 public grammar schools and high schools. The county agent, in cooperation with the school principals, had drawn up an itinerary for each forester assisting. Programs included an indoor talk on the contribution of trees to everyday life and an outdoor demonstration showing how to plant them. At the end of the school day each teacher passed out seedling packages to each school child to take home.

As a result of this program, County Agent Corpening reported that 100,000 seedlings were ordered from March 21 to April 15 (which marked the close of the planting season). An evaluation will be made later on to determine other results of this activity. Close cooperation was given by the Champion Paper and Fibre Company of Canton, N. C., which furnished bags and envelopes for making up the packages, and from the Tennessee Valley Authority in furnishing the seedlings.

In Chatham County, 100,000 tree seedlings were placed during the first full week in January. Continental Can Company of Hopewell, Virginia, draws a considerable volume of pulpwood from Chatham County. They were

anxious to encourage more forest tree planting. They offered to buy 100,000 loblolly pine seedlings for free distribution if the Extension Service would take the responsibility for placing these trees with Chatham County landowners.

County Agent J. B. Snipes contacted farmers and others during December and encouraged them to take advantage of this offer. He then made up a list of landowners, together with the number of trees they wanted to plant. He sent this list to the state forest nursery.

On Monday morning, January 7, Continental Can Company forester, Joe Hardee, took a pick-up truck, went to the nursery, and loaded up 100,000 loblolly pine seedlings. Accompanied by Extension Forester Gray, he then drove to Pittsboro, county seat of Chatham County.

Meanwhile, County Agent Snipes had notified the 35 landowners who were to receive these trees, to come in and pick them up at 1:00 p. m. on January 7. Most of them showed up. Before the trees were distributed, Gray and Hardee took these owners to a nearby farm and gave them a demonstration in how to heel-in and plant pine seedlings.

The owners then took their seedlings home. Altogether, 86,000 were distributed that day. The remaining 14,000 were picked up by the owners on the following day.

In order to encourage more farmers to take advantage of P. M. A. assistance in forest planting, forestry extension specialists appeared on county training meetings for local P. M. A. committeemen in a number of counties. The state extension forester cooperated with the State P. M. A. administrative officer in preparing and delivering a forest planting radio broadcast during P. M. A. program time. P. M. A. committeemen were

encouraged to make use of extension planting publications by ordering them through the local county agent.

A survey was made during the summer to measure the effectiveness of the free seedling programs. Results are discussed under section VI of this report, "Measuring Program Effectiveness."

The finest possible cooperation was received from the pulp and paper companies and from one lumber company, who made it possible to offer seedlings free of charge to 4-H Club members all over the state and to adult farmers in 38 counties. Altogether, they purchased a total of 1,447,750 tree seedlings from North Carolina Division of Forestry nurseries for free distribution through the Agricultural Extension Service.

The extension forester contacted personnel of the North Carolina Division of Forestry almost weekly during the planting season to keep informed on the available supply of the different species. Applications from 4-H Club members for free seedlings came to the extension forestry office directly for listing and for preparation of progress reports. The applications were then transmitted to the state forester. In the Western District, where free trees are available to landowners from the T. V. A. nursery at Norris, Tennessee, county agents approved all farmer applications before sending them on for processing. The district forestry extension specialist kept in close contact with T. V. A. foresters as the season progressed to check on distribution and supply.

3. Cooperation with Other Agencies

a. North Carolina Division of Forestry

(1) Purchase trees - The North Carolina Division of Forestry operated two nurseries where trees were grown for sale. This organization furnished copies of price lists and application forms with credit line mimeographed giving the Extension Service credit for promoting tree planting with farmers. The extension forester distributed these to county agents, who with assistance of forestry extension specialists promoted planting on farms and encouraged farmers to apply for trees. The North Carolina Division of Forestry on receipt of these applications arranged for distribution.

(2) Free trees - This organization grew trees in their two nurseries which were purchased by paper companies and others for free distribution through the Extension Service. This organization on receipt of applications through the extension forester arranged for distribution.

(3) Custom planting service - This organization operated two tree planting machines on a custom basis. The extension foresters and county agents publicized this service and referred suitable requests to this organization.

(4) This organization furnished trees free of charge for use at field demonstrations upon request.

b. Tennessee Valley Authority - Furnished free seedlings for distribution to farmers and farm youth in Western District counties. Extension Service personnel cooperated by promoting tree planting through publicity, meetings, and demonstrations, by advice and

instruction to individual farmers, and by approving all farm applications. Trees for farmers were delivered by truck periodically to county agents, who notified farmers to pick them up and, in many cases, delivered trees personally to the farm.

T. V. A. foresters also assisted, upon request of county agents, in advice and instruction to farmers when extra help was needed.

c. Production and Marketing Administration, Field Service Division - Forestry specialists served as instructors upon request at training meetings of county committeemen to encourage committeemen to promote planting as a practice under the Agriculture Conservation Program. The extension forester served as member of State P. M. A. Forestry Committee and helped in writing up specifications for forestry practices, including planting. Extension forestry department agreed to train P. M. A. committeemen to make compliance inspections on forest planting upon request.

d. Vocational Teachers - Extension foresters assisted vocational teachers in holding 9 demonstrations and meetings on planting for veterans on-the-farm trainees and vocational agriculture students. Attendance at these meetings was 202. Extension personnel also furnished planting literature in considerable quantities.

e. U. S. Forest Service - Furnished copies of Farmers' Bulletin 1994, "Tree Planting in the Central, Piedmont, and Southern Appalachian Regions."

f. North Carolina Pulp Company, Plymouth, N. C. - Furnished 602,600 loblolly pine seedlings, 4,500 longleaf pine seedlings, which extension personnel distributed free of charge to 4-H Club members

in Eastern North Carolina. (See table in Appendix.)

g. Champion Paper & Fibre Company, Canton, N. C. - Furnished 62,000 shortleaf pine seedlings and 234,150 white pine seedlings, which extension personnel distributed free of charge to 4-H Club members in Piedmont and western counties outside of the Western District. (See table in Appendix.)

h. International Paper Company, Georgetown, S. C. - Furnished 409,950 loblolly, 29,550 longleaf, 80,000 shortleaf, and 500 slash pine seedlings, which county agents distributed in 23 counties. (See table in Appendix.)

i. A. T. Griffin Manufacturing Company, Goldsboro, N. C. - Furnished unreported number of pine seedlings for distribution by Wayne County agent to 4-H Club boys in Wayne County.

j. Halifax Paper Company, Roanoke Rapids, N. C. - Furnished unreported number of pine seedlings for distribution by Halifax County agent to 4-H Club members in Halifax County.

k. Continental Can Company, Hopewell, Virginia - Furnished 100,000 loblolly pine seedlings for free distribution to landowners in Chatham County through extension personnel.

B. Forest Management

Although this is a very broad term, it will apply here to activities carried out primarily to improve cutting practices on farm woodlands. Activities reported by specialists under the heading "General Management" will also be covered.

1. Extent that Planned Goals Were Achieved - The following is a list of forest management program accomplishments by forestry extension specialists during the year. Where goals were set for that particular activity

in the 1952 Plan of Work, figures are included in the column "Planned, 1952." Activities are listed covering the following practices: timber thinning, timber stand improvement, selective cutting, pruning, and general management.

	Planned 1952	Accomplished 1952
Outdoor tours and demonstrations held		242
Indoor meetings held		80
Total		322
Attendance at tours, demonstrations, and meetings		19,713
Result demonstrations established		69
Management plans prepared on demonstration farms	82	69
Visits to individual farmers to make woodland examinations and management recommendations		914
Exhibits prepared and shown		6
Radio programs and news articles prepared		36
Number of farmers to adopt improved managements and cutting practices*	10,000	8,144

*From county agents' reports. Figure given represents number of farmers assisted in carrying out improved cutting practices (white only).

2. Extension Methods and Teaching Devices Used - Regular extension methods, already described in detail in previous annual reports, were used for the most part by the forestry extension staff in training county agents, local leaders and farmers in modern cutting and management practices. Single practice community-size field demonstrations, the establishment of ½- to 1-acre result demonstration plots, assisting demonstration farmers to draw up simple written management guides, and individual farm visits with county agents to examine the farmer's woodland, make on-the-spot recommendations, and train the farmer in applying them are some of the regular methods used. With 4-H Club members, local timber stand improvement contests were held in eleven

counties. These contests are described in detail under section IV. E. - 4-H Forestry.

Forestry field days (at which all major practices applicable to farm woodland management in the particular areaare demonstrated) were held in Edgecombe, Craven, Chatham, Burke, Montgomery, and New Hanover Counties during the year. Forestry week programs were held in Buncombe and Haywood Counties. Details on similar programs have been given in previous annual reports and will not be repeated here.

The extension forester served as a member of the State P. M. A. Forestry Committee and helped draft specifications for the timber stand improvement practice. In addition, extension personnel instructed P. M. A. committeemen in the fundamentals of timber thinning and timber stand improvement at training meetings in a number of counties.

One major accomplishment during the year which should improve the effectiveness of the forest management program throughout the state was the drafting of a new Memorandum of Understanding between the Extension Service and the North Carolina Division of Forestry, Department of Conservation and Development. Under the terms of this agreement, the Extension Service is to assume primary responsibility for educational activites in all phases of farm forest management. State Division of Forestry personnel will concentrate on the service phase - marking and estimating timber to be sold for individual forest owners. County agents have been instructed to refer requests involving this service directly to the state farm forester or service forester operating in his county.

Personnel of both agencies will continue to make individual woodland examinations and advise and train the landowner in carrying out management recommendations.

Personnel of both agencies attended a joint meeting in August where the provisions of the agreement and work methods were discussed.

This agreement has already gone a long way towards eliminating confusion, overlapping, and duplication of effort in the forest management programs of both agencies.

Increased interest was evidenced this year in the use of chemicals to control undesirable hardwoods in pine stands. Walter M. Keller, forestry extension specialist, Northwestern District, assisted county agents in nine of his counties with field demonstrations in using Ammate and 2-4-5-T to kill low-grade non-commercial hardwoods. Mr. Keller reports that a considerable number of farmers followed this practice with good results.

One farmer who followed Mr. Keller's recommendations was Mr. H. T. Watkins, a dairy farmer in the Blanche community of Caswell County. Mr. Watkins owned a stand of large, overmature hardwoods and pine. Upon Mr. Keller's recommendation, Mr. Watkins sold this timber on a clear-cut basis. He then applied Ammate poison to the hardwood stumps to prevent sprouts from developing, and planted the entire area in shortleaf pine seedlings.

It is quite likely that, had he managed this area in any other fashion, the new crop of trees would have consisted mainly of slow-growing hardwoods of low commercial value.

Increased interest is also developing in how to manage older

plantations. Many farmers throughout the state own land on which trees were planted by the Civilian Conservation Corps in the mid-thirties, and some few pioneered by doing their own planting.

These early plantings have now reached the point where they are ready for their first thinning. In Wayne County, Mr. Henry Weil planted 7½ acres of cropland to slash pine seedlings in 1938. At the time the area was planted it was infested with Bermuda grass to the point where row crop farming had become almost impossible.

In cooperation with the assistant county agent in forestry, James H. Phillips, a one-acre result demonstration in thinning this plantation was set up this year. After thirteen growing seasons, the plantation yielded 9 1/3 cords of pulpwood per acre, which brought in a net stumpage income of $27.90. Approximately one-half of the total number of trees were removed - for the most part, the least promising specimens. The growing stock left contained 14.7 cords of merchantable pulpwood.

Mr. Weil reported that it cost him $6.00 per acre to plant this area. Annual taxes of $0.41 per acre per year amounted to a total of $5.33 per acre for the 13-year period.

Thus, Mr. Weil has recovered his cost of planting, paid his taxes, and netted $16.57 per acre in this first thinning. He can expect much more substantial returns as the trees develop into log size.

This result demonstration has already been used as a forestry stop on a farm tour and as a training stop for a group of pulpwood conservation foresters. It is a living lesson in timber-production possibilities from tree planting.

3. Cooperation Given and Received from Other Agencies

North Carolina Division of Forestry - Requests received from farmers and others involving personal service work in marking and scaling timber were turned over to this agency for handling. Requests received by North Carolina Division of Forestry for assistance in holding demonstrations, meetings, and tours were forwarded to the county agent for handling.

Production and Marketing Administration - Extension forester served on state committee to write up specifications on forestry practices to be listed for conservation payments in the state handbook. Forestry extension personnel assisted with training meetings for local committeemen in a number of counties.

U. S. Forest Service - Furnished bulletins, charts, and other publications on farm forest management.

U. S. Forest Service, Southeastern Forest Experiment Station - Made facilities available at two research branch stations for tours of farm groups. Furnished management information upon request. Extension forester served as member of advisory committee for one branch station.

School of Forestry, N. C. State College - Extension forester conducted tour of farm forests for forest management class.

Resident teaching staff and research personnel have assisted by furnishing information upon request.

Vocational Agriculture - Extension foresters, through the county agents, held 36 field demonstrations for veterans farm trainees featuring management practices and put on 8 programs at veterans class meetings. A

total of 1,448 veteran farm trainees attended these meetings and demonstrations.

Extension foresters held 21 field demonstrations on management and put on programs at 1 indoor meeting for vocational agriculture classes. A total of 1,276 vocational boys attended and received instruction.

A number of individual schools were assisted in securing and setting up school demonstration forests under the supervision of the vocational teacher.

N. C. Forestry Association - Sponsors Tree Farm program in North Carolina honoring landowners who have done outstanding jobs in managing their woodlands over a definite time period. Extension forestry personnel write up inspection records on potential holdings. State extension forester served on state Tree Farm committee, which passes on all inspections. Extension personnel assisted in planning appropriate ceremonies for presenting awards to landowners inspected by them and approved.

International Paper Company, Champion Paper and Fibre Company, Camp Manufacturing Company - These firms cooperated in sponsoring a number of field day programs, furnishing prizes for contests held at such programs, and paying for refreshments served. They also, upon request, furnished foresters who assisted with instruction at these field days.

C. Estimating, Marketing, Harvesting, and Wood Preservation

These four activities represent a most important phase of the farm forestry extension program because they deal with increasing present-day cash income rather than future income.

1. Goals Achieved - The following is a statistical summary of accomplishments of farm forestry extension personnel in these fields during the program year. Where the particular item was set up as a goal in the 1951 farm forestry extension Plan of Work the appropriate figure is listed in the column "Planned, 1952."

	Planned 1952	Accomplished 1952
Method demonstrations held		130
Tours and indoor meetings held		16
Total		146
Attendance at demonstrations, meetings, and tours		7,299
Result demonstrations established		10
Industries and operators assisted or contacted for market information	340	246
Visits to farmers and other landowners to give advice or instruction		273
Exhibits prepared and shown		0
Radio programs and news articles		5
Number of farmers to follow improved methods of timber scaling, harvesting, and marketing	6,000	5,144*
Number of tree and log scale sticks to be distributed	1,500	748

*This figure represents total number of farmers assisted in timber estimating and appraisal and forest products marketing by white county agents in 90 different counties during the year. The individual assistance work of farm forestry extension personnel is included with this total.

2. Extension Methods and Teaching Devices Used

a. Timber Estimating - This phase of the program was put over through assisting county agents in holding field demonstrations and through individual visits to farmers and other landowners to train them in using a 15-cent tree and log scale stick so that they could measure their own timber before making a sale. When a visit or request involved spending more than one day with a landowner, the request was generally forwarded to the nearest service

forester of the North Carolina Division of Forestry or to private consulting foresters for handling.

Forestry extension specialists assisted county agents in holding 52 field demonstrations and indoor meetings in tree estimating and log scaling. Where feasible, the farm forester or nearest service forester of the State Division was invited to attend and explain the marking and estimating service available from him to the landowner.

Forestry extension personnel visited 111 farmers and either trained them to estimate their own timber or explained how to get the job done by State Division or private consulting foresters.

As in past years, landowners found it exceedingly profitable to take advantage of instruction in timber estimating given to them by forestry extension staff members. Perhaps no other practice emphasized in the forestry extension program shows up to such quick advantage when adopted by farm woodland owners.

For example, Mr. R. E. Williams of Wilmar in Beaufort County owned just one acre of mature pine timber which was ready to sell. He had received three bids from different buyers for the timber on this acre. The highest bid received was $150.00. However, since the second bid had been considerably lower than this and the first bid lower than the seconed, Mr. Williams decided it might be well to take time to find out exactly how much timber he had and how much it was worth before trading.

W. T. Ellison, forestry extension specialist, Eastern District, came out and trained Mr. Williams to measure his trees

and determine their volume. When Mr. Williams had completed the job, he found that the trees on the acre contained 26,000 board feet by the International ¼-inch rule. Armed with this information, he contacted several more buyers and eventually received $900 cash. He thus received an extra $450 for the half day it took to measure his trees.

R. G. Jordan, a farmer in the Old Richmond section of Forsyth County, had the same experience; but in addition to realizing a much better price, he also saved two tracts of immature timber which were making rapid growth. Mr. Jordan had a bad crop season in 1952 and needed some cash to take care of his family through the winter. He had received an offer of $1,800 from a local sawmill operator for all of the timber on his place large enough to make sawlogs.

He came to Walter M. Keller, forestry extension specialist, Northwestern District, for advice. Mr. Keller examined his woodland and recommended that the mature timber be sold but that two younger tracts be excluded from the sale because they were making rapid growth. Mr. Keller trained Mr. Jordan to mark and scale the mature trees and left Mr. Jordan to do the job. Mr. Jordan later reported to Mr. Keller that he completed the job, figured up the volume, called in five different sawmill men to bid on the timber, and sold the mature timber only for $4,200 - $2,400 more than he had originally been offered for all the timber on his farm.

b. Marketing of Standing Timber and Forest Products - Information on markets, prices, specifications, sale contracts and sale

methods was generally passed on to farm timber owners in conjunction with demonstrations and meetings on timber scaling, selective and seed tree cutting and timber thinning. It was also disseminated through individual visits to make woodland examinations, management and harvesting recommendations.

Marketing practices and information were especially featured at the Chatham County field day program in May and at 7 indoor meetings with farm groups. Forestry extension personnel visited 85 farms to advise the owner on marketing procedure.

In addition, a revised sample timber sale contract form was prepared to guide timber owners in drawing up written sale agreements. The new form is extremely flexible. It can be used as a guide in making sales of marked sawtimber or pulpwood, sawtimber or pulpwood to a diameter limit, sales where seed trees only have been marked to reserve, or a combination of these.

The extension forester used material furnished by the Southeastern Forest Experiment Station to prepare a mimeograph showing a comparison of 1950 and 1951 pulpwood production by counties and districts. This was passed on to staff members, who were instructed to use it in helping prepare forestry sections for county agricultural challenge programs. It was also used to encourage county agents in heavy pulpwood-drain counties to plan demonstrations and meetings in pulpwood thinning, harvesting, and marketing.

Preliminary work was done this year to set up retail buying yards for rough green pine fence posts. One large pressure treating company in South Carolina has expressed a strong desire

to buy such posts in North Carolina. Their existing price schedule reveals that on small posts, the price per cord exceeds that currently being paid for pulpwood.

This particular firm distributes creosoted posts through Farmers Cooperative Exchange stores throughout North Carolina. These posts are delivered by trailer truck. The return trip is made empty at the present time.

F. C. X. management has agreed to set up buying yards for rough green pine posts at two stores on an experimental basis. They will pay so much per post, with prices based on both size and length, to farmers who bring them in. Forestry extension personnel will render all possible assistance.

Christmas tree marketing is also to be investigated. An interview form for forestry extension personnel to use in contacting retailers and wholesalers has been prepared. Information to be tabulated includes prices, sizes and species preferred, source of supply, reason for leftovers, and other items.

c. Harvesting - Most farmers in North Carolina harvest timber needed in farming operations, but for various reasons prefer to sell standing timber and let the buyer do the cutting in making commercial sales.

Research and observation confirm the wisdom of this practice with respect to large products such as sawlogs, crosstie bolts, dimension logs, poles, and piling. Few farmers are well equipped to log this larger timber, and the delivered-price to stumpage-price ratio does not justify the time and expense in

most sections of the state.

Where such products as fence posts and pulpwood are concerned, there is a great difference between prices paid for the harvested and/or delivered product and that paid for stumpage. By cutting these products and assembling them on the farm where they can be loaded on a truck, the owner can often better than double the price received compared to selling stumpage.

For this reason, emphasis was placed this year, as in past years, on demonstrating the use and maintenance of equipment which will increase man-hour output in harvesting small forest products. Three types of equipment were featured - one-man bow saws, one-man power saws, explosive wedges for splitting fuelwood and post bolts, and a simple chain-type peeling machine for debarking fence posts in preparing them for preservative treatment.

All forestry extension personnel are equipped with bow saws and filing kits and explosive wedges. Explosive wedges were demonstrated, with particularly favorable response, in the Eastern and Western Districts. Bow saw operation and maintenance demonstrations were held in conjunction with field day programs and demonstrations of other forestry practices. In some cases forestry extension personnel conducted these demonstrations. In others, representatives of bow saw manufacturers did the job.

One of the most effective ways to show what a bow saw will do is to locate a man experienced in using one and let him work in a pulpwood-size tract until he has cut and loaded a pickup-truck load of wood. This was done at the Burke County forestry

field day held in the woods of the State School for the Deaf at Morganton, N. C.

Pulpwood-size trees ready for cutting were marked in one corner of the school woods. A pickup truck was located nearby. At the beginning of the program, Extension Forester Gray demonstrated how to use a bow saw in felling and bucking pulpwood-size trees.

The saw and an axe were then turned over to Mr. Will Gladden, a worker on the school farm. Mr. Gladden went to work on the marked trees. In one hour and twenty minutes he had cut and loaded the pickup truck. The load was measured by a pulpwood buyer who stated that the load was worth $6.00 delivered to the pulpwood yard in Morganton and $4.00 in the woods. This gave those attending a very practical idea as to how much they could earn per hour cutting and selling pulpwood from their own woodland during the winter months.

The Northeastern and Western District specialists each have a one-man power bow saw, which they demonstrated at a large number of field meetings throughout the year. Maintenance, as well as operation, was stressed.

d. Wood Preservation - Interest in this phase of the forestry extension program continued to increase, particularly in the Coastal Plain and eastern Piedmont counties.

Forestry extension staff members assisted county agents in holding 72 field demonstrations in the preservative treatment of fence posts and farm timbers. Sixteen of these were held in cooperation with Mr. H. M. Ellis, In Charge, Agricultural

Engineering Extension, who followed the treating demonstration with a demonstration and discussion of good fence construction methods. An example of methods used in carrying out this combination-type demonstration was given in detail in the 1951 Annual Report and will not be repeated here.

In addition to the field demonstrations, wood preservation was featured at 9 indoor meetings. Forestry extension personnel also visited 71 farmers to show them how to get setup for on-the-farm post treatment and made 36 visits to commercial plant operators to assist them with production problems and discuss prices and supply problems.

Results were often immediate. For example, a post treating and fence construction demonstration was held on March 10 at the farm of Mr. James Kelley near Newport in Carteret County. Methods of debarking posts with an inexpensive-type chain peeler and treating posts by the cold-soak method using 5% pentachlorophenol as a preservative were demonstrated. As a result, four chain peelers were constructed by vocational teachers and farmers for their own use and use by other farmers in the county on a rental basis.

Chain-type peelers were also built in three other Eastern District counties — Pasquotank, Currituck, and Perquimans.

W. M. Keller, forestry extension specialist, Northwestern District, held 11 fence post treating demonstrations in six different counties. As a result, three chain peelers were built for community use and two treating tanks for community use were constructed.

We believe one major effect of this campaign is that a large number of farmers are becoming sold on the value of using treated posts and treated timbers. Visits to commercial operators throughout the year revealed that in practically all cases they were having no trouble selling their output of treated posts and lumber. Many of them were concerned over the fact that they could not keep up with the demand. In some instances they were having trouble locating posts for treatment, particularly during the summer months when farmers do not have time to cut and sell posts to these plants.

Two new fence post service-life result demonstrations were set up this year. One of these went in at the Pitt County fairgrounds in Greenville, N. C.; the other was set up at a prominent highway intersection near Goldsboro in Wayne County. Details on similar fence panels were given in the 1951 Annual Report.

3. Assistance Given and Received from State, Federal, and Other Agencies

U. S. Forest Service, Southeastern Forest Experiment Station - Forest Utilization Service personnel have acted as instructors at sawmill operators' field days and have furnished valuable information on fence post treating methods and markets. Information from farm forestry studies conducted at Bent Creek Experimental Forest and other branch stations has been very helpful in publicizing wages earned in harvesting and selling forest products.

U. S. Forest Service, Forest Products Laboratory - Furnished publications on fence post treating and air-seasoning of wood.

N. C. State College, School of Forestry - Furnished materials for

treating demonstrations. Furnished instructor at sawmill field day program.

N. C. Division of Forestry, Department of Conservation and Development - Requests involving service work in timber marking and estimating were referred to this agency for handling.

Vocational Agriculture - Farm forestry extension personnel in cooperation with county agents and vocational teachers held 10 field demonstrations and 4 indoor meetings on timber estimating, harvesting, marketing, and post treatment attended by 323 veteran farm trainees. Eleven field demonstrations for vocational boys were held, attended by 301 boys.

Disston Saw Company - Furnished one-man chain saw on permanent loan for demonstration use. Representatives participated in a number of harvesting demonstrations.

Mall Saw Company - Furnished two-man chain bow saw on permanent loan for demonstration use. Representatives participated in a number of harvesting demonstrations.

Homelite Saw Company - Furnished two-man chain bow saw on permanent loan for demonstration use. Representatives participated in a number of harvesting demonstrations.

McCulloch Saw Company, Sandvik Saw and Tool Corporation - Representatives participated in a number of harvesting demonstrations.

Halifax Paper Company, International Paper Company, N. C. Pulp Company, Camp Manufacturing Company, and Various Pulpwood Dealers and Producers - Furnished information on pulpwood marketing at field demonstrations. Furnished crews to thin demonstration areas. Furnished prizes for

contests at field day programs. Farm forestry extension personnel advised on locating and publicizing new buying yards, checked marking by company foresters on farm woodlands upon request, and referred company foresters to persons wishing to sell pulpwood.

E. C. Atkins Saw Company - Furnished instructor at sawmill field day programs.

Agricultural Engineering Extension Department, N. C. State College - Cooperated in holding combined post treating and fence construction demonstrations. Cooperated in setting up two result demonstrations in fence post service life and fence construction.

Williamston Treating Company - Furnished treated posts and lumber at Pitt County fair grounds.

D. Forest Protection

1. Fire Prevention - As in past years, major efforts in this field have largely been left up to the North Carolina Division of Forestry. However, under the new "Memorandum of Understanding," Extension has been asked to assume a more active role in forest fire prevention. Plans were discussed with the assistant state forester in charge of fire control, and it was agreed that a series of pointed messages on the prevention from the farmer's standpoint should be prepared by the Extension Forestry Department.

The first of these, a pictorial circular entitled "You Can't Burn Out the Boll Weevil" was prepared but has not yet been published. Two others - one on burning off ditch banks and a second on brush burning - are planned.

Forest fire prevention was stressed by forestry extension personnel at 37 field and indoor meetings this year. State Division

of Forestry personnel cooperated by demonstrating fire-suppression equipment at forestry field days in Craven, Edgecombe and Chatham Counties.

J. E. Ford, assistant extension forester, reported using an extremely effective method for showing the damage done by even a light ground fire under certain conditions. At the New Hanover County forestry field day program he staked off an acre of land containing a stand of recently germinated pine seedlings. A stake was driven by each seedling for location purposes. The area was then fired. While it was burning, a fireplow was used to plow a break around the fire; and the fire was allowed to burn to the break and then die out.

Persons attending the program were then asked to find the seedlings on the burned area. In spite of the fact that it had rained the day before, every seedling was completely destroyed by the fire.

2. Protection from Grazing - The 1950 federal farm census shows that one-third of the total farm woodland acreage in the mountain counties of North Carolina is pastured. The situation is such that grazed mountain woodlands are gradually becoming the number one soil erosion problem in the mountain counties.

F. E. Whitfield, forestry extension specialist, Western District, has been publicizing the effects of woodland grazing through news articles, radio programs and through calling it to the attention of farmers attending demonstrations of other practices. Two field meetings were held to observe the results of pasturing woodland, and two

result demonstrations were set up in cooperation with T. V. A. to measure the results from fencing out previously grazed woodland.

3. Protection from Insects - Epidemic infestations of the southern pine beetle in southeastern North Carolina and the pine leaf adelgid in Western North Carolina, which became established in 1951, died out in 1952. However, Ips bark beetles and turpentine beetles were active, and many requests were received for information on their identification and control.

In collaboration with the extension entomologist, Assistant Extension Forester J. E. Ford prepared a new circular on "The Turpentine Beetle in North Carolina." Mr. Ford also has in preparation a similar-style circular on the southern pine beetle and is working on a number of others. Mr. Charles Speers, Head, Forest Insect Investigations Branch, Bureau of Entomology and Plant Quarantine, has cooperated very closely in this program by reviewing manuscripts, furnishing photographs, etc. Upon request he identifies specimens sent in by forestry extension specialists and makes control recommendations. All forestry extension specialists have been equipped with mailing tubes for shipping specimens.

Mr. Speers also served as instructor at a one-half day training session on forest insects held for department personnel in October.

A heavy infestation of loopers feeding on foliage of oak, hickory, and other hardwoods was discovered in the spring of 1952 in the southern mountain counties. F. E. Whitfield, forestry extension specialist, Western District, alerted county agents in the area and gave them information needed to answer inquiries from forest owners.

4. Protection from Diseases - Oak wilt found in Buncombe and Haywood Counties in 1951 was discovered in Swain County in 1952. County agents in the Western District were alerted as to the symptoms, possible controls, and importance of this disease in their January district meeting. An agreement was reached with the Plant Pathology Department at State College and the Division of Forest Pathology, Bureau of Plant Industry, Southeastern Forest Experiment Station, whereby owners of suspected trees can mail specimens to either agency for identification and control recommendations. Assistant Extension Forester Ford, in collaboration with Dr. J. H. Jensen, Head, Plant Pathology Department, N. C. State College, began preparing a circular entitled "Oak Wilt in North Carolina."

All department personnel received a half-day's instruction in the importance, symptoms, and control of the major forest diseases in North Carolina. This meeting was held in Asheville in October. Staff members of the Division of Forest Pathology, Bureau of Plant Quarantine, Soils and Agricultural Engineering, Southeastern Forest Experiment Station, served as instructors.

As in past years, the insect and disease phase of the forestry extension program, with the exception of preparing materials, consisted mainly of answering individual requests for information on these pests. Staff members, especially Assistant Extension Forester Ford, assisted county agents in holding 30 meetings with 4-H Club members, F. F. A. boys, and adult farmers on insect and disease importance, identification and control.

E. 4-H Forestry

This was one of the major phases of the farm forestry extension

program during the 1952 program year.

1. Extent That Planned Goals Were Achieved - The following is a statistical summary of accomplishments during the year. Where the particular activity was listed as a goal in the 1952 farm forestry extension Plan of Work, the appropriate figure is listed under the column "Planned, 1952."

	Planned 1952	Accomplished 1952
Number of 4-H Club members to complete forestry projects	3,000	2,673
Acreage involved		3,906
Number of 4-H Club members to plant forest tree seedlings[1]	1,200	1,015
Number of trees planted	1,250,000	1,214,250
Number of field meetings and demonstrations for 4-H Club members at which farm forestry extension personnel assisted		372
Number of indoor meetings for 4-H Club members where farm forestry extension personnel assisted		39
Number of club members who received instruction at meetings and demonstrations from forestry extension specialists	20,000	16,265
Number of counties in which farm forestry extension specialists assisted with forestry contests for farm boys sponsored by local industries or civic organizations	17	12
Number of counties receiving forestry instruction at county 4-H summer camps from farm forestry extension specialists	33	8
Number of club members attending		506
Number of local leaders attending		43
Special forestry and conservation camps for farm youth at which assistance was given by farm forestry extension specialists	2	2

Although forestry extension specialists devoted less time in assisting county agents with holding demonstrations and meetings

1/ Free trees furnished by industry and T. V. A. only.

for 4-H Club members this year, forestry activities reached an all-time high, with 2,673 club members completing forestry projects and 1,214,250 trees planted by club members. Club members would have made a greater increase in tree planting than this except for the fact that the allotment of free white pine and shortleaf pine seedlings for the western Piedmont section was used by mid-planting season.

County agents in 91 of the state's 100 counties reported 4-H Club boys and girls completing projects in forestry.

2. Extension Methods and Teaching Devices Used - In past annual reports we have gone into considerable detail on techniques used in conducting 4-H forestry demonstrations, field days, meetings, contests, and project work. All of these methods were used to good effect in 1952, and details will not be repeated here except where changes in technique were made.

In conducting timber stand improvement contests and in training individual club members to carry out projects in timber thinning and timber stand improvement, we are working constantly towards cutting out extra work resulting in window dressing which is of no practical value. For example, our scoring system on stand improvement projects has been changed. The club member is no longer required to stack his products on the project area for measurement. We found that this requirement had resulted in much extra work and time and was, under certain conditions, an undesirable practice.

In practical timber thinning operations we urge farm woodland

owners to market products harvested promptly in order to avoid excessive staining and end checking in sawlogs and to avoid attracting destructive insects into the woods. This is particularly important in operating pine timber.

Therefore, in 4-H project work, we are now urging the club member to move pulpwood, posts, and other products harvested for sale right on to the market. We ask him to attach receipts to his project record book as evidence of income earned.

We recommend that products cut for home use - such as fuelwood, posts, tier poles, etc. - be hauled to where they will be used or further processed. This cuts out the necessity of having to pick up the wood twice.

We are also discouraging such window-dressing operations as shrubbing down all undergrowth on the project area unless such cutting results in practical value such as releasing desirable reproduction or young growth from competition.

We feel that as a result of this change, our farm youth are learning how to carry out this type of woods operation in as efficient a manner as possible and will be more likely to make systematic thinning or stand improvement a regular farm practice when they become adults.

3. Assistance Given and Received from Federal, State, and Private Agencies and Individuals in Promoting 4-H Forestry

a. U. S. D. A., Forest Service - Furnished copies of Miscellaneous Publication 395, "Forestry for 4-H Clubs," plus charts, "How a Tree Grows."

b. U. S. D. A., Production and Marketing Administration - Set up conservation payments for forest planting and timber stand improvements. Four-H Club members, through their parents, were urged to take advantage of this assistance by farm forestry extension personnel.

c. Tennessee Valley Authority, Forestry Relations Division - Furnished 286,500 free seedlings to 4-H Club members for planting projects in Western District counties. Furnished 9,000 white pine seedlings for educational program in Haywood County. Farm forestry extension personnel and county agents publicized and promoted tree planting by 4-H Club members, and county agents distributed trees once they reached the county.

d. N. C. Division of Forestry - Directed state-wide forestry camp for farm boys in which Extension Service cooperated by furnishing four instructors and counselors, helping plan the program, and selecting and sending 35 4-H delegates to the camp.

Grew and shipped trees purchased by paper companies for free distribution to 4-H Club members upon receipt of applications from extension forester.

e. Champion Paper and Fibre Company, Canton, N. C. - Donated $175 for prizes in sponsoring timber stand improvement contest for farm boys in seven mountain counties conducted by extension personnel and vocational teachers.

Co-sponsored state-wide forestry camp for farm boys with three other paper companies and furnished instructor for the week.

Donated 62,000 shortleaf pine seedlings and 234,150 white

pine seedlings to 4-H Club members. Extension personnel secured applications and promoted the program with club members.

f. N. C. Pulp Company, Plymouth, N. C. - One of four co-sponsors of 1952 state-wide forestry camp for farm boys.

Donated 607,100 loblolly and longleaf pine seedlings to 4-H Club members. Extension personnel secured applications and promoted the program with club members.

g. Riegel Paper Corporation, Bolton, N. C. - One of four co-sponsors of 1952 state-wide forestry camp for farm boys.

h. International Paper Company, Georgetown, S. C. - Furnished contest prizes and refreshments at three 4-H forestry field day programs. Furnished forestry instructors upon request. One of four co-sponsors of 1952 state-wide forestry camp for farm boys.

i. North Carolina Forestry Association, Raleigh, N. C. - Sponsored silver medals for county 4-H forestry champions in 1951-1952. County agents selected county winners and arranged award ceremonies. Program was expanded to include Negro club members in 1952.

j. A. T. Griffin Manufacturing Company, Goldsboro, N. C. - For fourth time donated free seedlings to 4-H Club members in Wayne County. Extension personnel secured applications and promoted program. Winners received cash prizes and trip to International Paper Company mill at Georgetown, South Carolina.

k. Raleigh Chamber of Commerce, Raleigh, N. C. - Donated $175 for cash prizes and signs on winning projects in sponsoring 1951-52 "Wake County Timber Stand Improvement Contest for Farm Boys." Extension personnel and vocational teachers promoted and directed

project activity among 4-H and F. F. A. boys.

l. P. M. Barger Lumber Company, Statesville, N. C. - Donated $50 to be used for cash prizes in sponsoring "Iredell County Forest Planting and Thinning Contest for Farm Boys." Extension personnel and vocational teachers promoted program and secured applications from 4-H and F. F. A. boys.

m. Junior Chamber of Commerce of Union County, Monroe, N. C. - Set up $50 for cash prizes in sponsoring 1951-52 "Timber Thinning Contest for Union County 4-H Club Members." Sponsored forestry field day for 4-H Club members. Extension personnel planned, promoted, and directed project activity and meeting.

n. Lenoir Chamber of Commerce, Lenoir, N. C. - For fifth straight year set aside $100 to be used for cash prizes in sponsoring "Forestry Contest for Caldwell County Farm Boys." Extension personnel and vocational teachers promoted and directed program. Sponsored trip to Bent Creek Experimental Forest for 4-H Club boys and girls with outstanding records.

o. Optimist Club, Lenoir, N. C. - Donated loving cup to farm boy with best timber stand improvement project in Caldwell County during 1952.

p. Wilkes Chamber of Commerce - For sixth straight year put up $175 to be used as cash prizes in sponsoring "Wilkes County Timber Stand Improvement Contest for Farm Boys." Extension personnel and vocational teachers promoted and directed project activity with 4-H and F. F. A. boys.

q. Elkin and Mt. Airy Kiwanis Clubs - Donated $200 for cash prizes as sponsor of "Surry County Timber Stand Improvement Contest for

Farm Boys." Extension personnel and vocational teachers promoted and directed project activity with 4-H and F. F. A. boys. This is the fifth straight year for this contest.

r. Stokes Lumber Company - Donated $100 for cash prizes in sponsoring "Timber Stand Improvement Contest for Stokes County 4-H Boys." Extension personnel promoted and directed project activity. This is the fifth year this contest has been sponsored.

s. Halifax Paper Company, Roanoke Rapids, N. C. - Donated unreported number of pine seedlings to club members in Halifax County.

t. Carr Lumber Company and the Silversteen Industries, Brevard, N. C. - Donated $75 for prizes to winners in Transylvania County timber stand improvement contest.

u. Mead Corporation, Sylva, N. C. - Furnished $50 in cash prizes in sponsoring Jackson County timber stand improvement contest.

v. Enka Corporation, Enka, N. C. - Furnished $50 in cash prizes as sponsor of Buncombe County timber stand improvement contest.

F. Personnel Training, Administrative and Other Activities

1. Training Meetings of Farm Forestry Extension Personnel - All department personnel attended a joint meeting of the forestry extension staff and state, district and farm forestry personnel of the North Carolina Division of Forestry in Southern Pines in August. At this meeting, Assistant Director of Extension John W. Goodman explained the purpose of the new Memorandum of Understanding drawn between the Agricultural Extension Service and the North Carolina Division of Forestry. State Forester Claridge and Extension Forester Gray discussed working procedures and methods of coordinating the programs

of both agencies for more effective public service. A question-and-answer period brought out into the open some problems, which were resolved on the spot.

This meeting was the first such held. From time to time future joint meetings of the personnel of both agencies will be held to discuss program plans and activities and provide for coordinated effort where needed.

Following this meeting, the forestry extension staff met for one day in Raleigh. Report-form procedure and the tree seedlings program were discussed thoroughly. The afternoon was devoted to a preview of some fifty new color slides. Each district specialist listed those which he needed, and plans were made to have copies duplicated and sent to each district specialist.

All department personnel attended the national meeting of the American Forestry Association in Asheville in October. Following this, a one-day training session in forest insects and diseases was held for them at the Southeastern Forest Experiment Station. Dr. George Hepting and staff members of the Forest Disease Investigations Branch, Bureau of Plant Industry, served as instructors for the half-day session on diseases. Mr. Charles Speers, Head, Forest Insect Investigations Branch, Bureau of Entomology and Plant Quarantine, took charge of the afternoon session on insects.

W. J. Stegall, Field Agent, Blister Rust Control Service, conducted a tour for the department to Mt. Mitchell to observe western white pine and ribes infected with white pine blister rust.

2. Training Meetings for County Extension Personnel - Extension Forester Gray appeared on programs at all district meetings of county extension

personnel in January (six white and three Negro meetings). The purpose of the farm forestry extension program was reviewed, details on program activities, new literature and teaching materials available were discussed; and suggestions were made as to how county agents could incorporate more forestry into county extension programs.

3. Program Planning Assistance - In the late summer and early fall, all district forestry extension specialists visited county extension personnel individually to discuss program progress and discuss plans for the coming extension year. In many cases written goals were set up as to groups to be reached, number of meetings to be held, subject matter to be covered, etc. In addition, district specialists served as members of County Agricultural Challenge Committees and helped prepare analyses of county farm forestry situations, action needed and goals to be reached.

4. Administrative - The signing of a Memorandum of Understanding between the Agricultural Extension Service and the N. C. Division of Forestry represents a major step in resolving a conflict which had long existed between the two agencies. Since this was done and the joint meeting of forestry personnel of both agencies was held, there has not been a single complaint from personnel of this department concerning activities or action of members of the N. C. Division of Forestry. The state forester has reported the same result among personnel of his Division.

Much time and effort was spent on drawing up this two-page, relatively simple memorandum. However, as a result, we feel the foundation has been laid for a much stronger and more effective overall forestry program for the people of North Carolina.

Extension Forester W. K. Williams of Washington, D. C., reported that this agreement received careful study by personnel of other state Extension and state Forest Services and was used by them as a guide in drawing up similar agreements.

5. Other Activities - In addition to work already covered the extension forester participated in meetings and served as a member of various committees and organizations as follows:

Society of American Foresters, National meeting, Biloxi, Mississippi.
Society of American Foresters, Appalachian Section - Attended summer meeting, Monck's Corner, South Carolina. Served on Newsletter Committee.
North Carolina Forestry Council - Secretary and member of committee to draft state seed tree law.
Resource-Use Education Clinic, N. C. College - Served as instructor.
Resource-Use Education Camp, Crabtree Creek State Park - Served as instructor.
Coordinated Fence Post Investigations, Clemson, South Carolina.
International Farm and Home Group tour - Discussion leader on farm forestry.
Sawmill Short Course, N. C. State College - Discussion leader on cutting practices.
Four-H Short Course, N. C. State College - Chairman, campus tours and talent contest committees.
Conducted tour for Farm Appraisal class, N. C. State College.
Conducted tour for Forest Management class, N. C. State College.

V. Teaching Materials Prepared

Teaching materials were prepared in 1952 as follows:

A. New Publications

Type	Title	Copies
Extension Folder #86	"The Care and Use of the Bow Saw," J. E. Ford	10,000
Extension Folder #91	"The Turpentine Beetle in North Carolina," George Jones and J. E. Ford	25,000
Extension Circular #371	"Plant Forest Trees," J. L. Gray	30,000
Extension Folder #74	"Handy Tables for Measuring Farm Timber, No. 1 - Southern Pine"	15,000
Extension Folder #75	"Handy Tables for Measuring Farm Timber, No. 2- Hardwoods"	10,000
Mimeograph	"North Carolina Forestry Facts," J. E. Ford	500

B. Revisons

Type	Title	Copies
Mimeograph	"Outline and Comparison of Several Methods of Fence Post Treatment," J. E. Ford	3,000
"	"Selection of Fence Posts for Home Use or Treatment," J. E. Ford	1,000
"	"Fence Post Treating Plants in North Carolina"	1,000
"	"Sources of Wood Preservatives"	1,000
"	"Outline for Forestry Resource-Use Education," J. E. Ford	500
"	"List of Available Forestry Publications, Maps, Posters, etc."	1,000
"	"Sample Timber Sale Agreement"	500
"	"Cold Soaking with Penta," J. L. Gray	2,500

C. Material in Preparation but not Published

Type	Title
Extension Folder	"Oak Wilt in North Carolina," J. H. Jensen and J. E. Ford
" "	"Southern Pine Beetle," J. E. Ford
" "	"You Can't Burn Out the Boll Weevil," J. L. Gray

D. Other Material Prepared

In addition, both Gray and Ford prepared 6 scripts for spot announcements at the request of Halifax Paper Company, who had purchased radio time from local stations for forestry messages.

Approximately 36 new color slides were taken covering forestry practices and 100 copies made for use by district personnel.

VI. Measuring Program Effectiveness

For the last five years, pulp and paper companies, lumber companies, and civic organizations have been buying forest tree seedlings and giving them to the Agricultural Extension Service for free distribution to 4-H Club members, farmers, other landowners and F. F. A. boys. Since 1950, the North Carolina Division of Forestry has handled the distribution of free seedlings to F. F. A. boys.

During the past three planting seasons alone, two pulp and paper

companies located within North Carolina and one company located in South Carolina, which draws wood from North Carolina, have purchased over 3½ million seedlings which were distributed through the Agricultural Extension Service to adult farmers and 4-H Club members only.

These donations were made to encourage tree planting on the part of both adults and farm youth. Although no strings were attached, the sponsoring companies were anxious to find out whether or not the trees, since they were furnished free, were being planted or wasted. Further, they wanted to know if the planting was being done in such a manner that reasonable survival was resulting.

The North Carolina Division of Forestry had conducted spot checks on all plantings made each year but had not come up with sufficient information on plantings of seedlings donated by the paper companies to allay the doubts of the industry folks as to whether the boys, girls, and adults were using the trees paid for by the companies or wasting them.

An agreement was made with the state forester whereby farm forestry extension personnel would make a survey of plantings involving donated seedlings for the 1951-52 planting season.

Lists which had been made of persons receiving donated seedlings were checked every tenth name at random from the list of adults, list of 4-H Club members, and list of F. F. A. boys who ordered and received free seedlings through the courtesy of the paper mills. These names, addresses and number of trees received per person were then made up on a district basis and sent to each district forestry extension specialist. With the lists, inspection forms were sent and instructions stating that the specialist was to visit personally each planting listed, check the number of seedlings planted and make a survival count.

Inspection records when completed for each district were forwarded to the extension forestry office in Raleigh. There a summary report was compiled breaking down the findings by donors and by planting groups.

The results showed that 95% of all trees donated to adult farmers and landowners had been planted and 80% of all such trees donated were living at the time the inspection was made.

With 4-H Club members, 95% of the total number donated had been planted and 75% of the total number donated were living at the time of inspection.

With F. F. A. boys, 92% of the total number donated had been planted and 77% of the total number donated were living at the time of inspection.

This information was publicized and forwarded to foresters and officials of the three companies. They were highly pleased at the results and relieved to know that the seedlings and the money paid for them were not being wasted. One company doubled its donation to 4-H Club and F. F. A. members for the coming planting season. A second is planning to increase its donation of free trees to adults during 1953-54. The third firm was already donating more than we could place in Eastern North Carolina; so no increase was asked for from them.

Plans are to make similar checks every other year in order to keep county agents, vocational teachers, and extension foresters on their toes in the free seedling distribution program.

VII Statistical Summary

Type of Data	Name of Specialist								
	Gray	Ford	Ellison	Jones and Phillips[1]	Douglass	Keller	Smith[2]	Whitfield	Totals
Days in office	139	140	141	56	128	98	45	52	799
Days in field:									
On state-wide or area activities	28	39	14	14	12	10	10	3	130
Assisting county extension personnel	67	59	82	140	112	93	180	155	888
Assisting other governmental agencies	5	0	2	10	4	9	4	9	43
Assisting others	22	8	17	38	0	34	2	33	154
Holidays taken	10	10	10	8	10	9	5	9½	71½
Annual leave taken	11	19	10	12	13½	5½	2	17½	90½
Sick leave taken	3	16½	7	4	3½	5	5	2	46
Number of conferences in office	613	797	95	274	26	401	125	36	2,367
Circular letters:									
No. prepared	20	12	1	3	1	0	0	9	46
No. of copies sent out	751	2,120	16	76	26	0	0	270	3,259
Individual letters written	679	1,019	104	192	102	83	149	142	2,470
News articles prepared	5	4	0	1	2	7	13	5	37
Radio broadcasts	9	4	2	1	1	3	22	8	50
Exhibits prepared and shown	0	0	0	0	1	2	6	2	11
Timber scale sticks placed	329	170	25	139	5	30	50	0	748
Literature distributed:									
Bulletins and leaflets	200	1,313	0	234	191	263	600	2,100	4,901
Folders	2,497	2,554	0	246	823	775	700	250	7,845
Mimeographs	1,080	2,374	2,378	885	34	900	1,850	1,200	10,701
Charts and posters	68	1,331	0	0	31	20	150	40	1,640
Other	397	575	0	0	345	87	0	30	1,434
Total number distributed	4,242	8,147	2,378	1,365	1,424	2,045	3,300	3,620	26,521

1/ J. C. Jones worked from December to December 31, 1951. He resigned and was replaced by J. H. Phillips on January 1, 1952.

2/ G. W. Smith worked from December 1, 1951 to September 30, 1952, when he resigned. Position was vacant from October 1 to November 30, 1952.

Statistical Summary (Field Work)

Extension Procedure	Name of Specialist								
	Gray	Ford	Ellison	Jones and Phillips	Douglass	Keller	Smith	Whitfield	Totals
Method Demonstrations									
Veterans	4	15		4		7	20	12	62
Other Adult	32	36	29	19	21	24	33	23	217
4-H	10	5	101	40	92	5	39	80	372
Other Youth	12	12	1		6	6		10	47
Result Demonstrations									
Started: Adult			1	2				937	940
4-H						33	21	376	430
Continued: Adult									
4-H								1	1
Completed: Adult				2					2
4-H						21	12		33
TOTAL DEMONSTRATIONS	58	68	132	67	119	96	125	1,439	2,104
No. of Persons Receiving Instruction:									
Veterans	108	488		150		248	327	408	1,729
Other Adults	1,575	2,574	1,120	823	491	3,114	2,311	557	12,565
4-H	253	269	4,199	2,022	4,111	124	1,546	3,741	16,265
Other Youth	447	763	43		96			2,050	3,399
TOTAL PERSONS INSTRUCTED	2,383	4,094	5,362	2,995	4,698	3,486	4,184	6,756	33,958
Indoor Meetings									
Veterans		6		2			5	1	14
Other Adult	48	50	4	14	7	4	6	5	138
4-H	4	6		1	28				39
Other Youth	4	11			1				16
TOTAL INDOOR MEETINGS	56	73	4	17	36	4	11	6	207
No. of Persons Receiving Instruction:									
Veterans		188					104	54	346
Other Adults	1,415	4,532	28	590	202	66	92	52	6,977
4-H	117	36		90	1,843				2,086
Other Youth	1,537	474			130				2,141
TOTAL PERSONS INSTRUCTED	3,069	5,230	28	680	2,175	66	196	106	11,550
Total No. of Separate Field or Indoor Meetings at Which Assistance Was Given	104	74	100	72	122	48	83	165	768
Total Individuals Attending	5,111	3,073	3,446	3,545	6,966	3,538	3,316	9,000	37,995
Meetings Attended Only	18	7	7	11	18	7	8	2	78
Individual Visits to:									
County Agents	206	127	179	296	289	174	178	251	1,700
Demonstrations	44	80	1	7	46				178
Other Farms and Farmers	68	142	70	266	193	305	317	260	1,621
Industries and Operators	80	8	9	53	52	13	17	14	246
Others	154	161	47		27	28		23	440
TOTAL INDIVIDUAL VISITS	552	518	306	622	607	520	512	548	4,185
4-H Camps Instructed			2	1		1	3		7
No. Counties Represented			3	1		55	4		63

VIII Planting Tables

Table 1. State Summary of Trees Placed by Extension Personnel
By Districts
1951 - 1952 Planting Season

District	State Nursery Purchase Trees		Pulpwood Industry Free Trees to Adults		Pulpwood Industry Free Trees to 4-H		T. V. A. Nursery Free Trees to 4-H		T. V. A. Nursery Free Trees to Adults		Totals		Christmas Tree Plantings	
	Appli-cations	Trees	Appli-cations	Trees	Appli-cations	Trees	Appli-cations	Trees	Appli-cations	Trees	Appli-cations	Trees	Appli-cations	Trees
Eastern	36	155,225			21	29,250					57	184,475	31	141,100
Northeastern	66	119,050	3	12,000	51	92,800					120	223,850	39	28,450
Southeastern	99	347,150	49	186,300	128	183,400					276	716,850	47	56,500
Northwestern	62	288,900	10	16,000	233	296,050					305	600,950	27	51,500
Southwestern	95	239,800	118	305,700	219	326,250					432	871,750	18	21,000
Western	3	2,000					363	286,500	661	1,255,250	1,027	1,543,750	3	2,000
Totals	361	1,152,125	180	520,000	652	927,750	363	286,500	661	1,255,250	2,217	4,141,625	165	300,550

652
363
1015

Table 2. Summary of Trees Placed by Extension Personnel
Eastern District
1951 - 1952 Planting Season

County	State Purchase Trees		Pulpwood Industry Free Trees to 4-H		Pulpwood Industry Free Trees to Adults		Totals		Christmas Tree Plantings	
	Applications	Trees	Applications	Trees	Applications	Trees	Applications	Trees	Applications	Trees
Beaufort	11	9,700	4	7,050			15	16,750	10	8,700
Camden										
Carteret	4	10,700					4	10,700	4	10,700
Chowan			2	2,000			2	2,000		
Craven	8	8,100	6	7,500			14	15,600	7	6,600
Currituck	2	102,000					2	102,000	1	100,000
Dare	1	9,225					1	9,225	1	1,100
Gates	1	1,000	1	1,000			2	2,000	1	1,000
Hyde										
Jones	5	11,000	2	2,200			7	13,200	5	11,000
Onslow			4	3,500			4	3,500		
Pamlico			1	1,000			1	1,000		
Pasquotank	2	2,000					2	2,000	1	1,000
Perquimans	1	1,000	1	5,000			2	6,000	1	1,000
Tyrrell	1	500					1	500		
Washington										
Totals	36	155,225	21	29,250			57	184,475	31	141,100

Table 3. Summary of Trees Placed by Extension Personnel
Northeastern District
1951 - 1952 Planting Season

County	State Purchase Trees		Pulpwood Industry Free Trees to 4-H		Pulpwood Industry Free Trees to Adults		Totals		Christmas Tree Plantings	
	Applications	Trees	Applications	Trees	Applications	Trees	Applications	Trees	Applications	Trees
Bertie										
Edgecombe	18	48,000	8	19,000			26	67,000	7	5,500
Franklin	2	1,500	10	11,000			12	12,500	2	1,500
Granville	1	2,000	1	5,000	2	10,000	4	17,000		
Greene	6	5,500	1	2,000			7	7,500	6	5,500
Halifax	1	500	5	8,000			6	8,500	1	500
Hertford	3	7,000					3	7,000	1	500
Johnston			6	12,400			6	12,400		
Lenoir	2	1,000			1	2,000	3	3,000	2	1,000
Martin	3	11,750					3	11,750	2	1,750
Nash	6	4,000	4	3,000			10	7,000	5	2,500
Northampton	1	500	1	1,000			2	1,500		
Pitt	4	4,000	1	1,000			5	5,000	3	3,000
Vance	3	3,000	10	14,400			13	17,400	2	1,000
Wake	7	10,000	1	2,000			8	12,000	5	4,500
Warren										
Wayne	9	20,300	3	14,000			12	34,300	3	1,200
Wilson										
Totals	66	119,050	51	92,800	3	12,000	120	223,850	39	28,450

Table 4. Summary of Trees Placed by Extension Personnel
Southeastern District
1951 - 1952 Planting Season

County	State Purchase Trees		Pulpwood Industry Free Trees to 4-H		Pulpwood Industry Free Trees to Adults		Totals		Christmas Tree Plantings	
	Appli-cations	Trees	Appli-cations	Trees	Appli-cations	Trees	Appli-cations	Trees	Appli-cations	Trees
Anson	6	5,500	18	21,500	6	30,000	30	57,000	4	4,500
Bladen			3	8,000	2	10,000	5	18,000		
Brunswick	2	2,000	1	500	1	700	4	3,200	2	2,000
Columbus	5	10,550					5	10,550	4	5,550
Cumberland	4	5,500	6	8,500	5	10,000	15	24,000	4	5,500
Duplin	8	17,100					8	17,100	4	4,000
Harnett	1	500	2	1,500			3	2,000		
Hoke	11	51,000	3	3,000	12	41,000	26	95,000	2	1,500
Lee	6	10,000	7	7,000	1	1,100	14	18,100	1	4,000
Montgomery	9	93,000	33	43,000	14	59,000	56	195,000	2	2,000
Moore	5	66,500	19	23,500	3	15,000	27	105,000	1	1,000
New Hanover	10	8,000	6	10,500	1	4,000	17	22,500	10	8,000
Pender	1	1,000	1	800			2	1,800	1	1,000
Richmond	9	35,500	18	28,100	3	10,500	30	74,100	4	5,000
Robeson	3	6,500	7	17,500			10	24,000		
Sampson	6	5,500	1	2,000			7	7,500	4	4,000
Scotland	13	29,000	3	8,000	1	5,000	17	42,000	4	8,500
Totals	99	347,150	128	183,400	49	186,300	276	716,850	47	56,500

Table 5. Summary of Trees Placed by Extension Personnel
Northwestern District
1951 - 1952 Planting Season

County	State Purchase Trees		Pulpwood Industry Free Trees to 4-H		Pulpwood Industry Free Trees to Adults		Totals		Christmas Tree Plantings	
	Appli-cations	Trees	Appli-cations	Trees	Appli-cations	Trees	Appli-cations	Trees	Appli-cations	Trees
Alamance	1	500	4	4,500	9	11,000	14	16,000		
Alleghany	4	15,000	32	72,700			36	87,700		
Ashe	1	5,000	15	37,250			16	42,250		
Caswell	5	27,500	21	16,550			26	44,050	1	1,000
Chatham	1*	100,000	47	33,800			48	133,800		
Davidson	2	1,500	4	12,000			6	13,500		
Durham	2	1,500					2	1,500	1	1,000
Forsyth	4	31,500	3	3,000			7	34,500	3	30,000
Guilford	10	8,000	3	2,000			13	10,000	6	4,500
Orange			14	9,000			14	9,000		
Person	1	500	7	14,150			8	14,650	1	500
Randolph	1	500	11	13,000	1	5,000	13	18,500	1	500
Rockingham	5	3,500	6	8,000			11	11,500	5	3,500
Stokes	3	15,500	45	50,000			48	65,500	1	500
Surry	16	58,500	3	2,500			19	61,000	6	8,000
Wilkes	5	19,400	15	15,600			20	35,000	1	1,500
Yadkin	1	500	3	2,000			4	2,500	1	500
Totals	62	288,900	233	296,050	10	16,000	305	600,950	27	51,500

*These trees were purchased by Continental Can Company, Hopewell, Virginia. They were distributed among some 35 landowners free of charge.

Table 6. Summary of Trees Placed by Extension Personnel
Southwestern District
1951 - 1952 Planting Season

County	State Purchase Trees		Pulpwood Industry Free Trees to 4-H		Pulpwood Industry Free Trees to Adults		Totals		Christmas Tree Plantings	
	Appli-cations	Trees	Appli-cations	Trees	Appli-cations	Trees	Appli-cations	Trees	Appli-cations	Trees
Alexander			3	3,000			3	3,000		
Burke	4	4,500	9	16,000			13	20,500	1	500
Cabarrus	6	10,000	11	21,800	13	30,000	30	61,800		
Caldwell	5	42,000	7	10,500			12	52,500	2	6,000
Catawba	3	24,500	3	2,000			6	26,500	1	500
Cleveland	8	7,000	16	25,500	9	23,500	33	56,000	1	500
Davie	4	4,100					4	4,100		
Gaston	8	5,500	19	38,600	21	36,500	48	80,600	1	1,000
Iredell	3	36,500	6	7,500			9	44,000	1	1,000
Lincoln	5	7,750	6	9,000	10	27,500	21	44,250	1	3,000
McDowell										
Mecklenburg	10	11,100	35	40,300	12	22,000	57	73,400	3	2,500
Polk	7	6,100	4	5,000			11	11,100	1	1,000
Rowan	6	4,750	37	41,450			43	46,200		
Rutherford	14	20,500	26	31,100	22	63,000	62	114,600	1	500
Stanly	9	26,000	1	1,000	14	39,700	24	66,700	4	4,000
Union	3	29,500	36	73,500	17	63,500	56	166,500	1	500
Totals	95	239,800	219	326,250	118	305,700	432	871,750	18	21,000

Table 7. Summary of Trees Placed by Extension Personnel
Western District
1951 - 1952 Planting Season

County	State Purchase Trees		T.V.A. Free Trees to Adults 1/		T.V.A. Free Trees to 4-H		Totals		Christmas Tree Plantings	
	Applications	Trees	Applications	Trees	Applications	Trees	Applications	Trees	Applications	Trees
Avery	1	500	61	85,250	25	15,500	87	101,250	1	500
Buncombe	1	500	70	73,500	6	8,000	77	82,000	1	500
Cherokee			140	220,000	26	25,500	166	245,500		
Clay			16	51,000	4	4,000	20	55,000		
Graham			17	33,000	42	28,000	59	61,000		
Haywood	1	1,000	48	85,000	109	67,000	158	153,000	1	1,000
Henderson			63	81,500	11	14,500	74	96,000		
Jackson			34	117,000	12	10,500	46	127,500		
Macon			49	116,500	36	21,500	85	138,000		
Madison			16	26,000	7	5,500	23	31,500		
Mitchell			22	65,000	18	19,500	40	84,500		
Swain			38	68,500	13	9,500	51	78,000		
Transylvania			48	126,500	45	47,500	93	174,000		
Watauga			10	28,500	6	4,000	16	32,500		
Yancey			29	78,000	3	6,000	32	84,000		
Totals	3	2,000	661	1,255,250	363	286,500	1,027	1,543,750	3	2,000

1/ Figures refer to farm plantings only. Municipal and industrial plantings are not included even if the county agent or forestry extension specialist was responsible for its establishment. In all other districts, figures include all classes of owners if tree order came in on an Extension Service application blank.