NORTH CAROLINA

AGRICULTURAL EXTENSION SERVICE

Office

_____ PLAN OF WORK

FOR

1952

Major phases of project or subdivisions of project covered	Name of Worker*	Percentage of time devoted to entire project by each worker
	H. M. ELLIS, IN CHARGE AGRICULTURAL ENGINEERING EXTENSION	
	J. C. FERGUSON, AGRICULTURAL ENGINEERING EXTENSION SPECIALIST	
	R. M. RITCHIE, JR., " " " "	
	W. C. WARRICK, " " " "	
	E. S. COATES " " " "	
Farm Drainage, Irrigation, Soil Conservation, Water Systems, Fence Construction and ~~Fence~~ Post Treating Demonstrations	H. M. Ellis	100%
Rural Elec. & Crop Drying	E. S. Coates	100%
Farm Machinery and Cotton Gins	J.C. Ferguson	100%
Farm Bldgs. and ~~Building~~ Plan Service	R. M. Ritchie, Jr.	100%
Special Housing Project	W. C. Warrick	100%

RFS2/14

Date Submitted: February 15, 1952. Signed: H. M. Ellis
Project Leader

Date Approved: _____, 195___. Signed: _____
Asst. State Director of Extension

Date Approved: _____, 195___. Signed: _____
Director of Extension Work
U. S. Department of Agriculture

*If phases of project are divided between two or more workers, indicate assignment to each.

I N D E X

1

1952

A BRIEF STATEMENT REGARDING THE PRESENT SITUATION WHICH SHOULD GOVERN EXTENSION WORKERS' PLANS IN THE FIELD OF AGRICULTURAL ENGINEERING

The economic situation ahead is filled with strong inflationary trends and there will be an increasing demand for farm produce.

FARM MACHINERY: We are well on our way with the increased use of machinery, but the mechanization of North Carolina farming must continue at a rapid rate. Power should be in keeping with farm requirements. The general care, operation and maintenance of power machinery will be stressed.

FARM BUILDINGS: Many farm homes are in need of major repairs. Too many of them are not really livable. Too few of them have bathrooms, ample storage facilities and central heating systems.

Construction costs are high, certain building materials are difficult to find. We should not be too promotional-minded in this phase of work, but should not show a discouraging attitude to those in position to build. Buildings needed for comfort and for efficient production are in order.

DRAINAGE: Farm mechanization requires fair uniformity of land drainage. The over-all Extension program has been (and will remain) pointed toward more efficient production. The drainage program for 1952 is as timely as it has ever been.

IRRIGATION: Interest is high. Aluminum tubing may become scarce. Many method demonstrations will be conducted. These demonstrations plus industrial promotion will move irrigation forward as fast as we care for it to go until research catches up.

SOIL CONSERVATION: Farmers are aware of soil losses but as yet we have just scratched the surface in checking these losses. There should be no let-up in this program.

CROP DRYING: Interest in crop drying is increasing. Farmers are learning that losses from moisture can be greatly reduced. Wherever practical, farmers will be encouraged to install equipment for drying grain and hay crops.

WATER SYSTEMS: The installation of running water in the kitchens of rural homes has not kept pace with our rural electrification program. People usually buy what they desire the most. Until we cause them to desire running water in their homes we have not completed this phase of our program. This is an improvement that should be made in the homes of the lowest income groups, because it pays such high returns on money invested.

RURAL TELEPHONES: In our changing world telephones are every day becoming more and more necessary. From selling an animal to summoning a doctor a telephone is almost indispensable. Rural telephones will work magic changes in our rural social and economic structure.

FARM MACHINERY

More than 70,000 farm tractors are now being used by North Carolina farmers and over 16,000 farms have completely mechanized farming operations and do not have any workstock whatever.

The small tractor of less than 12 d.b.h.p., fits well into North Carolina agriculture and has quickly become a major economical factor in farm power, with more than 13,000 in use.

One of the objectives of an agricultural program for North Carolina is to increase the net farm income by producing a greater quantity and a better quality of products, at lower cost. Lowering cost of production by the use of suitable equipment and "know-how", offers one of the best opportunities of increasing net farm income, particularly in tobacco, cotton, peanuts, sweet potatoes and dairying. In addition, mechanization helps to minimize drudgery and loss from weather hazards, both of which are considered as the chief objections to farming as a profession.

With the steady increase of h.p. and the associated power operated implements, general care, maintenance and operation become increasingly important. Due to inexperience and neglect, maintenance cost runs excessively high on most farms. Realizing the importance of good maintenance and operating techniques, the Agricultural Engineering Extension Department has placed special emphasis on this work for several years. During 1952, work of this nature will be conducted in approximately 50 counties

More effort has been exerted toward the care and maintenance of the tractor, since it is the major item of expense, and the most vital single tool on the farm. This effort has been in the form of local half-day tractor maintenance schools for both adults and 4-H members. Visual aids, such as cutaway air cleaners, carburetors, oil filters and ignition systems, along with engine and tractor charts are used. Farmer-owned tractors are used to demonstrate correct adjustment and proper service. Keen interest has been shown throughout the many schools held and this indicates a definite need for this type of instruction.

Two, 3-day leader training schools on tractor maintenance are held annually for assistant county agents and for selected 4-H members. This work has been sponsored for the past six years by a leading oil company, through the National 4-H Committee and has accomplished outstanding results in

developing talent among the assistant county agents and the 4-H leaders. This training has been utilized in the furthering of good maintenance practices throughout the state in the work with local 4-H groups.

Unusual interest has developed as a result of the 4-H tractor project in county operator contests. Twelve counties entered contestants in a state contest in 1951 and many more counties will organize and conduct county contests in 1952.

Farm machinery dealers have been most cooperative with the Extension Service in both adult and 4-H tractor maintenance work, by supplying facilities in the form of machine shop space, personnel and prizes.

Widespread interest exists in the use of herbicides and the equipment for application. Several plans have been developed for the construction of home-made hand and tractor mounted sprayers. Assistance will be continued in 1952 by working with county agents and individual farmer-demonstrators in the furtherance of this work.

Spraying and dusting of insecticides on various crops is of major importance economically. This work requires know-how and properly designed equipment for application. Many requests are received throughout the year for demonstrations and for general assistance in this phase of agricultural machinery.

Anhydrous ammonia was used on a commercial scale in North Carolina for the first time in 1950, in some counties. Other counties are becoming interested and will desire assistance in educational meetings and field demonstrations.

Many of the educational meetings and field demonstrations which involve agricultural engineering, agronomy, etomology, etc., are scheduled jointly with other specialists, with equal emphasis given to all phases.

The rotary hoe as a cultivating tool for tobacco has proved itself and as a result of 37 field demonstrations during 1951, a number of tobacco farmers used this method of cultivating tobacco last year. Additional demonstrations will be arranged in 1952 to further advance this labor saving method, not only for tobacco, but for many other row crops to which it is adaptable.

Farm machinery exhibits and demonstrations are all important to the annual Farm and Home Week program and will be given special consideration in 1952. Dealers and branch representatives have been most cooperative in arranging excellent displays and in participating in varied field demonstrations.

In 1951, the farm machinery display was left in place for both the annual 4-H Week and the FFA state meeting. Guided tours and lecture periods were arranged for these groups by the Agricultural Engineering staff.

A similar schedule will be arranged in 1952.

The responsibility of directing the Farm Machinery Department of North Carolina State Fair is delegated to the farm machinery specialist in Agricultural Engineering Extension. Extensive displays of machinery are arranged each year and with improvement of facilities for 1952, it is expected that an even better show can be expected.

Many special requests come each year to this Department for assistance, from specialists and from county agents that are not included in the county plan of work. Ofttimes these involve newly developed machines or new adaptations of conventional equipment developed by manufacturers or by individual farmers. Farmers are prone to place undue emphasis on ideas or adaptations that may be entirely new to their particular locality and often they believe that they have patentable ideas that are really not of any particular significance. In many instances the Agricultural Engineering Department is called in to confer with the farmer and to evaluate such ideas. In most cases the ideas are not new and would therefore involve a waste of funds, if an attempt were made to patent them. Of course, a fair and unbiased decision is attempted in such cases and the advice given, either for or against the continuation of development, depends on the merit of the ideas or the device.

****** COTTON GINNING ******

North Carolin cotton ginners have made rapid progress in recent years toward the development of improved facilities for handling roughly harvested cottons. While North Carolina employs only a few mechanical cotton harvesters the quality of harvesting continues to decline largely because of better ginning facilities. The situation has resolved itself into a vicious circle, with the farmer assuming less and less responsibility for grade, as the ginner attempts to improve the grade.

Extension work in cotton ginning involves educational meetings with cotton farmers in an attempt to convince them of a larger share of responsibility in grade and cooperation with their ginners toward improving over-all quality.

Technical training schools for cotton gin owners and operators becomes increasingly important as more complicated and expensive equipment is developed and utilized in the ginning processes.

Requests from county ginners' organizations and local county agents are received each year, for assistance toward improving ginning techniques and a more thorough understanding of the importance of erecommended practices in operation.

Cotton gin operator schools and general educational meetings will be held in 1952, as the demand justifies. Normally, these meetings are held jointly with staff members of the State Department of Agriculture, assigned to supervise and assist with the ginning of cotton throughout North Carolina.

FARM STRUCTURES

Housing:

Even though a great many farm houses are being built and have been built in North Carolina in recent years, there is still a great need for the promotion of better farm houses. Improvement of these seems to trail behind the improvement in many other phases of farming. Interest in better housing is high and if this continues, farm houses will steadily improve in spite of high building costs. It is anticipated that in 1952, the building of farm houses will continue at the present high rate, because building materials in general will be in good supply except basic metals for which suitable substitutes will be found.

Major Problems:

Many farm families try to build their own houses, but lack knowledge of proper planning and construction. Too, many of our agents do not feel fully qualified to advise and conduct meetings on subjects related to building.

Several of the house plans in our plan service need revision and a number of new plans should be added.

Our agents do not have a complete list of our house plans in one book to use in helping people select plans. More cooperation is needed between Extension agents and local dealers and builders to insure the use of better plans and better construction methods.

ACTIVITY GOALS FOR 1952:

Specialist days in field	99
" " " office	260
Agents conferences and visits	140
Assistance with meetings	24
Result demonstrations to be continuously under way	20
Construction demonstrations (method)	6
New plans	4
Old plans revised	6
News articles and radio talks	18
Circular letters	2

Methods of Procedure:

Assistance will be given, where requested, with meetings and demonstrations in the counties. A variety of meetings is planned, including special interest meetings on house building, remodeling, kitchens and heating. Method demonstrations are planned that will cover such subjects as floor finishing, wallboard finishing, and kitchen cabinet construction. Most of these will be held in some of the homes used as result demonstration projects.

One specialist will continue supervision of 25 result demonstration houses now under way. Several have recently been completed and it is planned to hold an open house at each result demonstration after it is completed. As these projects are finished, other new ones will be picked up so as to keep as many projects going as the specialist can properly supervise.

A housing program will be presented at each of the six district meetings during the winter. This program, conducted jointly with the house furnishings specialist will be based on a set of slides prepared in 1951, for agents' training and for use by agents in their counties.

A complete catalog of the house plans in our plan service will be made available to all agents. The complete plans will be reproduced by multilithing and will be bound in a single volume for distribution to all agents. A number of plans require minor revision before printing. With this complete information on file the agents will be more able to assist people in selecting plans.

New plans are being developed to meet the needs of families who cooperate on the result demonstration program, and as these plans develop, the best of them will be added to the catalog.

Cooperation:

Commercial representatives will cooperate in conducting method demonstrations at the result demonstration houses and at special interest meetings as in the past. Agents will be encouraged to invite local builders and dealers to come to Extension meetings on housing. Other Extension specialists will assist in conducting meetings and demonstrations when needed. In particular, the house furnishings specialists will continue to cooperate by assisting in giving advice as to furnishing and decorating the result demonstration houses and the Horticultural Extension Department will be asked to assist in landscaping these projects.

Publications, Visual Aids and Other Teaching Aids:

Work will continue in making slides and pictures of result demonstration houses. Cost figures on labor and material and other information will be keptand these will all be used by agents and specialists in educational work.

******* FARM SERVICE BUILDINGS *******

North Carolina agriculture is expanding rapidly in livestock, poultry and dairy production. This shift in the agricultural pattern requires a great many new buildings beyond those which would normally be built under the old pattern of farming. Often the cost of buildings is a major obstacle to a farmer who wishes to add a new livestock, poultry or dairy enterprise. It is therefore important that in our farm buildings work that we make information available on buildings of the lowest cost possible, consistent with sound management.

In spite of high building cost and scarcity of certain materials, most farmers will be able to use their own labor, home grown timber (and substitute materials where necessary) to erect the buildings they need.

Research Needed:

Research is needed to furnish more data on requirements for low cost buildings suited to our climate and to our farming practices. Too many of our designs are based on research or practices in other regions. Specifically, we are in need of more definite information on requirements for grain conditioning and storage, and for buildings to house all types of livestock.

Major Problems:

The need for more definite information upon which to base building design.

Information on buildings needs to be presented in a form which will be more readily understood, and accepted by farmers and by country builders.

More training of agents needed.

Need for closer cooperation between Extension workers and local dealers and builders.

ACTIVITY GOALS:

Specialist days in field	57
" " " office	74
Visits to agents	75
Assistance with meetings	15
Construction demonstrations	7
New plans prepared	4
Present plans revised	15
News articles and radio talks	5
Circular letters	3

Methods of Procedure:

Counties will be visited as requested, to assist with meetings, to hold conferences with agents and to make visits to individual farms on special problems.

Meetings planned include those on tobacco barns, silos, poultry houses, dairy barns and general type meetings, where a group is invited in to discuss various problems.

A series of demonstrations on construction of flue-cured tobacco barn ridge ventilators will be continued. A large number of these ventilators has been built as a result of demonstrations in previous years, but the percentage, compared to the number of barns in the state, is still small. An effort will be made this year to further simplify the construction of the ventilator, without sacrificing its principles, in order to encourage its use by a larger number of farmers.

A plan is being developed for an aromatic tobacco curing barn which will use a forced circulation of heated air to dry the tobacco. The development of a proper curing barn is very important to the over all aromatic tobacco program, and it is hoped that a good number of these barns can be built in 1952, which will serve as demonstrations.

In an effort to provide more economical livestock and poultry buildings, plans have been issued for a pole-frame lounging barn and a pole-frame poultry laying house. These plans have proved very popular and we have had a demand for several other buildings of this type. If time is available, the original plans will be revised and one or more new plans of this type will be added to the files.

As soon as the new house plan catalog is completed we will begin work on a similar catalog of farm service building plans. By reproducing all of our plans in printed form, we will be able to furnish each agent with a book which will include all of our farm service building plans. A number of our plans will require revision before they are printed for use in the book.

Cooperation:

All departments will cooperate in the preparation of new plans or revision of old plans related to their field.

Many of the meetings planned will be conducted in cooperation with specialists from other departments.

Commercial interests will cooperate in furnishing information and assistance relating to their products. Outstanding among these is the Portland Cement Association, which has always been very cooperative in supplying information relative to the use of concrete.

Close cooperation will be maintained between the specialists and district and county agents.

Publications and Visual Aids:

As much time as possible will be devoted to work on the revised plan catalog mentioned above.

An Extension circular "FLUE-CURED TOBACCO BARN CONSTRUCTION" will be revised and reprinted.

RURAL ELECTRIFICATION - 1952

(1) Electricity is reaching more North Carolina farm families each year. During the twelve months ending July 1, 1951, 36,054 rural consumers were added to the number who already had electric service. A total of 3,795.41 miles of lines was constructed during this period to serve new consumers. North Carolina now ranks second in the nation in the number of farms with electric service. Of the state's 288,508 farms, 218,948 have electric service.

(2) Although it is very important to reach the remaining 16.2% of the farms that do not have electric service, emphasis is being placed upon educating the 83.8% that do have it, on the proper uses of electrical equipment, so as to boost the farm income through greater efficiency.

(3) Since farm electrical equipment is to become less plentiful because of metal allocations for more important defense materials, farm families must clearly understand the importance of correct usage and care.

(4) Farm and home agents realize the importance of producing more farm products with the present acreage and equipment and with less labor. They also realize the need for the care and proper use of electrical equipment as a method of continued efficient production. Consequently, the agents need assistance in training rural people along these lines.

(5) Commercial groups, utility companies and rural electric membership cooperatives are to be encouraged to assist the farm and home agents with the electrification problems in each county.

MAJOR PROBLEMS:

1. Preparation of subject matter material for adults and 4-H club members on uses of electricity for farm and for the home.
2. Preparation and presentation of demonstrations on use of electrical equipment on farm and in the home.
3. Making information available to farm and home agents in an acceptable form for teaching to rural people.
4. Training agents on proper utilization of electricity through the most modern practices, and methods.
5. Securing cooperation from electric utilities, rural electric membership cooperatives and local commercial dealers in electrical appliances and equipment, in promoting a long range educational program.

ACTIVITIES GOALS:

42 specialist's days in field

70 " " " office

14 conferences and visits with agents
15 county-wide training meetings
33 counties assisted
3 circular letter
10 news articles and radio talks.

METHODS OF PROCEDURE:

1. Meetings and demonstrations:
   Special interest meetings for farmers, home demonstration members and 4-H club groups, on utilization of electricity and use and care of electrical equipment.

2. Agents' conferences and visits:
   Visits will be made to discuss Farm and Home Electric program and methods of promoting an over-all educational program.

3. Training School:
   A special school will be held to train instructors of the summer camp program on the subjects used in electric classes.

4. 4-H club camps:
   Four subjects on electricity will be taught at each 4-H camp during the summer. Electric utilities will furnish instructors and equipment.

5. Preparation of Educational Material:
   A 4-H club record book for the Farm and Home Electric Project will be prepared. Subject matter will also be assembled and prepared for 4-H club members, farmers and farm home-makers concerning electrical farming and home-making.

6. Publicity:
   News articles and radio talks on timely topics will be released by the State office. These will be prepared in this Department, for use by REA Coops, in monthly news letters and by newspapers and magazines throughout the State.

COOPERATION:

The Home Management Department will cooperate in preparation of material and in promotion of the program.

The Electric power companies will cooperate in furnishing assistance to agents and in supplying educational material when requested. They will furnish instructors and electrical equipment for electric classes in four summer 4-H camps. They will also furnish awards to 4-H club winners in the electrical project on county and territorial levels.

The Westinghouse Electric Corporation will furnish educational material for electrical classes in 4-H camps and for agents and club members. They will give awards to winners in the 4-H Club farm and home electric program on county and state levels.

Close cooperation will be maintained between this office and the state 4-H specialists, the district agents and county farm and home demonstration agents in promoting the electrification program.

The state REA office and rural electric membership cooperatives will cooperate with an educational program to reach each of its consumers with the latest recommended practices. They will assist in promoting the 4-H club electric project on a local and county level.

Dealers and electrical supply houses will assist county extension agents with promotional work on a county and local level.

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CROP DRYING

From the standpoint of increased farm income it is just as important to preserve a crop as it is to produce it. Drought, hail and wind storms cause serious losses on farms, but even these losses are not as great as the loss of crops, because of poor preservation, after harvesting. This same principle applies to all agricultural products and has brought about the use of preserving agents such as pasteurization, curing, cooling, drying, canning, fumigation and quick freezing. Preservation by drying is one of the oldest methods known but it is just beginning to take hold on North Carolina farms.

In this state climatic conditions are a great handicap to good harvesting but equally as serious is farm mechanization. The use of combines and mechanical pickers makes it necessary for harvesting to be done whenever the bulk of a crop is ready. Consequently parts of the crop are often harvested when immature and with high moisture content. The damaging effect of even a small

portion of a crop having high moisture content, in bulk storage presents a problem.

(3) The distribution of crops in North Carolina lends itself well to some system of crop drying, since 74 counties grow one or more of the ten principal crops that have need of artificial drying or curing. There are 21 counties that grow from five to seven of these crops.

(4) There is a critical need for on-the-farm storage and drying facilities in North Carolina. Acreages and yields of grain crops are increasing yearly. Approximately 40% of the grain crop sells at a time of lowest market prices, due to lack of proper on the farm drying and storage facilities. Off-farm storage facilities are limited and are now filled to capacity. The prospect for new off-farm facilities is very poor under present conditions.

(5) Research is needed on a crop drying system that is practical for the small farmer with limited capital. Many of these farmers have been reached with a suitable system through the use of tobacco barns as a source of heat, but many more farmers do not have tobacco barns and must depend upon commercial driers or upon improperly controlled home-made heating systems. The cost of a commercial system is out of reason for the small farmer.

Research is also needed on drying certain crops such as gladioli bulbs, which while they add to the state's farm income are not necessarily classed as a principal crop.

MAJOR PROBLEMS:

1. Education of farmers to benefits of artificial drying. Comparison of cost of installation of driers to amounts lost in crops from weather damage.
2. Training agents to promote crop drying and to be able to assist in designing a drying installation.
3. Preparing and presenting educational information to show practicability of crop drying.
4. Securing cooperation of commercial firms in properly presenting facts to prospective buyers of equipment.

ACTIVITY GOALS:

54 specialist days in field
95 " " " office
35 agents' conferences and visits
40 counties assisted
10 field days and farm demonstrations
5 circular letters
6 news articles.

METHODS OF PROCEDURE:

1. Meetings and demonstrations: Field demonstrations are conducted to show methods of designing and constructing crop drying systems.

   Special interest meetings for groups interested in installation of hay, grain or seed drying systems.

   Result demonstrations in grain drying, where one or more crops are dried on the same system.

2. Agents conferences and visits: Conferences in agents' offices for training and visits made with agents to assist farmers in planning drying installations.

COOPERATION:

(1) Research and Extension departments will cooperate in promoting timely educational programs. The Research Department will be consulted on the design of any new system.

(2) Certain farmers will cooperate in studies of various types of drying systems.

(3) The Production and Marketing Administration will cooperate by making loans to farmers who desire to install crop driers.

DRAINAGE

Project Situation:

North Carolina farming is rapidly becoming mechanized and mechanized farming demands uniformly drained fields. Wet spots that could be tolerated with horse-drawn equipment must be eliminated if modern machinery is to be used efficiently.

Trends toward livestock farming present numerous problems. Extremely low, wet places are being surface-drained to provide additional pasturage.

In North Carolina, approximately 4,000,000 acres are poorly drained. This includes woodlands, muck soil, wet sands, as well as the areas that are cleared. Soils and drainage specialists estimate that 1/4 of the 4,000,000 acres is in cultivation and that 980,000 acres have some form of drainage, but that not more than 1/5 of this 980,000 acres has adequate drainage for the crops commonly grown in the area. Inadequate drainage of potentially good agricultural land is a state-wide problem.

A cooperative research project is being conducted by the North Carolina Experiment Station and the Soil Conservation Service to determine the type drainage best adapted for each major soil type and also to determine proper spacing and depth for tile and open ditches.

The over-all agricultural extension program has been (and must remain) geared toward more efficient production. This is a sound reason for having adequately drained land.

Major Problems:

1. Lack of satisfactory outlets.
2. " " information on hard-todrain soils
3. " " trained personnel

Activity Goals:

15	18	specialist days in field assisting in conducting county programs
25	28	" " " office preparing educational material to aid in county programs.
6	6	" " " office in cooperative work with PMA and SCS programs.
12	12	demonstration meetings conducted by specialist.
4	4	news articles

Methods of Procedure:

We will assist agents in planning and conducting their county programs. The specialist will hold educational meetings, conduct preliminary surveys, hold tile laying demonstrations, primarily for the benefit of the agent. The agent will not be expected to launch a personal service program, but our demonstrations should enable him to conduct similar demonstrations and to make sound recommendations. He will be supplied with teaching aids, so that he may feel confidence in carrying on the work. Trips to the counties by the specialist for follow-up work cannot be listed in a plan of work, but these follow-up trips will be cared for in our unallotted time.

COOPERATION:

Name of Agency	Assistance to be given	Assistance to be received
PRODUCTION MARKETING ADMINISTRATION	Committee work on preparation of specifications for soil building practices and engineering advice on special problems.	Stimulation of program through payment to farmers for drainage practices.
SOIL CONSERVATION SERVICE	1. Preparation of specifications for all drainage practices. 2. Will work together on many of the county demonstrations.	1. SCS technician will make surveys for community projects. 2. Will work together on many of the county demonstrations.
VOCATIONAL TEACHERS	The will be invited to attend the county demonstrations and to bring their students.	Teachers will assist in making surveys and will promote programs in other ways.

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IRRIGATION

Project Situation:

Irrigation has proved a profitable practice for many crops grown in North Carolina. Even though located in the humid area some sections of this state experience a damaging drought each year. In the past few years the interest of farmers in irrigation has increased rapidly. Irrigation in this time increased from a few acres to an estimated acres. Major crops now under irrigation to a limited extent, include Irish potatoes, general truck crops, tobacco, peaches and pasturage. The pioneers in the use of irrigation equipment in the state were the blueberry and flower growers.

Portable, revolving sprinkler systems are best suited to the needs of our farmers. Until the declaration of a national emergency, all indications were that there would be a large expansion in irrigation installations and large annual increases in acreage under irrigation. Now that practically all parts of sprinkler equipment will in short supply, due to the defense program there will be only a small increase in the installation of irrigation systems.

Major Problems

1. Lack of "know-how"
   A. Little information on infiltration rate of soils.
   B. " " " water requirement of crops grown and results of watering, such as increasing susceptibility of plants to disease.
2. Lack of trained personnel in agencies of USDA and in sales organizations.

Activity Goals:

20 specialist days in the field
30 " " " " Office
50 agents to be assisted
10 preliminary surveys to be made (for demonstrations and for training agents).
6 county-wide demonstrations of portable irrigation systems.
8 circular letter
3 news articles.

Planned Demonstrations:

During 1952, major emphasis in this phase of our program will be placed on field demonstrations. These demonstrations will be located at strategic points to cover the main crops produced in this state. Exact sites will be selected with regard to available water supply, ease in accommodating the spectators, how well the area can serve in putting the subject over, etc.

At least four dealers will be invited to participate in each demonstration and each dealer will be asked to demonstrate one small and one medium or large system.

Included is a copy of the form letter sent to dealers who are helping with the first demonstration of 1952.

Cooperation:

Subject matter specialists of other departments will cooperate in conducting demonstrations, as will dealers and manufacturers of irrigation equipment. Vocational teachers and SCS technicians will be invited to participate in all method demonstrations.

January 4, 1952

Mr. Thomas W. Crockett, Mgr. Irrigation Dept.,
Standard Fert. Co., Williamston, N. C.

Mr. John W. Copley, Jr., Thompson Irrigation Co.,
605 N. Heritage St., Kinston, N. C.

Mr. H. C. Klose, Sales Eng., Dillon Sup. Co.,
Raleigh, N. C.

Mr. Frank S. Reid,
Dickinson Ave., Greenville, N. C.

Gentlemen:

Thank you for your prompt responses to the invitation to participate in the Wilson County irrigation demonstration.

Following is the general information concerning the proposed demonstration:

TIME: Friday, January 25, 1952, at 2 p.m.

PLACE: Mrs. Haywood Edmundson's farm, four miles southeast of Wilson, on Highway 58 (at the fishpond -- the only one on Hwy. No. 58 -- between Wilson and Stantonsburg).

EQUIPMENT TO DEMONSTRATE: Both plant bed and field irrigation equipment. Plant bed equipment was specified, but we should include some larger equipment for the benefit of those in attendance.

CONDITIONS: Plenty of parking space. Plenty of easy to get at water.

PLANS FOR MEETING: General remarks 10 minutes, followed by an allotment of 15 minutes each for each concern demonstrating equipment. Please plan your remarks to use around 10 minutes, then use the remaining 5 minutes to demonstrate both of your systems. (The spectators will be moved on to the next location at the end of the 15-minute period.)

After each company, in turn, has had a 15-minute period, there will be a period for questions and answers, after which the group will b e released to observe and discuss the equipment with the different representatives.

I have a number of requests for similar demonstrations in other counties during 1952, and will certainly appreciate your criticisms and your suggestions for conducting these meetings.

Yours very truly,

H. M. Ellis, In Charge
Agricultural Eng. Extension

Visual Aids:

Work will be continued in building up a set of slides for agents' use in conducting educational meetings on irrigation.

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- SOIL CONSERVATION -

From more than 22% of the total land area of North Carolina, erosion has stripped 1/3 or more of its topsoil. The Piedmont Section which covers about 1/3 of the State has suffered the greatest loss. In 10 of the worst eroded Piedmont counties, around 25% of the area has been abandoned .

The Extension Agricultural Engineering Department is concerned with the educational program of the engineering phases of all conservation programs in the State. The county programs are well organized and the county agents are well informed. The bulk of the field work is being conducted by the Soil Conservation Service and little field work is planned by the Agricultural Engineering Extension specialist.

Planning and Teaching Activities:

8	specialist days in field
15	" " " office
6	method demonstration county meetings
___	agents participating in the program
3	circular letters
3	news articles
4	state level conferences with PMA and SCS officials

Cooperation:

Agencies:	Assistance to be given	Assistance to be received
PRODUCTION & MARKETING ADMINISTRATION	In preparation of specifications for earth moving practices.	Stimulation of program through incentive payments.
SOIL CONSERVATION SERVICE	Conducting educational program and in coordinating work.	Conducting action program through Soil Conservation districts.
VOCATIONAL TEACHERS	Furnishing educational materials and inviting them to participate in demonstrations.	Helping in training farmers and making farm visits on follow-up work.

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WATER SYSTEMS

WATER SYSTEMS

The installation of running water in the kitchens of rural homes has lagged behind the electrification program to an alarming extent. Some of the farmers who do not have running water systems (or complete running water systems), are driving some of the more expensive makes of car.

At each White and Negro District Program Planning Conference last year, the need for emphasis on this program was stressed. It will be stressed again in 1952.

Major Problems:

1. Lack of income and improper use of income
2. Large tenant population
3. Farmers' lack of sufficient desire for the improvement.

Activity Goals:

18 specialist days in field
30 " " office
100 counties to participate
14 community (or county-wide) meetings conducted by specialist
3 news articles
3 circular letters

Methods of Procedure:

Agents have requested assistance, on their plans of work. They will inform this Department whether the meeting planned will be a general educational meeting on farmstead systems, water conditioning or a method demonstration at some home where a system is being installed.

After agents and specialist agree on a date the agents make local arrangements, and where dealers are to participate the specialist makes arrangements with them.

Cooperation:

Equipment dealers will be invited to participate at both educational meetings and at method demonstrations.

Vocational teachers will be invited to participate.

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FENCE CONSTRUCTION AND POST TREATING DEMONSTRATIONS

With increased interest in livestock and faced with an all-time for labor, our farmers are more fence-conscious than they have been since the passing of the "no-fence" law. A

factor adding to the need for an educational program is the scarcity of good posts.

The Extension Agricultural Engineering and Extension Forestry departments have jointly planned a series of fence construction and post treating demonstrations. These demonstrations were announced through the usual channels and 23 White county agents and 7 Negro county agents have requested them.

Major Problems:

1. The generally held belief of farmers that they are experts at fence construction.
2. Lack of good posts.
3. High price of woven wire. (Farmers just will not take proper care in constructing a barbed wire fence.

Methods of Procedure:

The necessary posts and the equipment will be taken to each meeting to demonstrate how to peel posts, how to stack them to dry (~~if necessary~~), how to treat them and how to care for them after treatment.

This will be followed by an explanation of a properly constructed fence corner post assembly. (The assembly will be constructed before the beginning of the demonstration.)

Planning and Teaching Activities:

Carried out
24
9
21
20
4

25 specialists' days in field
8 " " " office
30 counties to participate in 1952
25 county-wide method demonstration meetings
2 news articles
1 set of approximately 30 slides on post treating and fence construction for county agents' use in conducting meetings.

GENERAL

4-H Club Work:

Method demonstration outlines will be prepared as teaching aids for agents' use in conducting 4-H meetings. Counties that request help will be assisted by specialists in conducting handicraft projects at the 4-H Club camps.

A farm and home safety record book will be prepared in 1952, 1953 jointly by an Extension Agricultural Engineer and the Home Management specialist.

For other 4-H Club activities see the Rural Electrification and Farm Machinery sections.

Farm and Home Week and 4-H Club Short Course:

All members of this Department will participate in conducting these two annual programs. Definite plans for these programs have not, as yet, been made but each specialist in the Department will spend at least two weeks time in planning and conducting them.

Safety and Fire Prevention:

Each Extension specialist in Agricultural Engineering is responsible for promoting safe practices in his field of work. Information on the programs for Fire Prevention, Spring Clean-up, and National Safety Week are distributed from this office.

Special Farm Engineering Problems:

There are many farm problems of an engineering nature that confront us in the field and in office conferences. Urgent requests fro assistance from agents come to us. A few of these problems are on general sanitation, farm ponds, safety programs, fence construction demonstrations, farmstead planning, land clearing, special field days, etc.

For such phases of our program only tentative plans can be made. We set aside field and office days in which to assist with special problems and these, of necessity, will be planned as the problems arise.

A PLAN OF SPECIALISTS' WORK AT THE STATE LEVEL

Line of Work AGRICULTURAL ENG. EXT. 195

H. M. Ellis

List the number of days required by months for each type of work

Write in Month and Specialist's name under each month	Preparation of Bulletins	Preparation of Educational Materials	Preparation of News and Radio Materials	Conferences in State and Out-of-State	Training Schools	Office Conferences and Correspondence	Preparing your Plan of Work	Preparing your Annual Report	Days Allotted to Field Work	Holidays	Annual Leave	Unallotted Office Time	Total Days For Month
December 1951		3	1	1		7	1	1	5	6	1		26
January 1952		5	1	1		6	2	2	10				27
February "		4		1		10			9			1	25
March "		4	1	1		6			10				22
April "		4		1		5			9	1	1		21
May "		4	1	1		5			8		2	1	22
June "		4	1	1		6			8		1		21
July "		4	1	1		6			7	1	2	1	23
August "		4		1		5			6		5		21
September "		4	1	1		6			10	1	1	2	26
October "		5	1	1		9			7		1	3	27
November "		4	1	1		9			6	1	1	2	25
TOTALS		49	9	12		80	3	3	95	10	15	10	286

A PLAN OF SPECIALISTS' WORK AT THE STATE LEVEL

Line of Work AGRICULTURAL ENGINEERING EXT. 1952

J. C. Ferguson

List the number of days required by months for each type of work

Write in Month and Specialist's name under each month	Preparation of Bulletins	Preparation of Educational Materials	Preparation of News and Radio Materials	Conferences in State and Out-of-State	Training Schools	Office Conferences and Correspondence	Preparing your Plan of Work	Preparing your Annual Report	Days allotted to field work	Holidays	Annual Leave	Unallotted Office Time	Total Days For Month
DECEMBER		6	2	2	2	4	1	1	2	6			26
JANUARY 1952		3	2	1	6	2	2	2	9				27
FEBRUARY		4		3	2	2			14				25
MARCH		4	1	1		2			14				22
APRIL		2	1	1		2			12	1		2	21
MAY		2		5		2			12		1		22
JUNE		2	1	1		3			12		2		21
JULY		2	1	1		3			14	1	1		23
AUGUST		2		1		3			10		3	2	21
SEPTEMBER		3	1	2		3			10	1	2	4	26
OCTOBER		3	1	1		2			10		3	7	27
NOVEMBER		3	2	1		3			10	1	3	2	25
TOTALS		36	12	20	10	31	3	3	129	10	15	17	286

A PLAN OF SPECIALISTS' WORK AT THE STATE LEVEL

Line of Work AGRICULTURAL ENG. EXT. 1952

R. M. Ritchie, Jr.

List the number of days required by months for each type of work

Write in Month and Specialist's name under each month	Preparation of Bulletins	Preparation of Educational Materials	Preparation of News and Radio Materials	Conferences in State and Out-of-State	Training Schools	Office Conferences and Correspondence	Preparing your Plan of Work	Preparing your Annual Report			Annual Leave	Unallotted Office Time	Total Days For Month
DECEMBER 1951		4				7		2	5	6	2		26
JANUARY 1952		4				4	2		15			2	27
FEBRUARY		4		1		4	1		14			1	25
MARCH		4	1	1		2			12			2	22
APRIL		3	1	1		3			10	1		2	21
MAY		4	½	1		5			10			2	22
JUNE		4	1			4			8			4	21
JULY		2	1	2		4			6	1	3	4	23
AUGUST				3		2			6		10		21
SEPTEMBER		7	1	1		5			6	1		5	26
OCTOBER		7	1	1		7			5			6	27
NOVEMBER		7	1	1		6			4	1		5	25
TOTALS		50	7	12		53	3	2	101	10	15	33	286

A PLAN OF SPECIALISTS' WORK AT THE STATE LEVEL

Line of Work AGR. ENG. EXT. 195 2

W.C.WARRICK

List the number of days required by months for each type of work

Write in Month and Specialist's name under each month	Preparation of Bulletins	Preparation of Educational Materials	Preparation of News and Radio Materials	Conferences in State and Out-of-State	Training Schools	Office Conferences and Correspondence	Preparing your Plan of Work	Preparing your Annual Report	Days allotted to field	Holidays	Annual Leave	Unallotted Office Time	Total Days For Month
DECEMBER 1951		7				4	2	2	3	6	4		26
JANUARY 1952		10	1	2		2	2		6			4	27
FEBRUARY "		6	1	4		2			12				25
MARCH "		6		1		3			10			2	22
APRIL "		6	1	1		3			6	1	1	2	21
MAY "		6	1	1		6			5			3	22
JUNE "		6	1	1		3			6			4	21
JULY "		7	1			6			2	1		6	23
AUGUST "				1		5			3		10	2	21
SEPT. "		6	1	1		6			2	1		9	26
OCT. "		8	1	2		6			1			9	27
NOV. "		7	2			5			2	1		8	25
TOTALS		75	10	14		51	2	2	58	10	15	49	286

A PLAN OF SPECIALISTS' WORK AT THE STATE LEVEL

Line of Work ~~Agricultural Engineering Ext.~~ 195~~2~~

E. S. Coates

List the number of days required by months for each type of work

Write in Month and Specialist's name under each month	Preparation of Bulletins	Preparation of Educational Materials	Preparation of News and Radio Materials	Conferences in State and Out-of-State	Training Schools	Office Conferences and Correspondence	Preparing your Plan of Work	Preparing your Annual Report	Days allotted to Field	Holidays	Annual Leave	Unallotted Office Time	Total Days For Month
~~December 1951~~		~~9~~	~~1½~~	~~1½~~		~~1~~	~~2~~	~~3~~	~~3~~	~~6~~			~~26~~
~~Jan. 1952~~		~~9~~	~~2~~	~~1½~~		~~3~~	~~1~~		~~10½~~				~~27~~
~~Feb. "~~		~~5~~	~~1~~	~~4~~		~~1~~			~~13~~			~~1~~	~~25~~
~~Mar. "~~		~~4~~	~~1~~	~~1½~~		~~1~~			~~14½~~				~~22~~
~~Apr. "~~		~~5~~	~~1~~	~~1~~		~~4~~			~~9~~	~~1~~			~~21~~
~~May "~~		~~5~~	~~2~~	~~1~~		~~3~~			~~10~~			~~1~~	~~22~~
~~June "~~		~~8~~	~~1~~	~~1~~		~~5~~			~~3~~		~~3~~		~~21~~
~~July "~~		~~7~~	~~2~~	~~1~~		~~4~~			~~6~~	~~1~~	~~2~~		~~23~~
~~Aug. "~~		~~2~~	~~1~~	~~1~~		~~2~~			~~4~~		~~10~~	~~1~~	~~21~~
~~Sept. "~~		~~10~~	~~3~~	~~2~~		~~5~~			~~4~~	~~1~~		~~1~~	~~26~~
~~Oct. "~~		~~9~~	~~2~~	~~3~~		~~7~~			~~2~~			~~4~~	~~27~~
Nov.		11	4	2		5				1		2	25
TOTALS		~~84~~	~~21½~~	~~19¼~~		41	3	3	79	10	15	10	~~286~~

A PLAN OF SPECIALISTS' WORK AT THE COUNTY LEVEL

Line of Work ~~AGRICULTURAL ENG. EXT.~~ 195 2

Write in Counties to be Served for the month	Description of work to be done in Counties	Days Devoted to work by ELLIS	FERGUSON	RITCHIE	WARRICK	COATES	Total Days To County
DECEMBER 1951							
Hertford	Water systems	1					
~~Currituck~~	~~Farm Bldgs.~~	1					
Halifax	Irrigation & Drainage	2					
Stanley	Tractor schools		1				
Edgecombe	Farm Bldgs.			1			
Onslow	" "			1			
Moore	" "			1			
Nash	" "			1			
Hoke	" "			1			
Caldwell	Result housing				1		
Union	" "				2		
"	Community bldg.					1	
Cleveland	Crop drying					1	
Henderson	" "					1	
Washington	Meeting with co.agts.						
~~JANUARY 1952~~							
Wake	Nurserymen's Short Course	1					
Iredell	SW. Dist. meeting	1					
Warren	Water systems	1					
Hertford	" & sewage "	2					
Wayne	Irrigation survey	1					
Pender	Water & Sewage	1					
Wilson	Irrig. dem.	1					
Duplin	Water	1					
Sampson	Drainage	1					
Catawba	Farm Mch.		1				
Davie	"		1				
Iredell	"		1				
Harnett	"		1				
Franklin	"		1				
Rockingham	"		1				
Wilkes	"		1				
Onslow	"		1				
Carteret	"		1				
Dist.meetings	Housing			6			
Chatham	"			1			
Johnston	"			1			
Anson	"			1			
Harnett	"			1			

A PLAN OF SPECIALISTS' WORK AT THE COUNTY LEVEL

Line of Work AGR. ENG. EXT. 195 2

Write in Counties to be Served for the month	Description of work to be done in Counties	Days Devoted to work by ELLIS	FERGUSON	RITCHIE	WARRICK	COATES	Total Days To County
JANUARY 1952							
Union	Farm Bldgs.			1			
McDowell	"			1			
Alexander	"			1			
Surry	"			1			
"	Public Agr. bldg.			1			
Durham	Result Housing				1		
Alamance	"				1		
Barnett	"				1		
Johnston	"				1		
Jones	"				1		
Anson	"				1		
Cleveland	Judging Better Acres Farms				1/2		
Durham	Elec. School					1	
Hoke	"					1	
Sampson	"					1	
Nash	Crop drying & hotbed					1	
Tyrrell	" "					1	
Orange	" "					1	
Anson	" "					1	
Martin	F&H Elec.					1	
Wake	REA Conf.					1/2	
"	Nurserymen's Short Course					1	
"	N.C.Seed Found.Conf.					1	
FEBRUARY							
Tyrrell	Fence Constr.& Post Treatment	1					
Hyde	" "	1					
Perquimans	" "	1					
Wayne	Agr. School	1					
Franklin	Terracing "	1					
Sampson	Water system meeting	1					
Lenoir	" 2	1					
Edgecombe	Drainage	1					
New Hanover	"	1					
Sampson	Farm Mch		1				
Robeson	"		1				
Montgomery	"		1				
Hoke	"		1				
Brunswick	"		1				
Anson	"		1				
Craven	"		1				

A PLAN OF SPECIALISTS' WORK AT THE COUNTY LEVEL

Line of Work AGR. ENG. EXT. 195 2

Write in Counties to be Served for the month	Description of work to be done in Counties	Days Devoted to work by ELLIS	FERGUSON	RITCHIE	WARRICK	COATES	Total Days To County
FEBRUARY - continued							
Moore	Farm Machinery	1					
Chatham	"	1					
Guilford	"	1					
Halifax	"	1					
Franklin	"	1					
Onslow	"	1					
Jones	"	1					
Nash	Housing			1			
Alexander	"			1			
Sampson	"			1			
Person	"			1			
Johnston	"			1			
New Hanover	Farm"Bldgs.			1			
Wilson	"			1			
Person	"			1			
Granville	"			1			
Orange	"			1			
Caswell	"			1			
Polk	"			1			
Swain	"			1			
Yancey	"			1			
Halifax	Result housing				1		
Carteret	"				1		
Beaufort	"				1		
Anson	"				1		
Harnett	"				1		
Scotland	"				1		
Caldwell	"				1		
Johnston	"				1		
Sampson	"				1		
Mitchell	" " & housing meeting				1		
Hertford	" " & Farmers' convention				2		
Johnston	Farm & Home Elec.					1	
Lee	"					1	
Lincoln	"					1	
Caldwell	"					1	
Onslow	"					1	
Robeson	"					1	
Pitt	"					1	
Mecklenburg	Crop drying					1	
Pitt & Nash	" " School and tour					1	
Columbus	Elec. school					1	
Pender	"					1	

A PLAN OF SPECIALISTS' WORK AT THE COUNTY LEVEL

Line of Work AGR. ENG. EXT. 1952

Write in Counties to be Served for the month	Description of work to be done in Counties	Days Devoted to work by ELLIS	FERGUSON	RITCHIE	WARRICK	COATES	Total Days To County
February continued							
Currituck	Elec. hotbeds					2	
MARCH							
Forsyth	Irrigation	1					
Pitt	"	1					
Halifa x	"	1					
Buncombe	"	1					
Mitchell	Drainage	1					
Rowan	"	1					
Gates	"	1					
Caswell	"	1					
Gaston	Terracing	1					
Union	"	1					
Mecklenburg	Farm Machinery		1				
Union	"		1				
Caldwell	"		1				
Sampson	"		1				
Montgomery	"		1				
Bladen	"		1				
Caswell	"		1				
Henderson	"		1				
Martin	"		1				
Wake	"		1				
Edgecombe	"		1				
Beaufort	"		1				
Perquimans	"		1				
Hertford	"		1				
Gates	Housing			1			
Wilkes	"			1			
Burke	"			1			
Stanly	"			1			
Union	"			1			
Caldwell	"			1			
Alexander	Farm Bldgs.			1			
Watauga	"			1			
Cherokee	"			1			
Wake	"			1			
Iredell	"			1			
Randolph	"			1			

A PLAN OF SPECIALISTS' WORK AT THE COUNTY LEVEL

Line of Work AGRICULTURAL ENGINEERING EXT. 195 2

Write in Counties to be Served for the month	Description of work to be done in Counties	Days Devoted to work by ELLIS	FERGUSON	RITCHIE	WARRICK	COATES	Total Days To County
MARCH - continued							
Sampson	Result housing				1		
Hertford	"				1		
Alamance	"				1		
Gates	"				1		
Tyrrell	"				1		
Jones	"				1		
Scotland	"				1		
Stokes	"				1		
Martin	"				1		
Cleveland	"				1		
Bertie	Leaders' Electric School					1	
Craven	" "					1	
Hyde	Crop drying					1	
Yancey	" "					1	
Sampson	Hot bed dem.					1	
Harnett	" " "					1	
Hertford	" " "					1	
Cumberland	" " "					1	
Vance	Farm & Home Elec.					1	
Greene	"					1	
Rowan	"					1	
Yancey	"					1	
Graham	"					1	
Jackson	"					1	
Nash	Terracing	1					
Orange	" school	1					
Wilkes	Water sys. meeting	1					
Iredell	" " "	1					
Yancey	Drainage	1					
Madison	"	1					
Clay	"	1					
Jones	Housing	1					
Henderson	Farm ponds	1					
Moore	" machinery		1				
Guilford	" "		1				
Nash	" "		1				
Greene	"		1				
Granville	"		1				
Alleghaney	"		1				
Ashe	"		1				
Polk	"		1				
Alexander	"		1				

A PLAN OF SPECIALISTS' WORK AT THE COUNTY LEVEL

Line of Work ~~AGR. ENG. EXT.~~ 195 ~~2~~

Write in Counties to be Served for the month	Description of work to be done in Counties	Days Devoted to work by: ELLIS	FERGUSON	RITCHIE	WARREN	COATES	Total Days To County
APRIL 1952							
Jones	Housing			1			
Franklin	"			1			
Chatham	Farm Bldgs.			1			
Beaufort	Farm Bldgs.			1			
Duplin	"			1			
Brunswick	"			1			
Orange	"			1			
Carteret	"			1			
Rockingham	"			1			
Alamance	"				1		
~~Perquimans~~	Result housing				1		
Duplin	" "				1		
Stokes	"				1		
Caswell	"				1		
Jones	"				1		
Scotland	"				1		
~~Polk~~	Elec. hotbed					1	
Warren	Crop drying					1	
~~Cabarrus~~	"					1	
Randolph	"					1	
~~Guilford~~	"					1	
Caswell	"					1	
Buncombe	"					1	
Avery	F&H Elec.					1	
~~Wilkes~~	"					1	
Rowan	Irrigation	1					
~~Scotland~~	"	1					
Dare	4-H Club	1					
~~Buncombe~~	~~Farm Ponds~~	1					
Rutherford	Drainage	1					
~~Northampton~~	~~Farm Mch.~~		1				
Chowan	"		1				
~~Beaufort~~	"		1				
Halifax	"		1				
~~Clay~~	"		1				
Madison	"		1				
~~Cleveland~~	"		1				
Henderson	Housing			1			
~~Edgecombe~~	Farm Bldgs.			1			
Forsyth	"			1			
Craven	"			1			
Haywood	"			1			
Madison	"			1			

A PLAN OF SPECIALISTS' WORK AT THE COUNTY LEVEL

Line of Work AGR.ENG.EXT. 195 2

Write in Counties to be Served for the month	Description of work to be done in Counties	Days Devoted to work by ELLIS	FERGUSON	RITCHIE	WARRICK	COATES	Total Days To County
MAY - continued							
Transylvania	Farm Bldgs.			1			
Cleveland	"			1			
Yancey	"			1			
Rutherford	"			1			
Caldwell	Result housing				1		
Mitchell	"				1		
Buncombe	"				1		
Martin	"				1		
Sampson	"				1		
Pender	Crop drying					1	
Anson	"					1	
Wake	"					1	
Burke	"					1	
Cleveland	"					1	
Alexander	Elec. Equip.Sch.					1	
Macon	F&H Elec					1	
Clay	"					1	
Buncombe	"					1	
Guilford	Irrigation	1					
Wake	"	2					
Cleveland	"	1					
Union	"	1					
Swain	Water systems	1					
Haywood	Drainage	1					
Burke	Farm Mch.		1				
Buncombe	"		1				
Wilson	"		1				
Wilkes	"		1				
Lenoir	4-H Camp			2			
Martin	Farm bldgs.			1			
Rockingham	"			1			
Union	"			1			
Chatham	Agr. bldg. for county			1			
Montgomery	Housing			1			
Cabarrus	"			1			
Harnett	Result Housing				1		
Greene	"				1		
Beaufort	"				1		
Carteret	"				1		
Tyrrell	"				1		
Buncombe	"				1		

A PLAN OF SPECIALISTS' WORK AT THE COUNTY LEVEL

Line of Work AGR.ENG.EXT. 1952

Write in Counties to be Served for the month	Description of work to be done in Counties	Days Devoted to work by ELLIS	FERGUSON	RITCHIE	WARRICK	COATES	Total Days To County
JUNE	JUNE - continued						
Haywood						1	
Currituck	Crop drying					1	
Alexander	"					1	
Bertie	F&H Elec.						
JULY							
Granville	Terracing	1					
Davie	Irrigation	1					
Mecklenburg	"	1					
Polk	Water systems	1					
Nash	" meeting	1					
Johnston	Drainage	1					
Duplin	"	1					
Iredell	Cotton gins		1				
Davidson	Farm Mch.		1				
Currituck	Housing			1			
Chowan	"			1			
Tyrrell	"			1			
Beaufort	"			1			
Stokes	"			1			
Guilford	"			1			
Durham	Result housing				1		
Gates	"				1		
Tyrrell	Crop drying					1	
Haywood	" "					1	
Polk	F&H Elec.					1	
Iredell	Water	1					
Moore	"	1					
Wilkes	" and sewage	1					
Macon	Farm Bldgs.	1					
Alexander	" Sanitation	1					
Craven	Housing	1					
Mecklenburg	Farm Mch.		1				
Cleveland	Cotton Gins		1				
Wilson	"		1				
Craven	Housing			1			
Robeson	"			1			
Pasquotank	"			1			
Gates	"			1			
Johnston	"			1			
Chatham	Community Bldg.			1			

A PLAN OF SPECIALISTS' WORK AT THE COUNTY LEVEL

Line of Work ~~AGR.ENG.EXT.~~ 1952

Write in Counties to be Served for the month	Description of work to be done in Counties	Days Devoted to work by					Total Days To County
		ELLIS	FERGUSON	RITCHIE	WARRICK	COATES	
AUGUST 1952							
	Result housing						
~~Pasquotank~~					1		
Duplin	" "				1		
~~Carteret~~	2 "				1		
Harnett	Crop drying					1	
~~Pitt~~	" "					1	
Union	" "					1	
~~Pasquotank~~	" " ~~AND STORAGE~~					1	
SEPTEMBER							
Greene	Fence Constr. & post treating	1					
Pitt	"	1					
Vance	"	1					
~~Hertford~~	"	1					
Pender	"	1					
~~Columbus~~	"	1					
Catawba	"	1					
~~Lincoln~~	"	1					
Alexander	"	1					
~~Chatham~~	"						
Cabarrus	Cotton Gin Work		1				
~~Harnett~~	"		1				
Nash	"		1				
~~Northampton~~	"		1				
Pender	Housing			1			
Polk	Farm Bldgs.			1			
Wilkes	"			1			
~~Rutherford~~	"			1			
Gaston	"			1			
~~Cleveland~~	"			1			
Perquimans	Result Housing				1		
~~Tyrrell~~	" "				1		
Sampson	Crop drying					1	
~~Cumberland~~	~~Sweet potato curing~~					1	
~~Franklin~~	"					1	
~~Stokes~~	"					1	
Durham	Fence Constr. & Post treating	1					
Orange Oct.	"	1					
Surry	"	1					
Wilkes	"	1					
Gates	"	1					
Warren	"	1					
Northampton	"	1					

A PLAN OF SPECIALISTS' WORK AT THE COUNTY LEVEL

Line of Work AGR. ENG. EXT. 195 2

Write in Counties to be Served for the month	Description of work to be done in Counties	Days Devoted to work by ELLIS	FERGUSON	RITCHIE	WARRICK	COATES	Total Days To County
OCTOBER - continued							
Nash	Cotton gins		1				
Franklin	Farm Bldgs.			1			
Columbus	Yam Festival			1			
Cleveland	Judging better acres farms				2		
Hertford	"				1		
Orange	Sweet Potato Curing					1	
Forsyth	Crop drying					1	
NOVEMBER							
Caldwell	Fence Constr. and post treating	1					
Polk	"	1					
Alamance	"	1					
Sampson	"	1					
Franklin	"	1					
Bertie	"	1					
Sampson	Housing			1			
Chatham	Community Bldgs.			1			
Wilson	Farm "			1			
Nash	Housing			1			
Hertford	Judging Better acres farms				1		
Gates	"				1		

Keep with Office Copy of 1952 Plan of Work

STATEMENT OF THE SITUATION AND PROBLEMS AFFECTING NORTH CAROLINA FARMS, HOMES AND COMMUNITIES IN 1952

The primary objective of the Agricultural Extension Service is to help farm families develop a pattern of farming and homemaking which through proper and full use of their land, labor and other resources will result in higher economic returns from farming and thereby make more income available to the farm family for better living.

In North Carolina the two major problems which have limited progress toward better rural and family living are the lack of income and use of income. For some families the lack of income can be traced to limited resources, but for the majority it is the failure to take full advantage of their opportunities in making best use of their resources. For other families the way in which income is used, rather than the lack of it, seems to be the determining factor in their not having and doing many of the things which would make for better family and community living.

With a large part of the world population earnestly striving for world peace while others seem to be interested in aggression, the problems in connection with farming and homemaking will increase in number and intensity. For example, the fear and anxiety caused by mobilization, the homes being broken by sons and fathers going into the armed forces and crowded living conditions during this uncertain time, add to the state of confusion.

The economic situation ahead is filled with strong inflationary trends. This is explained by the fact that in addition to the financial aid which has been pledged by our government to many other nations, the cost of expanding our armed forces and the rearmament program as well as supplying increased amounts of goods and services to the people who may be liberated through our efforts, will be extremely high. The expanding population in this state and nation together with the increasing per capita level, and changing composition, of demand will also require additional foods, fibers, goods and services.

Present and prospective price and cost relationships would indicate that flue cured and burley tobacco should be planted in line with acreage allotment.

Prices for livestock and livestock products also appear to be favorable. The quantity of these products available for local consumption is considerably below the amount needed for adequate diets. It is estimated that in 1949 four-fifths of all the meat sold through grocery stores and restaurants in North Carolina was produced outside the state.

North Carolina farmers who are now receiving approximately $180 cash income per farm from the sale of livestock could materially increase their net farm income by producing beef cattle, sheep or swine on lands not needed for tobacco, peanuts, cotton and other special crops. Likewise, the demand for dairy products will support expansion. For any livestock enterprise to be successful with feed grains in short supply, it is imperative that the production of forage crops and grain be increased.

Farmers will find labor, fertilizer, seeds, machinery, equipment, insecticides and other necessary production supplies higher in cost and at times difficult to obtain. In spite of these handicaps, however, those farmers who follow latest recommended production and marketing practices should receive a reasonable profit.

More than fifty percent of the total farm acreage in North Carolina is woodland. Income from the sale of farm forest products has more than doubled in the past five years. Prices for most forest products and standing timber are high and are likely to remain high. Farm forests supply large amounts of material needed annually in farming operations. They also perform valuable functions in preventing erosion, protecting watersheds,and furnishing food and shelter for wildlife. In spite of their value, however, poor management has resulted in depleting desirable growing stock to the point where the average farm woodland acre is producing at about one-third of potential capacity. Progress is being made, however, particularly in forest planting, better marketing and utilization methods, and the adoption of scientific yet practical cutting methods.

To increase the efficiency in production and operation of many farms will call for better "balance" between crops and livestock with economical sized units of each, use of more labor saving equipment and machinery, better farm drainage, application of the latest approved production practices, crop drying, soil building and conservation. The economic loss through crop diseases alone is approximately $70,000,000 annually, and the loss from insects is perhaps even greater. While control treatments and practices are readily available for a number of these diseases and insect problems, many farmers are not yet following them. This problem is intensified by the fact that as changes in farming systems occur, new disease and insect problems will also arise.

What farmers do toward solving the above problems will have a direct bearing on their gross and net income during 1952. A closely related problem is how to best use the income available for family living. This is paramounted by the increased costs of those commodities and services which are desired and needed to improve family living.

One practice that could be followed by more farm families is the production of sufficient food to eat fresh and a surplus to conserve for the non-productive months. One of the greatest handicaps in family food production, however, is the failure of many farm families to realize the value and importance of this phase of their farming operation.

An increase in the amount and variety of food production for home use would do much to improve the health and economic level of North Carolina farm families. Recent studies have shown that in those counties where there was a good balance between crops and livestock, the family diets were better than in those counties following a cash crop system. Since World War II many farm and rural families have been spending a high percentage of the net farm income for food, most of which they could have produced. This may account in part for the fact that per capita consumption of milk and meat in North Carolina is below the level needed for good nutrition.

Many homes are in need of major repair. Likewise, too many of them are not considered really "livable" because of the lack of adequate and comfortable furnishings. A small percentage of them have bathrooms, ample storage facilities and central heating systems. Proper clothing for comfort and health and adequate medical care are also problems for many families.

These facts emphasize not only the importance of having sufficient income to provide for better family living, but also the need for better planning as to the use of income in relation to what the family has, what they want, what they need and what they can afford. These conditions, no doubt, have contributed to the domestic difficulties in many families and migration of a large number of farm people to the urban areas. It is essential, therefore, that parents and youth consider together the causes of their problems and then earnestly strive for a solution. In this changing world it is not enough that the more than 500,000 farm boys and girls of North Carolina be given information and training in better practices in agriculture and homemaking. The training must also provide for the production of economic wealth, health improvement, better citizenship, cooperation and recreation, if they are to make the adjustments needed to provide a satisfying rural life and actually learn the art of living.

Even though the present situation and outlook for 1952 seems rather complex and confused, there are some things which are encouraging. A large number of new farm homes have been built in recent years and others remodeled. The use of better seed, livestock and the adoption of recommended production practices are on the increase. Many home conveniences have recently been added and the people are demanding the latest research information which has a bearing on their production and homemaking problems.

It was pointed out earlier that the lack of income in many instances can be attributed to the failure of some families to take full advantage of their opportunities. These opportunities, of course, can be recognized only through careful

study of the needs and possibilities and will involve careful planning throughout the State, counties and communities and on the individual farms. It will require the combined judgment, best thinking and cooperative effort of Extension workers and farm people in first determining what each farm family can do, helping them to establish goals and objectives through family planning and then providing them with the necessary information for making the desired changes and adjustments in their pattern of farming and homemaking.

Statement prepared November 1951

The primary objective of the Agricultural Extension Service is to help farm families develop a pattern of farming and homemaking which through proper and full use of their land, labor and other resources will result in higher economic returns from farming, and thereby make more income available to the farm family for better living.

The Extension Agricultural Engineering Department is charged with the responsibility of conducting a program for the purpose of training county farm agents and home demonstration agents in order that they may, with the use of demonstrations, teach farmers and farm homemakers how to make the best possible use of labor, power and equipment.

In meeting this responsibility, one full time engineering specialist conducts an Extension farm machinery program. Since the tractor is the major piece of equipment on which all mechanized operations depend, its proper maintenance and use is highlighted in the machinery program. This year 72 tractor maintenance schools were conducted over the state, with a total attendance of 4030. Many other machinery schools, short courses and field demonstrations were also conducted.

In the field of farm buildings, two full time specialists are employed. One concentrates his time and efforts on a general farm buildings program and the other with a result demonstration program in housing. The general program consists of working with agents on county programs by conducting special interest meetings, construction demonstrations, and in the preparation of slides that are used by agents. The result demonstration phase consists of working closely with a few key families that plan to construct a new home or to remodel an old one. Plans are prepared by the specialist to fit the particular needs of that family, and some construction supervision is given. As nearly as possible, complete records are kept and slides are made of the major steps of construction.

The result is a complete record of the costs for labor and material, with a complete set of slides for the use of the agents. We feel that a house plan, resulting from such a demonstration, will be of extreme value to us in offering the best possible plans to our farm families.

One specialist devotes his time to Rural Electrification and Crop Processing. His objective is to assist farmers through an educational program, to make more use ofelectricity and insofar as possible to eliminate crop losses, caused by lack of drying facilities. Mechanization has magnified the problem of safe storage, making it necessary for farms to rely on artificial crop drying.

Another specialist assists agents with their county programs of farm drainage, soil conservation, irrigation, and farmstead water systems.

In each of these phases emphasis is placed on educational programs to teach farmers the need for the practices, and then, with method demonstrations meetings to teach them how to do the work.

A number of miscellaneous activities are carried on by this department, such as assisting in programs for farm safety, rural telephones, rural fire prevention and fire fighting, 4-H Club, farm ponds, farm sanitation, etc.

EXTENSION AGRICULTURAL ENGINEERING SPECIALISTS:

H. M. Ellis	-	Land Improvement
J. C. Ferguson	-	Farm Machinery
R. M. Ritchie, Jr.	-	Farm Buildings
W. C. Warrick	-	Result Dem. Housing
E. S. Coates	-	Rural Electrification and Crop Processing