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STATE OF MONTANA

ANNUAL REPORT
of the
STATE VETERINARY SURGEON
to the
LIVESTOCK SANITARY BOARD
July 1, 1966 through June 30, 1967

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T A B L E O F C O N T E N T S

PAGE

I. INTRODUCTION

A.	Letter of Transmittal from the Montana Livestock Sanitary Board to the Governor of the State of Montana.....	i
B.	Letter of Transmittal from the State Veterinary Surgeon to the Montana Livestock Sanitary Board.....	ii
C.	Members of the Montana Livestock Sanitary Board.....	iii
D.	Divisions of the Montana Livestock Sanitary Board.....	iv
E.	History and Duties of the Montana Livestock Sanitary Board.....	v
F.	Organizational Chart of the Montana Livestock Sanitary Board.....	vi

II. DIVISION REPORTS

A. ADMINISTRATION DIVISION REPORT

1.	Summary of Activity and Accomplishments.....	1
2.	Livestock Sanitary Board Staff.....	1
3.	Artificial Insemination.....	1
4.	Grant to the Veterinary Research Laboratory.....	1
5.	Official Regulations.....	3
6.	Licenses and Permits Issued.....	4
7.	Cooperating Agencies, Departments and Associations.....	5
8.	Financial Statements.....	6

B. DIAGNOSTIC LABORATORY DIVISION REPORT

1.	Comments on Diagnostic Laboratory.....	8
2.	Summary of Work Performed.....	9
3.	Bacteriology, Pathology, Parasitology and Virology Report.....	10
4.	Serology Report.....	21
5.	Milk, Cream, Cottage Cheese, Buttermilk and Chip and Dip Bacteriology Report.....	22
6.	Chemical Report.....	23
7.	Autopsies Performed Report.....	26

T a b l e o f C o n t e n t s

PAGE

(Continued)

8.	Distribution of Laboratory Tests Among Species of Animals Report.....	27
C. DISEASE CONTROL DIVISION REPORT		
1.	Comments on Disease Control.....	28
2.	Cattle Diseases.....	28
3.	Horse Diseases.....	32
4.	Sheep Diseases.....	32
5.	Swine Diseases.....	33
6.	Poultry Diseases.....	34
7.	Wild Animal Diseases.....	34
8.	Trends of Some Livestock Diseases Reported in Montana the Past 10 Years.....	36
9.	Official Animal Inspections Report.....	48
10.	Imports into Montana.....	49
11.	Out-of-state Breeders Holding Permits to Import Semen for Artificial Insemination.....	50
12.	Out-of-state Hatcherymen Holding Permits to Import Baby Chicks and Hatching Eggs.....	50
13.	Official Inspections Made at Montana Livestock Markets.....	51
14.	Garbage Feeding Establishments.....	51
15.	Montana Veterinarians' Animal Disease Report.....	52
16.	Etiological Agents Responsible for Diseases Reported by Montana Veterinarians.....	56
D. MILK & DAIRY INSPECTION DIVISION REPORT		
1.	Comments on Milk and Dairy Inspection.....	57
2.	Summary of Work Performed.....	58
3.	Official Inspections and Tests of Milk, Milk Products, Dairies and Milk Plants.....	58
4.	Milk Plant Sanitation Compliance Ratings with Montana Livestock Sanitary Board Regulations.....	59

(Continued)

5.	Retail Raw Dairies Sanitation Compliance Ratings with Montana Livestock Sanitary Board Regulations.....	60
E. MEAT INSPECTION DIVISION REPORT		
1.	Comments on Meat Inspection.....	61
2.	Summary of Work Performed.....	62
3.	Official Establishment Inspections.....	62
4.	Labels and Sketches.....	62
5.	Establishments Under State Meat Inspection.....	63
6.	Establishments Under Federal Meat Inspection.....	63
7.	Animals Slaughtered Under State and Federal Meat Inspection and Animals Slaughtered Without Meat Inspection.....	64
8.	Whole Carcasses Found Unfit for Human Consumption Under State and Federal Meat Inspection.....	64
9.	Parts of Carcasses Found Unfit for Human Consumption Under State and Federal Meat Inspection.....	64
10.	Beef and Swine Livers Found Unfit for Human Consumption Under State and Federal Meat Inspection.....	64
11.	Diagnoses of Whole Carcasses Condemned at Slaughter Under State Meat Inspection.....	65
12.	Diagnoses of Beef Livers Condemned at Slaughter Under State Meat Inspection.....	65
13.	Diagnoses of Parts of Carcasses Condemned at Slaughter Under State Meat Inspection.....	66
14.	Pounds of Meat and/or Meat By-Products Processed Under State Meat Inspection.....	67
15.	Reinspected or Rejected Meat, Meat By-Products and Ingredients Under State Meat Inspection.....	67
III. <u>INDEX</u>		68

STATE OF MONTANA
LIVESTOCK SANITARY BOARD
Helena, Montana

July 1, 1967

The Honorable Tim Babcock
Governor of the State of Montana
Helena, Montana

Dear Governor Babcock:

In compliance with Title 46, Section 242, R.C.M. 1947, we are transmitting to you the "Annual Report of the State Veterinary Surgeon to the Livestock Sanitary Board" for the fiscal year July 1, 1966 through June 30, 1967.

There were five meetings of the Livestock Sanitary Board during the fiscal year:

June 30 and July 1, 1966..... Missoula
July 22, 1966..... Helena
December 5, 1966..... Great Falls
March 9 and 10, 1967..... Bozeman
May 24 and 25, 1967..... Billings

The complete Minutes of all the above meetings are recorded in the "Official Minute Book of the Montana Livestock Sanitary Board" and are on file in the Office of the State Veterinary Surgeon, Livestock Building, Capitol Grounds, Helena, Montana.

Respectfully submitted,



J. W. SAFFORD, D.V.M.
Executive Officer
MONTANA LIVESTOCK SANITARY BOARD

STATE OF MONTANA
LIVESTOCK SANITARY BOARD
Helena, Montana

July 1, 1967

The Honorable Livestock Sanitary Board
Helena, Montana

Dear Sirs:

In compliance with Title 46, Section 242, R.C.M. 1947, I submit to you the "Annual Report Of the State Veterinary Surgeon to the Livestock Sanitary Board" for the fiscal year July 1, 1966 through June 30, 1967.

The many hours each of you spends - not only at formal Board meetings, but almost daily - in the formulation and review of policy and in resolving the many problems attendant to discharging the responsibilities assigned to you by State Law cannot be fully measured. The work, interest and time you give can only be that of dedication to the best interests of the people of Montana, as each of you serves on the Board without pay. I wish to express to each of you my sincere appreciation and gratitude for your most valuable counsel, advice and assistance to me in carrying out the many administrative responsibilities assigned to me.

It is hoped that this "Annual Report" will adequately reflect the good work accomplished by the full-time staff of the Livestock Sanitary Board and all the Deputy State Veterinarians in Montana. I commend their accomplishments to the Board.

Respectfully submitted,



J. W. SAFFORD
State Veterinary Surgeon
STATE OF MONTANA

JWS/jc

MEMBERS
of the
MONTANA LIVESTOCK SANITARY BOARD

MR. ARCHIE O. WILSON, Chairman..... Hysham
MR. F. T. SAYLOR, Vice-Chairman..... Choteau
MR. JOHN W. BLACK..... Hinsdale
MR. WILFORD JOHNSON..... Hall
MR. MANLY A. MOORE..... Powderville
MR. MELVIN PETERSON..... Wisdom

J. W. SAFFORD, D.V.M.
Executive Officer

DIVISIONS
of the
MONTANA LIVESTOCK SANITARY BOARD

ADMINISTRATION..... J. W. Safford, D.V.M.
DIAGNOSTIC LABORATORY..... Beckwith Hubbell, Jr., D.V.M.
DISEASE CONTROL..... Glenn C. Halver, D.V.M.
MILK & DAIRY INSPECTION..... Herb Ballou, M.S.
MEAT INSPECTION..... Herb Brosz, D.V.M.

HISTORY AND DUTIES
of the
MONTANA LIVESTOCK SANITARY BOARD

The Livestock Sanitary Board was created by Chapter 152 of the 1907 Laws of Montana and re-enacted by Chapter 262 of the 1921 Laws of Montana.

The duties of the Livestock Sanitary Board are set out in Sections 46-201 through 46-246; 46-301 through 46-303; 46-401 through 46-415; 46-907; 46-2401 through 46-2406; 46-2501 through 46-2515 and 46-2601 through 46-2611, R.C.M., 1947.

It is the duty of the Livestock Sanitary Board to confine, eradicate, control or prevent diseases of livestock and poultry; to prevent the introduction of livestock and poultry diseases into the State of Montana; to maintain a Diagnostic Laboratory; to license and to establish and maintain a system of inspection of meat and meat plants, slaughterhouses, dairies, milk and milk plants, rendering plants, garbage-feeding and garbage cooking establishments and animal artificial insemination. In addition, it is the duty of the Livestock Sanitary Board to obtain samples of meat and milk offered for human consumption and carry out bacteriological and chemical analyses of these samples; to provide for safety of manufactured or refined foods for livestock; and to provide for the control and safety of remedies and biological products used for treatment of animals.

GOVERNOR

LIVESTOCK SANITARY BOARD

EXECUTIVE OFFICER & STATE VETERINARIAN

CHIEF DEPUTY STATE VETERINARIAN

ADMINISTRATION DIVISION

DIAGNOSTIC LABORATORY DIVISION

DISEASE CONTROL DIVISION

MILK & DAIRY INSPECTION DIVISION

MEAT INSPECTION DIVISION

DISTRICT 1
District State Veterinarian
Missoula

DISTRICT 2
District State Veterinarian
Great Falls

DISTRICT 3
District State Veterinarian
Glasgow

DISTRICT 4
District State Veterinarian
Miles City

DISTRICT 5
District State Veterinarian
Billings

DISTRICT 6
District State Veterinarian
Butte

27
Deputy State Veterinarians

31
Deputy State Veterinarians

13
Deputy State Veterinarians

13
Deputy State Veterinarians

30
Deputy State Veterinarians

33
Deputy State Veterinarians

LIVESTOCK SANITARY BOARD

ORGANIZATIONAL CHART

SUMMARY OF ACTIVITY AND ACCOMPLISHMENTS

The fiscal year 1967 "Annual Report" to the Montana Livestock Sanitary Board is significant because there was an absence of livestock disease outbreaks requiring extraordinary disease control activity.

It is significant that each Division of the Livestock Sanitary Board - Diagnostic Laboratory Division, Disease Control Division, Milk & Dairy Inspection Division and Meat Inspection Division - made progress in many areas and met the demands for utilization of advanced technology in maintaining a healthy livestock industry and assured a safe milk and meat supply in Montana.

LIVESTOCK SANITARY BOARD STAFF

The problem of attracting and maintaining a scientific staff has been largely overcome by Board and legislative action. Only one position, that of District Deputy State Veterinarian, remained to be filled at the end of the fiscal year. It is hoped that the economic adjustments made during the year will have a degree of durability, even though continued inflation threatens.

ARTIFICIAL INSEMINATION

On behalf of the Montana Livestock Sanitary Board, the Animal and Range Sciences Department of Montana State University held two courses on artificial insemination and sanitation during the fiscal year to assist individuals in qualifying for a license. Duly appointed representatives of the Livestock Sanitary Board, who serve on the staff of Montana State University, conducted licensing examinations twice during the fiscal year to determine qualifications of license applicants.

In accordance with Chapter 37, Laws of 1953, 277 licenses were issued to individuals during the fiscal year to practice artificial insemination in Montana. The growth in the practice of artificial insemination in Montana has been from 19 licenses issued ten years ago (1956/57 fiscal year) to 277 licenses issued this fiscal year.

GRANT TO THE VETERINARY RESEARCH LABORATORY

The Montana Livestock Sanitary Board approved a grant of \$10,000 for the fiscal year to the Montana Veterinary Research Laboratory, specifying that the entire amount was to be used to assist in continuing the research project on "calf scours". The following progress report was submitted by the Veterinary Research Laboratory:

'NEONATAL ENTERITIS IN CALVES - PROGRESS REPORT
Veterinary Research Laboratory
Montana State University

Studies for 1966/67 were divided into a number of objectives. The

studies followed a pattern initiated in the previous year, and included the following:

- A. Definition of etiology with emphasis on effects of C. perfringens and E. coli and enzymes and toxins produced by these microbes.
- B. Attempt to correlate resistance of calves with amounts of colostrum absorbed and with development of detectable antitoxins.
- C. Development of control measures.

Procedures and Results

- A. Using accepted laboratory procedures, it was observed that there was a greater incidence of C. perfringens in 1966 than in 1967. These isolates were typed as follows:

80%.....	<u>C. perfringens</u> , Type C
10%.....	<u>C. perfringens</u> , Type A
10%.....	<u>C. perfringens</u> , non-toxic

- B. A transmissible enteritis was induced in an experimental herd owned by the Laboratory. Numerous isolations were made and are under further study. Correlation studies between resistance, absorbed colostrum, antitoxic content of sera and nature of intestinal flora will be completed soon. These data may serve as material for an article to "The Cornell Veterinarian".
- C. Studies on control measures indicated that the disease may probably be controlled, in part, with 60,000 Beta units of an experimental C. perfringens antitoxin. It was observed that 75% of untreated calves (induced transmissible enteritis group) scoured. The incidence was lowered to 44% in calves given antitoxin subcutaneously, and 78% of calves given oral antitoxin scoured. All calves receiving subcutaneous antitoxin showed at least 1/4 unit antitoxin in their sera. Few calves (22%) receiving the oral antitoxin showed antitoxin in their sera.

These studies need verification, but we will have to wait until next year's spring crop of experimental calves.

OFFICIAL REGULATIONSRevised:

The following Official Regulations were revised and adopted during the fiscal year:

1. Chapter 13, Regulations 1301 through 1307. "Rabies".
2. Chapter 16, Regulations 1601 through 1612. "Garbage Feeding".
3. Chapter 22, Regulations 2201 through 2214. "Carcasses and Parts of Carcasses Intended for Sale as Human Food".
4. Chapter 25, Regulations 2501 through 2505. "Rendering Plants, Vehicles and Equipment".
5. Chapter 26, Regulations 2601 through 2616. "Livestock Markets".
6. Chapter 1, Regulation 119. "Transfer of Dairy License".

New:

The following new Official Regulations were adopted during the fiscal year:

1. Chapter 38, Regulations 3801 through 3810. "Practice of Artificial Insemination".
2. Chapter 4, Regulation 422. "Tuberculosis in Poultry".

LICENSES AND PERMITS ISSUED (1966/67 Fiscal Year)*Licenses

Artificial Inseminators.....	277
Garbage Feeding.....	11
Meat Depots.....	4
Meat Packing Houses.....	19
Milk Plants.....	32
Poultry Slaughterhouses.....	6
Producer Dairies.....	420
Rendering Plants.....	13
Retail Raw Dairies.....	15
Slaughterhouses.....	<u>66</u>
Total Licenses Issued.....	863

Permits

Chicks and Hatching Eggs.....	71
Milk and Dairy Distributors.....	129
Semen for Artificial Insemination (From 8 Breeding Services).....	<u>530</u>
Total Permits Issued.....	<u>730</u>
<u>TOTAL LICENSES AND PERMITS ISSUED.....</u>	<u>1,593</u>

*License fees collected during the fiscal year and submitted to the State of Montana General Fund..... \$2,526.50

COOPERATING AGENCIES, DEPARTMENTS AND ASSOCIATIONS

The Montana Livestock Sanitary Board's duties and responsibilities are accomplished through the cooperation, advice and assistance of many. To the following we express our sincere thanks:

Montana City and County Health Departments

Montana Fish & Game Commission

Montana Horse Racing Commission

Montana Independent Meat Packers Association

Montana Livestock Commission

Montana Milk Distributors

Montana Milk Producers

Montana State Department of Health

Montana State University:

 Animal and Range Sciences Department

 Cooperative Extension Service

 Veterinary Research Laboratory

Montana Stockgrowers Association

Montana Swine Growers Association

Montana Veterinary Medical Association

Montana Wool Growers Association

Rocky Mountain Laboratory

U. S. Bureau of Sports Fisheries and Wildlife

U. S. Department of Agriculture:

 Agricultural Research Service, Animal Health Division, Montana

U. S. Public Health Service

FINANCIAL STATEMENTSSTATEMENT OF APPROPRIATED FUNDSFUNDS AVAILABLE 7/1/66General Funds

Operation - Cash Balances 6/30/66.....	\$ 8,536
Operation - Appropriations.....	157,147
Capital - Cash Balance 6/30,66.....	3,776
Capital - Appropriation.....	13,103
Grants & Benefits - Cash Balance 6/30/66.....	179
Grants & Benefits - Appropriation.....	10,200
Meat Inspection - Cash Balance 6/30/66.....	15,523
Meat Inspection - Appropriation.....	<u>126,630</u>

Total General Funds Available..... \$335,094

LSB Earmarked Revenue Fund 215100

Operation - Cash Balance 6/30,66.....	\$ 18,009
Operation - Appropriation.....	<u>155,350</u>

Total LSB Earmarked Rev. Fund 215100 Available..... 173,359

TOTAL ALL FUNDS AVAILABLE 7/1/66..... \$508,453

FUNDS EXPENDEDGeneral Funds

Operation.....	\$142,170
Operation - Encumbered.....	9,846
Capital.....	13,098
Capital - Encumbered.....	3,592
Grants & Benefits.....	10,040
Meat Inspection.....	<u>134,835</u>

Total General Funds Expended..... \$313,581

LSB Earmarked Revenue Fund 215100

Operation.....	<u>136,868</u>
----------------	----------------

TOTAL ALL FUNDS EXPENDED..... 450,449

FUND BALANCES 6/30/67

General Funds (Reverted to General Fund).....	\$ 21,514
LSB Earmarked Revenue Fund 215100 (Reverted to LSB).....	<u>36,490</u>

TOTAL ALL FUND BALANCES REVERTED..... \$ 58,004

Financial Statements (Continued)STATEMENT OF LSB EARMARKED REVENUE FUND 215100

CASH BALANCE 7/1/66.....	\$ 41,404
<u>Income</u>	
Livestock Taxes ($4\frac{1}{2}$ mills).....	<u>179,118</u>
Total Cash Balance and Income.....	\$220,522
<u>Expenditures</u>	
Appropriated Funds.....	\$136,869
Transfer to LSB Emkd. Rev. Fund 215000.....	<u>15,000</u>
Total Expenditures.....	<u>151,869</u>
CASH BALANCE 6/30/67.....	\$ 68,653

*STATEMENT OF LSB EARMARKED REVENUE FUND 215000FUNDS AVAILABLE

<u>Fund Balance 7/1/66</u>	
U. S. Govt. Bonds (Face Value).....	\$ 87,500
Accrued Interest (U. S. Govt. Bonds).....	5,337
<u>Income</u>	
Interest (U. S. Govt. Bonds).....	3,000
Transfer from LSB Emkd. Rev. Fund 215100....	<u>15,000</u>
TOTAL FUNDS AVAILABLE.....	\$110,837

FUNDS EXPENDED

Salaries, Employee Benefits and Travel for Skunk Reduction Program.....	\$ 12,198
Cost to Cash \$10,000 U. S. Govt. Bond before Maturity Date for Skunk Reduction Program.....	728
Cost of Accrued Interest on Purchase of U. S. Govt. Bonds.....	<u>25</u>
TOTAL FUNDS EXPENDED.....	<u>12,951</u>

FUND BALANCE 6/30/67..... \$ 97,886

*Reserve for Emergency use in Controlling Dangerous Disease Outbreaks.

COMMENTS ON DIAGNOSTIC LABORATORY

The control of livestock diseases and the continual testing of milk and meat, in this age of rapid technological advancement, requires constant learning and training, acquisition of new laboratory equipment and application and utilization of both to old and new problems. Following are the highlights of advancement made during the fiscal year at the Laboratory to meet these ever-increasing demands.

Appropriated funds were made available to add a medical technician with virological training and experience to the staff; and equipment was acquired to establish several much needed virological diagnostic tests. The GC4 gas chromatograph was installed and the chemists have established the techniques and procedures required for its use in detecting pesticides in milk. The gas chromatograph will find use in a broad range of toxicological investigations. Equipment and techniques have been acquired to carry out much needed chemical analyses of meat and meat-products. Members of the staff, at every possible opportunity, have attended specialized training schools and seminars to enable the Laboratory to adopt new and advanced methods.

This year has seen real advancement in many areas of Laboratory work to provide the essential services required to keep Montana livestock healthy and meat and milk safe. The investment in training and equipment will become more manifest next biennium.

The scope and wide variety of scientific examinations and tests on milk, meat and on a large number of animals of many species and the results obtained clearly demonstrate the broad scientific knowledge and skill possessed by the Laboratory staff. The results of some of their work are tabulated in the following tables:

SUMMARY OF WORK PERFORMED

Following is a summary of official tests and examinations performed by the Diagnostic Laboratory during the fiscal year.

<u>OFFICIAL TESTS AND EXAMINATIONS (LABORATORY)</u>	<u>NUMBER</u>
Autopsies Performed.....	983
Bacteriology, Pathology, Parasitology and Virology Findings:	
Positive.....	2,522
Negative.....	2,089
Bacteriology Milk Tests.....	11,647
Chemical Analyses.....	2,992
Serology Tests.....	<u>134,078</u>
Total.....	154,311
Tests performed by Other Laboratories.....	15
Serology Field Tests.....	<u>29,872</u>
Total.....	29,887
<u>TOTAL OFFICIAL TESTS AND EXAMINATIONS (LABORATORY).....</u>	<u>184,198</u>

Bacteriology, Pathology, Parasitology and Virology Report

	BAT	CAT	CATTLE	CHICKEN	CHINCHILLA	DEER	DOG	DUCK	ELK	HAMSTER	HORSE	MEAT	MEAT MEAL	MILK	PHEASANT	RABBIT	SHEEP	SKUNK	SWINE	MISCELLANEOUS		
																				Specimen	No.	
<u>Clostridium perfrin-</u>			64	7		1	2				2						5		3			
<u>gens</u>																						
<u>Clostridium perfrin-</u>			1																			
<u>gens, Type A</u>																						
<u>Clostridium perfrin-</u>			1																			
<u>gens, Type C</u>																						
<u>Clostridium perfrin-</u>																						
<u>gens, Type D</u>																						
<u>Clostridium septicum</u> ..			10																			
<u>Clostridium sordelli</u> ..			5																			
<u>Clostridium sphenoides</u>																						
<u>Clostridium sporogenes</u>																						
<u>Clostridium sp</u>			29																			
<u>Clostridium tertium</u> ...			1																			
<u>Clostridium tetanoides</u>																						
<u>Clostridium tetano-</u>																						
<u>morphum</u>			2																			
<u>Corynebacterium bovis</u> .			1																			
<u>Corynebacterium</u>																						
<u>enzymicum</u>														1								
<u>Corynebacterium equi</u> ..			1																			
<u>Corynebacterium</u>																						
<u>flaccumfaciens</u>																						
<u>Corynebacterium</u>			1																			
<u>pseudomonas</u>																						
<u>Corynebacterium</u>																						
<u>pyogenes</u>			2		1																	
<u>Corynebacterium sp</u>			37	2		1						1		9			2					
<u>Cyst, epidermoid</u>																						
<u>Cystic testicle</u>			1																			

POSITIVE FINDINGS

Clostridium perfrin-
gens.....
Clostridium perfrin-
gens, Type A.....
Clostridium perfrin-
gens, Type C.....
Clostridium perfrin-
gens, Type D.....
Clostridium septicum..
Clostridium sordelli..
Clostridium sphenoides
Clostridium sporogenes
Clostridium sp.....
Clostridium tertium...
Clostridium tetanoides
Clostridium tetano-
morphum.....
Corynebacterium bovis.
Corynebacterium
enzymicum.....
Corynebacterium equi..
Corynebacterium
flaccumfaciens.....
Corynebacterium
pseudomonas.....
Corynebacterium
pyogenes.....
Corynebacterium sp....
Cyst, epidermoid.....
Cystic testicle.....

Bacteriology, Pathology, Parasitology and Virology Report

NEGATIVE FINDINGS														MISCELLANEOUS								
	BAT	CAT	CATTLE	CHICKEN	CHINCHILLA	DEER	DOG	DUCK	ELK	HAMSTER	HORSE	MEAT	MEAT MEAL	MILK	PHEASANT	RABBIT	SHEEP	SKUNK	SWINE	Specimen	No.	
Rabies.....																				Mice	18	
Rabies.....																				Mink	2	
Rabies.....																				Monkey	1	
Rabies.....																				Muckrats	4	
Rabies.....																				Prairie Dog	1	
Rabies.....																				Raccoons	5	
Rabies.....																				Rat	1	
Rabies.....																				Squirrels	3	
Rabies.....																				Weasel	1	
Ram epiddymitis																						
organism.....																						
Salmonella sp.....			2	1			1						12								Feed	1
Spirochetes sp.....			2																			
Staphylococcus sp.....			1																			
Streptococcus sp.....			2																			
Trichomonas sp.....			11																			
Trichophyton sp.....										1												
Vibrio fetus.....			253														15					
Virus pig pneumonia...																						
White muscle disease..			1																			
TOTAL NEGATIVE FINDINGS.....	18	48	1532	17	3	1	55	4	-0-	11	21	6	13	2	6	6	63	62	71	Various	71	

UNSATISFACTORY SPECIMENS.....

SEROLOGY REPORT

TEST	SOURCE	POSITIVE	NEGATIVE	SUSPICIOUS	VACCINATE	UNSATISFACTORY	ANTI-COMPLEMENTARY	TOTAL
Anaplasma CA.....	Cattle	6	238	28		5		277
Anaplasma CF.....	Cattle	49	313	131		7	9	509
Br. abortus agg.....	Bison		41	2				43
Br. abortus agg.....	Cattle	389	86,612	3,278	69	5		90,353
Br. abortus agg.....	Deer		69					69
Br. abortus agg.....	Elk	1	414	6				421
Br. abortus agg.....	Goats		10					10
Br. abortus agg.....	Horses	1	12	6				19
Br. abortus agg.....	Swine		161	1				162
Br. abortus ring tests.....	Cream		5,939	12				5,951
Br. abortus ring tests.....	Milk		3,784	29		1		3,814
Br. abortus (whey).....	Milk	3		1				4
Br. abortus agg. (field).....	Cattle		151	12				163
Br. abortus agg. card test (field)	Cattle	17	126					143
Br. abortus agg. card test (field)	Swine		475					475
*Colorado Tick Fever CF.....	Horse		1					1
L. pomona agg. plate test.....	Bison		42					42
L. pomona agg. plate test.....	Cattle	77	1,906	66				2,049
L. pomona agg. plate test.....	Dog		5					5
L. pomona agg. plate test.....	Elk		409					409
L. pomona agg. plate test.....	Horse		6					6
L. pomona agg. plate test.....	Swine	1	45	2				48
*Eastern Equine Encephalitis CF...	Horse		1					1
*Western Equine Encephalitis CF...	Gnat		1					1
*Western Equine Encephalitis CF...	Horse	4	6					10
*St. Louis Equine Encephalitis CF..	Horse		2					2
S. pullorum agg. (field).....	Chickens	1	29,050					29,051
S. pullorum agg. (field).....	Ducks		40					40
TOTAL.....		549	129,859	3,574	69	18	9	134,078

	IN COMPLIANCE	NOT IN COMPLIANCE
<u>MILK ANALYSES</u>		
Bacterial counts.....	3,145	332
Coliform counts.....	2,970	585
Penicillin determinations.....	3,274	9
Total Milk Analyses.....	9,389	926
<u>CREAM ANALYSES</u>		
Bacterial counts.....	329	48
Coliform counts.....	357	45
Penicillin determinations.....	402	1
Total Cream Analyses.....	1,088	94
<u>COTTAGE CHEESE ANALYSES</u>		
Coliform counts.....	38	9
Penicillin determinations.....	47	
Total Cottage Cheese Analyses.....	85	9
<u>BUTTERMILK ANALYSES</u>		
Coliform counts.....	23	4
Penicillin determinations.....	27	
Total Buttermilk Analyses.....	50	4
<u>CHIP AND DIP ANALYSES</u>		
Coliform counts.....	1	
Penicillin determinations.....	1	
Total Chip and Dip Analyses.....	2	
TOTAL MILK, CREAM, COTTAGE CHEESE, BUTTERMILK, AND CHIP AND DIP ANALYSES	10,614	1,033

CHEMICAL REPORT

	ANTIMONY		ARSENIC		BISMUTH		CYANIDE		LEAD		MERCURY		STRYCHNINE		ZINC	
	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.
Alfalfa.....										1						
Antelope stomach contents....			1				1			1				1		
Avian (pigeon).....																1
Bones.....			1													1
Bovine feces.....			1													1
kidney and liver....			1						1							
liver.....			3						2	1						
stomach contents....			50						6	49						
Canine stomach contents.	1		6						10	2				2		
Caprine stomach contents			4				2		13	17				19		
Equine stomach contents.			1													
Equine stomach contents.			3							4						
Equine intestines....			2							1				1		
Fat.....			1											1		
Feed.....			2											1		
Feed pellets.....	1		1			1				1						
Feline intestines.....										1						
Feline stomach contents.			2							1				2		
Grease.....	1		1			1				1						
Kidney (unknown).....																
Meat.....			2											1		
Meat pellets.....			1											2		
Medicinal preparation	1															
Paint.....			2							3						
Pipe dope.....			1						1	1						1
Procaine stomach contents....			6							9				1		
Powders.....			1							1						
Soil and trash.....			12						5	9				2		
Tinfoil.....									1							
Water.....			1				1			2						
Total Toxicology Analyses.....	2	2	11	96	-0-	2	-0-	4	25	95	-0-	23	19	38	1	-0-

Chemical Report

	CALCIUM		PHOSPHORUS		MAGNESIUM		CAROTENE		VITAMIN A	
	High	Low	High	Low	High	Low	High	Low	High	Low
BLOOD ANALYSES										
Bovine.....	22	31	31	26	6	8	7	63	34	29
Equine.....		1		1						
Ovine.....						3				
Porcine.....	2		1	3						1
Total Blood Analyses.....	24	44	32	34	6	11	7	63	34	74

COMPOSITION ANALYSES OF DAIRY PRODUCTS

Buttermilk.....	26
Cottage Cheese.....	18
Cream and Milk.....	1,478
Total Composition Analyses of Dairy Products.....	1,522

MINERAL CONTENT ANALYSES

Water for Livestock Consumption.....	FIT	QUESTIONABLE	UNFIT
	62	13	22

NITRATE ANALYSES

Feed.....	FIT	QUESTIONABLE	UNFIT
Water.....	1		
	30	6	4
Total Nitrate Analyses.....	31	6	4

RACE HORSE DRUG ANALYSES

Saliva and Urine.....	POSITIVE	NEGATIVE	SUSPICIOUS
	-0-	478	-0-

Chemical Report

MEAT ANALYSES

	ADDED WATER	WATER	PROTEIN
Beelee Binder.....	8	1	1
Bologna.....	1	9	9
Sausage.....	3	1	1
Wieners.....		3	3
Total Meat Analyses.....	12	14	14

Beelee Binder.....
 Bologna.....
 Sausage.....
 Wieners.....
 Total Meat Analyses.....

MISCELLANEOUS ANALYSES

Bovine Hair - selenium content..... 1
 Bovine Tissue - phosphorus content..... 1
 Drug - Vitamin A content..... 1
 Equine Hair - selenium content..... 1
 Meat..... 3
 Meat - warfarin content..... 1
 Mercury Treated Grain..... 1
 Metals - identification..... 2
 Nitrate Tablets..... 2
 Ovine Liver - copper content..... 1
 Pelleted Feed - salt content..... 1
 Pill - aluminum sulfate and potassium permanganate..... 2
 Salt - iodine content..... 1
 Urinary calculi - chemical content..... 1
 Water - phosphorus content..... 1

Total Miscellaneous Analyses..... 20

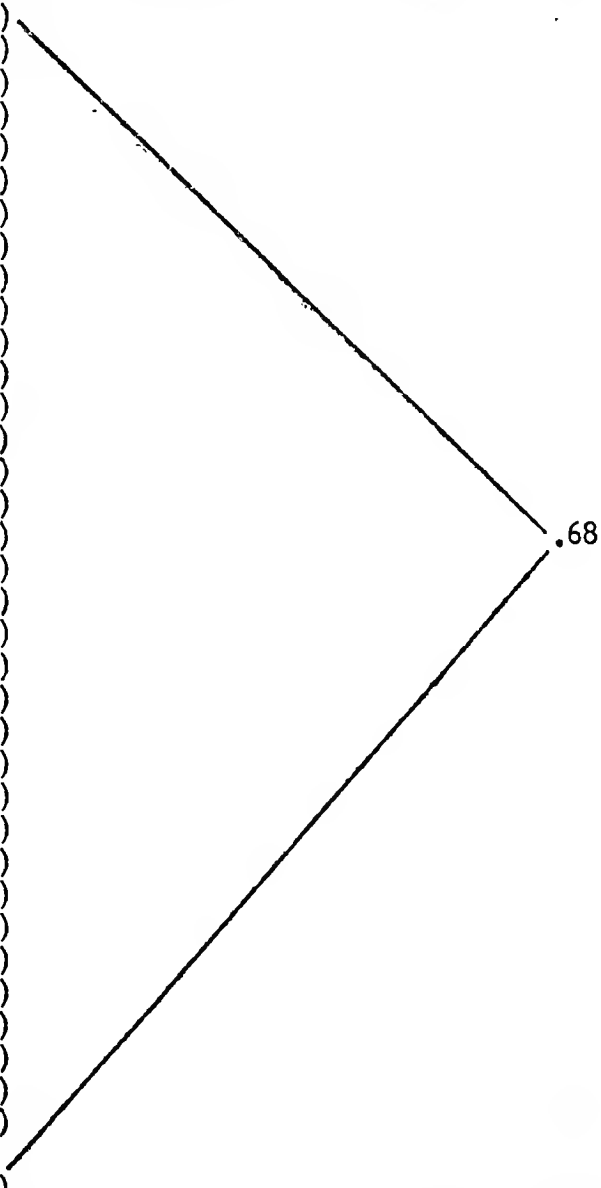
TOTAL ALL CHEMICAL ANALYSES..... 2,992

AUTOPSIES PERFORMED REPORT

<u>SPECIE</u>	<u>NUMBER</u>	<u>SPECIE</u>	<u>NUMBER</u>
Antelope.....	3	Mice.....	12
Badger.....	1	Mink.....	3
Bats.....	15	Monkey.....	1
Bear.....	1	Muskrat.....	1
Canaries.....	2	Pheasants.....	14
Cattle.....	445	Pigeons.....	6
Cats.....	37	Rabbits.....	17
Chickens.....	105	Raccoon.....	1
Chinchillas.....	17	Sheep.....	78
Deer.....	1	Skunks.....	28
Dogs.....	21	Squirrel.....	1
Ducks.....	10	Swine.....	137
Foxes.....	2	Turkeys.....	3
Geese.....	2	Weasel.....	1
Gophers.....	2		
Grouse.....	1		
Guinea Pigs.....	5		
Hamsters.....	6		
Horses.....	3		
Martin.....	1		
		<u>TOTAL AUTOPSIES PERFORMED.....</u>	<u>983</u>

DISTRIBUTION OF LABORATORY TESTS AMONG SPECIES OF ANIMALS

SPECIE	NUMBER	PERCENT
Cattle.....	97,482.....	63.17
Chickens.....	29,310.....	18.99
Milk.....	23,257.....	15.07
Swine.....	1,195.....	.77
Elk.....	831.....	.54
Horses.....	614.....	.40
Sheep.....	317.....	.21
Dogs.....	157.....	.10
Cats.....	103.....	.07
Skunks.....	93)	
Bison.....	85)	
Deer.....	75)	
Meat.....	73)	
Ducks.....	55)	
Chinchillas.....	42)	
Meat Meal.....	40)	
Rabbits.....	39)	
Bats.....	35)	
Mice.....	30)	
Pheasants.....	24)	
Hamsters.....	17)	
Pigeons.....	14)	
Goats.....	12)	
Guinea Pigs.....	11)	
Antelope.....	9)	
Foxes.....	7)	
Geese.....	7)	
Gophers.....	7)	
Mink.....	7)	
Raccoons.....	6)	
Sparrows.....	6)	
Canaries.....	5)	
Muskrats.....	5)	
Dog Food.....	5)	
Worms.....	4)	
Badgers.....	4)	
Squirrels.....	4)	
Coyotes.....	3)	
Turkeys.....	3)	
Bears.....	2)	
Grouse.....	2)	
Martins.....	2)	
Monkeys.....	2)	
Weasels.....	2)	
Other Miscellaneous.....	307)	
TOTAL.....	154,310.....	100%



COMMENTS ON DISEASE CONTROL

Many of the diseases which once posed a real threat to the industry either have been reduced materially or no longer exist in Montana.

Cattle diseases caused by bacteria accounted for only 8.6% of the diseases reported and those caused by viruses accounted for 35.6%. Those diseases for which the exact causes remain unknown accounted for 33.8% of the cattle diseases reported. Viruses were responsible for 74% of the horse diseases reported. Internal and external parasites remained the major cause of disease problems in sheep in that 62.1% of the cases reported were caused by these agents. Viruses caused 44.2% of the swine cases reported, 61.6% of the poultry cases and 94.3% of the dog cases.

These facts emphasize the importance of keeping the bacterial caused diseases suppressed and the need for better methods in the field and laboratory for diagnosing, controlling and preventing diseases of virus origin. Considerable advances have been made in all areas, but field reports of increasing incidences of virus-caused diseases demand that more be done in many areas to effect reduction of losses and to meet the challenge of their increasing costs to the industry.

Such diseases as cancer eye, "pink eye", "asthma" and "water belly" caused markedly increased losses this past year. They are all diseases for which the exact cause has alluded many investigators. The fact that these diseases were mainly responsible for 33.8% of all cattle diseases reported this year indicates, beyond a doubt, that renewed efforts must be made to find the causes and better methods of prevention.

CATTLE DISEASES

Montana veterinarians reported 43 cattle diseases in 24,982 cattle on 6,756 ranches. This is a decrease of 1 disease, 6,200 cattle and an increase of 863 ranches from the previous fiscal year.

Anaplasmosis

A total of 97 cases on 68 ranches was reported. The Laboratory tested 509 blood samples from cattle for anaplasmosis, using the complement fixation test; and 35% showed a positive or suspicious reaction. The CA test was made on 277 bovine blood samples with 12% giving a positive reaction.

The absence of clinical anaplasmosis in the three herds in which one-half of the cattle were vaccinated with "Anaplaz", an anaplasmosis vaccine, and no significant changes in anaplasmosis blood titers the fall of 1966, made it impossible to evaluate the effectiveness of the vaccine in preventing anaplasmosis in the herds in Montana.

Brucellosis

129,502 cattle were tested for brucellosis, revealing 500 reactors (0.38%) and 4,230 suspects (3.28%). Of the total tested, 39,843 were tested out-of-state and

62,262 were tested in the state from blood samples collected at packing plants from backtagged animals.

There were 9,765 Brucellosis Ring Tests made on milk and cream samples. Forty-one (0.42%) were suspicious to the test.

The fiscal year started with 30 brucellosis infected herds. Thirty-one additional infected herds were found during the year. A total of 35 herds eliminated brucellosis, leaving 26 herds under brucellosis quarantine at the end of the fiscal year.

Twenty-eight counties were recertified as Modified-Certified Brucellosis Areas during the fiscal year.

During the fiscal year, 282,686 calves were officially vaccinated with Brucella abortus Strain 19 vaccine. 8,491 doses of Brucella abortus vaccine were sold and apparently used for unofficial vaccination of calves.

REDUCTION OF BRUCELLOSIS-INFECTED HERDS

Fiscal Year	Number of Infected Herds	Percent Infected Herds in Montana
First Area Test in Montana.....	2,434.....	7.96%
July 1, 1957.....	666.....	2.36%
July 1, 1958.....	357.....	1.24%
July 1, 1959.....	238.....	0.92%
July 1, 1960.....	135.....	0.56%
July 1, 1961.....	93.....	0.34%
July 1, 1962.....	49.....	0.16%
July 1, 1963.....	44.....	0.15%
July 1, 1964.....	36.....	0.14%
July 1, 1965.....	37.....	0.14%
July 1, 1966.....	30.....	0.12%
July 1, 1967.....	26.....	0.11%

*CALVES OFFICIALLY VACCINATED WITH BRUCELLA ABORTUS VACCINE - STRAIN 19

Year	Doses	Year	Doses	Year	Doses	Year	Doses
1958..	303,090	1960..	215,043	1962..	209,472	1964..	297,002
1959..	294,265	1961..	224,576	1963..	250,899	1965..	267,367
						1966..	287,642
						1967..	282,686

*In addition, reports were received that 8,491 doses of Brucella abortus vaccine were sold, indicating that many calves were unofficially vaccinated.

COUNTY DISTRIBUTION OF REMAINING
BRUCELLOSIS INFECTED HERDS
AS OF JULY 1, 1967

NAME OF COUNTY	NUMBER OF HERDS
Big Horn.....	4
Carter.....	1
Cascade.....	2
Fergus.....	1
Gallatin.....	1
Glacier.....	3
Hill.....	1
Lewis and Clark.....	1
Meagher.....	2
Missoula.....	1
Pondera.....	2
Powell.....	1
Ravalli.....	1
Rosebud.....	1
Sanders.....	1
Valley.....	1
Wheatland.....	1
Yellowstone.....	1
Total.....	26

Fluorosis

State Department of Health laboratory reports show that forage samples collected during the year continued to reveal many samples containing between 200 and 2,000 p.p.m. fluoride. Cattle utilizing forage with this excessive amount of fluoride will be most harmfully affected.

It is sincerely hoped that the enforcement of the "Clean Air Act", adopted by the 40th Legislative Assembly will stop this indiscriminate poisoning of livestock in the 315 square mile area around Garrison, Montana.

Mucosal Disease - Virus Diarrhea

This virus disease complex showed a marked decrease in fiscal year 1967. Montana veterinarians reported 102 cases on 49 ranches.

Although a virus diarrhea vaccine is available which can assist in the prevention of virus diarrhea, much remains to be done to establish more satisfactory methods on how to prevent the mucosal disease - virus diarrhea complex.

Rabies

On March 13, 1967 a cow in Wibaux County was found to be rabid. The preceding fiscal year showed a marked increase in skunk rabies in this general area. As skunk rabies increases in an area, domestic animal rabies increases.

The skunk reduction program carried out in this area will prevent much exposure of domestic livestock to rabies.

Rhinotracheitis

This disease was reported in 1,899 cattle on 64 ranches; 352 cases of vulvovaginitis were reported. Many veterinarians feel that the I.B.R. virus is also responsible for a conjunctivitis in cattle which was being observed with increased frequency as the fiscal year ended. It is strongly suspected that many abortions are caused by this virus. The inclusion of the I.B.R. serum neutralization test for diagnostic assistance at the Laboratory should assist in determining the amount of conjunctivitis, vulvovaginitis and abortions due to the I.B.R. virus in Montana.

The I.B.R. vaccine is proving to be effective in preventing those losses attributed to the I.B.R. virus.

Shipping Fever

Veterinarians reported 7,390 cases of shipping fever on 551 ranches during the fiscal year. Although there was a reduction in the number of cases from last year, there was considerable increase in the number of ranches on which the disease was observed. This disease continues to remain the most frequently reported and widespread disease occurring in Montana.

It is sincerely hoped the newly developed vaccines containing Parainfluenza 3 virus, which became available during the year, will prove effective in reducing the incidence of the disease. Every attempt should be made to minimize stress factors on young cattle which are known to predispose them to this disease.

Tuberculosis

The tuberculin test was applied to 3,604 dairy cattle and 13,881 beef cattle. Three cattle in 3 herds gave a positive reaction to the test (0.017%).

There were 102,105 cattle slaughtered under backtag or brand identification. Twenty-six cattle were reported to have lesions compatible with the lesions of tuberculosis (0.025%). Herds of origin of cattle found with lesions compatible with tuberculosis were tuberculin tested.

The entire State of Montana was declared a Modified-Accredited Tuberculosis

Area on February 2, 1967. This is a departure from reaccrediting the state county by county.

Vibriosis

Both veterinarians in the field and at the Laboratory diagnosed an increased amount of vibriosis. Two hundred fifty-two cases were reported on 43 ranches. The Laboratory isolated Vibrlo fetus from 73 cattle specimens. A ten-year compilation of reports of vibriosis definitely shows vibriosis to be state-wide in distribution.

The first year's use of the commercially available Vibrio fetus bacterin indicates it is being effective in reducing the infertility caused by this infection. It is hoped that the bacterin will continue to help prevent serious losses from the disease.

HORSE DISEASES

There were 13 diseases in 1,072 horses reported on 535 ranches.

Encephalitis

Montana veterinarians reported 37 cases of equine encephalitis on 36 premises. This was a marked decrease from the 324 cases on 276 premises reported last fiscal year. More widespread vaccination of horses could be responsible for the marked reduction.

SHEEP DISEASES

There were 15 sheep diseases reported on 165 ranches in 4,011 sheep. Montana sheep continue to remain remarkably free from serious infectious and contagious diseases.

Epididymitis

Montana veterinarians reported 677 cases of ram epididymitis on 79 ranches. Although this is a considerable increase over the previous fiscal year, there is every indication that the careful physical examination of rams, screening out those showing lesions, and the proper use of the R.E.O. bacterin is proving effective in controlling the disease.

Isolation of Corynebacterium pseudotuberculosis from the epididymus of rams found with lesions of epididymitis indicates that this bacterium may be responsible for the cause of epididymitis along or, possibly, in combination with the R.E.O. bacterium. Over the past three years, the Laboratory has, on several occasions, isolated C. pseudotuberculosis only from R.E.O. suspected lesions. The significance of C. pseudotuberculosis in the development of epididymitis will have to be

determined to be able to effectively deal with epididymitis in rams.

Infectious Foot Rot

There were 269 cases of foot rot reported in 23 flocks. For a good many years, an intensive program of eradication of this costly sheep disease has been carried out in Montana. Time and time again, it has been demonstrated that flocks of sheep and areas can get rid of the disease and remain free of the disease. The disease is spread by introducing sheep with infectious foot rot. The disease could be completely wiped out of Montana in six months to a year if every sheep owner desired this to happen. It seems this should be done.

Individuals who acquire infected sheep, hide the disease, cut out the lame ones and sell the exposed sheep are the individuals responsible for the perpetuation of this disease in our state.

Pediculosis

The reports of lice in 1,844 sheep in 8 flocks is a considerable reduction from the 48 flocks with 10,800 sheep reported the previous fiscal year.

Sheep owners could do much to get rid of lice once-and-for-all if they would be alert to the very small louse (Damalinia ovis) causing the problem. Identification of this louse from sheep over the past several years indicates that this is the only louse causing lice infestation in Montana. Many sheep owners are, apparently, looking for a large louse, similar to the "blue louse" found on cattle, and overlook the very small sheep louse.

Rabies

A ram was found to be rabid in Powder River County on March 24, 1967. The ram had been in northeastern Wyoming prior to coming to Montana. Rabid skunks had been found in Powder River County and northeastern Wyoming the preceding fiscal year.

Skunk reduction programs were carried out in both Montana and Wyoming in the areas where skunk rabies was diagnosed. This will reduce the possibility of further exposure of sheep to rabies.

SWINE DISEASES

Ten swine diseases in 688 swine on 59 premises were reported during the fiscal year.

Brucellosis

No clinical evidence of swine brucellosis was reported in the field. No isolations of Brucella organisms were made by the Laboratory from swine specimens. Serological tests made on 637 swine samples did not disclose reactors.

Eleven swine herds were officially validated or revalidated as brucellosis-free during the fiscal year.

Hog Cholera

No hog cholera was reported during the fiscal year.

POULTRY DISEASES

Six poultry diseases were reported on 12 premises in 652 chickens.

Salmonella

All breeding flocks supplying hatchery eggs were tested for pullorum-typhoid. There were 29,050 chickens tested and one reactor (0.003%) was found.

Salmonella anatum was isolated from 2 chickens, S. californica from 2 chickens and S. thompson from 1 chicken submitted to the Laboratory.

WILD ANIMAL DISEASES

Rabies

The Laboratory conducted rabies tests on 251 animals of 25 different species during the fiscal year. Following is a chronological listing of the rabid positive animals found during the fiscal year:

POSITIVE RABIES			
Date	Town	County	Specie
3-13-67.....	Wibaux.....	Wibaux.....	Cow
3-24-67.....	Broadus.....	Powder River.....	Sheep
5-22-67.....	Plentywood.....	Sheridan.....	Skunk
6-7-67.....	Billings.....	Yellowstone.....	Bat
6-26-67.....	Medicine Lake.....	Sheridan.....	Skunk

Five cases found positive are a marked reduction from 16 positive cases the previous fiscal year.

Following the skunk reduction program in southeastern Montana the previous fiscal year, no positive rabid skunks were found in that area this fiscal year, even though 15 rabid skunks were found last fiscal year.

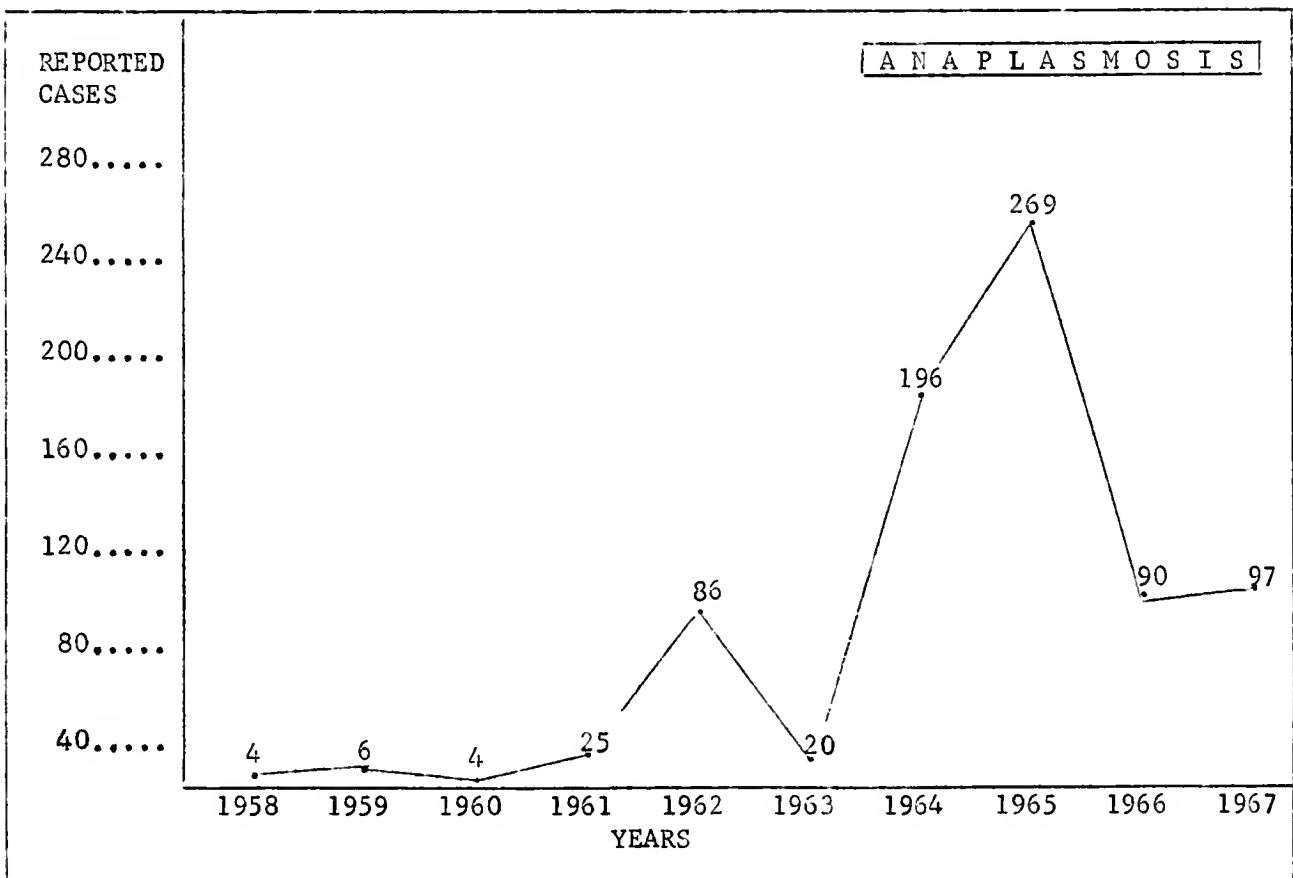
The two rabid skunks reported above were found in Sheridan County. The U. S. Department of Sports Fisheries and Wildlife, the Livestock Commission and the Montana Fish and Game Commission immediately carried out a skunk reduction program in and around the areas of location of the rabid skunks.

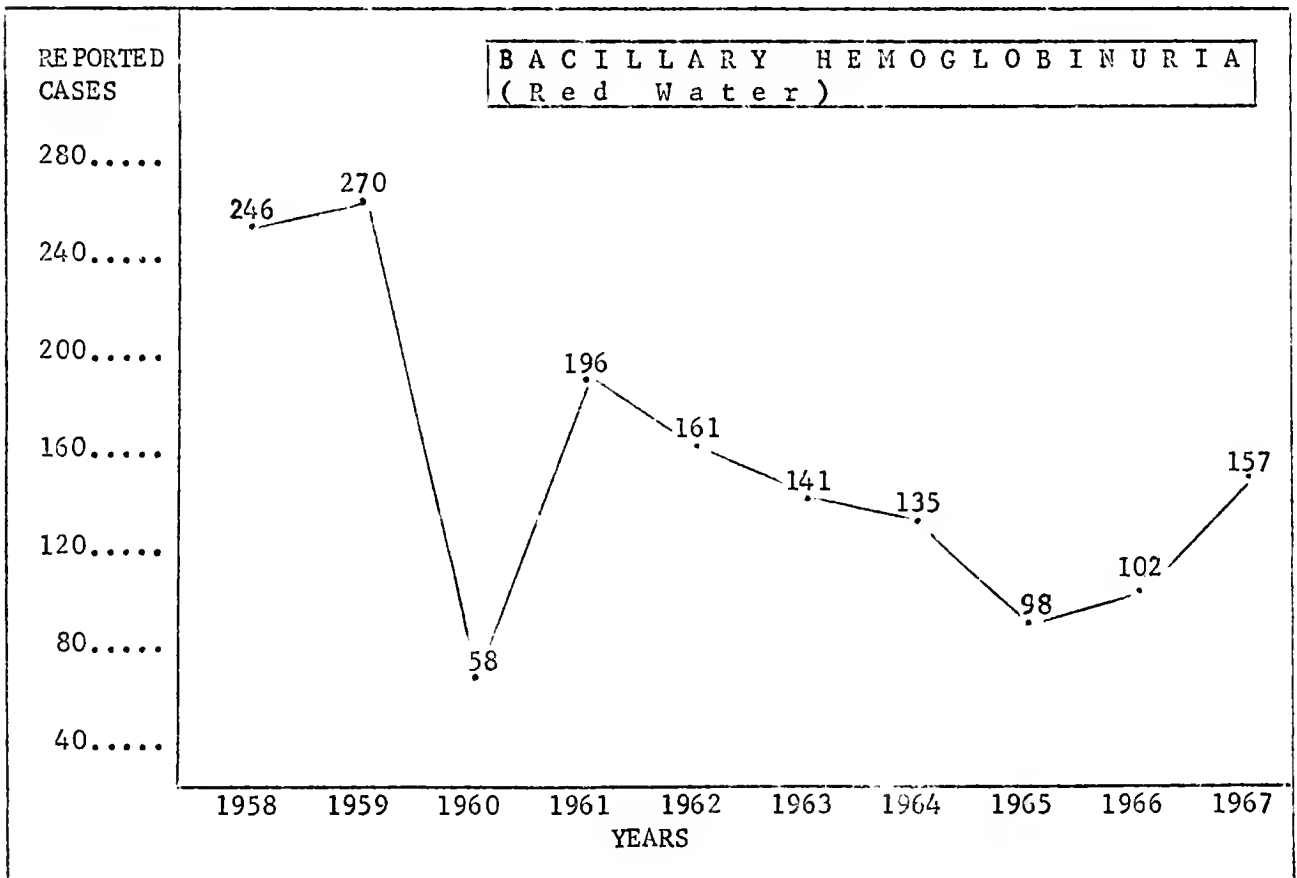
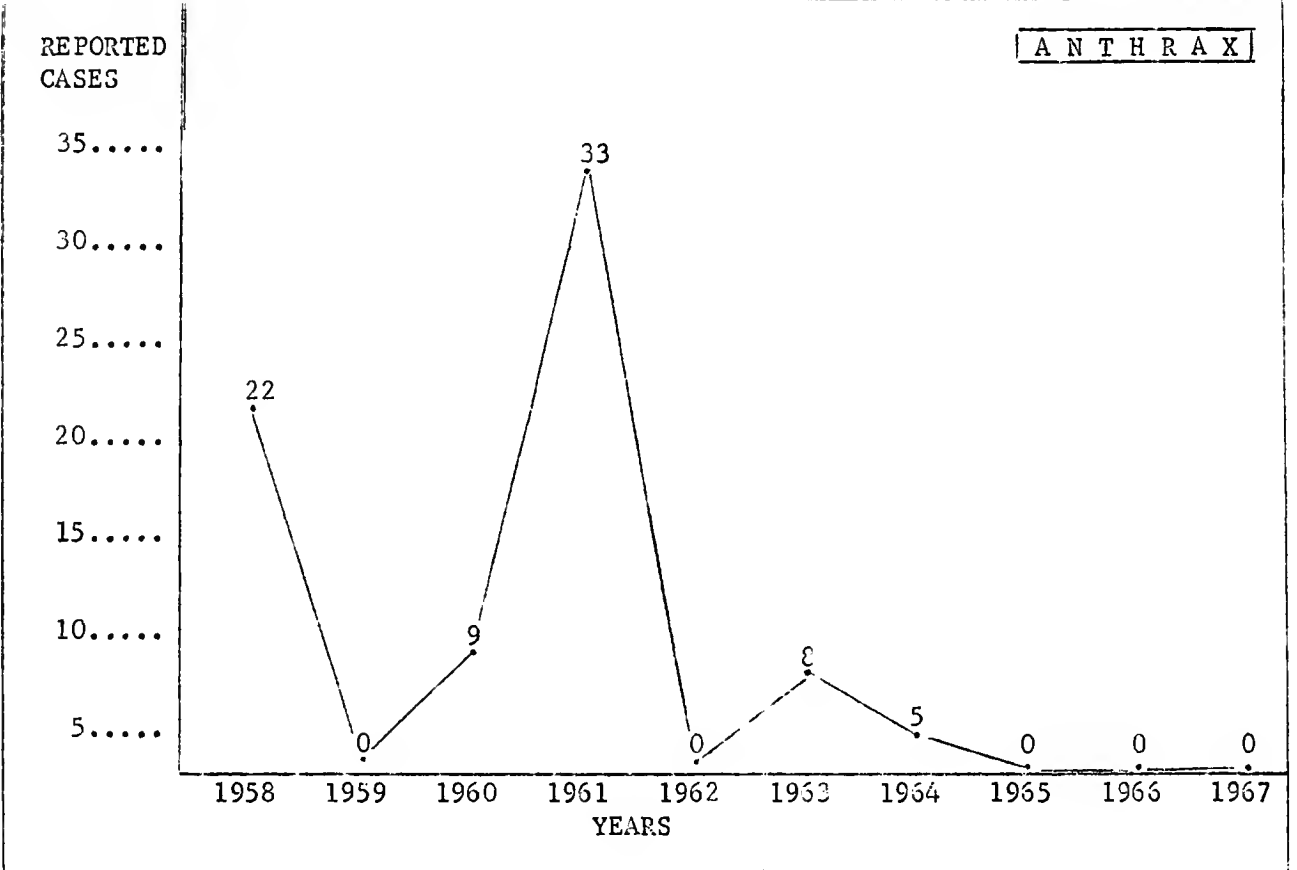
We are confident that if the skunk reduction program had not been carried out in eastern Montana the past two years, the domestic livestock losses from rabies would have been much greater, as would the potential for human exposure to rabies. The skunk reduction program has halted, these past two years, the western migration of rabies in skunks.

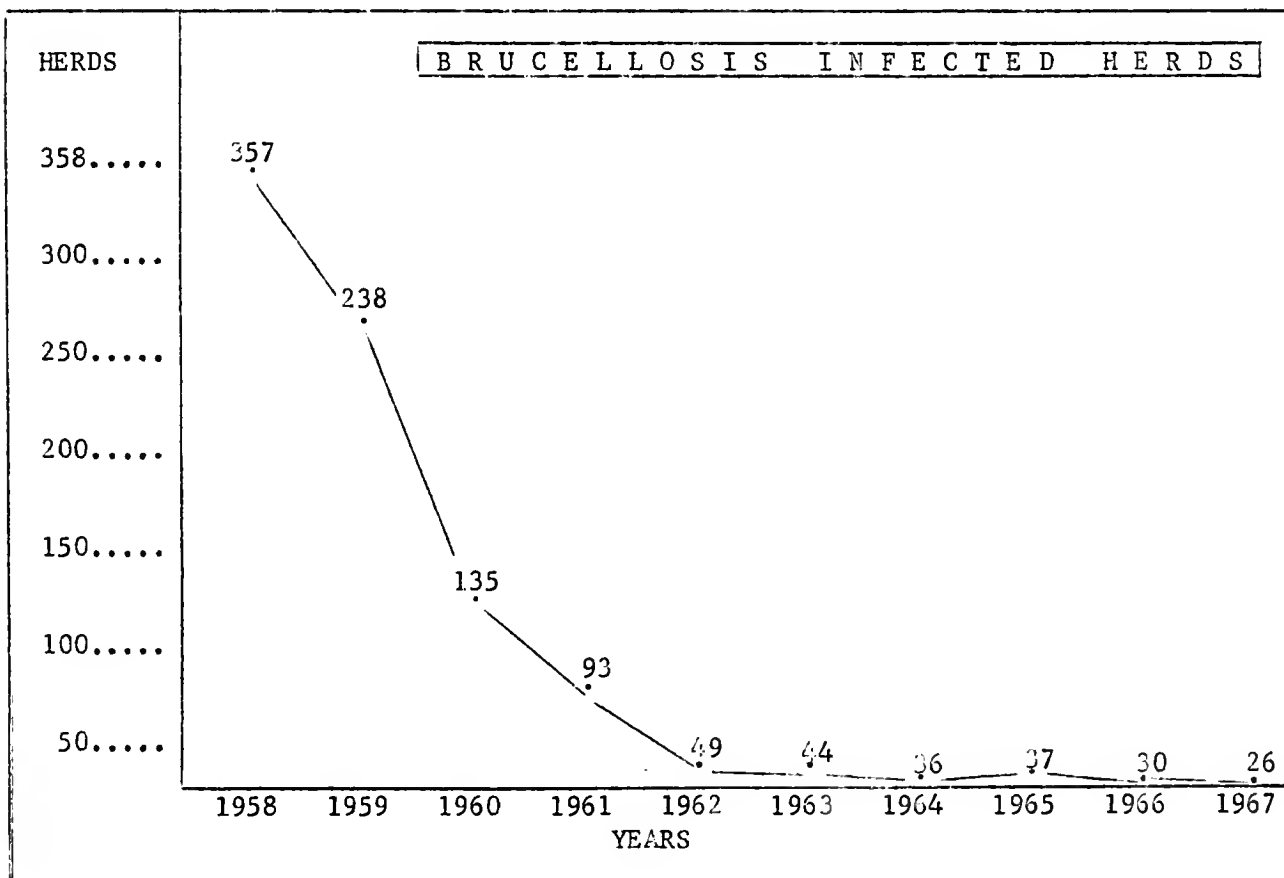
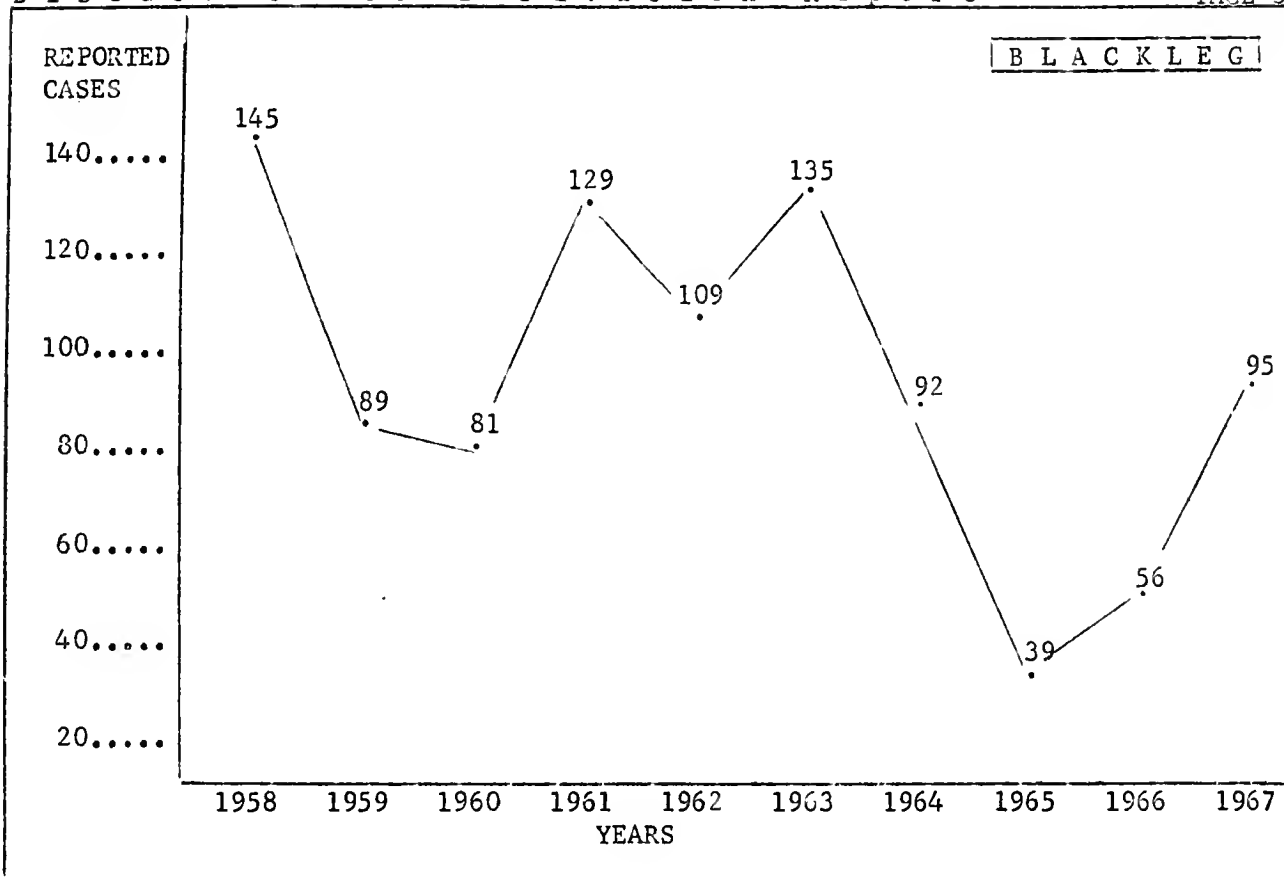
A National Rabies Council has been formed to coordinate efforts in the United States toward rabies control and eradication. Their first problem will be concentrated on rabies control and eradication in wildlife. It is hoped we will be able to hold rabies at our eastern boundary, keeping Montana free of rabies, until the coordinated national effort can become effective.

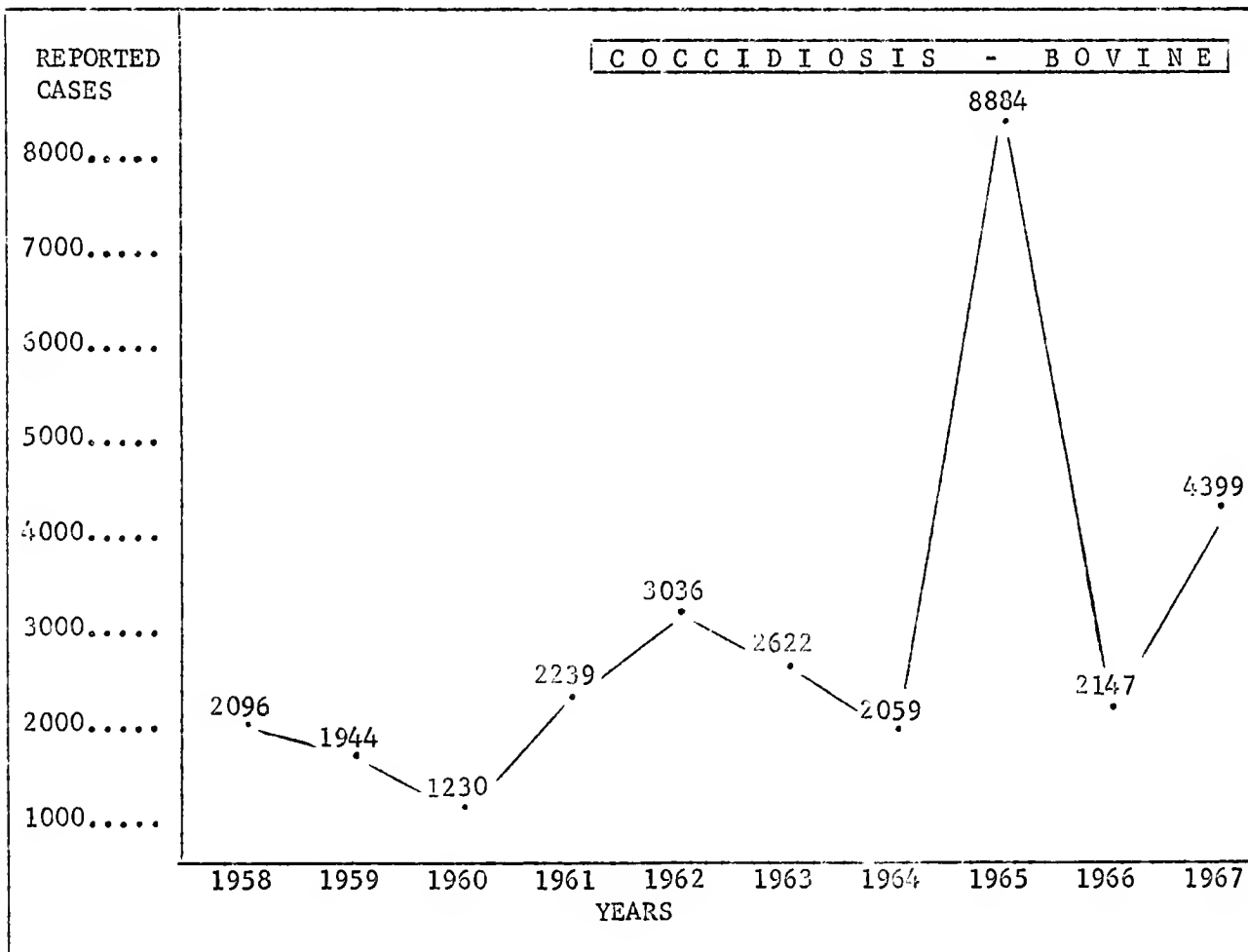
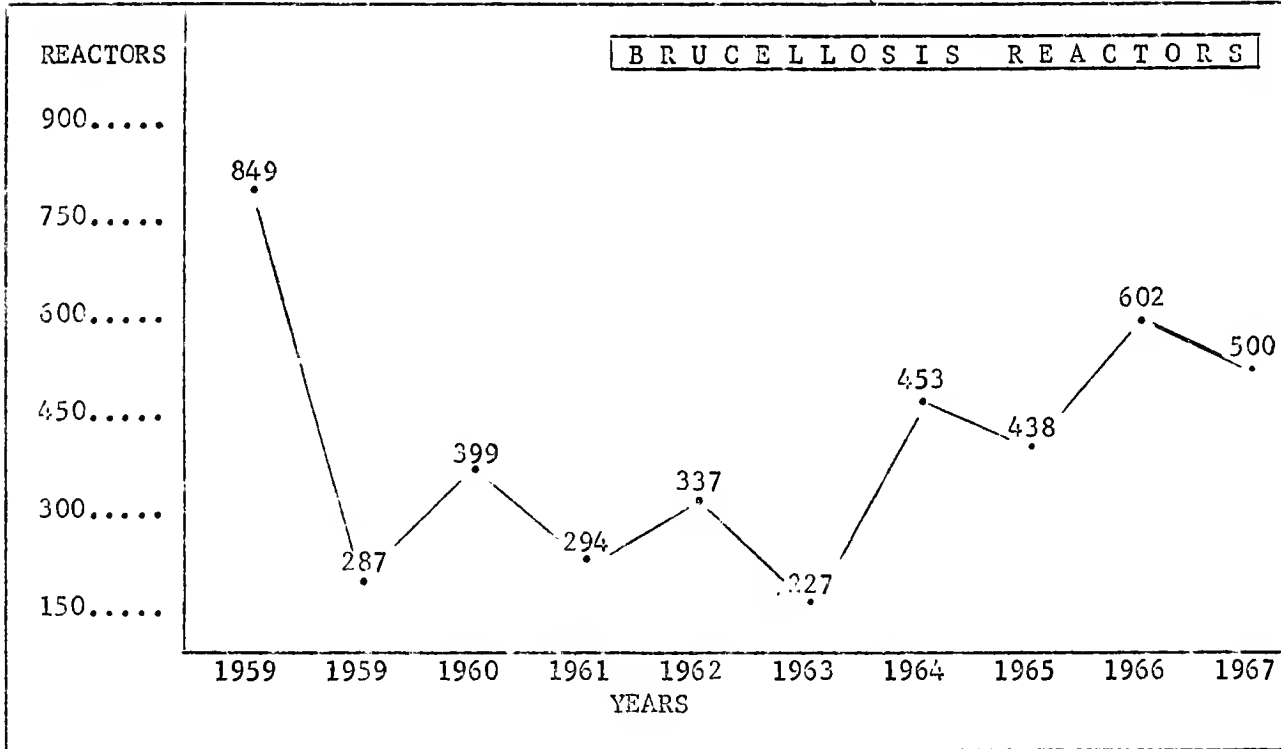
TRENDS OF SOME LIVESTOCK DISEASES REPORTED IN MONTANA THE PAST 10 YEARS

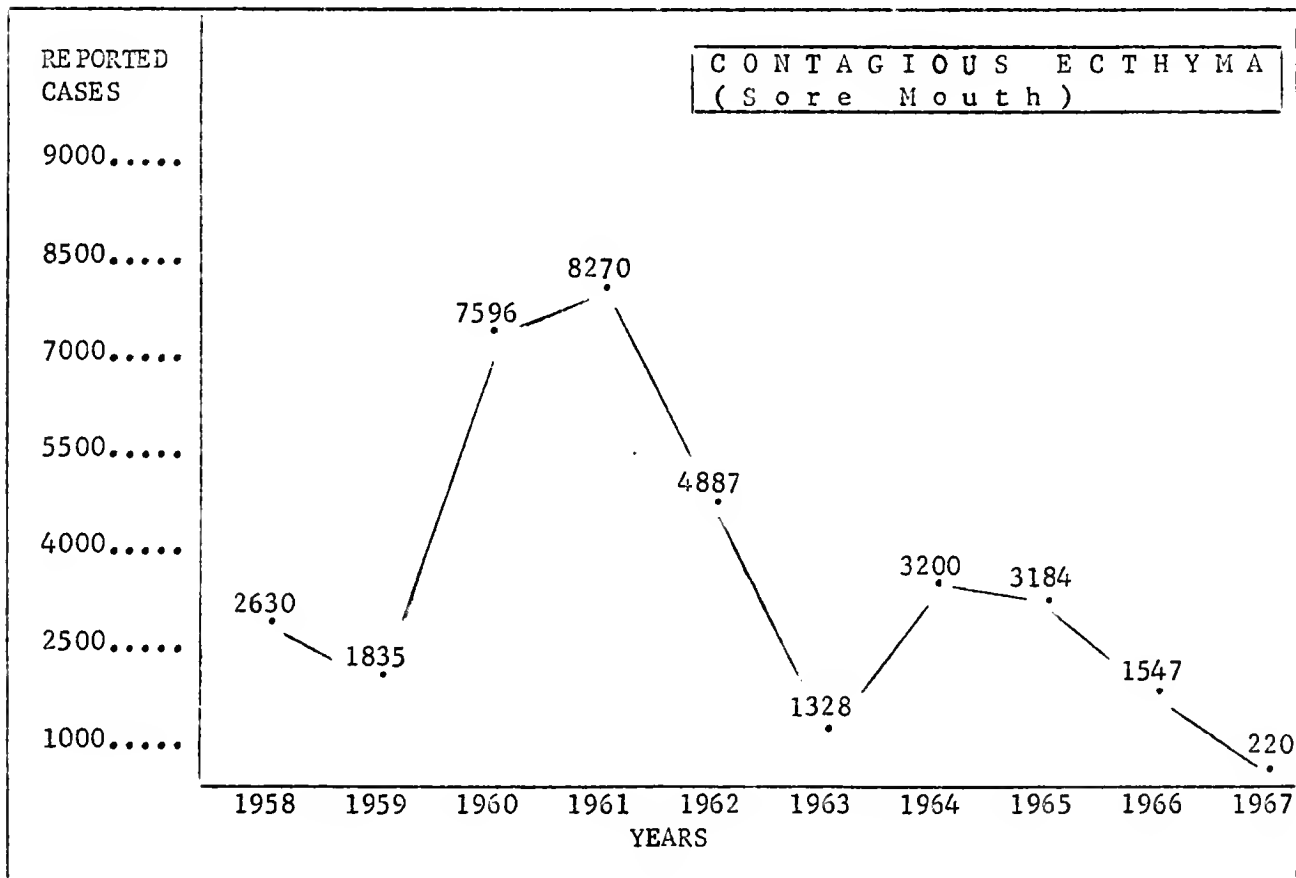
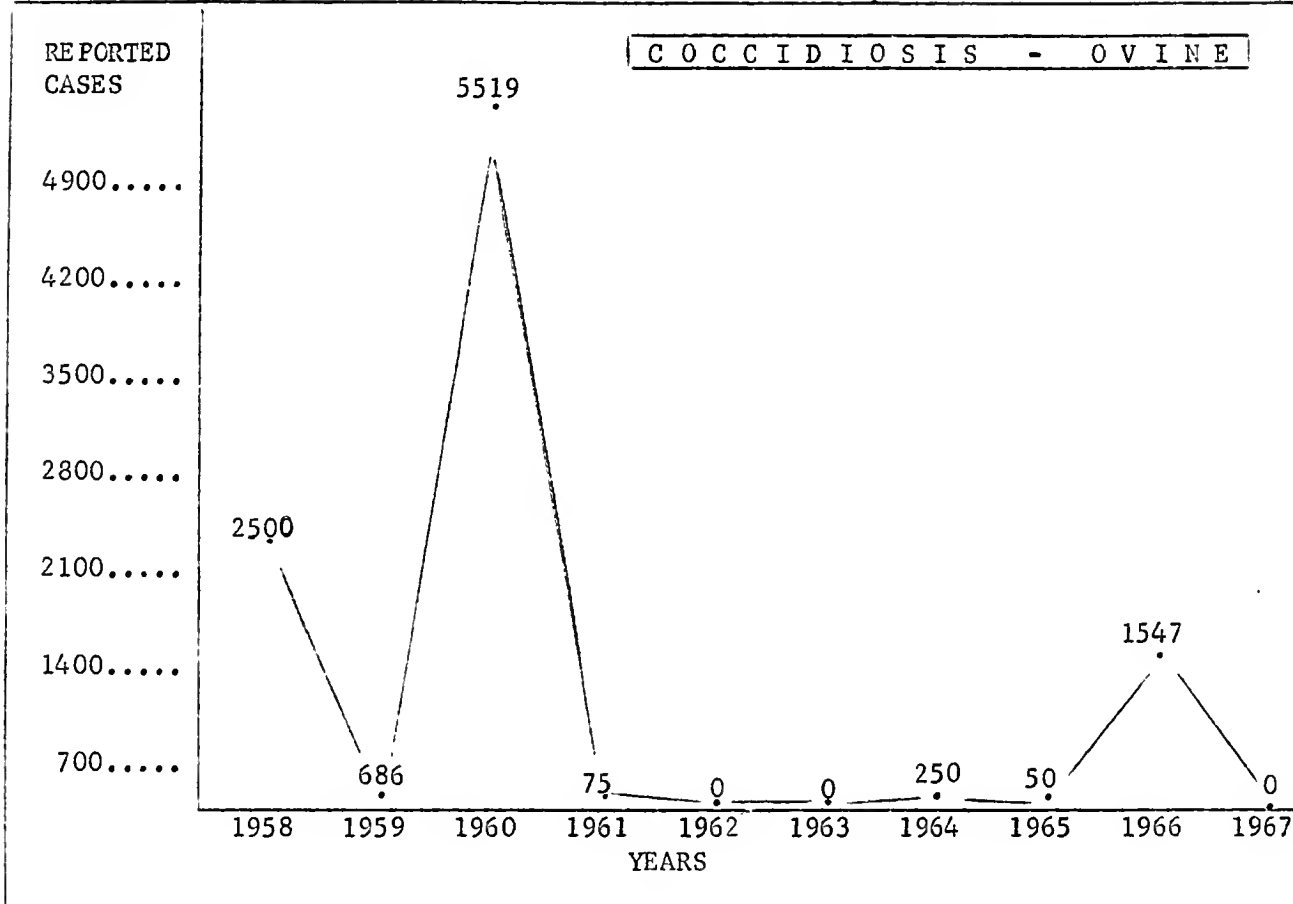
The following graphs illustrate the occurrence and trends of some of the more important livestock diseases which occurred in Montana the past 10 years. A study of these graphs can measure progress in disease control, demonstrate areas for increased concentration of disease control work, provide a basis for determining the comparative economic loss to the livestock industry, pointedly demonstrate priority needs for research and provides information needed to more accurately determine the disease problems to be met in the future.

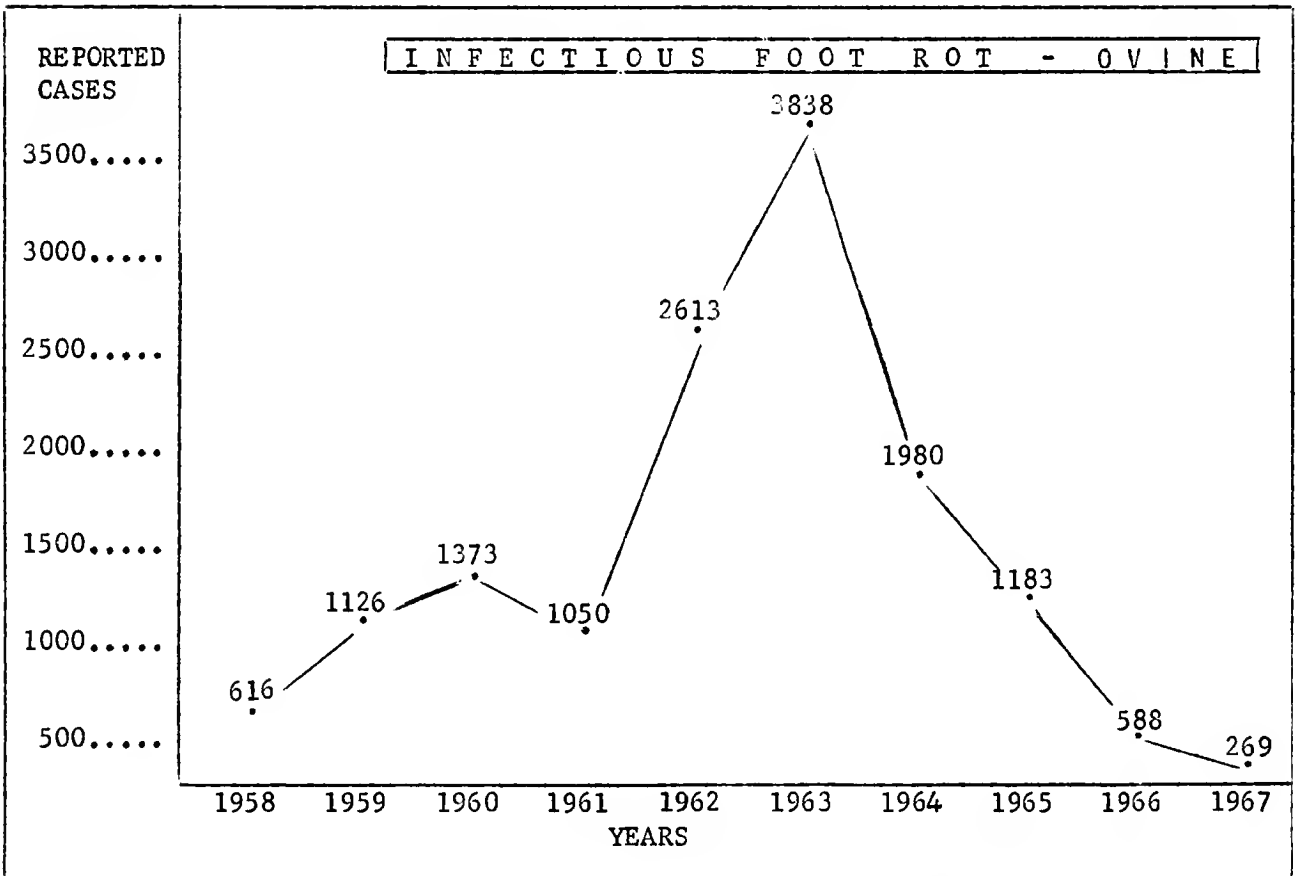
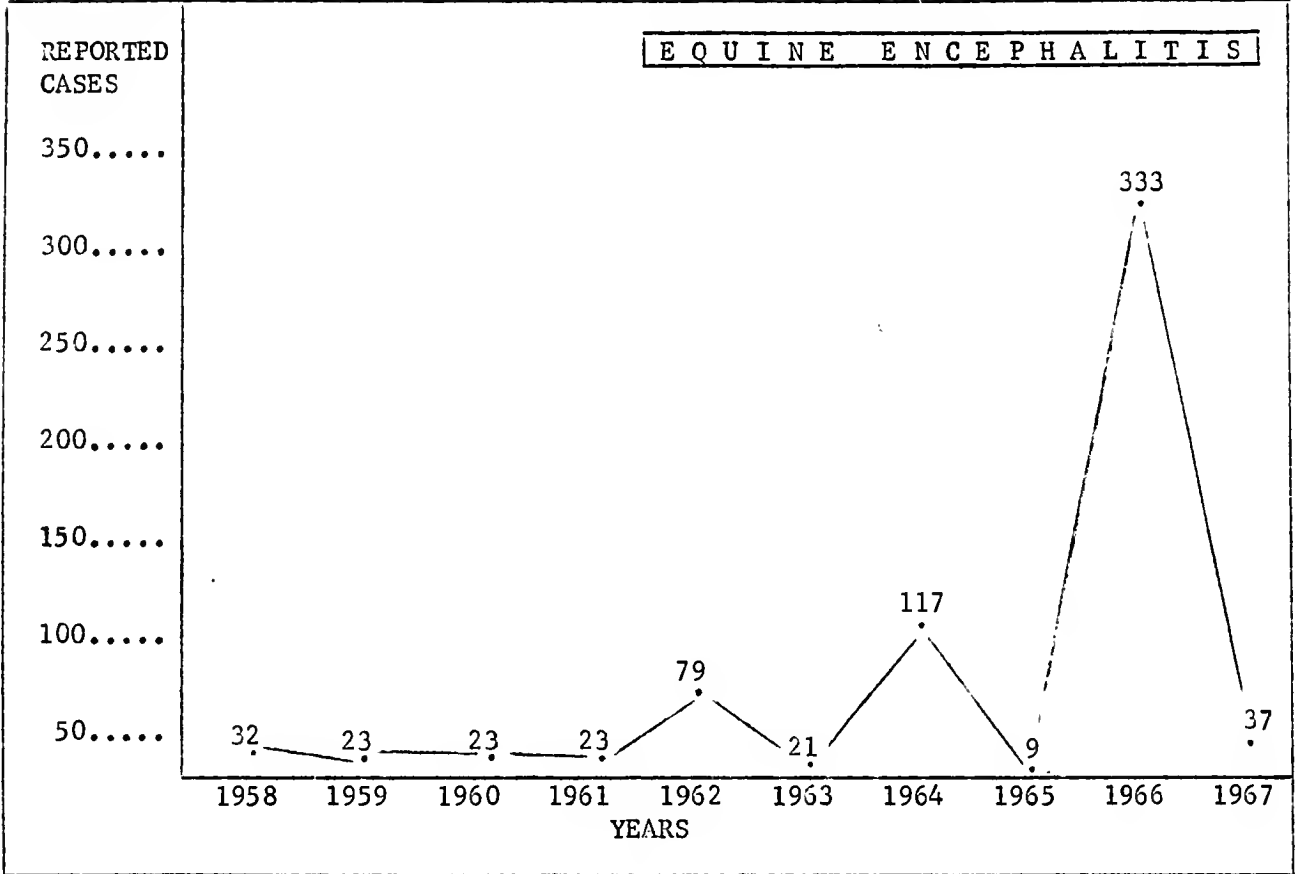


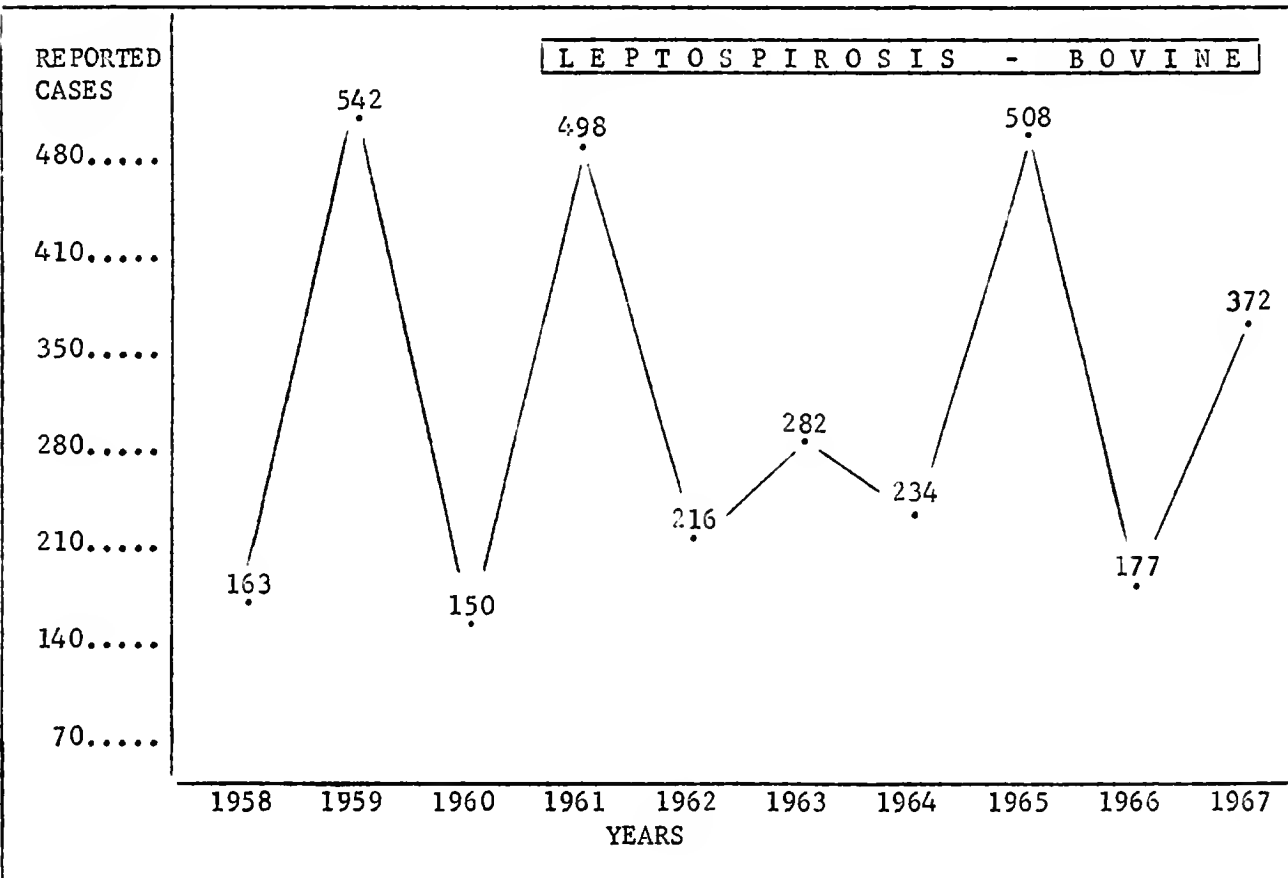
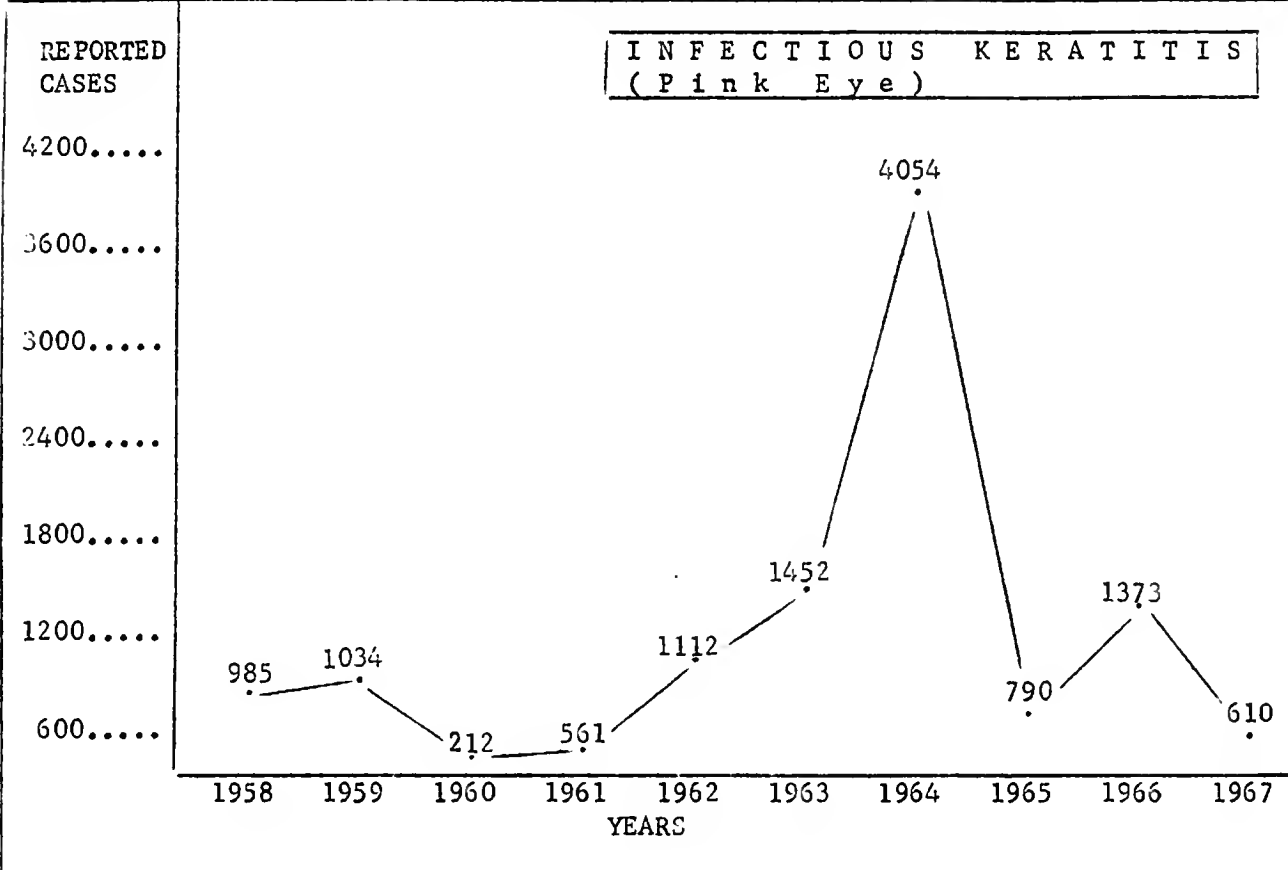


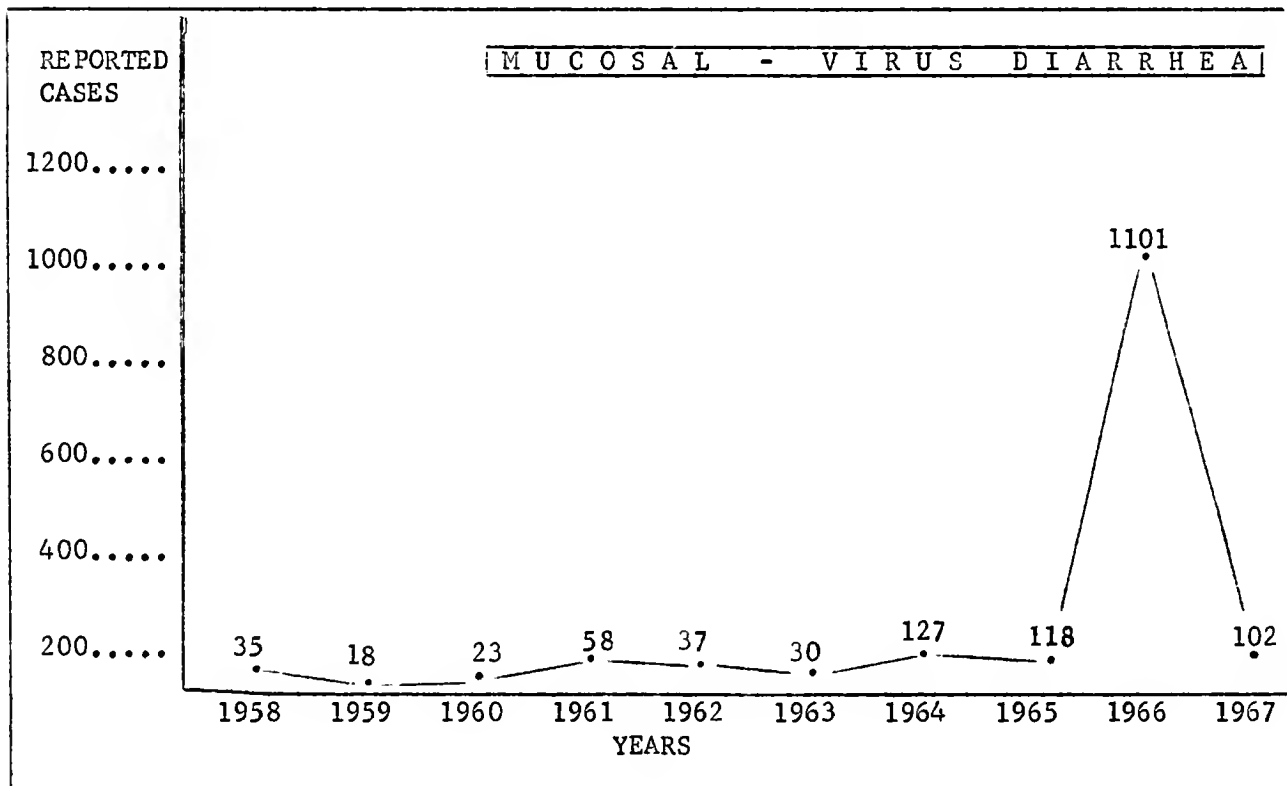
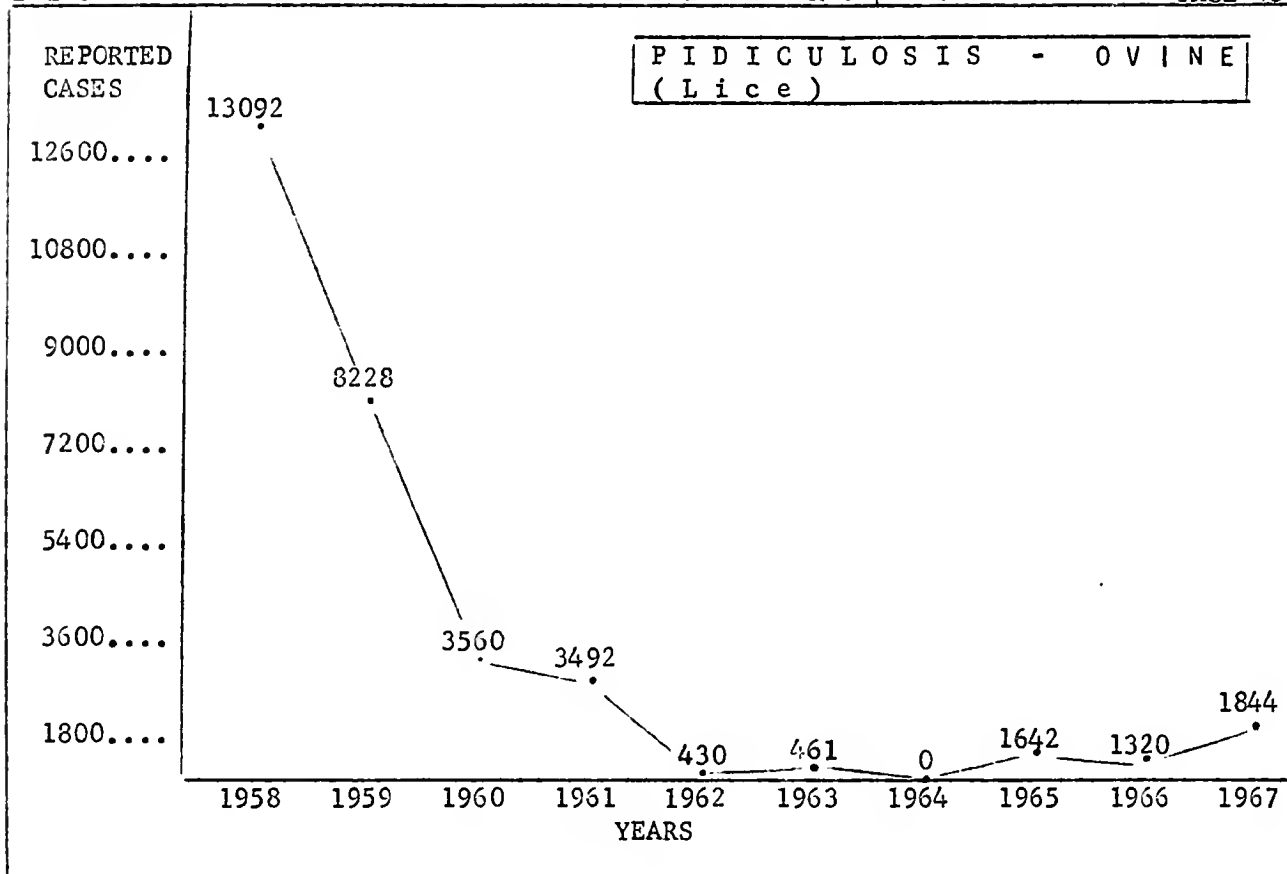


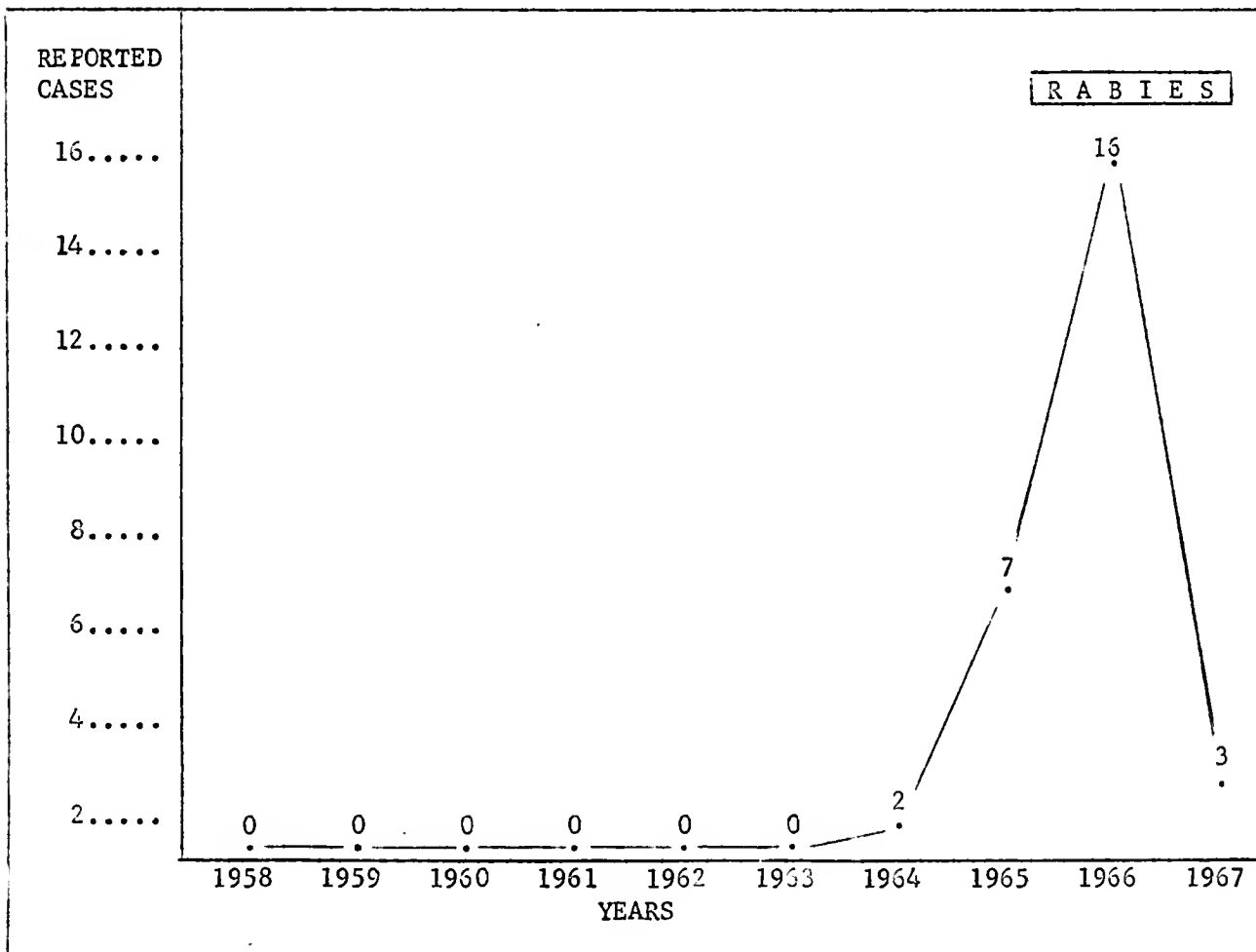
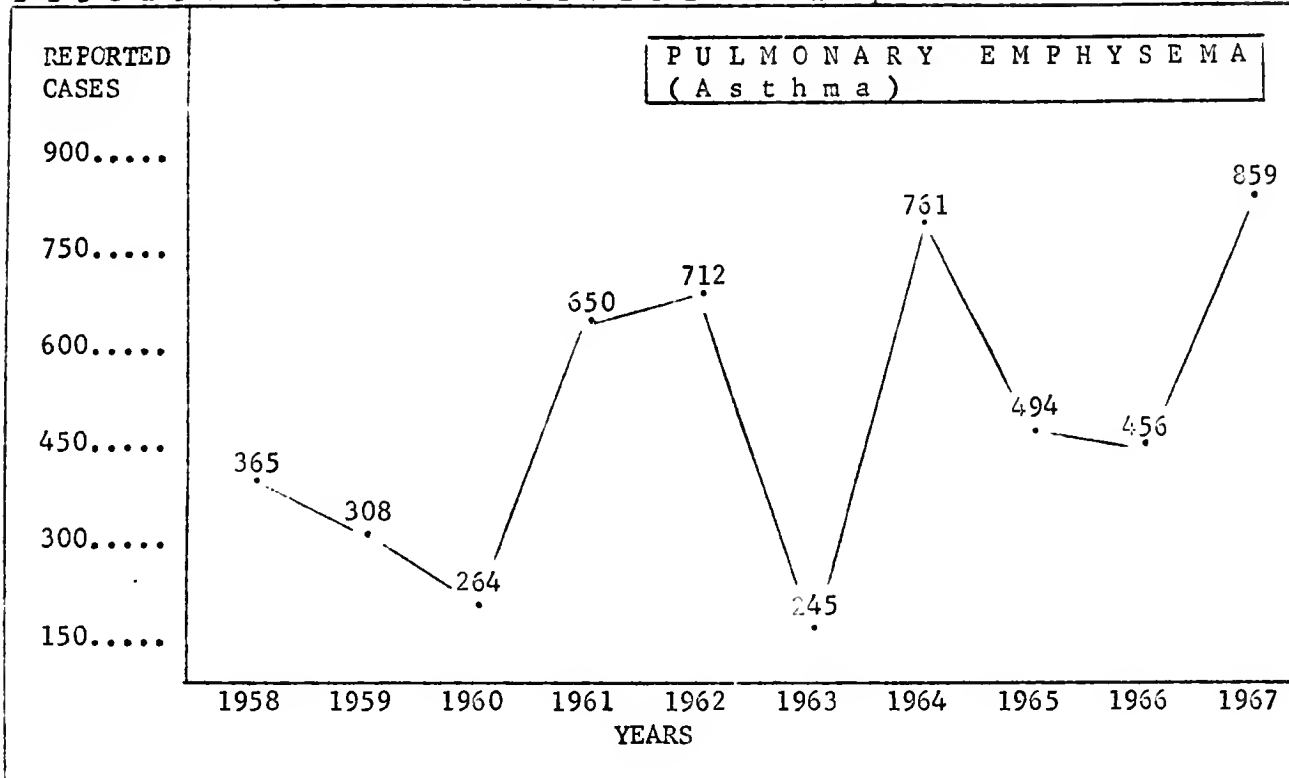


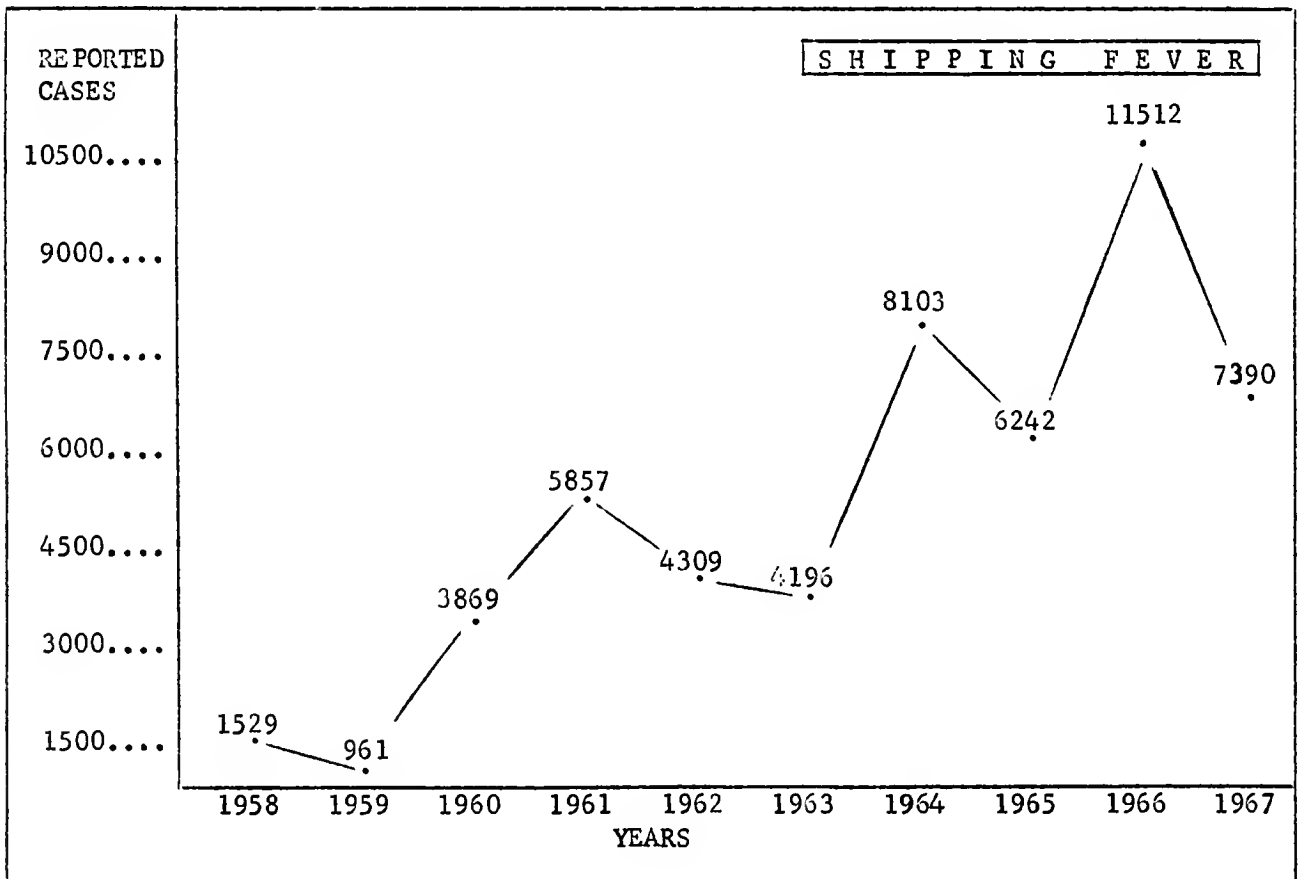
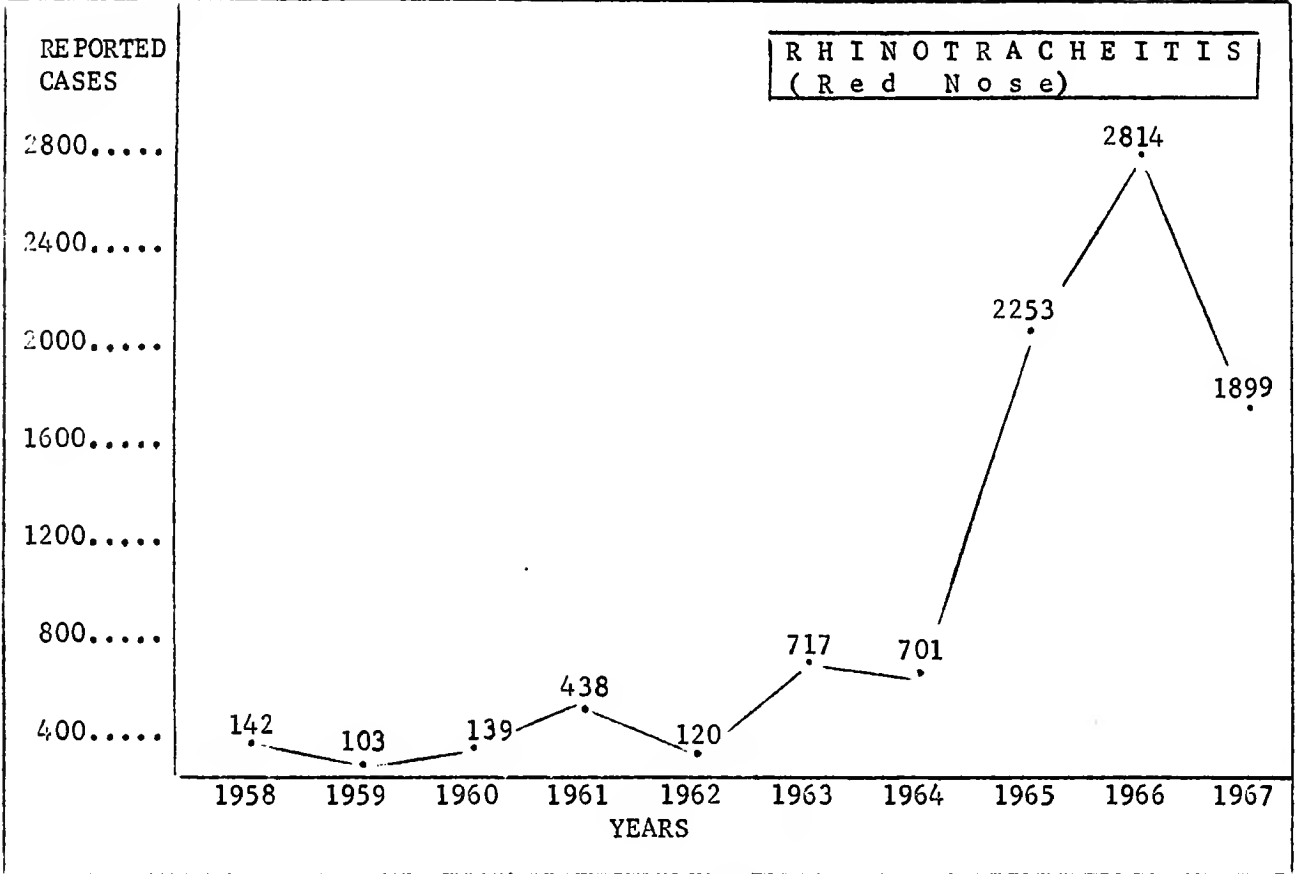


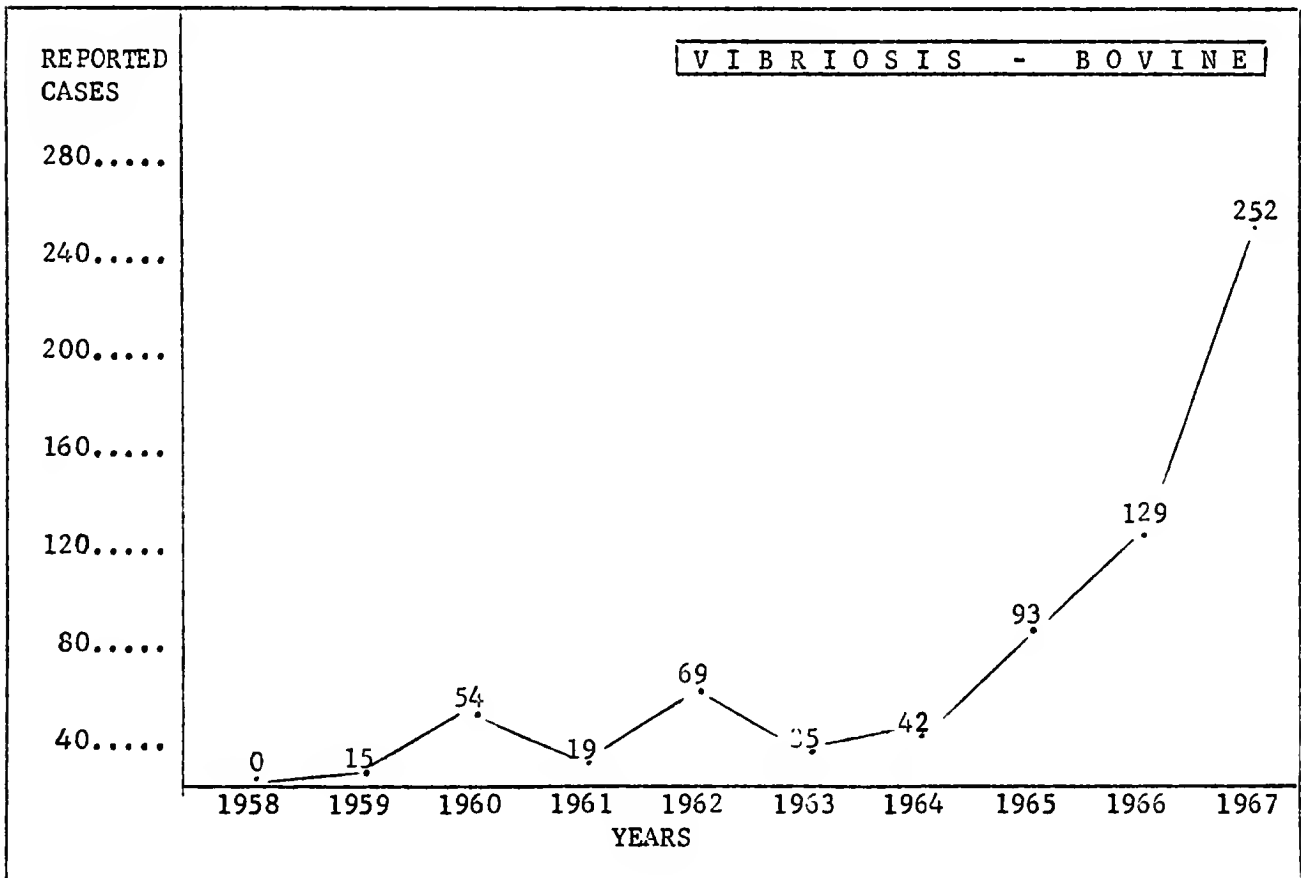
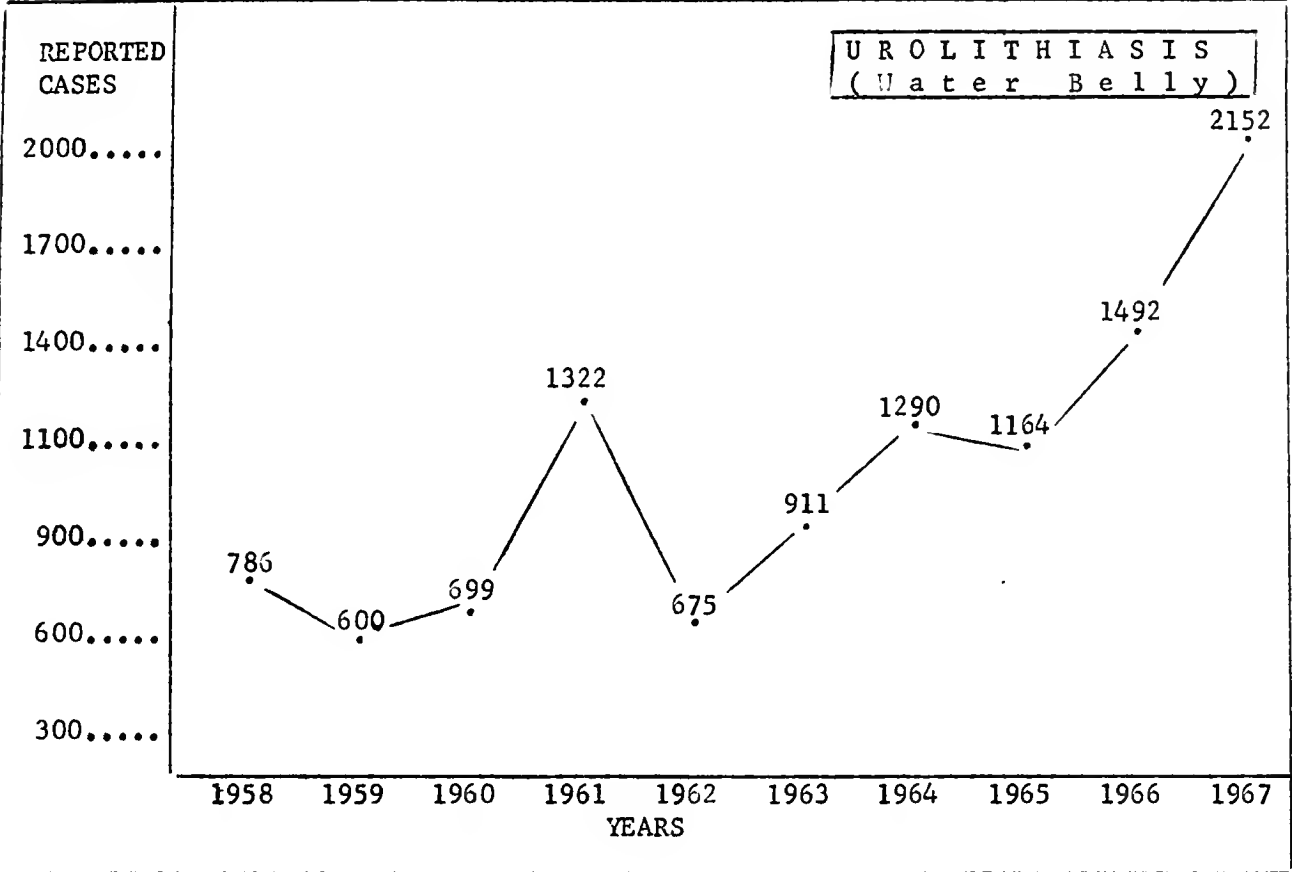


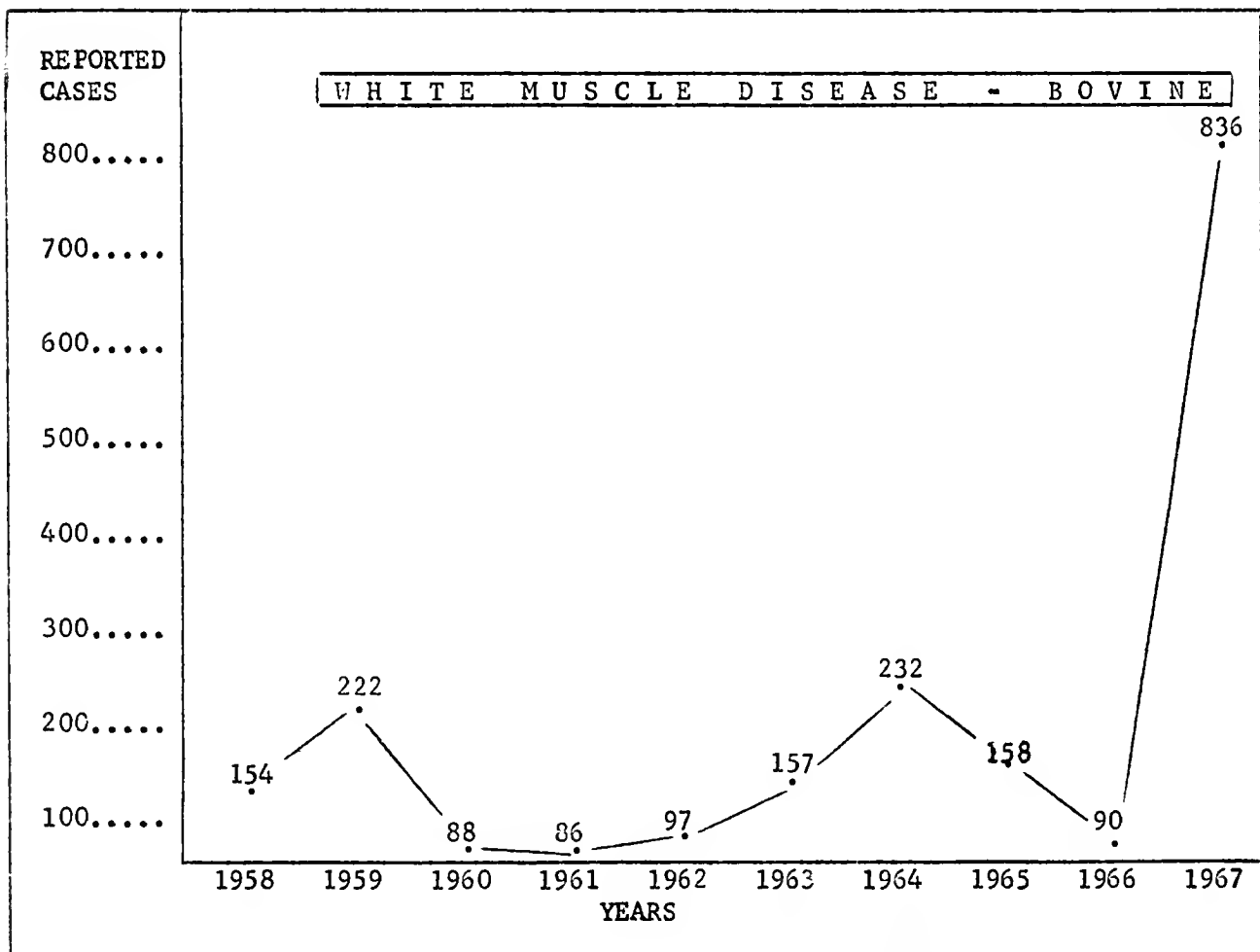
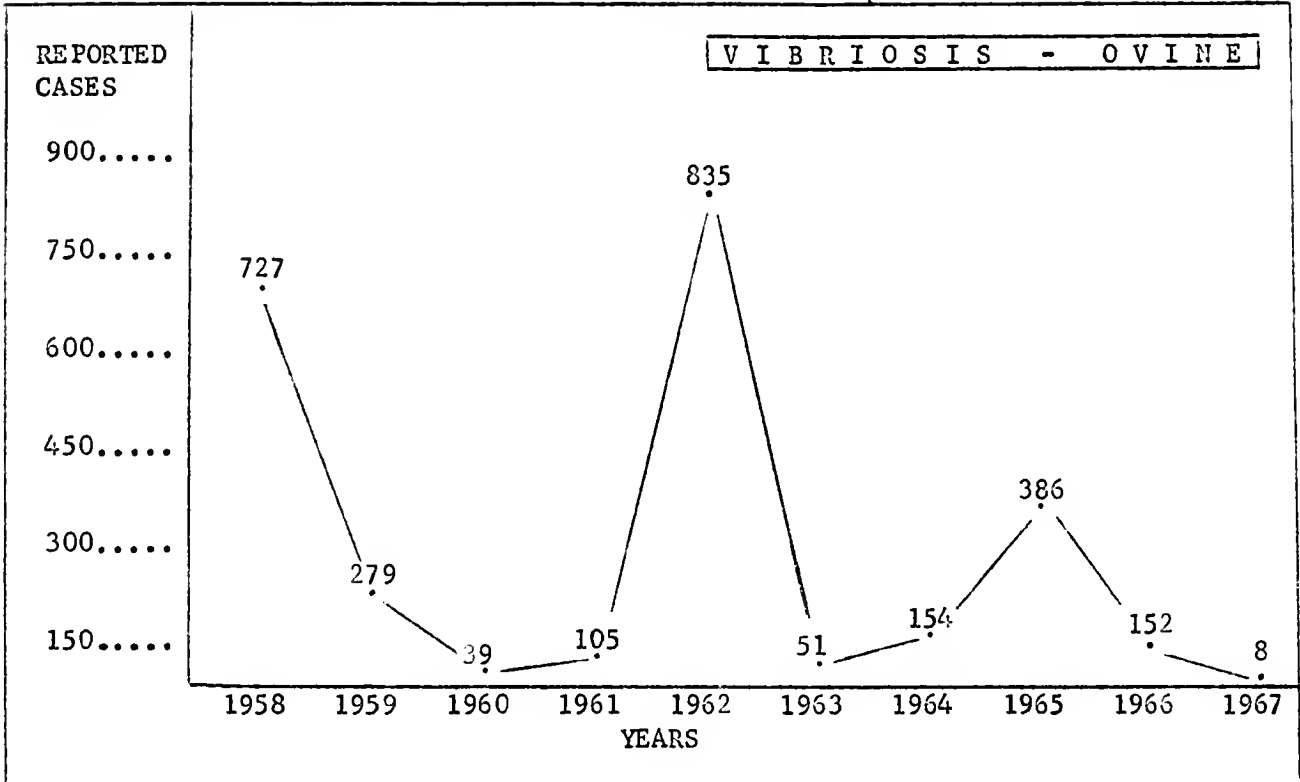












 OFFICIAL ANIMAL INSPECTIONS REPORT

SPECIE	TOTAL INSPECTED
<u>Cattle</u>	
Inspected for interstate shipment.....	831,542
Inspected at markets.....	867,530
Inspected for scabies.....	1,607
Backtagged.....	152,398
Bled for brucellosis.....	27,397
Tested for tuberculosis - Dairy.....	3,604
Tested for tuberculosis - Beef.....	13,881
Miscellaneous inspections.....	<u>6,342</u>
Total Cattle.....	1,904,301
<u>Horses</u>	
Inspected for interstate shipment.....	3,127
Inspection at markets.....	10,965
Miscellaneous inspections.....	<u>1,066</u>
Total Horses.....	15,158
<u>Sheep</u>	
Inspected for interstate shipment.....	495,611
Inspected at markets.....	190,327
Miscellaneous inspections.....	<u>37,426</u>
Total Sheep.....	723,364
<u>Swine</u>	
Inspected for interstate shipment.....	716
Inspected at markets.....	119,870
Miscellaneous inspections.....	<u>1,197</u>
Total Swine.....	121,783
<u>Poultry</u>	
Inspected for interstate shipment.....	507
Miscellaneous inspections.....	<u>31,318</u>
Total Poultry.....	31,825
<u>Dogs and Miscellaneous Animals</u>	
Inspected for interstate shipment.....	2,108
Miscellaneous inspections.....	<u>137</u>
Total Dogs and Miscellaneous Animals.....	<u>2,245</u>
<u>TOTAL ALL OFFICIAL ANIMAL INSPECTIONS.....</u>	<u>2,798,676</u>

IMPORTS INTO MONTANA

STATE OF ORIGIN	CATTLE	HORSES	SHEEP	SWINE	POULTRY	DOGS & MISC ANIMALS	TOTAL
Alabama.....						3	3
Alaska.....						49	49
Arizona.....	408	82				7	497
Arkansas.....	8	14				14	36
California.....	704	79	2			97	882
Colorado.....	2,544	144	18	4		53	2,763
Florida.....	2					6	8
Idaho.....	12,934	340	2,965	383		15	16,637
Illinois.....	34	4	12			8	58
Indiana.....						1	1
Iowa.....	509	23	987	21,129		36	22,684
Kansas.....	72	45				37	154
Kentucky.....		4	7				11
Louisiana.....		2					2
Maryland.....	39	9					48
Michigan.....						3	3
Minnesota.....	926	14	7	590		76	1,613
Mississippi.....	3	1				2	6
Missouri.....	43	1				21	65
Nebraska.....	1,004	119	16	4,202		43	5,384
Nevada.....	810	18				8	836
New Jersey.....	9						9
New Mexico.....	1,018	28				3	1,049
New York.....	2					1	3
North Carolina..		2				1	3
North Dakota....	11,799	222	5,123	2		19	17,165
Ohio.....		3	1			5	9
Oklahoma.....	585	2				9	596
Oregon.....	902	90	4,146	1		63	5,202
Pennsylvania....				1			1
South Dakota....	5,058	122	15,863	19,955		15	41,013
Tennessee.....		2				2	4
Texas.....	13,063	32			850	15	13,960
Utah.....	543	85	15			38	681
Virginia.....						1	1
Washington.....	2,398	160	7,270	6	87,107	278	97,219
Wisconsin.....	645	16	3			21	685
Wyoming.....	16,413	275	15,366	8		57	32,119
FOREIGN COUNTRIES							
Canada.....	6,805	707	3,225	31	694	224	11,686
Mexico.....	726						726
TOTAL IMPORTS	80,006	2,645	55,026	46,312	88,651	1,231	273,871

OUT-OF-STATE BREEDERS HOLDING PERMITS TO IMPORT SEMEN FOR ARTIFICIAL INSEMINATION

Upon receipt and review of official health certificates on each individual sire, certifying to many tests and clinical inspections proving freedom from infectious or communicable diseases, an annual permit is issued to ship bovine semen into Montana to be used for artificial insemination. Annual permits were granted to the following during the fiscal year:

PERMITS TO IMPORT SEMEN FOR ARTIFICIAL INSEMINATION

<u>COMPANY</u>	<u>NUMBER OF STUDS</u>
All West Breeders Burlington, Washington.....	63
American Breeders Service, Inc. DeForest, Wisconsin.....	147
Armour & Company Denver, Colorado.....	80
Cache Valley Breeding Association Logan, Utah.....	47
Curtiss Breeding Service, Inc. Cary, Illinois.....	154
International Beef Breeders Denver, Colorado.....	17
Northern Illinois Breeding Co-op Hampshire, Illinois.....	14
Southern Illinois Breeding Association Breese, Illinois.....	8
<u>TOTAL PERMITS ISSUED.....</u>	<u>530</u>

OUT-OF-STATE HATCHERYMEN HOLDING PERMITS TO IMPORT BABY CHICKS AND HATCHING EGGS

Upon certified proof of freedom from pullorum and other infectious diseases, annual permits were issued to 71 hatcheries, located in seventeen states and Canada, to ship baby chicks and hatching eggs into Montana during the fiscal year.

OFFICIAL INSPECTIONS MADE AT MONTANA LIVESTOCK MARKETS

<u>MARKET LOCATION</u>	<u>CATTLE</u>	<u>HORSES</u>	<u>SHEEP</u>	<u>SWINE</u>	<u>TOTAL</u>
Billings Commission...	159,577....	1,643....	49,696....	-0-....	210,916
Billings Public.....	78,568....	1,503....	60,775....	69,314....	210,160
Bozeman.....	37,512....	174....	17,417....	8,134....	63,237
Butte.....	80,183....	76....	310....	6,294....	86,863
Dillon.....	16,750....	693....	13,325....	4,596....	35,364
Glasgow.....	46,363....	154....	2,846....	12,778....	62,141
Glendive.....	38,744....	112....	1,773....	4,513....	45,142
Great Falls.....	58,444....	119....	1,150....	-0-....	59,713
Hamilton.....	9,253....	102....	1,550....	1,623....	12,528
Havre.....	43,429....	1,540....	1,125....	-0-....	46,094
Kalispell.....	17,157....	317....	574....	8,231....	26,079
Levistown.....	62,158....	256....	13,204....	-0-....	75,618
Miles City.....	38,526....	2,015....	2,038....	364....	42,943
Missoula.....	65,365....	2,030....	4,968....	4,023....	76,386
Shelby.....	24,192....	27....	256....	-0-....	24,475
Sidney.....	91,309....	204....	19,520....	-0-....	111,033
<u>TOTAL INSPECTIONS.....</u>	<u>867,530....</u>	<u>10,965....</u>	<u>190,327....</u>	<u>119,870....</u>	<u>1,188,692</u>

GARBAGE FEEDING ESTABLISHMENTS

In accordance with Section 46-2602 (RCM 1947), eleven garbage feeding establishments were issued licenses during the fiscal year.

A total of 176 garbage feeding establishment inspections were made during the fiscal year with the cooperation of the U. S. Department of Agriculture.

MONTANA VETERINARIANS' ANIMAL DISEASE REPORT

BACTERIAL DISEASES	CATTLE		HORSES		SHEEP		SWINE		POULTRY		DOGS	
	Cases	Herds	Cases	Herds	Cases	Herds	Cases	Herds	Cases	Herds	Cases	Herds
Actinomycosis-bacillosis.....	1,742	1,469										
Bacillary hemoglobinuria.....	157	107			2	1						
Blackleg.....	95	59										
Botulism.....			2	2								
Brucellosis.....	500	61										
Clostridium novyi.....	7	2										
Diphtheria.....	77	63										
Distemper.....			861	434								
Enterotoxemia.....	45	27			677	79						
Epididymitis.....												
Erysipelas.....							194	3				
Foot-rot.....	601	119			269	23						
Leptospirosis.....	372	169	1	1			38	7				94
Listeriosis.....	1	1			3	2	1	1				
Malignant edema.....	9	9	1	1								
Omphalitis.....									50	2		
Pneumonia.....	75	34	3	3								
Tetanus.....	2	2	7	3			6	1				
Tuberculosis.....	3	3							81	4		
Vibriosis.....	252	43			8	8						
Total Bacterial Diseases.....	3,938	2,168	875	444	959	113	239	12	131	6		94
<u>NUTRITIONAL DISEASES</u>												
Atrophic rhinitis.....												
Cachexia.....	46	2					130	12				
Grass tetany.....	53	18										
Greasy pig disease.....							1	1				
Photosensitization.....	47	8										
White muscle disease.....	836	97			27	11						
Total Nutritional Diseases.....	982	125			27	11	131	13				

Montana Veterinarians' Animal Disease Report

Viral and Rickettsial Diseases (Continued)	CATTLE		HORSES		SHEEP		SWINE		POULTRY		DOGS	
	Cases	Herds	Cases	Herds	Cases	Herds	Cases	Herds	Cases	Herds	Cases	Herds
Encephalitis.....	7	4	37	36								
Enzootic bovine abortion.....	10	2										5
Infectious anemia.....			14	12								
Infectious bronchitis.....			19	15					1	1		
Infectious hepatitis.....												174
Influenza.....			123	24								
Lip and Leg.....					202	2	120	25				
Mucosal-virus diarrhea.....	102	49										
Posthitis.....					9	7						
Rhinotracheitis.....	1,899	64										
Shipping fever.....	7,390	551										
Sinusitis.....									25	1		
TGE.....	332	3					195	6				
Vulvovaginitis.....	46	16										
Warts.....												
Total Viral and Rickettsial Diseases.....	9,888	760	193	87	431	22	315	31	402	5		1,562
<u>Unknown Etiology</u>												
Brisket edema.....	11	10										
Cancer eye.....	1,685	1,319										
Enteritis, non-specific.....	319	56					2	2				
Infectious keratitis.....	640	77			4	1						
Mandibular phlegmon.....	12	12										
Meningo-encephalitis.....	25	1										
Polioencephalomalacia.....	3	2										
Pullet disease.....												
Pulmonary emphysema.....	859	276	2	2						125	1	
Urolithiasis.....	2,152	1,465			34	2						

Montana Veterinarians' Animal Disease Report

	CATTLE		HORSES		SHEEP		SWINE		POULTRY		DOGS	
	Cases	Herds	Cases	Herds	Cases	Herds	Cases	Herds	Cases	Herds	Cases	Herds
Unknown Etiology (Cont.)	5,706	3,218	2	2	38	3	2	2	125	1		
Total Unknown Etiology.....												
GRAND TOTAL ALL DISEASES...	24,982	6,756	1,072	535	4,011	165	688	59	658	12		1,656

ETIOLOGICAL AGENTS RESPONSIBLE FOR DISEASES REPORTED BY MONTANA VETERINARIANS

Following is a percentage distribution of etiological agents responsible for the diseases reported by Montana Veterinarians during the 1967 fiscal year:

CAUSE OF DISEASES	CATTLE	HORSES	SHEEP	SWINE	POULTRY	DOGS
Bacteria.....	15.8%	81.6%	23.9%	34.7%	19.9%	5.7%
Nutrition.....	3.9%	-0-	0.7%	19.0%	-0-	-0-
Parasites.....	0.1%	-0-	62.2%	-0-	-0-	-0-
Poisons.....	0.2%	0.2%	1.5%	0.2%	-0-	-0-
Protozoa.....	17.6%	-0-	-0-	-0-	-0-	-0-
Viruses and Rickettsia.....	39.6%	18.0%	10.7%	45.8%	61.1%	94.3%
Unknown.....	22.8%	0.2%	1.0%	0.3%	19.0%	-0-

COMMENTS ON MILK & DAIRY INSPECTION

The national trend of fewer producing dairies and milk plants distributing more milk applies to Montana. The concentration of large volumes of milk in fewer milk plants, who have in some cases almost statewide distribution, lends great emphasis to the absolute necessity of observing every disease control and sanitation precaution to avoid a milk-borne disease or poisoning outbreak which could be most extensive. The milk and dairy inspection work is directed toward pre-venting such tragedies. The fact that the milk and dairy inspection work has, for many years, prevented milk-borne disease and poisoning outbreaks has caused a few to question its necessity and the same few to become careless. If this attitude prevailed, the result could be an extremely dangerous situation. It is more important than ever that milk and dairy inspection be maintained to the highest degree of efficiency and thoroughness.

To provide additional safeguards to consumers of milk, essential laboratory equipment has been obtained during the year to start routine testing of milk for the detection of pesticides. Plans have been completed to apply the Wisconsin Mastitis Test to all producer samples to assist in eliminating milk obtained from cows with mastitis from being marketed into channels for human food.

SUMMARY OF WORK PERFORMED

Montana licensed Milk Plants distributed 201,947,200 pounds of pasteurized milk, cream and fluid milk products to Montana consumers during the fiscal year. This is a total of 553,280 pounds a day.

Montana licensed Retail Raw Dairies distributed 1,895,080 pounds of raw milk during the fiscal year. This is a total of 5192 pounds a day.

Raw milk accounts for .9% of the total milk supply offered to Montana consumers; and 99.1% of the milk, cream and fluid milk products distributed in Montana has the added public health protection of pasteurization.

Following is a summary of sanitary inspections and laboratory tests made during the fiscal year to assure Montana consumers that their milk came from healthy cows and is produced, handled and processed under strictly sanitary conditions:

OFFICIAL INSPECTIONS AND TESTS
OF
MILK, MILK PRODUCTS, DAIRIES AND MILK PLANTS

<u>INSPECTIONS AND TESTS</u>	<u>NUMBER</u>
Antibiotic detection tests.....	3,788
Bacterial counts.....	3,854
Brucellosis ring tests.....	9,765
Chemical analyses.....	1,522
Coliform tests.....	4,032
Dairy inspections.....	1,235
Milk Plant inspections.....	131
Milk Plant equipment tests.....	101
Tuberculosis tests.....	3,604
TOTAL.....	28,032

MILK PLANT SANITATION COMPLIANCE RATINGS
WITH
MONTANA LIVESTOCK SANITARY BOARD REGULATIONS

MILK PLANT NUMBER	POUNDS SOLD DAILY	PLANT SCORE	PRODUCER'S SCORE	PASTEURIZED MILK RATING
25-1.....	28,000.....	94%.....	91%.....	93%
25-2.....	56,000.....	94%.....	91%.....	93%
25-7.....	11,500.....	90%.....	93%.....	92%
25-8.....	1,900.....	85%.....	74%.....	80%
25-10.....	76,000.....	97%.....	91%.....	94%
25-11.....	2,400.....	91%.....	93%.....	92%
25-13.....	120.....	80%.....	85%.....	83%
25-15.....	800.....	85%.....	80%.....	83%
25-16.....	32,000.....	93%.....	92%.....	93%
25-18.....	60,000.....	89%.....	92%.....	92%
25-19.....	16,000.....	96%.....	89%.....	93%
25-20.....	20,000.....	91%.....	91%.....	91%
25-21.....	32,000.....	91%.....	92%.....	92%
25-25.....	16,330.....	94%.....	89%.....	92%
25-28.....	18,400.....	90%.....	94%.....	92%
25-30.....	14,580.....	88%.....	94%.....	91%
25-31.....	18,400.....	93%.....	90%.....	92%
25-32.....	48,000.....	94%.....	91%.....	92%
25-33.....	2,000.....	100%.....	88%.....	94%
25-38.....	20,000.....	95%.....	92%.....	94%
25-39.....	12,000.....	91%.....	91%.....	91%
25-40.....	10,000.....	92%.....	88%.....	90%
25-41.....	3,000.....	90%.....	81%.....	86%
25-43.....	800.....	91%.....	93%.....	92%
25-45.....	200.....	90%.....	85%.....	87%
25-46.....	80.....	86%.....	89%.....	88%
25-47.....	52,000.....	90%.....	93%.....	92%
25-49.....	800.....	97%.....	95%.....	96%
TOTAL.....	553,280.....	91%.....	90%.....	91%

RETAIL RAW DAIRIES SANITATION COMPLIANCE RATINGS
WITH
MONTANA LIVESTOCK SANITARY BOARD REGULATIONS

DAIRY NUMBERS	POUNDS SOLD DAILY	DAIRY SCORE
R-1.....	320.....	90%
R-2.....	800.....	95%
R-11.....	320.....	93%
R-15.....	576.....	80%
R-19.....	576.....	92%
R-21.....	240.....	98%
R-25.....	240.....	80%
R-29.....	600.....	96%
R-32.....	640.....	83%
R-33.....	320.....	91%
R-34.....	560.....	96%
 TOTAL.....	 5,192.....	 90%

COMMENTS ON MEAT INSPECTION

The following reports show the number of animals and parts of animals condemned on inspection as unfit for human consumption. Causes of their condemnation express, in no uncertain terms, the necessity for properly conducted meat inspection to safeguard human health.

At least 1/3 of the meat sold is in the form of a processed or manufactured meat product. Meat, being a perishable and easily contaminated product, can decompose and become contaminated before and during processing and manufacturing. Meat products can be treated and disguised to cover-up decomposition and contamination. Meat products easily lend themselves to substitution of adulterants and other less costly foods. They can be treated with harmful dyes, drugs, chemicals and non-food substances. Weight can be increased by incorporation of excessive amounts of water and other non-meat substances. Meat and meat products can be processed and manufactured in insanitary surroundings and equipment. Pork meat products, improperly cured, smoked or cooked, can be a dangerous source of trichinosis. Today's ever-increasing marketing of processed and manufactured meat products demands the maintenance of a good, complete system of processing, manufacturing and labeling to always assure that wholesome, nutritious, safe and non-fraudulent products are offered for sale.

It is recommended, for public health and welfare, that a complete system of meat inspection be extended in Montana to assure the benefits of meat inspection to all Montana people.

SUMMARY OF WORK PERFORMED

The Montana Livestock Sanitary Board maintained meat inspection in 20 slaughterhouses and 8 meat packing houses. The U. S. Department of Agriculture maintained meat inspection in 5 slaughterhouses. Forty-one slaughtering establishments operated without meat inspection.

There were 628,100 animals slaughtered in licensed establishments this fiscal year. Of the total, 79% was slaughtered under federal meat inspection, 17% was slaughtered under state meat inspection and 4% was slaughtered in establishments without meat inspection.

An estimated 1,876,665 pounds of meat were found totally unfit for human consumption and removed from food channels in the State of Montana during the fiscal year.

Forty-one diseases and miscellaneous other conditions were found in animals slaughtered under state meat inspection, which caused the entire animal or part of animal to be unfit for human consumption and resulted in condemnation.

OFFICIAL ESTABLISHMENT INSPECTIONS

<u>TYPE OF ESTABLISHMENT</u>	<u>NO. OF INSPECTIONS</u>
Meat Depots.....	3
Meat Packing Houses.....	17
Poultry Slaughterhouses.....	5
Rendering Plants.....	19
Slaughterhouses.....	66
Slaughterhouses - Rabbit.....	2
<u>TOTAL OFFICIAL ESTABLISHMENT INSPECTIONS.....</u>	<u>112</u>

LABELS AND SKETCHES

<u>ITEM</u>	<u>NUMBER</u>
Labels temporarily approved.....	18
Labels approved.....	123
Sketches approved.....	73
<u>TOTAL.....</u>	<u>214</u>

ESTABLISHMENTS UNDER STATE MEAT INSPECTION

<u>ESTABLISHMENT NAME</u>	<u>LOCATION</u>	<u>ESTABLISHMENT NO.</u>
<u>Slaughterhouses</u>		
*Barsotti Bros. Meat Packing Plant, Inc.	Great Falls.....	8
*Biastoch Meats, Inc.	Butte.....	13
*Daily, John R., Inc.	Missoula.....	2
*Havre Abattoir.....	Havre.....	12
*Kalispell Meat Company.....	Kalispell.....	9
Mickey's Packing Plant.....	Great Falls.....	18
Miles City Packing Company.....	Miles City.....	26
*Montana Meat Company of Helena.....	Helena.....	5
Montana State Prison.....	Deer Lodge.....	4
Montana State University.....	Bozeman.....	23
*New Butte Butchering Company.....	Butte.....	19
Quick Freeze Packing Company.....	Livingston.....	10
*Rahr Meat Service.....	Glendive.....	6
Roberts Packing Plant.....	Dillon.....	16
*Rocky Mountain Packing Company, Inc....	Havre.....	21
Schramm Packing Company.....	Missoula.....	3
*Timberland Packing Company.....	Lewistown.....	22
Triangle Packing Company.....	Choteau.....	27
*Vandevanter Meats.....	Columbia Falls.....	7
Vollmer & Sons, Inc.....	Bozeman.....	14
*Also does meat processing		

Meat Packing Houses

Ben's H & H Market.....	Missoula.....	29
Central Meat Market.....	Lewistown.....	32
Great Falls Meat Company.....	Great Falls.....	36
Hickory Kitchen.....	Great Falls.....	31
Montana Sausage Company.....	Great Falls.....	30
M & P Meat Company, Inc.....	Great Falls.....	34
Snowy Mountain Meat Company.....	Lewistown.....	33
Triplett Meats.....	Kalispell.....	35

ESTABLISHMENTS UNDER FEDERAL MEAT INSPECTION

<u>ESTABLISHMENT NAME</u>	<u>LOCATION</u>	<u>ESTABLISHMENT NO.</u>
<u>Slaughterhouses</u>		
Austin's Packing Company.....	Glasgow.....	317
Great Falls Meat Company.....	Great Falls.....	301
Midland Empire Packing Company, Inc....	Billings.....	339
Needham Packing Corp. of Montana.....	Great Falls.....	857-G
Pierce Packing Company.....	Billings.....	691

**ANIMALS SLAUGHTERED UNDER STATE AND FEDERAL MEAT INSPECTION
AND
ANIMALS SLAUGHTERED WITHOUT MEAT INSPECTION**

SPECIE	STATE	FEDERAL	WITHOUT
Cattle.....	46,596.....	187,188.....	15,216
Calves.....	977.....	167.....	256
Sheep.....	3,457.....	18.....	1,225
Swine.....	55,485.....	308,777.....	8,738
TOTAL.....	106,515.....	496,150.....	25,435

**WHOLE CARCASSES FOUND UNFIT FOR HUMAN CONSUMPTION
UNDER STATE AND FEDERAL MEAT INSPECTION**

SPECIE	STATE	FEDERAL
Cattle.....	152.....	628
Calves.....	11.....	-0-
Sheep.....	9.....	-0-
Swine.....	95.....	308
TOTAL.....	267.....	936

**PARTS OF CARCASSES FOUND UNFIT FOR HUMAN CONSUMPTION
UNDER STATE AND FEDERAL MEAT INSPECTION**

SPECIE	STATE	FEDERAL
Cattle.....	1,808.....	15,142
Calves.....	20.....	-0-
Sheep.....	887.....	-0-
Swine.....	29,177.....	26,247
TOTAL.....	31,892.....	41,389

**BEEF AND SWINE LIVERS FOUND UNFIT FOR HUMAN CONSUMPTION
UNDER STATE AND FEDERAL MEAT INSPECTION**

LIVERS	STATE	FEDERAL
Beef.....	13,394.....	61,454
Swine.....	23,672.....	64,536
TOTAL.....	37,066.....	125,990

DIAGNOSES OF WHOLE CARCASSES CONDEMNED AT SLAUGHTER
UNDER STATE MEAT INSPECTION

DIAGNOSIS	CATTLE	CALVES	SHEEP	SWINE
Abscesses.....	9.....	0.....	0.....	13
Actinomycosis bacillosis.....	6.....	0.....	0.....	0
Anasarca.....	7.....	0.....	0.....	0
Arthritis-polyarthritis.....	2.....	0.....	0.....	1
Ascites.....	2.....	0.....	0.....	0
Bruises, injuries, etc.....	12.....	3.....	0.....	15
Cachexia.....	16.....	0.....	0.....	3
Caseous lymphadenitis.....	1.....	0.....	7.....	0
Contamination.....	0.....	0.....	0.....	1
<u>Cysticercus bovis</u>	0.....	1.....	0.....	0
Edema.....	9.....	0.....	0.....	0
Emaciation.....	4.....	0.....	0.....	0
Emphysema.....	0.....	5.....	0.....	0
Epithelioma.....	15.....	0.....	0.....	3
Erysipelas.....	0.....	0.....	0.....	1
Hydronephrosis.....	1.....	0.....	0.....	0
Icterus.....	3.....	0.....	0.....	13
Metastasis.....	0.....	0.....	0.....	0
Metritis.....	7.....	0.....	0.....	0
Nephritis.....	2.....	0.....	0.....	0
Pericarditis.....	8.....	0.....	0.....	2
Peritonitis.....	2.....	0.....	0.....	1
Pneumonia.....	18.....	0.....	1.....	18
Pyelonephritis.....	1.....	0.....	0.....	1
Pyemia.....	2.....	0.....	0.....	1
Septicemia-toxemia.....	21.....	2.....	1.....	14
Sex odor.....	0.....	0.....	0.....	3
Tuberculosis.....	2.....	0.....	0.....	3
Uremia.....	2.....	0.....	0.....	0
Urinary calculi.....	0.....	0.....	0.....	2
TOTAL.....	152.....	11.....	9.....	95

DIAGNOSES OF BEEF LIVERS CONDEMNED AT SLAUGHTER
UNDER STATE MEAT INSPECTION

DIAGNOSIS	NUMBER CONDEMNED
Abscesses.....	8,529
Carotenosis.....	20
Cirrhosis.....	137
Contamination.....	3
Distomiasis.....	3,039
Echinococcosis.....	4
Sawdust.....	444
Telangiectasis.....	424
Miscellaneous diseases.....	794
TOTALS.....	13,394

DIAGNOSES OF PARTS OF CARCASSES CONDEMNED AT SLAUGHTER
UNDER STATE MEAT INSPECTION

DIAGNOSIS	CATTLE	CALVES	SHEEP	SWINE
Abscesses.....	1,072.....	5.....	23.....	2,756
Actinomycosis bacillosis.....	152.....	1.....	0.....	101
Adhesions.....	15.....	0.....	6.....	98
Anasarca.....	3.....	0.....	0.....	9
Arthritis-polyarthritis.....	5.....	0.....	2.....	37
Ascites.....	0.....	0.....	2.....	0
Bruises, injuries, etc.....	161.....	5.....	5.....	197
Cachexia.....	3.....	0.....	0.....	3
Caseous lymphadenitis.....	0.....	0.....	17.....	0
Contamination.....	185.....	0.....	0.....	139
Cysticercosis.....	0.....	0.....	56.....	24
<u>Cysticercus tenuicollis</u>	0.....	0.....	6.....	14
Edema.....	0.....	1.....	0.....	0
Epithelioma.....	94.....	0.....	2.....	14
Grubs.....	2.....	0.....	0.....	0
Hematoma.....	1.....	0.....	0.....	0
Icterus.....	0.....	0.....	0.....	6
Lump jaw.....	7.....	0.....	0.....	0
Nephritis.....	2.....	0.....	0.....	2
Parasitism.....	0.....	0.....	11.....	0
Pericarditis.....	69.....	0.....	2.....	374
Peritonitis.....	0.....	0.....	2.....	0
Pneumonia.....	5.....	0.....	0.....	2
Septicemia-toxemia.....	0.....	0.....	0.....	7
Sex odor.....	0.....	0.....	0.....	7
Taeniasis.....	0.....	0.....	16.....	0
Tuberculosis.....	13.....	0.....	0.....	1,471
Tumor.....	2.....	0.....	0.....	0
Unclean heads.....	2.....	0.....	0.....	237
Miscellaneous diseases of the liver.....	10.....	8.....	735.....	23,672
TOTAL.....	1,803.....	20.....	885.....	29,170

POUNDS OF MEAT AND/OR MEAT BY-PRODUCTS PROCESSED
UNDER STATE MEAT INSPECTION

TYPE OF PROCESSING	POUNDS
<u>Placed in Cure</u>	
Beef.....	134,514
Pork.....	2,640,015
Other.....	24,010
<u>Smoked and/or Dried</u>	
Beef.....	46,864
Pork.....	2,588,340
<u>Cooked Meat</u>	
Beef.....	1,146
Pork.....	64,703
Other.....	1,265
<u>Sausage Fresh Finished</u>	837,201
<u>Sausage Smoked or Cooked</u>	
Franks, Wieners.....	1,759,281
Other.....	847,367
<u>Loaf: Head Cheese, Chili, Jellied Product</u>	391,119
<u>Steaks, Chops, Roasts</u>	2,156,206
<u>Sliced Product</u>	
Bacon.....	410,487
Other.....	5,607
<u>Hamburger</u>	1,037,794
<u>Misc. Meat Product</u>	296,320
<u>Lard Rendered</u>	899,248
<u>Oleo Stock</u>	400
<u>Edible Tallow</u>	40,725
<u>Compound Containing Animal Fat</u>	47,900
<u>TOTAL</u>	<u>14,230,512</u>

REINSPECTED OR REJECTED
MEAT, MEAT BY-PRODUCTS AND INGREDIENTS
UNDER STATE MEAT INSPECTION

ITEM	POUNDS
Reinspected Meat and/or Meat By-Product.....	3,574,733
Rejected Meat and/or Meat By-Product.....	5,251
<u>TOTAL</u>	<u>3,579,984</u>

	PAGE
ADMINISTRATION DIVISION REPORT.....	1
Agricultural Research Service, Animal Health Division, Montana.....	5
Anaplasmosis.....	28
Anaplasmosis Trends (Graph).....	36
"Anaplaz" Vaccine.....	28
Animal and Range Sciences Department, Montana State University.....	5
Animal Inspection Report, Official (Tabulation).....	48
Animals Slaughtered Under State and Federal Meat Inspection and Animals Slaughtered Without Meat Inspection (Tabulation).....	64
Anthrax Trends (Graph).....	37
Artificial Insemination.....	1
Artificial Insemination, Licenses Issued.....	4
Artificial Insemination, Permits Issued to Import Semen (Tabulation).....	4,50
"Asthma".....	28
"Asthma" Trends (Graph).....	44
Autopsies Performed Report (Tabulation).....	26
Bacillary Hemoglobinuria Trends (Graph).....	37
Bacteria, Cause of Disease by (Tabulation).....	56
Bacteriology, Pathology, Parasitology and Virology Report (Tabulation).....	10-20
Beef and Swine Livers Found Unfit for Human Consumption Under State and Federal Meat Inspection (Tabulation).....	64
Blackleg Trends (Graph).....	38
Blood Analyses Report (Tabulation).....	24
Board Members - See "Livestock Sanitary Board, Members of"	
Breeders, Out-of-State - See "Artificial Insemination, Permits Issued to Import Semen (Tabulation)"	
Brucellosis, Cattle.....	29
Brucellosis Infected Herds, County Distribution of Remaining (Tabulation).....	30
Brucellosis Infected Herds, Reduction of (Tabulation).....	28
Brucellosis Infected Herds, Trends (Graph).....	38

	PAGE
Brucellosis Reactor Herds Trends (Graph).....	39
Brucellosis, Swine.....	34
"Calf Scours", Report of Veterinary Research Laboratory on.....	1
Calves Officially Vaccinated with <u>Brucella abortus</u> Vaccine (Tabulation).....	29
"Cancer Eye" ^m	28
Cattle Diseases.....	28
Chemical Report (Tabulation).....	23-25
Chickens - See "Poultry"	
City Health Departments.....	5
Coccidiosis Trends, Bovine (Graph).....	39
Coccidiosis Trends, Ovine (Graph).....	40
Composition Analyses of Dairy Products Report (Tabulation).....	24
Contagious Ecthyma Trends (Graph).....	40
Cooperating Agencies, Departments and Associations (Tabulation).....	5
Cooperative Extension Service - See "Montana Cooperative Extension Service" ¹	
County Distribution of Remaining Brucellosis Infected Herds (Tabulation).....	30
County Health Departments.....	5
Deputy State Veterinarians.....	ii
Diagnoses of Beef Livers Condemned at Slaughter Under State Meat Inspection (Tabulation).....	65
Diagnoses of Parts of Carcasses Condemned at Slaughter Under State Meat Inspection (Tabulation).....	66
Diagnoses of Whole Carcasses Condemned at Slaughter Under State Meat Inspection (Tabulation).....	65
Diagnostic Laboratory, Comments on.....	8
DIAGNOSTIC LABORATORY DIVISION REPORT.....	8
Diagnostic Laboratory Division, Summary of Work Performed.....	9
Diagnostic Laboratory Equipment.....	8
Diagnostic Laboratory Personnel.....	8

	PAGE
Disease Control, Comments on.....	28
DISEASE CONTROL DIVISION REPORT.....	28
Disease Report, Montana Veterinarians - See "Montana Veterinarians' Animal Disease Report"	
Distribution and Causes of Animal Diseases, Percentage of - See "Etiological Agents Responsible for Diseases Reported by Montana Veterinarians"	
Distribution of Laboratory Tests Among Species of Animals Report (Tabulation).....	27
Divisions of Montana Livestock Sanitary Board - See "Livestock Sanitary Board, Divisions of"	
Encephalitis.....	32
Encephalitis Trends (Graph).....	41
Epididymitis.....	32
Equine Encephalitis - See "Encephalitis"	
Equipment Test, Milk Plant.....	58
Establishments Under Federal Meat Inspection (Tabulation)	
Establishments Under State Meat Inspection (Tabulation).....	63
Etiological Agents Responsible for Diseases Reported by Montana Veteinarians (Tabulation).....	56
Extension Service, Montana Cooperative - See "Montana Cooperative Extension Service"	
Financial Statement (Tabulation).....	6-7
Fish & Game Commission - See "Montana Fish & Game Commission"	
Fluorosis.....	30
Foot Rot.....	33
Foot Rot Trends, Ovine (Graph).....	41
Garbage Feeding Establishments, Licenses Issued.....	4,51
Governor of the State of Montana, Letter of Transmittal from the Montana Livestock Sanitary Board to.....	i
Grant to Veterinary Research Laboratory.....	1

PAGE

Hatcherymen, Out-of-State - See "Out-of-State Hatcherymen Holding Permits to Import Baby Chicks and Hatching Eggs"	
Hog Cholera.....	34
Horse Diseases.....	32
Horse Racing Commission - See "Montana Horse Racing Commission"	
Imports into Montana (Tabulation).....	49
Imports, Permits Issued.....	4
Infectious Foot Rot - See "Foot Rot"	
Infectious Keratitis Trends (Graph).....	42
Keds, Sheep - See "Lice, Sheep"	
Labels and Sketches (Tabulation).....	62
Leptospirosis Trends, Bovine (Graph).....	42
Letter of Transmittal, Montana Livestock Sanitary Board to Governor of Montana.....	i
Letter of Transmittal, State Veterinary Surgeon to Montana Livestock Sanitary Board.....	ii
License Fees Collected.....	4
Licenses and Permits Issued (Tabulation).....	4
Lice, Sheep.....	33
Lice Trends, Ovine (Graph).....	43
Livestock Commission, Montana - See "Montana Livestock Commission"	
Livestock Markets, List of (Tabulation).....	51
Livestock Markets, Official Animal Inspections Made at (Tabulation).....	51
Livestock Sanitary Board:	
Divisions of.....	iv
History and Duties of.....	v
Meetings Held.....	i
Members of.....	iii
Organizational Chart of.....	vi
Staff of.....	1
Mastitis.....	57

	PAGE
Meat Analyses Report (Tabulation).....	25
Meat Depot Inspections.....	62
Meat Depots, Licenses Issued.....	4
Meat Inspection, Comments on.....	61
MEAT INSPECTION DIVISION REPORT.....	61
Meat Inspection Division, Summary of Work Performed.....	62
Meat Packing House Inspections.....	62
Meat Packing Houses, Licenses Issued.....	4
Meat Packing Houses, List of (Tabulation).....	63
Meat Slaughterhouses, List of - See "Slaughterhouses, List of"	
Milk, Cream, Cottage Cheese, Buttermilk and Chip and Dip Report (Tabulation)..	22
Milk & Dairy Inspection, Comments on.....	57
MILK & DAIRY INSPECTION DIVISION REPORT.....	57
Milk & Dairy Inspection Division, Summary of Work Performed.....	58
Milk Plant Sanitation Compliance Ratings with Montana Livestock Sanitary Board Regulations (Tabulation).....	59
Milk Plants, Licenses Issued.....	4
Mineral Content Analyses Report (Tabulation).....	24
Miscellaneous Analyses Report (Tabulation).....	25
Modified-Accredited Tuberculosis Areas.....	31
Montana City and County Health Departments.....	5
Montana Cooperative Extension Service, Montana State University.....	5
Montana Fish & Game Commission.....	5,35
Montana Horse Racing Commission.....	5
Montana Independent Meat Packers Association.....	5
Montana Livestock Commission.....	5,35
Montana Livestock Sanitary Board - See "Livestock Sanitary Board"	
Montana Milk Distributors.....	5

	PAGE
Montana Milk Producers.....	5
Montana State Department of Health.....	5,30
Montana State University.....	1,5
Montana Stockgrowers Association.....	5
Montana Swine Growers Association.....	5
Montana Veterinarians' Animal Disease Report (Tabulation).....	52-55
Montana Veterinary Medical Association.....	5
Montana Veterinary Research Laboratory - See "Veterinary Research Laboratory"	
Montana Wool Growers Association.....	5
Morbidity Report - See "Montana Veterinarians' Animal Disease Report"	
Mucosal-Virus Diarrhea.....	30
Mucosal-Virus Diarrhea Trends (Graph).....	43
"Neonatal Enteritis in Calves", Veterinary Research Laboratory Progress Report.....	1
Nitrate Analyses Report (Tabulation).....	24
Nutrition, Cause of Diseases by (Tabulation).....	56
Official Animal Inspections Report (Tabulation).....	48
Official Establishment Inspections (Tabulation).....	62
Official Inspections and Tests of Milk, Milk Products, Dairies and Milk Plants (Tabulation).....	58
Official Inspections Made at Montana Livestock Markets (Tabulation).....	51
Official Regulations, Revised and New.....	3
Official Tests and Examinations (Laboratory), Summary of.....	9
Out-of-State Breeders Holding Permits to Import Semen for Artificial Insemination (Tabulation).....	50
Packing Houses, List of - See "Meat Packing Houses, List of"	
Parasites, Cause of Diseases by (Tabulation).....	56
Parts of Carcasses Found Unfit for Human Consumption Under State and Federal Meat Inspection (Tabulation).....	64

	PAGE
Pediculosis - See "Lice, Sheep"	
Percentage Distribution of Causes of Animal Diseases - See "Etiological Agents Responsible for Diseases Reported by Montana Veterinarians"	
Permits Issued to Milk and Dairy Distributors.....	4
Permits Issued to Import Chicks and Hatching Eggs.....	4
Permits Issued to Import Semen for Artificial Insemination.....	4,50
Personnel, Livestock Sanitary Board - See "Livestock Sanitary Board, Staff of"	
Pesticides, Detection of.....	8,57
"Pink Eye".....	28
"Pink Eye" Trends (Graph).....	42
Poisons, Cause of Diseases by (Tabulation).....	56
Poultry Diseases.....	34
Poultry Permits Issued to Import Chicks and Hatching Eggs.....	4
Poultry Slaughterhouse Inspections.....	62
Poultry Slaughterhouses, Licenses Issued.....	4
Pounds of Meat and/or Meat By-Products Processed Under State Meat Inspection (Tabulation).....	67
Producer Dairies, Licenses Issued.....	4
Protozoa, Cause of Diseases by (Tabulation).....	56
Pullorum - See "Salmonella"	
Pulmonary Emphysema Trends (Graph).....	44
Rabies.....	31,33,34
Rabies, Positive Cases (Tabulation).....	34
Rabies Trends (Graph).....	44
Race Horse Drug Analyses Report (Tabulation).....	24
Ram Epididymitis - See "Epididymitis"	
"Red Nose" Trends (Graph).....	45
Red Water Trends (Graph).....	37

	PAGE
Regulations, Official Revised and New - See "Official Regulations, Revised and New"	
Reinspected or Rejected Meat, Meat By-Products and Ingredients Under State Meat Inspection (Tabulation).....	67
Rendering Plants Inspections.....	62
Rendering Plants, Licenses Issued.....	4
REO - See "Epididymitis"	
Retail Raw Dairies, Licenses Issued.....	4
Retail Raw Dairies Sanitation Compliance Ratings With Montana Livestock Sanitary Board Regulations (Tabulation).....	60
Rhinotracheitis.....	31
Rhinotracheitis Trends (Graph).....	45
Rocky Mountain Laboratory.....	5
<u>Salmonella anatum</u> , <u>california</u> , <u>pullorum-typhoid</u> and <u>thompson</u>	34
Serology Report (Tabulation).....	21
Sheep Diseases.....	32
Shipping Fever.....	31
Shipping Fever Trends (Graph).....	45
Slaughterhouse Inspections.....	62
Slaughterhouse Inspections, Rabbit.....	62
Slaughterhouses, Licenses Issued.....	4
Slaughterhouses, List of (Tabulation).....	63
"Sore Mouth" Trends (Graph).....	40
Staff, Montana Livestock Sanitary Board - See "Livestock Sanitary Board, Staff of"	
State Department of Health - See "Montana State Department of Health"	
Swine Diseases.....	33
Toxicology Analyses Report (Tabulation).....	23
Trends of Some Livestock Diseases Reported in Montana the Last 10 Years.....	36

	PAGE
Tuberculosis, Cattle.....	31
Urolithiasis Trends (Graph).....	46
U. S. Bureau of Sport Fisheries and Wildlife.....	5,35
U. S. Department of Agriculture.....	5
U. S. Public Health Service.....	5
Vaccination, <u>Brucella abortus</u>	29
Vaccines.....	29,31
Veterinary Research Laboratory, Montana State University.....	5
Veterinary Research Laboratory, Grant to the.....	1
Vibriosis.....	32
Vibriosis Trends, Bovine (Graph).....	46
Vibriosis Trends, Ovine (Graph).....	47
Virus Caused Diseases, Comments on.....	28
Viruses and Rickettsia, Cause of Diseases by.....	56
Virus Diarrhea - See "Mucosal-Virus Diarrhea"	
Vulvovaginitis.....	31
"Water Belly".....	28
"Water Belly" Trends (Graph).....	46
Western Equine Encephalitis - See "Encephalitis"	
White Muscle Disease Trends, Bovine (Graph).....	47
Whole Carcasses Found Unfit for Human Consumption Under State and Federal Meat Inspection (Tabulation).....	64
Wild Animal Diseases.....	34
Wisconsin Mastitis Tests.....	57

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