VIRGINIA AGRICULTURAL EXTENSION SERVICE

DAIRY SCIENCE PLAN OF WORK
(Name of Project)

For

Calendar Year 1961

Major phases of project or subdivisions of project covered	Name of Worker*	Percent 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: 4-15-61 196___. Signed: M. F. Ellmore
Project Leader

Date Approved: 4/20/61 196___. Signed: G. C. Graf
Head of Department

Date Approved: 4/24/61 196___. Signed: W. H. Darnell
State Director of Extension

Date Approved: JUN 30 1961 196___. Signed: E. J. York Jr.
Administrator, Federal Extension Work, U.S. Department of Agriculture

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

BROAD OBJECTIVES OF 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 VIRGINIA DAIRY INDUSTRY SITUATION

The dairy industry, as well as other segments of agriculture, is in a situation where resource adjustment has not been as rapid as it has in non-agricultural segments of society. Even though adjustments have occurred, there is still a disproportionate share of the nation's resources employed in agriculture. This situation has resulted in a low return to these resources. This is a nationwide problem which has been a chief concern of national leaders for twenty years. No satisfactory solution has been developed.

Resource adjustments have been made quite rapidly in the dairy industry. Operating units are decreasing in number, but increasing in size. New technology is being applied at a rapid rate. Much of the new technology is of the labor saving type or is of a type which encourages increased production. The result has been an increased out put per unit of labor. It would seem that an increase in labor efficiency would be accompanied by a decrease in use of total resources. This is not the case. The increased capital requirements have about offset the value of labor saved. The increased output of a product for which there is an inelastic demand has had a depressing effect on price.

The Virginia dairyman finds himself in a situation today in which business management skills as well as production management skills are of paramount importance to the future welfare of his operation and his family. There is little or nothing that the individual can do to effect the market price of his product or of the things he must buy. It is the cumulative effect of past decisions that have contributed the situation; it will be the cumulative effect of future decisions that will change the situation. Such cumulative action will result only through industry self-help or through government programs.

There is great variability in the levels of knowledge, understanding and skills among Virginia dairymen. Among the more progressive there is a great desire for information that will improve their management. Among the less progressive there is a lack of understanding regarding the science of dairying. It is this group that is accounting for a large proportion of the decline in herd numbers.

Reports from publicity hungry pseudo research workers have cast a shadow of doubt in the minds of uninformed consumers about the place of milk fat in the human diet. Adverse publicity, generated by the misinformed, frequently distort the true facts about the industry. Disharmony within the industry contribute to this situation.

A more detailed survey of the situation as it applies to the various activity areas in Virginia dairying will be presented in the following sections of this plan.

MAJOR DAIRY INDUSTRY PROBLEMS

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

2. Orderly adjustment of resources within the industry too slow for economic stability.

3. Insufficient incentive for youth to seek training for positions of responsibility and leadership in the agricultural field. (The dairy industry shares this problem with all segments of agriculture.)

4. Lack of understanding of the dairy industry situation and problems by news editors and others who influence public opinion.

PROBLEMS WITHIN EXTENSION

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

1. Failure to use scientific methods of program development.

2. County workers with insufficient training in dairying.

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

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

5. Distance between headquarters and field.

6. Insufficient research results.

7. Failure to use adequate communication methods and techniques.

AREA I DAIRY BUSINESS MANAGEMENT

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

Objective of Activity: For dairymen to acquire an understanding of the importance of applying business management principles to their dairy farming enterprise.

The Situation: Dairy farming is big business. No other agricultural industry has a larger capital investment per worker. Increased production costs and shrinking margins have placed a premium on good business management. There is a continuation of the trend toward greater application of new technology. This may or may not be good for the economic health of the individual farm. Many operators lack skills in the science of decision making.

Problems:

1. Lack of farmer appreciation of the fact that business management decision making is a science.

2. Lack of information on the specific situation in the various sections of the state.

Justification: A review of analyses made by the agricultural economics department show, that among the more progressive dairymen who have kept and used enterprise records, that the scientific approach to business management has been very profitable. The nature of questions from the field and requests for assistance through agents indicates that more individuals are becoming aware of the importance of careful analysis and of consideration of alternative methods of problem solving.

The Plan:

Problem 1. Lack of farmer appreciation.

Educational Objective: For dairymen to acquire knowledge of the principles of business management and the skills needed to apply these principles.

Methods: We will cooperate with other departments in preparing materials and in teaching these principles. This will involve agent training, as well as material for farmer use. We will cooperate in this endeavor with the departments of; agricultural economics, agricultural engineering, the agronomy department and others.

Results Expected and Evaluation: We would expect an increase in the number of dairymen desiring to participate in the V.P.I. Farm Record Program and an increase in requests for information on the subject at meetings and conferences.

Problem 2. Lack of basic information.

Educational Objective: There is none as such. Work would be done to

provide a bench mark and a source of situational data.

Methods: The Dairy Science Department in cooperation with the department of agricultural economics and the state department of agriculture will complete the comprehensive survey of Virginia's dairy industry.

Evaluation: Results of activity will be measured in terms of the amount of useful basic data available to those who work with dairymen in the field of dairy management.

AREA II DAIRY PRODUCTION PRACTICES

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

Objective of Activity: For dairymen to acquire a greater understanding of breeding, feeding and herd management principles and to adopt more approved practices.

The Situation: The forage available on many Virginia dairy farms is inadequate in quantity and quality to feed these herds at recommended levels for greatest economy. Because of this situation, grain must make up a high proportion of the ration. This situation usually results in a high feed cost per 100 pounds of milk produced. Many dairymen have fixed in mind an arbitrary upper limit on grain feeding, regardless of quantity or quality of forage fed. Failure to adopt newer concepts of dairy cattle feeding limit the expression of capacity to produce, as well as limit the economic return from good cows.

Breeding is recognized as one of the limiting factors in dairy production. It is doubtful that this is the greatest limiting factor in most Virginia herds. Levels of feeding and management have not improved at as fast a rate as has breeding. It is true that about 150,000 Virginia cows are bred each year to bulls of doubtful worth. On the other hand, artificial breeding has been available since 1948. Currently over 25% of the cows are bred to superior bulls by this means. Also, many dairymen use well bred bulls of their own selection. Evidences of poor breeding practices are observed to a greater extent in the herds of manufacturing milk producers than in the grade A herds. Many of these cows are bred to beef bulls, either because the resulting calves are to be vealed, or because the beef bull is already on the farm. There is also the idea among some dairymen that first calf heifers bred to beef bulls will experience less difficulty in calving.

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. Good husbandry is practiced on many Virginia dairy farms. This is evident by the level of production demonstrated by the top DHIA herds. Yet, the incidence of mastitis, which is a good indicator of herd management levels, is very high. It is estimated that the cost of this disease in the state exceeds $5,000,000 annually. This cost can be reduced through the adoption of approved herd management or good husbandry practices. This situation is further complicated by the rapid rate of new technology adoption. The acquisition of the skills to apply to the technology has been slow.

Problems:

1. Failure of many dairymen to recognize the economic opportunities of providing adequate quantities of high quality feeds to their dairy animals.

2. Failure of some dairymen to appreciate the importance of using the best sires on their brood cows.

3. Failure on the part of many to appreciate the need for acquiring new husbandry skills to go with the new technology adopted.

Justification: The hope of realizing a superior market for the crops grown on the farm is the main reason for the existence of a dairy herd. Dairymen cannot depend on high market price alone to insure a superior market for their feed crops. The degree to which this objective is reached will depend upon the ability of the operator to organize for greatest profit all of his production resources. Effective extension activity in this area can help the industry realize a higher return on its investment.

The Plan:

Problem 1. "Economic opportunities through improved feeding practices."

Educational Objective:

a. For county agents, DHIA supervisors and dairymen to acquire a better understanding of the principles of nutrient utilization.

b. For dairymen and those who work with dairymen to increase their skill in evaluating feeds, particularly forage.

c. For dairymen, and others, to acquire skill in using the results of feed evaluation.

Methods: The results of EDPM will be used extensively in demonstrating the effects of feeding according to the nutrient requirements of the cow. Feed evaluation conferences or clinics will be held in cooperation with the agronomy department. Emphasis will be placed on the use of principles of feed evaluation used in the EDPM program. Study will be continued on the advantages to farmers of a forage evaluation service.

Results Expected and Evaluation: It would be expected that dairymen would gain a greater appreciation of the differences between forages and a better understanding of how to supplement them. This could be evaluated by the changes in the feed evaluation figures on DHIA summaries, by agents observation of farmers ability to evaluate feeds and by the requests from the field for information on harvesting time, storing methods, etc. Current interest in forage testing is an indication of desire for precise information. Use of the service, if developed, would also be an indication of such a desire.

Problem 2. "Use of good sires."

Educational Objective: For more dairymen to acquire an understanding of the importance of using superior sires as the means of improving the inherited capacity of their animals to produce.

Methods: Continue to disseminate sire evaluation information collected through DHIA. Provide educational assistance to artificial breeding sire selection committees. The more successful these groups, the better

will be the seed stock available to Virginia dairymen. Provide educational assistance to the various state breed clubs in their efforts to promote better breeding. Present information at county meetings on the importance of good breeding as the basis for developing a high production potential.

Results Expected and Evaluation: It would be expected that as more dairymen learn to appreciate the importance of good breeding, fewer scrub bulls would be used and a higher percentage of cows would be bred to the good sires available in the artificial insemination program. Changes in average level of production is not a good evaluation because breeding is not the greatest limiting factor to high production.

Problem 3. "Adoption of good husbandry skills."

Educational Objective: For dairymen and those who provide the day to day care of dairy cattle to gain a better understanding of why good husbandry is important and to improve their skills in their application.

Methods: Major emphasis will be given to the mastitis prevention and control program. The good practices taught and demonstrated through this program cover the whole area of good herd care. Adoption of these recommendations will not only reduce mastitis but also reduce the cost of production and increase production per cow. The monthly fact sheet series will be continued. Work with dairy committees will be stressed and close cooperation with the Virginia mastitis prevention and control program will be continued.

Results Expected and Evaluation: It is expected that the incidence of mastitis will be reduced and that the general level of herd care will be raised. This is a long time program and actual statistics are difficult to obtain. It is possible that an evaluation survey may be initiated by the state committee during late 1961 or 1962.

AREA III PRODUCTION RECORDS

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

Objective of Activity: For dairymen to develop an awareness of the need for and application of production records as a basis for sound decision making in feeding, breeding and managing their herds.

The Situation: Three types of dairy record systems are available to Virginia dairymen through the National Cooperative Dairy Herd Improvement Program (NCDHIP). These are: Dairy Herd Improvement Association (DHIA) records; Owner-Sampler (O-S) records; and Weigh-a-Day-a-Month records. These are designed so that any dairymen, regardless of his location, can participate in the NCDHIP.

Herds are enrolled in the NCDHIP in 87% of Virginia counties. Approximately 38% of the herds producing grade A milk are enrolled. About 15% of the total dairy cows in Virginia are in cooperating herds. Less than 1% of the herds producing milk for manufacturing purposes are enrolled. Historically extension workers and dairymen have shown a tendency to think of manufacturing milk production as requiring vastly different skills and methods than the production of Grade A milk. Dairy record keeping has been regarded as desirable but not essential for economical milk production by some segments of the extension service and by some segments of the industry. Also, some have tended to regard the NCDHIP as a service rather than the educational program which it is designed to be.

To improve the NCDHIP the southern states have joined together in developing a dairy records processing center using high speed electronic data processing machines. This improved system provides records that are more complete, more accurate and more legible than hand calculated and recorded records. Not only are the new records of greater value to the participating dairymen, but they are also more readily available to county and state extension workers for educational demonstration work.

Problems:

1. Lack of understanding of the responsibilities of different positions within the program.

2. Inadequate number of dairymen participating in the dairy record program.

3. Dairymen are not assuming their proper responsibilities at a sufficiently rapid rate in the administration of the testing program.

Justification: Dairy records are the cornerstone of a sound dairy management program. They provide the basic facts necessary for making sound management decisions in feeding, culling, and breeding. They also serve as evaluation instruments in determining the effectiveness of adopted practices. The results obtained by the cooperators who have used their records effectively attest to the value of the program to the industry and demonstrates the need for continued expansion of this activity.

The Plan:

Problem 1. Lack of understanding of responsibilities of different positions in the program.

Educational Objective: For district and county extension personnel, local and state DHIA officers, directors, members, and supervisors to develop an understanding of their roles and responsibilities in the NCDHIP.

Methods: Individual conferences with district agents, individual conferences with county agents, consultations with local DHIA boards of directors, group meetings of county agents and meetings of DHIA supervisors.

Results Expected and Evaluation: Expect extension personnel to develop a clearer understanding of their relationship to local DHIA boards of directors, DHIA members and DHIA supervisors. A decrease in the number of requests for the specialists to provide counseling and guidance to local groups would be considered a measure of the success in getting county extension workers aware of and willing to assume their responsibilities. Increased awareness on the extension worker's educational responsibilities should result in increased educational dairy work as indicated by the nature of requests for assistance and from a review of monthly county workers narrative reports. Awareness of problem areas on the part of district supervisory personnel should stimulate remedial action on the part of county personnel. The success of the program to increase understanding of roles will be reflected in increased activity of local boards of directors as they assume more of their responsibilities.

Problem 2. Inadequate number of dairymen participating in the dairy record program.

Educational Objective: For non-participating dairymen to feel the need for records and to develop skill in their use.

Methods: Promotional activities will be handled through news stories, radio, television and county meetings. Veterinarians, dairy plant fieldmen, feed fieldmen, and dairy equipment suppliers will be advised of the merits of the testing programs. DHIA supervisors will participate in a one-half day salesmanship training session conducted by the Federal Extension Dairyman. County herd book clinics will be encouraged. A continuing effort will be made to acquaint extension personnel with better methods of using the new electronically processed records in teaching farm decision making.

Results Expected and Evaluation: The number of dairymen participating in the NCDHIP is expected to increase. With increased knowledge, acceptance of the electronically processed records is expected to increase rapidly. The number of herds enrolling during the year and the number of herds on the manual program changing to electronically calculated records will be a measure of the success of efforts in this area. Changes in the skill in record useage can only be estimated. However, increases in herd averages is at least partially a result of intelligent record use.

Problem 3. Dairymen are not assuming their responsibilities at a sufficiently rapid rate in the administration of the testing program.

Educational Objective: For the officers and directors of the Virginia Federation of Dairy Herd Improvement Associations, Incorporated, and the officers and members of each local association to assume a larger share of the responsibilities for administering and staffing the testing program.

Methods: Matters requiring administrative decisions in the operation of the Federation will be referred to the Executive Committee for action. The Federation will be required to prepare its own budget for future years. Local boards of directors will be reminded that they are responsible for locating prospective DHIA supervisors and no effort will be made by the specialists to conduct a supervisor recruitment program. As many testing program decisions as possible will be referred to the boards of directors for consideration. Through correspondence and personal contact county extension workers will be urged to refer decision making to the elected officers of the local DHIA.

Results Expected and Evaluation: As the Federation executive committee and directors become better informed concerning the administrative details of operating the Federation, their ability to handle these matters will increase. They will be getting prepared for the eventual autonomous operation of the Federation without any administrative decision making on the part of extension personnel. As the Federation assumes its rightful responsibilities the efforts and time required on the part of extension personnel in this area will diminish thereby releasing additional time for truly educational activities. The willingness of the executive committee of the Federation and of the local boards of directors to accept their responsibilities will be a measure of the effectiveness of the educational program.

AREA IV DAIRY TECHNOLOGY

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

Objective of Activity: For producers, processors, and distributors to gain knowledge and skills, necessary in economical production, processing and handling, so 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. Producers are finding it difficult to develop the new knowledge and skills necessary to keep pace with these trends. Many plants do not have facilities and adequately trained personnel to carry out well planned quality control programs for milk procurement and product processing.

Problems:

1. Many dairymen lack the knowledge and skills necessary to produce and maintain high quality, good flavored milk under changing conditions.

2. Many plants do not have laboratory facilities to carry out quality programs.

3. There are too few well trained laboratory technicians to staff new and existing dairy plant laboratories.

4. Many plant managers lack adequate knowledge to make the desired adjustment in technology and methods necessary to remain competitive.

Justification: The perishable nature of milk and milk products requires that production, processing and distribution be carried out under rigidly controlled conditions.

Rapid changes in technology and skills make it difficult for all segments of the industry to remain competitive without some assistance from dairy extension. Adoption of new methods and technology on the farm are continuously introducing new problems in production and maintenance of high quality milk of good flavor. Well equipped dairy plant laboratories, staffed with qualified technicians are essential in the procurement of high quality milk and in the processing of uniform, high quality products. Turnover in laboratory personnel, changes in laboratory techniques, and development and maintenance of complete plant laboratories require continuous educational support to the industry. Dairy plant managers are continuously facing changes in equipment, processing techniques and product handling that require some assistance from extension in helping them to visualize various alternatives.

The mere existence of any industry is dependent upon the demand for its products. Since quality of product can greatly affect demand, quality control of milk from the cow to the consumer is essential.

The Plan:

Problem 1. Production of too much low quality milk.

Educational Objective:

a. For producers to change attitudes and to acquire knowledge and skills necessary for the production of high quality milk having good flavor.

b. For dairy plant fieldmen, who work with dairymen, to gain new knowledge and techniques that will be helpful to them in the promotion of their quality improvement programs.

Methods: To continue to disseminate, through mass media and meetings with dairymen, information on the production of high quality milk and the control of milk off-flavors. To counsel with individual dairymen on quality problems upon request of the county agent. To supply informational assistance to Virginia dairy fieldmen that will be helpful in the promotion of their quality improvement programs.

Results Expected and Evaluation: It would be expected that dairymen would gain greater knowledge of methods necessary for the production of high quality milk and the control of off-flavors in milk. This could be evaluated by the changes in the amount of milk classed as substandard by milk graders in dairy plants and by bulk pick-up haulers.

Problem 2. Too few plants that lack facilities for complete laboratory control programs.

Educational Objective: For managers of dairy plants to recognize the necessity for having quality control programs.

Methods: To survey plants having no quality control programs and to counsel with them on the adoption of sound quality control programs based upon laboratory control with field supervision of milk supplies.

Results Expected and Evaluation: The producer, processor and consumer will all benefit from greater attention to milk quality. Evaluation of this objective would be determined by the changes in the number of existing laboratories and the increased use of public supported laboratories, such as local health laboratories and State Diagnostic Laboratories.

Problem 3. Lack of trained personnel for new and existing dairy plant laboratories.

Educational Objective: For laboratory employees of dairy plants to acquire knowledge and techniques necessary to conduct complete laboratory testing programs.

Methods:

a. To continue to carry out educational assistance to technicians in existing dairy plant laboratories.

b. To conduct a 4-day laboratory technicians' short course at V.P.I. to teach laboratory methods. Four or more applicants will be required to justify holding the short course.

Results Expected and Evaluation: It is expected that laboratory technicians would gain increased knowledge and skills in conducting the great variety of tests that dairy plant laboratories are expected to make. Results of this effort may be measured in terms of the changes in skills observed by the specialist during visits to these laboratories.

Problem 4. Lack of knowledge by plant managers to make wise adjustments in business operations.

Educational Objective: For dairy plant managers and supervisory personnel to improve abilities to operate efficient and competitive dairy plants.

Methods:

a. To cooperate in the development of efficient dairy plant plans and equipment arrangements upon request.

b. To counsel with dairy plant managers for the adoption of economical methods for handling, processing and distributing milk and dairy products.

c. 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.

d. To sponsor and conduct a Cottage Cheese Conference and Clinic to teach new techniques in cottage cheese manufacture.

Results Expected and Evaluation: It is expected that wise adjustments would result in more economical application of capital, facilities and labor that would lower costs of handling, processing and distributing of milk and dairy products. The consuming public would benefit from more uniform, high quality products at reasonable prices. Evaluation of these efforts could be measured by changes made by plants in adopting new methods and techniques designed to increase efficiency of operation.

AREA V CONSUMER EDUCATION

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

Objective of Activity: For the people of Virginia to acquire a better understanding of the nutritional value of milk and milk products and to increase their average daily intake.

Situation: Supplies of milk in Virginia are more than adequate to meet the needs at the present low consumption rate of ½ pint of fluid milk per person per day. The average housewife is not fully aware of the nutritional value of dairy products. She does not appreciate the fact that milk is one of the most economical sources of food nutrients and does not know all of the ways dairy products may be used in the menu.

The Problems:

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

Justification: Any constructive work which can improve the general health and well-being of the population contributes to the welfare of society in general. Educational efforts leading to a better informed public will lead to a more prosperous dairy industry in Virginia.

The Plan:

Problem 1. "Low Consumption per Capita."

Educational Objective: For home makers to acquire a greater understanding of the uses and nutritional value of milk and milk products.

Methods: The staff will cooperate with industry organizations in their educational programs by providing materials, counsel and support. The specialist will work closely with the dairy councils. Help will be given to the June Dairy Month program.

Specific materials will be provided to home demonstration agents for use in their nutrition programs. Demonstrations on preparing dairy foods will be presented upon request of agents.

Results Expected and Evaluation: We would expect that a greater number of consumers would have a higher regard for milk and dairy products. This might be evaluated by observing the changes in reported consumption rate. On the other hand, in view of the adverse publicity, maintenance of the same rate might be considered as a measure of success of the educational effort.

AREA VI YOUTH DEVELOPMENT

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

Objective of Activity: For rural youth to acquire the necessary knowledge and skills that will enable them to develop qualities of leadership, sportsmanship, character and personality necessary to happy and prosperous citizenship.

The Situation: The decrease in the number of dairy farms means less opportunity for dairy trained youth as operators. The high capital requirements of dairy farming limit the possibilities of youth who would like to be full time dairymen. There are some opportunities as salaried employees in dairy production. However, these positions are not as attractive as other employment because of long hours, confining nature of the work and low wages. The shift to urban living has resulted in greater numbers of youth who have limited appreciation of agriculture. It has probably resulted in failure on their part to appreciate that agriculture extends far beyond the fence lines of the farm. Many are not aware of the opportunities for youth in these related fields of agricultural supplies and services.

The Problems:

1. Lack of knowledge of youth in general on the scope, complexities and problems in agriculture, particularly in dairying.

2. Lack of training among rural youth in areas of living that are not completely covered in their formal schooling.

3. Maintenance of industry awareness that youth programs are of great benefit to the long time well-being of the industry.

Justification: Rural youth represent the most valuable crop grown on Virginia farms. Those that remain must obtain necessary skill in all phases of their chosen field. Youth programs provide an excellent foundation upon which to build proficiency. For those who must leave the farm or for rural non-farm youth, these programs help develop an appreciation for agriculture that will benefit agriculture as these youth become consumers, tax payers and voters.

The Plan:

Problem 1. "Youth's lack of knowledge about dairying."

Educational Objective: For "non-dairy farm" youth to acquire knowledge and appreciation of what is involved in milk production and processing and to understand the value of milk as a human food.

Methods: Two particular dairy 4-H Club projects will be promoted through county agents. These may be taken by individual club members, or can be taken by a club as a group project. One of these, "An Introduction to Dairying" is designed to teach youth basic facts about dairy

animals, how they are cared for, and how the milk is handled on the farm. It also teaches facts about the processing industry. It includes a visit to a dairy farm and plant. The other project, "Milk and Milk Products" is designed to teach facts about the nutritional value of milk and ways it may be used.

Results Expected and Evaluation: It is hoped that youth will develop an appreciation of the dairy industry through participation in these programs. It should result in good public relations with the industry in years to come. The short time effect may be evaluated by agents, the long time results can only be measured by the public opinion toward the industry in the future.

Problem 2. "Lack of training in areas not completely covered in formal education."

Educational Objective: For rural youth to develop qualities of leadership and sportsmanship as well as certain skills in dairy production.

Methods: Special subject matter material will be provided to agents. These materials will be leader training aids as well as actual teaching material. Assistance will be given to counties, districts and state 4-H and F.F.A. dairy shows. In some cases specialists will serve as judges. However, the all breeds judging conference held each year is providing trained lay judges that now judge many local fairs. Assistance will be given to county workers through judging clinics for 4-H members. County judging teams will compete in district and state contests. A state 4-H judging team will be trained by the team coach and specialist. This team will compete in the national contest.

Results Expected and Evaluation: It is expected that these extra curricular activities will help to broaden the experience of the participating youth and will help them to obtain a fuller, richer life. The results can not be measured in numbers of participants alone, but results can be seen in the enthusiasm, spirit, energy and zeal of these young people as they engage in the various activities.

Problem 3. "Maintaining industry support."

Educational Objective: For people in the dairy industry and related fields to acquire a better appreciation of the value of youth work and to continue their support of these activities.

Methods: Specialist will serve as advisor to the youth program committees of the various breed clubs. Efforts will be made through conferences, meetings, news stories and radio to inform all groups of the youth program. The dairy staff will cooperate with other departments in the college in this youth work. The problem does not lie so much in lack of interest and support as it does in the need for maintaining the existing good relations.

Results Expected and Evaluation: It is hoped that the dairy industry will continue its support of the junior program. This can be evaluated by the number of activities which industry sponsors as well as by the number of awards, etc. made available by them.

AREA VII ALLIED ACTIVITIES

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

Objective of Activity: This is not strictly a subject matter area, so does not have an educational objective as such. The reason for including an allied activity section is to recognize that service of an allied nature does take time, is a necessary function and offers opportunities for broad service to the college and to agriculture.

The Situation: Many areas of opportunity for specialist service lie outside the specific subject matter field. Many of the broad programs of the extension service are carried out through the subject matter specialist staff. Many of the organizations in the state rely on the specialist staff for guidance and counsel. There are many opportunities for specialists to serve agriculture through participation in activities of regional or national scope. The miscellaneous activities that would be classified under this heading can not always be anticipated.

The Problems: Actually there are no problems as such. In this area, problems are changed to opportunities. The specialists frequently are confronted with the problem of time. Time to fit the demands of this nature into a busy schedule.

Justification: Participation in these allied activities has a powerful public relations value. Not only does the college benefit, but the contacts made through this type of work are many times quite valuable to the specialist in making contacts in his subject matter area.

Methods: Opportunities for service in this area largely arise out of particular talents or interest of specialists. The methods used will be those which the situation indicates will best use the particular talent. In all work with organizations special efforts will be made to encourage the development of leadership within that organization. It is our sincere belief that this aim can best be accomplished by serving as advisors.

Results Expected and Evaluation: We feel that activity in this area will help the entire extension service to fulfill its broad obligations and will foster good public relations within extension, among the various segments of agriculture and between extension and the agricultural industry. We feel also that participation of staff members is a broadening experience and leads to greater personal satisfaction. It would seem that the evaluation of efforts in this area can be measured only in terms of our own satisfaction and in the regard with which we are held by those we work with in this area.