ANNUAL REPORT OF THE VETERINARY SCIENCE EXTENSION STAFF

FOR THE PERIOD JANUARY 1, 1961 to DECEMBER 30, 1961

Phases of Work: Livestock Disease and Parasite Control

Personnel Involved	Percentage of Time Devoted to Project
S. L. Kalison, D.V.M., Project Leader	100%
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Results and Accomplishments

The analysis of the situation made prior to the development of the plan of work for 1961 delineated many existing problems relative to the diseases and parasites affecting Virginia's livestock. Consultation with the other departments involved and the Virginia Department of Agriculture indicated that the following were of major importance to the livestock industry and should be given major emphasis.

Major Problems

I. Brucellosis

1. Apathy of livestock producers resulting in,
   a. delay in achieving modified certified brucellosis free status in Virginia
   b. failure to vaccinate all heifers being retained as herd replacements
2. Failure to give ample consideration to species other than cattle as sources of the infection.

II. Mastitis

1. Emphasis upon treatment as the approach to the control of mastitis.
2. Lack of appreciation of the necessity and importance of good management and proper milking methods in mastitis control.
3. Difficulty of reaching those people who are milking and handling the animals in the barn and who are the key to good management and proper milking procedures.

III. Reproductive Disorders and Artificial Insemination

1. Failure of livestock producers to utilize management practices that are known to increase breeding efficiency.
2. Failure to use the veterinarian in a routine sterility program that will minimize reproductive failures.

3. Failure to make the fullest use of artificial insemination for purposes of preventing the occurrence of genital diseases by livestock producers.

IV. Swine Herd Health Program

1. Failure to provide a healthy environment.

2. Failure to utilize known measures that will prevent exposure of animals to disease producing agents.

3. Failure to detect and identify diseases early.

4. Failure to select and apply treatment properly.

5. Failure to keep accurate and complete records.

V. Miscellaneous

1. General

a. Failure to use known preventative measures where available.

b. Failure to recognize the dangers of the indiscriminate use of drugs.

c.. Improve relations between the various groups concerned with agriculture.

2. Cattle

a. Foot Rot

b. Parasites

c. Failure to use vaccination procedures routinely where advisable.

d. Nutrition as it relates to disease is not too well appreciated by cattle raisers.

e. Bloat

3. Sheep

a. Foot Rot

b. Parasites

c. Enterotoxemia

d. Scabies

e. Dangers of Improper Docking and Castrating

f. Failure to use measures known to assist in disease prevention.

4. Swine

a. Parasites

b. Failure to use vaccination procedures against Hog Cholera.

c. Swine Erysipelas - 1

d. Leptospirosis

e. Necessity for careful attention to preventative measures in all swine raising operations but particularly in the concentrated swine operations that are becoming more prevalent each year.

f. Virus Pig Pneumonia

g. Atrophic Rhinitis

h. Gut Edema

It is apparent that the two veterinarians constituting the total personnel of the extension section of the Veterinary Science Department would not be able to give major emphasis to all of these problems. This has proven to be correct. However, some effort has been made to devote some time to all of these areas.

The work done the past year will be reported under the problem areas as they were stated in the Plan of Work.

Mastitis

20% of one and 5% of a second man's time was devoted to this phase of work.

This condition continues to be the most important disease problem, if not the most important of all problems, presently facing the dairy industry. It is a complex problem and gaps in our knowledge make it difficult to devise an effective prevention and control program. Information that is available does make it possible to significantly reduce the incidence of the disease.

The Virginia Mastitis Prevention and Control Program initiated some 3½ years ago under the direction of the Virginia Mastitis Prevention and Control Committee is proceeding according to the overall long range program developed by this group during its first year of existence.

After extensive consideration of the many factors involved in a Mastitis prevention and control program, the committee decided to concentrate upon three of these. They were:

1. To emphasize to dairymen that it takes more than treatment to control Mastitis.
2. To make the dairymen aware of the necessity and importance of good management and proper milking methods in the control of the disease.
3. To explore methods and devise means of getting those people who are in contact with the animals and responsible for the milking operations to adopt the management practices and milking methods known to be essential to an effective Mastitis prevention and control program.

The extension staffs of the Veterinary Science and Dairy Science Departments cooperatively prepared 12 leaflets that were published once per month. These were made available in quantities of 16,000

copies per month and were distributed through county agents to all dairymen in the state.

Each leaflet discussed some phase of management or milking procedure that was essential to keeping Mastitis at a minimum. Collectively, emphasis was placed on milking methods, machine operation, care and maintenance, and management methods that are known to be effective in reducing the incidence of Mastitis.

A "Mastitis Calendar" was developed on which appeared reminders, a place to keep records of the incidence and cost of Mastitis, and other information relative to the disease. This was also developed by the Extension staffs of the Veterinary Science and Dairy Science Departments. Ten thousand were distributed to dairymen through county agents throughout the state.

The slide set made two years ago continued to receive repeated use by professional agricultural workers.

In connection with this phase of work, a county wide milking demonstration was developed in cooperation with the county dairy committee. The planning and development as outlined by the county dairy committee was carried out by the Veterinary Extension staff in cooperation with the County Extension staff. The extension veterinarians participated in the actual demonstration. This was a pilot effort designed to formulate a program that can be used for future demonstrations in counties throughout the state. Plans are presently underway for such demonstrations in other counties.

The problem of Mastitis was discussed at four county meetings, two area meetings, and the Annual Dairy Herdmens' Short Course.

held at the College, two district veterinary association meetings and one annual meeting of the Virginia Veterinary Medical Association.

One meeting of the educational subcommittee of the Virginia Mastitis Prevention and Control Committee as well as one meeting of the overall committee were attended as members of both groups.

Ten farm visits were made with local veterinarians and county agents as consultants on specific problems encountered on dairy farms.

Three feature articles were prepared for and published in a magazine distributed in two states, North Carolina and Virginia.

Discussions of Mastitis were presented at the Farm and Home Institute held at the University of Kentucky in Lexington, Kentucky, at the dairy section of the Southern Agricultural Workers Conference at Jackson, Mississippi and at a West Tennessee Veterinary Medical Association Meeting at Jackson, Tennessee.

The work associated with the position of chairman of the Mastitis subcommittee of the Joint Committee on Dairy Cattle Health of the American Veterinary Medical Association and the American Dairy Science Association was continued this year as it had for the previous three years.

Brucellosis

One worker devoted 10% and another 5% of their total time to this phase of work.

The area control program initiated some three years ago in Virginia as well as throughout the nation to reduce the incidence of brucellosis in cattle to less than ¼ of 1% has exceeded the goals set last year in some phases and has failed to achieve its goals in other phases. This program is a regulatory program and is, therefore, administered by the Division of Animal and Dairy Industry of the Virginia Department of Agriculture. The role of extension has been to support this effort with an educational program designed to assist the Division of Animal and Dairy Industry in achieving their objectives of making Virginia a modified certified brucellosis free area by 1963 and vaccinating all replacement heifers between 4-8 months of age with strain 19 vaccine.

The testing phase of the program has proceeded at a pace consistent with the personnel available to carry it out. The goal in 1961 was to complete or be in the process of completing the testing of all cattle in 95% of the counties in the state.

The reports of the Virginia Department of Agriculture for 1961 indicate that 92% of the counties have been completed and that testing is under way in all of the others. The goals have, therefore, been exceeded in this phase of the program. It is possible that the state will become eligible for designation as a modified certified brucellosis free area in 1962 rather than 1963 as originally planned.

In 1960, the number of replacement heifers vaccinated against brucellosis was 31.4% of the total heifer population estimated to be present on Virginia farms. This represented a decrease as compared to 1959 of 48%. It has been demonstrated that at least 70% of the available heifers must be vaccinated between 4-8 months of age in order to achieve the maximum benefits that may be realized from a calfhood vaccination program.

The goal for 1961 in this phase of the total brucellosis eradication program was to increase the number of calves vaccinated at the proper age to a number that would exceed 70% of those that were present on Virginia farms. The reports of the Virginia Department of Agriculture indicate that 43.4% of the available calves were vaccinated. This represents an increase of 12% over 1960, but falls short of the goal set.

The Extension staffs of the Veterinary Science, Dairy Science, and Animal Husbandry Departments in cooperation with the State Department of Agriculture have kept the extension workers and other professional agricultural workers informed of the progress being made in all phases of the brucellosis eradication program through monthly reports issued by the regulatory agency responsible for the administration of the program. All of the groups involved have issued periodic reminders to these same workers and the livestock producers to have calves vaccinated. These have appeared on radio programs, in newspapers and other publications throughout the state. Some part of all livestock meetings have been devoted to the program with emphasis upon vaccination.

The circular "Wipe Out Brucellosis", prepared by the Veterinary Extension staff some five years ago, is adequate to fill the need for a publication containing basic information that can be distributed to cattle producers. This is available in quantity.

This year, for the first time, the Veterinary Science and Animal Husbandry Extension staffs have devoted some time to discussions with swine producers relative to the problem of brucellosis as it effects swine. This will be intensified in the future. As the incidence of the disease in cattle decreases, it will be necessary to make every effort to reduce the incidence in swine, so that swine herds will not serve as sources of infection for both the cattle and human populations.

Artificial Insemination and Reproductive Difficulties

15% of one and 5% of a second man's time was devoted to this phase of work.

The artificial insemination program has demonstrated a steady progressive growth for the last 12 years in Virginia. The work done in this phase of the total Veterinary Extension program has been done in cooperation with the Dairy Extension group and the Artificial Breeding Associations.

The objectives enumerated in the plan of work for 1961 were as follows:

1. To improve breeding efficiency in both beef and dairy herds.
2. To reduce the incidence of diseases that interfere with conception rates.
3. To stimulate interest and make every effort to increase the number of herds and number of cattle utilizing the program.
4. To make certain that the semen used in the artificial insemination program originates from disease free bulls.
5. To assist in providing capable technicians to carry on the artificial insemination program.

A conception rate of 65-70% is indicative of a good breeding efficiency. During the past year the overall conception rate maintained in the program has been 69.7%. This is more than adequate and it is hoped it can be maintained in the future.

Four consultations were held with members of the breeding associations to evaluate bulls, methods of semen handling, preservation, shipment and other details in an effort to maintain semen quality.

This is done periodically and is felt to be of assistance in the production of a good quality semen.

The number of animals bred artificially increased 6% this year over the previous year and over 72,000 cattle were served during 1961. This indicated a steady growth but represents less than one third of the cattle that should be enrolled in the program.

In this connection parts of discussions at two county meetings were devoted to the advantages of using the program. The movie "Artificial Insemination" was made some years ago and was used throughout the state to promote the program.

One of the most important phases of the insemination program has been the testing program involving the bulls at the breeding center that assures the cattle breeders of the state that the semen originates from disease free bulls. The testing procedures, as outlined in the herd health program initiated 9 years ago, were applied by members of the Veterinary Extension staff in cooperation with the veterinarian employed by the breeding association. This was done four times during the past year and consumed a total of eight days. The required laboratory work was performed at the laboratory of the Veterinary Science Department at V.P.I.

There were three bulls examined by the Veterinary Extension staff for possible diseases and parasites and determined to be free of both prior to entry into service.

The extension veterinarians in cooperation with the Dairy Extension staff assisted in training eight technicians. In addition to these, two others were examined as to their qualifications for receiving a license to practice insemination as per state regulations.

A discussion was given at the Annual Technicians' Conference relative to diseases that may cause infertility in cattle.

The problem of reproductive difficulties affects not only the animals enrolled in the artificial insemination program but dairy and beef cattle being bred naturally. There are many factors involved, but herd management and the so-called genital diseases are by far the most important.

Herd management for breeding efficiency has long been a subject for emphasis. During the past year discussion utilizing slides were presented at two county meeting and at the Annual Meeting of the Membership of the Virginia Artificial Breeding Association. Four feature articles, one new article, and one radio program were devoted to this area.

Brucellosis, Vibriosis, Trichomoniasis, Leptospirosis, and certain non-specific infections have been classified as the genital disease group. They are all characterized by abortion or infertility or both. With the exception of Brucellosis and Leptospirosis, the bull is considered to be the primary means of spreading these diseases.

The health program that has been applied to the bulls maintained at the breeding center for purposes of artificial insemination has

been and continues to be an effective means of controlling these diseases in herds that use the program. Those livestock producers who use bulls in natural service must take precautions in the purchase and use of these animals to make certain that they are free of disease and producing viable semen capable of getting cows in calf. In the last few years procedures to determine that bulls are free of disease and producing a good quality semen have been developed and emphasis has been placed upon "bull evaluation".

These procedures have been described in one radio program, one news article and two feature articles. In addition, the extension veterinarians in cooperation with the Veterinary Science research staff and the Animal Husbandry Department presented a two day short course for veterinarians at the Beef Cattle Research Station in Front Royal designed to teach the essentials of bull evaluation. Twenty one veterinarians attended and each one had the opportunity to conduct all of the procedures and practice the techniques required in evaluating bulls.

In addition, the extension veterinarians examined bulls for soundness that were being offered for sale in three commercial bull sales. Approximately three hundred bulls were thus examined.

Ten farm visits were made during the past year with county agents and local veterinarians to investigate herds with infertility problems.

Swine Herd Health Program

15% of one and 30% of a second man's time was devoted to this phase of work.

The plan of work for the past year included a Swine Disease and Parasite Prevention and Control Program, as well as proposed methods of implementing the program.

The program itself and its implementation was discussed at a pre-planning meeting held with members of the Extension Administration and the Departments of Animal Husbandry, Entomology, and Agricultural Engineering. It was decided at this time to institute the program in several selected counties on a pilot basis. This approach was discussed with the district agents and the counties in which the program was to be instituted were selected. Following this, meetings were held with the agents of those counties selected to discuss the program. Of the counties selected, Isle of Wight County is the only county which has progressed to any appreciable degree thus far. A meeting has been held in this county with the local Swine Committee to survey the problems and to evaluate the situation.

The meetings with the county agents emphasized the need for information relative to the losses in each county resulting from swine diseases and parasites. As a consequence, surveys were conducted in these counties in cooperation with the county agents that supplied the necessary information. The extent of the losses due to swine diseases and parasites in each county was estimated on the basis of the survey results. These estimates were sent to the counties for the use of the various county livestock committees as

background information that would assist in evaluating the local situation and determining the needs in the area.

At this point, the decision was made by the administration to expand the Swine Disease and Parasite Control Program into a Comprehensive Swine Program including all phases of swine production, This is now in the process of organization, and will soon be taken out to the swine producing areas for their consideration. The Swine Disease and Parasite Control Program already initiated in Isle of Wight County is to be continued as originally planned.

The fact that prevention, rather than the treatment, of disease is much more effective in reducing financial losses was emphasized at county and state meetings the past year. A slide set was prepared to assist in demonstration of the basic factors involved in the development of any infectious disease. This was used frequently in teaching preventive medicine to livestock producers throughout the state.

In cooperation with the Experiment Station and the State Department of Agriculture, data was accumulated relative to the incidence of various diseases in feeder pigs and the influence of these diseases on growth rates. This information was also used in local meetings to identify the disease problems encountered in feeder pig production and marketing.

Miscellaneous

45% of one and 50% of a second staff member's time was devoted to this phase of work.

In veterinary medicine as in all other branches of medicine emergencies are frequent in occurrence. Any plan of work in the livestock disease phase of the extension program must be flexible enough to permit the specialists to deal with these situations.

Some problems involve acute conditions accompanied by high mortality rates or severe loss of production resulting in serious economic losses. Others are chronic in nature and persist over long periods of time. These also result in financial loss to the producer and if not checked can drain his resources steadily until they are depleted. In either case they constitute a danger to the producer, area, and in some cases, the industry.

Each year a number of these conditions appear and assistance is requested by the county agent, veterinarian or producer. They cannot be anticipated but when they occur, quick action is required in order to minimize their effect.

The farm visits made by the extension veterinarians serve several purposes. They assist county agents, livestock producers, and practicing veterinarians in solving problems relative to livestock diseases and parasites. In addition, they are valuable in supplying information to the research section of the Veterinary Science Department with regard to the problems that exist in the state and the relative significance of these disease and parasite problem. This is utilized to determine the selection of those

areas that are to receive emphasis in the research program. The collection of material for study that is made at the time of farm visits has been of assistance in the research program.

The accomplishment of close working relationships between the veterinary profession, the extension service, livestock producers, and others working with the livestock industry has always been a desirable goal. The closer this relationship becomes, the greater the benefit to the livestock industry. As in past years, considerable time and effort was expended in attaining this goal by working at the local, state and national levels with the veterinary profession.

The diversity of the problems and needs in this phase of work is great, the number is infinite. The work done is limited only by the time and personnel available.

A description of all the work done in this area is beyond the scope of this report. Some selected examples will serve to illustrate the nature of the work done.

Diseases and Parasites

Cattle

Hypomagnesemia (Wheat Pasture Poisoning Grass Tetany)

This condition was reported as occurring in beef cattle during the winter months in various areas of the state several years ago. At the request of county agents, veterinarians and some beef cattle producers a field study was initiated two years ago in cooperation with the research staffs of the Veterinary Science and Biochemistry and Nutrition Departments. The purpose of the investigation was to attempt to secure basic information that would make it possible

to improve the presently available diagnostic, therapeutic and preventive measures.

The results of the two year study have been summarized and presented to those involved in the study. They have also been discussed with veterinarians at two meetings of district veterinary associations.

While results are not conclusive and much more work on this condition is necessary, there were some indications that the addition of magnesium to the diet would assist in reducing the incidence of the disease. This information was distributed to all county agents and veterinarians in the state.

All reports indicate that there has been very little hypomagnesemia this year as compared to previous years. It is not possible at this time to determine whether the recommendations for prevention are effective or whether enough of the beef cattle producers utilized them. The next year or two will permit a more complete evaluation of both.

This study is being continued for another year and is possible only because of the excellent cooperation of two county agents, three veterinarians and four herd owners in addition to the college personnel involved.

The work done in connection with mastitis and infertility in cattle has been reported in previous sections.

Other conditions that were encountered on farm visits or were discussed on the phone, by letter, on the radio or in news articles

during the past year were:

1. Leptospirosis
2. Foot Rot
3. Cow Pox
4. Shipping Fever
5. Bloat
6. Rabies
7. Malignant Edema
8. Blackleg
9. Internal Parasites
10. Many other conditions that occur each year.

SHEEP

Most of the losses due to diseases and parasites sustained by sheep producers are directly attributable to poor management practices. It is essential, therefore, that any disease and parasite control program must include good management practices. For this reason, the great majority of the work done in this phase of the Veterinary Science Extension program was done in cooperation with the Animal Husbandry Department.

Utilizing the cooperative approach, the 4-H feeder lamb project sponsored by the Portsmouth Chamber of Commerce was handled as a team project. The county agents and members of the Department of Animal Husbandry involved requested assistance from the Veterinary Science Department.

The Veterinary Science Extension staff assisted in the selection of the lambs, in preparing them for distribution and by checking

them on the farm and at the show. Every opportunity was utilized to give the 4-H members, individually and collectively, information relative to the maintenance of the health of the lambs. These 4-H boys and girls, for the first time, were trained in the feeding and management of animals, as well as the control of diseases and parasites. They received training, therefore, in a complete program rather than in individual phases of sheep production and management.

The most important problems encountered in sheep were again internal parasites and foot rot. Radio and news releases were utilized to disseminate information relative to these conditions. Discussions of both foot rot and internal parasites were presented at livestock meetings in all areas of the state.

A staff member attended the 1st National Foot Rot Conference in Lexington, Kentucky, and participated on the program of this conference.

A leaflet titled "Foot Rot in Sheep" was prepared and published during the year by the Veterinary Extension Staff.

Radio tapes and other media were utilized to inform sheep producers of the need to prevent and control Ketosis and lamb diseases.

There were many requests from county agents and veterinarians for assistance with disease and parasite problems in sheep located on farms throughout the state.

Appraisal of Progress

This past year was the first full 12 month period during which the Extension Staff of the Veterinary Science Department has operated with the additional staff member added July 1, 1960. This has permitted the enlargement of the total program over previous years.

The Swine Disease and Parasite Control Program, included as a part of last year's plan of work, proceeded according to plan for the first part of the year. The decision to enlarge the program so as to include all phases of swine production and develop a complete program rather than confine it to swine disease and parasite control, necessitated a rearrangement of material and a change in the organization. This approach will undoubtedly strengthen the swine program materially.

The amount of work done in this phase of work exceeded that anticipated in the plan of work. The enlargement of the program and the involvement of all departments at the college concerned with swine production, economics, and marketing, indicated real progress in our efforts to initiate an educational program that will fill a definite need and be of the maximum benefit to swine producers throughout the state.

The amount of work done in the area of sheep diseases and parasites has also been able to be increased due to the added personnel. The number of radio programs and news articles devoted to sheep problems has been doubled. The number of farm visits made at the request of county agents and veterinarians to investigate.

sheep diseases and parasite problems has more than tripled this past year over the previous year.

The need for a leaflet on Foot Rot in sheep has been evident for some time. The publication of such a leaflet during the past year has fulfilled that need.

Real progress in the area of the sheep program involving the Veterinary Science Extension staff was made when they participated in the 4-H lamb program in the eastern part of the state. This presented an ideal opportunity to conduct an educational program with youngsters to teach methods of disease prevention and control. It is hoped that this will be continued and possibly enlarged.

The Mastitis Control Program has proceeded as planned by the Virginia Mastitis Prevention and Control Committee in all aspects but one. The phase of the program in which programs were to be initiated at the county level has been developing more slowly than anticipated. However, it appears that this can be accelerated in the near future.

The area program intiated 3 years ago to intensify the effort to eradicate brucellosis has proceeded at a more rapid rate than anticipated. The goal for 1961 was to have 95% of the counties either completed and designated as modified certified brucellosis free areas or under test. On December 31, 1961 all counties were either completed or under test.

The percentage of available calves vaccinated against brucellosis has not come up to the anticipated level. The Virginia Department

of Agriculture reports 32.5% of the calves vaccinated. It had been hoped that 70% of the available calves would be vaccinated. This phase of the brucellosis program will have to be emphasized during the coming year.

The artificial insemination program continues to show a steady growth. Progress in this phase of work is best measured by growth and maintenance of conception rates or breeding efficiency at a desirable.level.

Approximately 72,000 cows were bred in this program during 1961, a 6% increase over 1960.

The maintenance of conception rates between 65-70% is desirable and was one of the goals selected for 1961. The actual breeding efficiency was 68.2%, so this goal was achieved.

The quarterly health examination of bulls in service at the breeding center have been carried out as planned. The examinations of bulls prior to purchase for service have been completed as requested.

Training of technicians has been provided as requested.

All of the goals set in the plan of work have been achieved.

The diversity and quantity of work done under the phase of work labelled "Miscellaneous" continues to increase each year. Since the work cannot be anticipated, goals cannot be set and comparisons with the previous year's work are the sole measure of progress.

The number of farm visits continue to be at the same level per man. The requests for assistance from veterinarians continues to increase. The total number of these requests has for the past two years reached

a level that makes it difficult to answer them without additional personnel. The research group has assisted materially in this area of work.

The Veterinary Association activities on both the local and national levels increased significantly. It may well be that the most significant contributions to the total program are being made in this area.

The addition of another veterinarian to the Extension Staff on July 1, 1960, has improved the program considerably. The work with swine and sheep had been done on a request basis only in previous years. Lack of time and personnel had made it impossible to approach the disease and parasite problem in these species in an organized manner. It is now possible to alter this phase of the program and an organized approach described earlier has been developed making the work in this area more effective.

The Second Annual Short Course for Veterinarians was presented during the year and was even more successful than the first one. The Virginia Veterinary Medical Association has requested that another one be presented during the coming year.

Emergency work is an integral part of the Veterinary Extension program. There is no reason to believe that it will decrease in the foreseeable future. All requests for assistance in emergency situations have been answered. This has been possible only because of the cooperation and assistance of the members of the research staff of the Veterinary Science Department.

While one member of the Veterinary Extension staff has been given the primary responsibility for the work relative to sheep and swine and the other has the primary responsibility for projects relative to cattle, both dairy and beef, both have contributed to all phases of the total Veterinary Extension Program. It is anticipated that this approach will be utilized in the future since it has several apparent advantages in better coordination of activity, conservation of travel time and funds, uniformity, etc.

Veterinary Association Activities

The necessity to work with the veterinary profession in order to gain their support for extension programs that deal with livestock diseases is self-evident. It is no less important to secure their assistance in formulating these programs.

It is essential that all segments of the livestock industry, as well as the veterinary profession, be made aware of the fact that the success of a disease control program is dependent upon their complete cooperation in the approach to the problem. All of our activities directed toward the livestock industry stress this fact. It is also necessary to create an awareness on the part of the veterinarians that they have an important role in the disease control activities and a duty to fulfill their responsibilities in the approach to the solution of the problem. This has required a great deal of time and effort at the local, state, and national levels. The importance of this phase of work and the apparent progress, even if relatively small, has justified the time and effort spent.

Local Level

There are five district veterinary associations existing in Virginia. Three of these meet once every other month and the other two meet once each month.

The Veterinary Extension personnel participated on the program of eight of these district meetings and provided the program for nine others.

This has resulted in a uniformity of thinking in regard to livestock disease and parasite problems. It has assisted in the

election of major emphasis areas and the development of programs designed to deal with these problems. It has also provided the opportunity for the extension veterinarians to discuss the extension programs and secure the support of the practicing veterinarians for the educational work being carried on.

The misunderstandings and disagreements that arise between veterinarians, between livestock producers and their veterinarians, and between county extension personnel and local veterinarians are resolved at these district meetings. This has been accomplished a number of times during the past year.

The use of veterinarians on livestock committees to assist in the planning of those phases of the county program dealing with livestock diseases has increased considerably. This is a desirable trend and should be encouraged.

Requests from local veterinarians for assistance in disease problems continue to increase. During the past year forty-one farm visits were made for purposes of consultation with local veterinarians.

The State Level

Veterinary Extension personnel continued to serve in various capacities in the Virginia Veterinary Medical Association. They served as chairman of the Pharmacy Committee of the Virginia Veterinary Medical Association, and as chairman of the Joint Committee of the Virginia Veterinary Medical Association and the Virginia Pharmaceutical Association. During the years that this activity has been carried on, the relationship between these two

groups has improved significantly. The exchange of representatives to the state meetings of both associations initiated several years ago continues.

Members of the Veterinary extension staff served on the program and agricultural committees of the Virginia Veterinary Medicine Association and represent the group on the Nutrition Committee of the Virginia Council on Health and Medical Care.

The two state meetings of the association were attended and a staff member participated on the program of the winter meeting.

Two short courses for veterinarians were presented during the past year. The Second Annual Short Course was entitled "Immunology As Applied to Veterinary Practice" and was sponsored as in the previous year by the Agricultural Extension Service in cooperation with the Virginia Veterinary Medical Association and the Veterinary Science Department at the college. As in the previous year, a committee consisting of representatives of the sponsoring agencies selected the subject matter, time, speakers, etc. The major responsibility for arrangements and details was given to the Veterinary Extension staff.

The attendance was double that of the First Annual Short Course and a request for a continuation of this project has been received from the Virginia Veterinary Medical Association.

The second short course was a two day course in bull evaluation techniques and methods held at the Beef C ttle Research Station at Front Royal. Twenty veterinarians from the Northern Virginia area attended and were given the opportunity to practice the necessary procedures.

National Level

Activities at the national level relative to Veterinary Association activities were maintained at approximately the same level as in the previous three years. A member of the Veterinary Extension staff continued to serve as Secretary of the Joint Committee on Dairy Cattle Health of the American Veterinary Medical Association and the American Dairy Science Association and as Chairman of the Mastitis and the Health Records Subcommittee on this Committee. The committee met once during the year. The minutes of the meeting were prepared and the other work associated with this position was completed.

The investigation of drug use in veterinary medicine conducted by a Committee of the Council on Veterinary Services of the American Veterinary Medical Association was continued this year. A member of the Veterinary Extension staff continued to serve on this committee and prepared the report of its activities.

Miscellaneous Activities

There are many demands made upon the time of the Veterinary Extension staff for activities that cannot be classified but are relevant to the program. It is apparent that all of these cannot be included but some can be mentioned.

Campus activities require a considerable amount of time. The Annual Extension Conference, Institute of Rural Affairs, departmental meetings, Extension staff meetings, interdepartmental conferences, etc. are typical examples. Discussions were presented by Veterinary Extension staff members at the Annual Dairy Herdman's Short Course and the Animal Husbandry Short Course.

One staff member was appointed Chairman of the Subcommittee on Livestock Health and the other Chairman of the Subcommittee on Human Health of the Rural Civil Defense Committee.

One member of the staff continues to serve as Chairman of the Committee on Continuing Education of the Association of Extension Veterinarians. This is the third year that this duty has been performed.

A member of the Veterinary Extension staff has been appointed a member of the National Mastitis Council and is serving as a member of the Committee on Education of the Council. The work of this group is to get underway during the coming year.

Staff members attended the Conference for Veterinarians at Michigan State University, the Annual Convention of the American Veterinary Medical Association in Detroit, Michigan, and the Conference on Foot Rot in Sheep at Lexington, Kentucky.

Discussions were presented by staff members on the programs of the Iowa State Veterinary Medical Association Meeting at Des Moines, Iowa, Farm and Home Week at the University of Kentucky in Lexington, Kentucky, the West Tennessee Veterinary Medical Association Meeting at Jackson, Tennessee, the Southern Agricultural Workers' Conference in Jackson, Mississippi and the West Virginia Veterinary Medical Association Annual Meeting at Beckley, West Virginia.

Contributions to Regional Programs

This past year as in previous years, Members of the Veterinary Extension staff served on the Joint Committee on Dairy Cattle Health of the American Veterinary Medical Association and the American

Dairy Science Association.

The Mastitis Committee and the Joint Committee on Dairy Cattle Health have continued to publish objective evaluations of presently available for the control of mastitis. Correspondence from 31 states indicates that this information is being used in formulating mastitis control programs in these states.

Statistics

These statistics include the activities of two full-time staff members.

Days in office	398
Days in field	162
Miles traveled exclusive of transportation in common carrier or state owned vehicles	26,227
News articles	17
Radio programs	19
Feature articles	15
Circular letters	9
Leaflets prepared	2
Conferences with individual agents	28
Farm visits	108
Talks to groups	37
Departmental staff meetings	65
Extension staff meetings	5
Agricultural faculty meetings	4
Meetings out of state	7
Meetings in state	38
Meetings participated in out of state	8
Meetings participated in, in the state	45