VIRGINIA AGRICULTURAL EXTENSION SERVICE

DAIRY SCIENCE PLAN OF WORK
(Name of Project)

For

Calendar Year 1960

Major phases of project or subdivisions of project covered	Name of Worker*	Percentage of time devoted to entire project by each worker
Dairy Science	M. F. Ellmore	100%
	V. L. Baldwin	100%
	G. J. Nageotte	100%
	W. N. Patterson	100%
	W. S. Griffith	100%
	G. C. Graf	33 1/3%

Date submitted: March 23. 1960. Signed: M. F. Ellmore
Project Leader

Date approved: March 23. 1960. Signed: G. C. Graf
Head of Department

Date approved: 4/5. 1960. Signed: W. H. Daughtrey
State Director of Extension

Date approved: APR 15 1960. 196___. Signed: C. W. Warnock
Administrator, Federal Extension Work, U. S. Department of Agriculture

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

A CHALLENGE TO THE VIRGINIA DAIRY INDUSTRY

To provide for the people of Virginia an adequate supply of wholesome milk and milk products at a price consistent with the price of food nutrients from other sources.

To provide for the people engaged in this industry the means to enjoy a standard of living equal to that enjoyed by other segments of the population and the opportunity of developing a way of life accordant with their individual desires.

To promote an atmosphere of good will and understanding among those within the industry and between the industry and the consuming public.

To provide encouragement and assistance to the youth of the state in the development of superior leadership and skills necessary for useful, prosperous and happy citizenship.

ORGANIZATION OF THE DAIRY EXTENSION PROGRAM

The organization of the Dairy Extension program and activities will be carried out in accordance with the project agreement, dated November 10, 1954, between Virginia Polytechnic Institute and the United States Department of Agriculture. That portion of the agreement dealing with the various administrative procedures is quoted below:

"(a) The director of Extension is responsible for organizing, staffing, financing, reporting and otherwise administering this project.

(b) The work will be conducted with adults and young people through the organization and personnel of the Cooperative Extension Service, including supervisors, specialists and county extension agents.

(c) The personnel employed under this project will be responsible to the project leader for field activities results and subject matter. The project leader will be administratively responsible to the Director of Extension (or to a member of the extension administrative or supervisory staff designated by the Director)for program, field activities and results, and to the Head of the Dairy Husbandry Department, for the subject matter used in this extension project. The final decision in the employment of personnel for this project rests with the Extension Director. It is incumbent upon the project leader (who is responsible administratively to the Extension Director) and the head of the subject matter department to collaborate and to mutually agree in the recommendation to the Extension Director of any prospective candidate for any dairy extension staff vacancy."

The successful execution of an extension plan of work in a specialized subject matter field depends upon full cooperation between all personnel within the subject matter department and between subject matter departments whose objectives and programs are associated, interrelated, or coincide in certain areas. It is, therefore, necessary and desirable, that a free flow and exchange of ideas prevail between research, resident teaching and extension.

The Head of the Dairy Science Department, Dr. G. C. Graf, will coordinate the subject matter activities between these three fields, devoting 1/3 of his time in each of these fields. He shall foster an atmosphere of good will and a free exchange of ideas between all personnel, agencies and organizations.

In addition to the above, the Department Head will assist and counsel with the project leader and with the dairy extension specialists in their various subject matter fields throughout the year.

Through these efforts, there will exist a knowledge and appreciation of the problems, needs and results in research, resident teaching and extension, which will be understood, shared and discussed by all personnel for their mutual benefit.

THE DAIRY INDUSTRY SITUATION AND OUTLOOK

The Virginia dairy situation looks favorable for 1960. There are, however, interesting forces at work which constantly challenge those engaged in the production, processing, and distribution of milk and its' products. Careful planning and good business management are essential if reasonable margins are to be maintained under these changing conditions. The complexity of these forces can be appreciated when the implications seen in the following trends are understood.

1. Virginia's potential dairy products consumers are increasing at the rate of about 2% per year. Consumption per person remains relatively stable but is below the national average. Total sales of dairy products have increased with the growth in population. Consumer prices for milk and milk products have not increased as much as have the prices of other foods. Milk, in all forms, will remain a good buy in 1960. Even if the increase in per capita consumption is small, total consumption is expected to rise with the increase in population.

2. The price received by Virginia Grade "A" producers has held relatively steady. That portion of the total production going into surplus channels has increased. This has resulted in a lower blend price for some individual producers. The cost of most input items has increased. This has resulted in a greater pressure between costs and returns. It puts a premium on management.

3. The production of milk for manufacturing purposes continues to be a source of supplementary income on many farms. Numbers of manufacturing milk producers, as well as total production, however, are decreasing at a steady rate. Processing plants in Virginia and in other areas of the country are greatly concerned over this trend. Lower volumes of milk are adversely affecting plant operating efficiencies. New producers have been acquired rather slowly, because of relatively low margins and competition with other agricultural production enterprises.

4. Total milk production is still greater than consumption. However, the overall supply and demand are in better balance than they have been since the early 1950's. This is reflected in the fact that government purchases under the price support program for the first half of the 1959-60 marketing year have been smaller than in any similar period since 1952. Milk production in the United States declined again in 1959 for the second year in a row after setting a record high in 1957. Preliminary estimates indicate that the 1959 production is approximately 1 billion pounds less than the 1958 production. In contrast to the United States, total production in Virginia remained relatively stable. Deliveries of Virginia Grade "A" milk in 1959 increased more than 3 percent from 1958 while deliveries of manufacturing grade milk declined by the same percentage. Thus, the production of Grade "A" milk continues to increase while manufacturing milk declines. This pattern is likely to continue through 1960 although milk for manufacture likely will decline less in 1960 than in 1959,

probably about 1 percent.

5. Dairy farms and plants are decreasing in number. Various reasons are evident; high overhead, old age, labor difficulties and inefficiency are examples. Inefficiency is probably responsible for most of the reduction in farm numbers. Dairymen, generally do not recognize inefficiency as a reason for quitting the business. They either fail to or are unable to make adjustments and attempts to maintain "status-quo" actually results in regression.

6. The remaining dairy farms and plants are expanding. It appears that this is an attempt to spread high overhead and operating charges over more producing units. A large proportion of the increased cost of operation is due to the many technological changes which the dairy industry is experiencing. These are generally desirable from the standpoint of improved quality and/or from the effect on labor costs. On the other hand, these changes may have an adverse effect on net profit. The effect of changing technology on the individual operation may be evaluated only by careful analysis based on records of performance of that individual operation.

7. The average level of production of dairy cows in Virginia is too low for continued economic stability. This is not true of all herds in Virginia as evidenced by the top herds participating in the DHIA program. Failure on the part of dairymen to follow the basic recommended practices in feeding, breeding and herd management is the primary cause of low production. Dairymen generally recognize that each of these dairy husbandry phases is a limiting factor. If this were not so, average production per cow would not have increased over the years. Lack of knowledge and/or lack of a felt need for improvements are responsible for the fact that the rate of increase has not been faster.

8. The dairy industry is suffering from unfavorable public relations, not only between various segments of the industry, but also between the industry and the consuming public. Milk and its products have been much in the public eye. Dissension within the industry has been partly responsible. Poor communications between the industry and those who influence public thinking is a contributing factor. A lack of understanding, by the consuming public, of the complex marketing and distribution systems has contributed to adverse public opinion.

9. It is becoming increasingly difficult for young people to get into dairy production due to the high capitol requirements. With the tendency toward fewer and larger herds there is less opportunity for new dairymen. This is true largely for Grade "A" production. There is ample opportunity for expansion in the production of manufacturing milk, particularly as it provides a source of supplemental farm income.

   To an ever increasing extent rural youth are facing a future that will provide fewer opportunities for on the farm sources of income. There will be opportunities for well trained youth in related agricultural fields.

THE DAIRY EXTENSION PROGRAM AND 1960 PLAN OF WORK

THE PROGRAM

Recognition of the broad objectives of the industry is a prerequisite to the design of an effective extension program. These broad objectives encompass many fields of activity. The dairy specialist staff must recognize those fields in which their specific skill may be most effectively utilized. Historically, the function of the specialist has been to reinforce the educational program of the county staff. This is still the primary function. The growth of state wide industry activities and organizations desiring extension assistance has, however, broadened the field of opportunity for the specialist staff.

The program must outline an organized approach to the solution of major problems revealed through a knowledge of the existing situation. It must be recognized that interacting forces, present in a dynamic technological age, have and will cause change. Evaluation of these eminent, economic, physical and social forces will materially affect the method of approach to the attendant problems. The program must be flexible to meet changing situations.

THE 1960 PLAN OF WORK

The present dairy extension staff consists of five full time specialists. In addition, the Department Head spends 1/3 of his total time on extension activities. This plan of work attempts to recognize the specific problem areas which may benefit from the application of extension methods. Within these areas the most urgent problems have been selected for concentrated effort. At present this priority is determined by the specialist staff. Ideally, this should be determined on the basis of needs expressed through county program planning procedures. The degree to which all areas may be given consideration is limited by the size of the dairy extension staff and by the above mentioned limitations within the extension system.

MAJOR DAIRY INDUSTRY PROBLEMS

1. Low consumption of milk and milk products by the people of Virginia.

2. Industry tardiness in making the orderly adjustments necessary for economic stability. This is complicated by limited research results in most dairy fields.

3. Too few youth are being developed for positions of responsibility and leadership in a progressive and dynamic agriculture economy. (The dairy industry shares this problem and responsibility with all segments of agriculture.)

4. Adverse publicity is generated by lack of information on and understanding of the industry by those who influence public thinking.

PROBLEMS WITHIN EXTENSION

In developing a specialist plan of work, it is necessary to recognize problems within extension which will effect the methods used by specialists in the execution of their plan of work. The major ones are:

1. Rapid turnover of extension personnel.

2. Lack of dairy trained county workers.

3. Lack of information on specific needs of county workers in time to adequately incorporate these in the state plan.

4. Competition between subject matter departments for county extension time.

5. Competition for the time and participation of rural people.

6. Time and distance between headquarters and field.

7. Insufficient research results.

8. Inadequate communication methods and technique used.

ACTIVITY AREAS

The activities of the dairy extension staff will be expanded in 7 major areas for the current year as follows:

I Dairy Business Management

This area will be concerned with economic principles essential to efficient dairy business management.

II Dairy Production Practices

This area will deal with information pertinent to promotion, evaluation and adoption of improved practices in feeding, breeding, and herd management.

III Dairy Records - Procuring and Processing

This is a service area concerned with collecting dairy records and processing them for use through areas I and II.

IV Dairy Technology

This area will be concerned with providing educational assistance on technical problems to producers and processors of milk and dairy products.

V Consumer Education

This area will be concerned with providing information to the consuming public on the importance of milk in the diet. To provide information leading to better understanding by the public of industry problems.

VI Youth Development

This area will be concerned with assisting rural youth in developing qualities necessary for good leadership and citizenship.

VII Allied Activities

This area recognizes the responsibility and opportunity for extension to assist with non-specific agricultural programs which effect other segments of agriculture as well as dairy.

AREA I DAIRY BUSINESS MANAGEMENT

Coordinated by: M. F. Kilmore, Extension Dairy Specialist

The Purpose:

To help farm people recognize the importance of applying business management principles to their dairy farming enterprise. The science of decision making is as important as the science of feeding and breeding.

The Situation:

Dairy farming is big business. No other agricultural enterprise has a larger capital investment per worker. Increased production costs and shrinking margins have placed a premium on good business management.

Herd size and output per farm have increased. However, bigness in itself is no guarantee of adequate net return. Increases in total overhead, feed costs, labor costs and other costs are natural results of increased scope. Unwise choice in the selection of these input items can easily result in a decreased net return per unit of output.

Problems:

1. Many dairymen are inadequately equipped with the basic knowledge of business management techniques and skills.

Objective: To assist the dairy industry in the use of simple and practical business techniques.

Need: For more dairymen to become aware of and to use scientific methods of business management.

Plan: To cooperate with other departments in preparing materials and in teaching the principles of business management.

This will involve agent training as well as material for farmer use. We will cooperate with the agricultural economics department, agricultural engineering department, the agronomy department and others in this endeavor.

Related Activities:

I - Heifer calf marketing and procurement program.

The Situation and Problems:

1. Dairy production is increasing rapidly in Southwest Virginia.

2. There is a need for additional animals.
   (a) The normal heifer crop will not provide needed numbers.
   (b) A fairly large percent of existing foundation stock is of poor dairy breeding.

3. Producers of manufacturing milk cannot justify the purchase of high producing mature animals at the current high prices.

4. Producers of manufacturing milk could raise high quality heifers with a minimum of initial cash outlay. Ready cash is not available, feed and labor are available.

5. Dairy animals are being imported from outside of the area.
   (a) A high proportion are being secured through dealers.
   (b) The quality of these is open to question.

6. It would appear that there are surplus heifer calves of good quality in Northern Virginia being sacrificed to the slaughter pens.

Objective:

1. To improve the quality of dairy cows in Southwest Virginia.

Purpose:

Based on these observations and on observations of agents, fieldmen and others, it would appear that there is a need for a marketing program with two purposes.

1. Insure a supply of high quality replacement animals for Southwest Virginia.

2. Provide an outlet for surplus heifer calves, if there is a surplus of high quality calves, from Northern Virginia.

EXTENSION PLAN OF WORK

During the year of 1960 activity will be of a preliminary nature.

1. Develop a program to submit to the industry.

2. Survey more completely the situation.

3. If conditions warrant, initiate a pilot program in one county during the fall of 1960.

II - Dairy Industry Survey

The Situation and Problems:

Lack of specific information on many phases of the dairy industry makes it difficult to accurately evaluate many of the observed trends in the general situation. Specific information is needed by the industry, by the college and by agricultural agencies and organizations if they are to provide the needed assistance.

Plan of Work:

Continue to cooperate with the Virginia Department of Agriculture in the survey of the Virginia dairy industry.

During 1959, the grade A survey was completed and published in the Virginia joint agricultural publication No. 2 called "Looking Into The Grade A Dairy Industry In Virginia." The survey of the milk plants in

Virginia was completed during 1959 and will be published during 1960. The survey of the manufacturing milk industry will be completed during 1960.

III - Manufacturing Milk Industry Program

Situation and Problems:

A downward trend in the farmer deliveries of milk to manufacturing milk plants in the south has effected the operating efficiency of many of these plants. The decline in deliveries has resulted from farmers selecting other uses for their production resources.

Objective: To study the factors involved in this trend and help the industry develop programs that will benefit both segments of the industry.

Plan of Work:

Analysis of the dairy manufacturing industry survey, study of programs from other states and consultation with industry representatives will be carried out to get the basic facts surrounding the problem. This study will determine the type of program best suited to the problem. An attempt will be made during 1960 to develop a program outline to submit to the industry.

AREA II DAIRY PRODUCTION PRACTICES

Coordinated by: V. L. Baldwin, Associate Extension Dairy Specialist

The Purpose:

To promote the adoption of improved practices in dairy cattle feeding, breeding and herd management and to teach the principles of alternative evaluation. The selection of the best possible combination of production practices should lead to the highest net income for dairymen.

The Situation:

The feed available on many Virginia dairy farms is inadequate in quantity and quality to feed these herds at recommended levels for greatest economy. Many of these dairy farms are capable of producing all of the forage needed and at least a portion of the grain. Because of low quality and insufficient quantity of forage, grain must make up a high proportion of the mtion if the high level of milk production is to be obtained. This situation usually results in a high feed cost per hundred pounds of milk produced. Forage is usually the cheapest source of feed nutrients. Feed programs in which maximum use of high quality forage predominates will result in lower feed cost per unit of milk produced.

Breeding with selection offers the only method of improving the inherited producing ability of dairy animals. The development and expansion of artificial breeding is important in making superior inheritance more readily available to dairy cows in every Virginia county. Semen may be purchased and used by any dairyman even in those counties where no organized program is available.

It is estimated that more than 95,000 cows were bred artificially in Virginia during 1959. This represents 20% of the 460,000 dairy animals of breeding age.

Training in artificial breeding has been available through short courses at V.P.I. since about 1946. Routine Spring and Fall short courses were initiated in 1957 with the exact dates announced to all counties, one to six months in advance. These courses are given if sufficient applications are received to justify the time of the teaching staff. Breeding organizations have not generally anticipated their needs for technicians in relations to the set dates for these courses. They have preferred to hold emergency short courses as openings occur, and have trained their own technicians. The future of this V.P.I. short course will depend upon the desire of these organizations to anticipate their needs and the extent to which dairymen prefer to come to V.P.I. for training in artificial breeding.

Many dairymen use well bred bulls of their own selection. There are still, however, at least 150,000 cows in Virginia bred to bulls of doubtful worth.

Good husbandry is an art. It can be developed to a high degree through training and experience, provided these are based on native ability and a desire to learn. Much of the advantage of herd improvement through improved feeding and breeding may be lost if the details of good day by day husbandry are neglected. Good husbandry is practiced on many Virginia dairy farms. This is evident by the level of production observed in many DHIA herds in the state.

Problems:

1. Low net return per cow on many Virginia dairy farms.

Objectives:

1. To assist dairy farmers in raising the average level of production and net income through an educational program in feeding, breeding and herd management.

EXTENSION PLAN OF WORK

First Section - Feeding

Need 1 Maximum intake of forage for optimum efficiency.

PLAN A Provide county agents with data on amounts of forage needed for maximum intake.

Plan B Cooperate with the Agronomy and Agricultural Economics Departments in the promotion of economical forage production plans.

Plan C Cooperate with the Agricultural Engineering and Agricultural Economics Departments in promoting improved methods of harvesting, storing, and feeding forage.

Plan D Teach agents and supervisors the methods of forage evaluation outlined in the EDPM program.

Plan E Study the EDPM method of forage evaluation and refine this method for Virginia conditions.

Need 2 Larger heifers at two years of age.

Plan A Develop and present materials designed to pinpoint the advantages of adequate size for age of the dairy heifer.

Plan B Present to agents and others alternative methods for raising well grown heifer calves.

Second Section - Breeding

Need 1 Higher levels of inheritance for milk production in Virginia dairy herds.

Plan A Teach proper use of information from sire pedigrees, sire proofs, evaluation studies and type classification programs.

Plan B Teach advantages of artificial breeding.

Plan C Assist in the evaluation of breeding programs in individual herds as an agent training tool.

Plan D Cooperate with artificial breeding associations in preparation of information for sire booklets and in technician training.

Plan E Offer two artificial insemination short courses during the year to train artificial insemination technicians and herdsmen.

Need 2: Increased longevity and duty in Virginia dairy cattle.

Plan A Cooperate with breed clubs in their respective type classification programs and with artificial insemination breeding centers in using this information.

Plan B Teach selection for type characteristics which improve dairy cattle in relation to standards of beauty, utility, and longevity.

Third Section - Dairy Herd Management

Herd management deals with the organization of dairy husbandry practices.

Need 1 A greater appreciation of the importance of good husbandry practices.

Plan A Develop and present materials designed to stimulate interest in good management practices. These materials shall emphasize the importance of good management as a necessity for high production.

Need 2 For more dairymen to keep and use dairy herd records as a herd management tool.

Plan A Offer program outlines to county agents that are designed to teach the value of records in herd management.

Plan B Develop written materials on the kinds or types of records that would be most useful for management purposes. (Such as breeding charts, health charts, etc.)

Need 3 A positive herd health program.

Plan A Cooperate with the extension veterinarian in the development of a program that will emphasize the basic principles of disease prevention.

Plan B Participate with the industry committee in the execution of the state wide mastitis prevention and control program.

AREA III PRODUCTION RECORDS - PROCUREMENT AND PROCESSING

Coordinated by: William S. Griffith, Assistant Extension Dairy Specialist

The Purpose:

The main purpose is to assist in and coordinate the activities of county agricultural extension personnel in the conduct of the National Cooperative Dairy Herd Improvement Program.

The Situation:

In general the situation regarding dairy production records is good. Progress brings problems. The function of this project is to assist the dairy farmers of Virginia in making intelligent adjustments to the changes associated with progress.

Table I shows the scope of the National Cooperative Dairy Herd Improvement Program in Virginia as of December, 1959.

TABLE I - NUMBER OF COUNTIES, HERDS AND COWS ENROLLED IN THE NCDHIP

Type of Test	Counties	Herds	Cows
DHIA	86	1137	50,617
Owner Sampler	7	41	1,170
Weigh-A-Day-A-Month	8	10	283
DHIA, O.S. and WADAM	86	1188	52,070

These totals include 88% of the counties, 38% of the Grade "A" herds and 14% of the total dairy cows in Virginia.

In November, 1959, records on 6,857 cows in 125 Virginia herds were processed electronically by the regional Dairy Records Processing Center in Raleigh, North Carolina. This is 10% of the herds and 13% of the cows in the Virginia NCDHIP. Thirty-eight (66%) of the Virginia DHIA Supervisors have received training in the use of the EDPM records.

In 3 counties all three phases of the NCDHIP are in progress. In 7 counties both DHIA and owner sampler phases are functioning. Dairymen in 8 counties are utilizing DHIA and WADAM. In 12 counties there is no NCDHIP.

The official testing program as a separate and distinct entity is being replaced by a program in which DHIA-EDPM records are accepted as official. In 1958 there were 77 herds enrolled in conventional official testing and 3 herds in the new Dairy Herd Improvement Registry Program. In 1959 there were 57 herds still on conventional official testing and 20 herds enrolled in DHIR. It appears that the conventional official testing program will be completely replaced by DHIR.

To maintain the NCDHIP approximately 30% of the local supervisors must be replaced annually.

There is an opportunity to make more efficient use of lactation reports processed by EDPM and of herd replacement data reported manually by the supervisors.

Additional and more complete data arising from the EDPM program will require major revisions in the monthly and yearly summaries.

Problems:

1. Until all DHIA records are converted over to the electronic data processing system it will be necessary to train supervisors, county agents and dairymen in the use of the manual and electronic systems.

2. Few county agents have been led to understand the value of the owner sampler and WADAM phases of the NCDHIP for their dairymen.

3. Dairymen are not receiving tabulated summaries of lactation reports to help them in their breeding programs. The bull proving program has been unsatisfactory.

4. Data collected from herds in the National Cooperative Dairy Herd Improvement Program needs to be made available in a readily useable form for county agents, DHIA supervisors, dairymen or research personnel.

5. Owners of registered cattle need assistance in determining which program of official records best suits their needs.

Objectives:

1. Assist county agents and DHIA supervisors in getting all DHIA and owner sampler herds transferred to the Central Processing system.

2. Provide summaries by sire groupings and by herds of the lactation reports received from EDPM herds.

3. Provide county agents with the technical assistance needed to enable them to establish additional DHIA, owner sampler and weigh-a-day-a-month demonstrations.

4. Assist county agents in making their record procurement systems more efficient.

5. Improve existing processing activities to provide more useable information.

6. Conduct such routine procurement and processing activities as will enable county agents to continue their NCDHIP.

EXTENSION PLAN OF WORK

Need 1 Increase the number of herds on DHIA-EDPM to at least one in each local association and a state total of 350 herds enrolled by November 30, 1960.

Plan A — Provide recognition for supervisors and county agents doing an outstanding job through the Visor, Supervisors Annual Conference, Efficient Production Contest, Extension Service News, and other media.

Plan B — Write personal letters to county agents and supervisors with no EDPM herds every two months until results appear.

Plan C — Attend regional meetings of southeastern U. S. Extension Dairymen regarding EDPM to keep informed.

Plan D — Develop monthly summaries by county for DHIA-EDPM herds.

Plan E — Develop an efficient means of handling yearly summaries for DHIA-EDPM herds to effect the smoothest possible transition from hand to machine calculated records.

Plan F — Train agents and supervisors in use of DHIA-EDPM forms.

Need 2 — Provide each DHIA-EDPM member and each artificial breeding organization with sire evaluation summaries based upon lactation reports received from herds during the year in cooperation with the Dairy Science Department Research Staff.

Plan A — Develop an IBM-650 program for calculating needed data in cooperation with Department of Statistics before June 1, 1960.

Plan B — Distribute summaries of data to cooperating dairymen and artificial breeding organizations by June 20, 1960.

Plan C — Explore possibilities of having the processing done on a regional basis.

Need 3 — Provide the technical assistance necessary to enable county agents in at least 12 counties to utilize the owner-sampler system of production testing.

Plan A — Select 12 counties where an owner sampler program would have a good chance of success.

Plan B — Explore possibilities by personal visits and correspondence with the 12 county agents.

Plan C — Assist the agents in locating a man to do the testing work.

Plan D — In cooperation with the dairy herd management specialist develop guides for county agents to use in visiting NCDHIP herds so as to get full value from the records.

Need 4 — Simplify routine procedures of procurement and processing for greater efficiency.

Plan A — Reorganize monthly reporting of DHIA statistics which is printed in the Virginia Dairyman.

Plan B — Reorganize files of bull proofs and develop system for utilizing records to be made available through the new program of ARS.

Plan C — Develop comprehensive outline for DHIA supervisors short course.

Plan D — Conduct a maximum of 3 DHIA supervisor training courses
March 14 - April 2
June 6 - June 25
October 3 - October 22

Plan E — Conduct a statewide supervisors conference at VPI May 24-26.

CALENDAR OF WORK

Month	Week	Major Activity
December	1	Annual Report
	7	DHIA Honor Roll
	14	Program and Plan of Work
	21	Annual Report
	28	Annual Leave
January	4	DHIA Annual Summaries
	11	Dairymens Short Course
	18	Communications Training
	25	Communications Training
February	1	Southern Agricultural Workers' Meeting
	8	Dairy Fieldmans Conference
	15	Local DHIA Meetings
	22	Local DHIA Meetings
	29	Local DHIA Meetings
March	7	Local DHIA Meetings
	14	DHIA Supervisors' Training Course
	21	DHIA Supervisors' Training Course
	28	DHIA Supervisors' Training Course
April	4	Study Lactation Report Summaries
	11	Revise Supervisors' Training Course Syllabus
	18	Annual Leave
	25	Southeastern DHIA-EDPM Conference
May	2	Develop annual summary for EDPM herds
	9	Develop annual summary for EDPM herds
	16	DHIA Supervisors' Conference Preparation
	23	DHIA Supervisors Conference
	30	Miscellaneous Field Work
June	6	DHIA Supervisors' Training Course
	13	DHIA Supervisors' Training Course
	20	DHIA Supervisors' Training Course
	27	Miscellaneous Field Work
July	4	Owner-Sampler Promotion
	11	Breed Club Summer Meetings
	18	Annual Leave
	25	Institute of Rural Affairs

Month	Week	Major Activity
August	1	Evaluation of Virginia Production Testing Program
	8	Evaluation of Virginia Production Testing Program
	15	Extension Service Annual Conference
	22	Preparation for DHIA District Conferences.
	29	Owner-Sampler Promotion
September	5	Owner-Sampler Promotion
	12	DHIA District Conferences
	19	DHIA District Conferences
	26	Atlantic Rural Exposition
October	3	DHIA Supervisors' Training Course
	10	DHIA Supervisors' Training Course
	17	DHIA Supervisors' Training Course
	24	Annual Leave
	31	Miscellaneous Field Work
November	7	1960 DHIA Annual Summary
	14	1960 DHIA Annual Summary
	21	Annual Report
	28	Plan of Work

AREA IV DAIRY TECHNOLOGY

Coordinated by: G. J. Nagcotte, Associate Extension Dairy Specialist

The Purpose:

The perishable nature of milk and milk products require that production, processing and distribution be carried out under rigidly controlled conditions. It is the purpose of this activity to provide educational assistance to the industry in this field, that the consuming public may be assured of adequate supplies of high quality milk and dairy products.

The Situation:

Continuous changes due to technological advances in the fields of production, handling, storage, processing and distribution of milk and milk products characterize the situation. The numbers of dairy farms and processing plants are decreasing while their size is increasing. Milk storage time is increasing because of every-other-day farm pick-up and every-other-day delivery of milk to the consumer. The importance of good sanitation and quality control programs is increasing because of these changes. Industry personnel is finding it difficult to develop the new skills and knowledge necessary to keep pace with these trends.

Problems:

1. Lack of facilities and adequately trained personnel in some dairy plants to carry out well planned quality control programs for milk procurement and product processing.

2. Too much milk, produced and processed in Virginia, fails to meet high standards of quality and flavor for acceptance by the consuming public.

3. Inefficiency in handling, processing and distribution of milk is resulting in low profit margins within the industry.

EXTENSION PLAN OF WORK

Objective 1 — To cooperate with dairy plants in the establishment and/or operation of quality control laboratories.

Need 1 — To establish in one additional plant a quality program based upon laboratory control with field supervision.

Plan A — To survey plants having no quality control programs and counsel with them for the adoption of sound quality control programs based upon laboratory control with field supervision.

Need 2 — Continue to cooperate with dairy plants having laboratory control programs.

Plan A — To counsel with at least 20 dairy plants on special or general laboratory methods and processing procedures.

Plan B To conduct a 4 day laboratory technician's short course at V.P.I. to teach fundamental laboratory methods. Four or more applicants will be required to justify holding the short course.

Objective II To encourage producers to maintain high standards of quality and flavor in milk produced in Virginia.

Need 1 To develop, among producers, a greater appreciation of the need for clean methods in the production of high quality milk.

Plan A To prepare 3 radio topics, 3 newspaper releases and 10 subject matter talks on subjects related to the production of high quality milk.

Plan B To counsel with individual dairymen on quality problems upon request of county agents.

Plan C To cooperate with Virginia dairy fieldmen in the promotion of their quality production programs.

Need 2 To promote the adoption of methods for controlling milk off-flavors in Virginia produced milk.

Plan A To prepare 2 radio topics, 2 newspaper releases and 4 subject matter talks on the control of milk off-flavors.

Objective III To promote greater efficiency in the handling, processing and distribution of milk.

Need 1 To develop modern dairy plant plans and equipment arrangements to facilitate economies in milk and milk product processing.

Plan A To cooperate with the V.P.I. Department of Agricultural Engineering in the development of dairy plant plans upon request.

Plan B To counsel with and advise dairy plant personnel on selection, placement, and operation of new equipment as the need or opportunity arises.

Need 2 To encourage the adoption of economical methods for handling, processing and distributing milk and dairy products.

Plan A To promote, at every opportunity, the adoption of high-temperature-short-time pasteurization, in-place pipeline cleaning, bulk handling of milk, bulk dispensing of milk, and the use of automatic milk and ice cream vendors.

Plan B To cooperate with the Virginia Dairy Products Association in organizing and conducting a Dairy Plant Management Conference on problems related to economic operation of dairy plants.

AREA V CONSUMER EDUCATION

Coordinated by: G. J. Nageotte, Associate Extension Dairy Specialist

The Purpose:

Milk is nature's most nearly perfect food. It supplies, in perfect balance, most of the food elements essential for good nutrition. Children need at least 1 quart of milk or its equivalent per day. Adults should consume the equivalent of at least 3 glasses daily. It is the purpose of this activity to promote adequate consumption of milk and dairy products in the interest of better health and well-being of the people of Virginia.

The Situation:

Supplies of milk in Virginia are more than adequate to meet the needs at the present low fluid milk consumption rate of ½ pint per person per day. The average homemaker is not fully aware of the nutritional value and economy of milk and dairy products as sources of food nutrients; nor is she fully aware of all the ways these products may be used in the menu.

Past and current adverse publicity frequently distorts the true picture of facts surrounding the industry. Disharmony within the industry contributes to adverse public thinking.

Problems:

1. Low consumption of milk and milk products by the people of Virginia.
2. Adverse publicity generated by lack of information on and understanding of the industry by those who influence public thinking.

EXTENSION PLAN OF WORK

Objective I — To increase the per capita milk equivalent consumption rate of Virginia people toward recommended dietary standards.

Need 1 — To create awareness by more people of the nutritional values of milk and dairy products.

Plan A — Prepare 5 radio topics and 5 newspaper releases on subjects related to the nutritive qualities of milk and milk products.

Plan B — To cooperate with other departments and with dairy organizations in the preparation of educational exhibits.

Plan C — Support local Dairy Councils in their educational activities.

Plan D — Provide assistance to industry and civic organizations in the planning and execution of June Dairy Month promotional activities.

Need 2 — To develop variety in consumer use of milk and dairy products.

Plan A — Prepare subject matter materials for Home Demonstration Clubs on uses for dairy products and methods for making and storing dairy products in the home.

Plan B — Prepare and present demonstrations on making of dairy products in the home upon request from home demonstration agents.

Objective II — Encourage better relations within the industry; and between the industry and the consuming public.

Need 1 — Develop desirable public understanding of the problems of the dairy industry.

Plan A — Prepare 3 informative radio topics and 3 newspaper releases on subjects designed to foster consumer understanding of industry problems.

Plan B — Assist industry organizations in developing publicity and educational programs.

AREA VI YOUTH DEVELOPMENT

Coordinated by: W. N. Patterson, Associate Extension Dairy Specialist

The Purpose:

Rural Youth will become the future leaders of Virginia's Dairy Industry. The primary purpose of this activity is to provide opportunities for Rural Youth to develop qualities of leadership, sportsmanship, character and personality that contribute to happy and prosperous citizenship. Additional purposes are:

1. The development of basic knowledge and skills in the selection, feeding, care, and management of dairy animals.

2. To emphasize the nutritional importance of milk and dairy products as basic foods in the human diet.

3. To help youth understand the complex problems of the dairy industry.

The Situation:

Opportunities in managerial, operational, and professional positions in the Dairy and related industries are numerous. Too few dairy trained young people are available to meet the demand for replacements and to fill new positions developed. Dairy farming is such a high capital investment business that few young people can hope to become owner-operator dairymen except through inheritance.

Enrollment in 4-H Dairy animal project work is static. The number of club members enrolled in 1959 was 1674 compared to 1675 in 1958. Completions were down 3.5% for the same period, 66.4% in 1959 compared to 69.9% The club members with completed projects had 1479 animals or about 13 animals per club member.

Enrollment in the new introductory dairy project and the milk and milk products project is small. Some interest is evident in those areas where the 4-H Club enrollment is chiefly non-farm and urban.

Participation in activities related to 4-H dairy project work is high. Nearly all counties with an enrollment of 20 or more club members doing dairy animal project work have a local dairy show. Several area shows have been developed as well as two district wide shows. These provide an opportunity for very high percentage of club members to exhibit their project animals. The Atlantic Rural Exposition Junior Dairy Show has increased in numbers and quality. Every district in the state was represented in one or more breeds in the 1959 show.

Leadership at the local level is vested in volunteer local leaders with the help of limited number of professional agriculture workers. Supervision of project work, teaching of dairy practices, conduct of local fairs and shows, and participation in county, district, and state youth activities are guided by these key leaders.

Problems:

1. The number of dairy trained youth available as prospects for important leadership positions in the Dairy Industry and associated service organizations is small.

2. Enrollment in organized dairy youth programs is small.

3. Local youth program leadership lacks "dairy know-how."

4. Many conflicts arise in the conduct of dairy youth programs due to demands for time by the public schools, churches, and recreational activities in which youth participate.

5. Limited public funds or facilities are available for use by or awards for youth programs. Financial support of local, district, and state youth activities must be through solicitation and voluntary donations.

EXTENSION PLAN OF WORK

Objective I: Special emphasis on the beginners dairy project "An Introduction to Dairying" and the "Milk and Milk Products" project to increase enrollment and participation.

Need 1 Inform agents of the value of these projects in helping youth understand the complex problems of the Dairy Industry and the nutritional value of milk and dairy products.

Plan A Encourage agents to use the beginners project as a group activity through personal and circular letters, personal contact, and office visits.

Plan B Prepare at least two radio tape programs related to these projects.

Need 2 A system of evaluating this project work.

Plan A Consult with 4-H Club department and administrative staff on revision of annual report forms to include county enrollments in these projects.

Plan B Investigate recognition awards program for work in these projects.

Need 3 Subject matter and reference materials for use in this project work.

Plan A Develop a standard beginners dairy project record book.

Plan B Provide mimeo leaflets and record book insert materials for project work. Advise agents on commercial sources of subject matter materials.

ObjectiveII: A sufficient number of inspired volunteer local leaders and professional agricultural workers to insure the conduct of a high quality Dairy Youth program.

Need 1 Training programs and opportunities for local leaders, extension agents, and professional agriculture workers to increase their knowledge and skills in approved dairy practices.

Plan A Meetings and conferences with agents on an area or district basis to develop county subject matter and activity programs for 4-H Dairy Club work.

Plan B Prepare subject matter materials for use by leaders and agents in conducting project work.

Plan C Prepare at least 4 timely radio programs and/or news releases on 4-H Dairy project work.

Need 2 More Junior leadership activity in the conduct of local and county work.

Plan A Encourage agents to use older club members as Junior leaders.

Plan B Conduct specific Junior leadership training activities during the State 4-H Club Short Course and in area or county meetings as requested.

Objective III: Maintain a series of competitive activities and other programs in which youth enrolled in dairy project work may participate.

Need 1 Coordinate activities in which youth enrolled in dairy project work may participate.

Plan A Work with agents and leaders in planning and conducting fairs and shows, judging contests, fitting and showmanship demonstrations, tours, field days, and other activities.

Plan B Develop uniform standards for participation with agents and the 4-H Club Department.

Objective IV: Increase the interest of dairy and related industries who are or may actively support some phase of the rural youth dairy program.

Need 1 Liaison activities to keep dairy and related industries informed.

Plan A Assist with junior and adult programs included in activities of dairy and related organizations.

Plan B Cooperate with other departments in the conduct of youth activities.

AREA VII ALLIED ACTIVITIES

Coordinated by M. F. Ellmore, Dairy Extension Specialist.

It is inevitable and desirable that the dairy staff participate in activities that are of concern not only to the dairy industry, but to all agriculture. There are activities of a miscellaneous nature that can not always be anticipated. It is the purpose of this section to recognize the major areas which will utilize extension time and talent.

A. Headquarters activities: This time will be spent in administrative duties, program planning, special subject matter preparation, extension service activities, faculty and staff meetings, short course, joint activities with other departments, giving assistance to V.P.I. students, and assisting with Dairy Science Department programs.

B. Work with organizations: Many organizations call on the Dairy Extension staff for counsel and advice in the development and execution of their program. A partial list of these organizations which will receive assistance follows:

1. Virginia Federation of DHIA's
2. The Virginia State Dairymen's Association
3. The Virginia Milk Producers Federation
4. The Virginia Artificial Breeding Association
5. The Virginia Dairy Council
6. All the purebred cattle associations
7. Atlantic Rural Exposition and
8. The Virginia Dairy Fieldman's Association

C. Out of State Activities: Some time will be spent out of state attending special conferences, participating in cooperative farm tours, assisting sire selection committees and accompanying 4-H Club dairy judging teams.

D. Professional Improvement: It is desirable that all staff members attend as many professional improvement functions as time and financial assistance is available. Included in these are the American Dairy Science Association and Southern Agriculture Workers annual meetings.