STATE OF MONTANA

ANNUAL REPORT

of the

STATE VETERINARY SURGEON

to the

LIVESTOCK SANITARY BOARD

July 1, 1965 through June 30, 1966

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STATE OF MONTANA
LIVESTOCK SANITARY BOARD
Helena, Montana

July 1, 1966

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, 1965 through June 30, 1966.

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

September 7, 1965..... Helena
December 6 and 7, 1965..... Billings
March 2, 3, 4 and 5, 1966..... Helena
May 18, 1966..... Great Falls

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, 1966

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, 1965 through June 30, 1966.

Respectfully submitted,

J. W. SAFFORD

State Veterinary Surgeon

STATE OF MONTANA

MEMBERS

of the

MONTANA LIVESTOCK SANITARY BOARD

MR. ARCHIE O. WILSON, President..... Hysham

MR. JOHN W. BLACK, Vice President..... Hinsdale

MR. MELVIN PETERSON..... Wisdom

MR. MANLY A. MOORE..... Powderville

MR. F. T. SAYLOR..... Choteau

MR. WILFORD JOHNSON..... Hall

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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 & 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 46-208 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.

SUMMARY OF PURPOSE AND OBJECTIVES

Montana, with its nearly 3,000,000 cattle, 1,600,000 sheep, 200,000 swine, 2,000,000 poultry, 100,000 horses and other animals, contributes much to providing precious food and fiber to a nation with a rapidly expanding population. The combined livestock and poultry industries, with their dependent allied industries, are essential to the economic stability of our state. During this recent era of food surpluses, which appears to be coming rapidly to a close, too many have had a tendency to take our blessings of adequate, wholesome food and fiber and a healthy, prosperous livestock and poultry industry for granted. The Montana Livestock Sanitary Board and its staff, whose assigned duty and responsibility it is to safequard the health of this extremely important industry, do not take this for granted.

They know, all too well, that livestock diseases can, if permitted, decimate a livestock and poultry industry. They know that starvation, economic misery and political unrest in many countries today is the result of failing to recognize a healthy livestock population as the foundation of socio-economic stability. It has been the purpose of the Livestock Sanitary Board staff and Montana veterinarians, all of whom carry Deputy State Veterinarian appointments, to carry out every safeguard possible to protect the livestock and poultry industry from disease and to assure many people continued, adequate amounts of safe, wholesome food and fiber. To this, they are dedicated. It is hoped this Annual Report will properly reflect their combined efforts to accomplish these important objectives.

LIVESTOCK SANITARY BOARD STAFF

The demand of government and industry for veterinary medical scientists continues to increase. The 18 Colleges of Veterinary Medicine have not been able, and will not be able in the foreseeable future, to graduate sufficient numbers of veterinary medical scientists to meet this demand.

It is most difficult for the Montana Livestock Sanitary Board to attract and maintain the scientific, professional staff it must have in order to provide adequate safeguards for a healthy livestock industry and assure a safe product to Montana meat and milk consumers, when professional salaries are at least 15% to 30% lower than those offered by competing government agencies, industry and private practice. The result has been that key positions have been vacant on the staff somewhere in the organization for 10 years. At the close of the fiscal year, two District Deputy State Veterinarian positions and one Veterinary Meat Inspector position were vacant. With only 6 District Deputy State Veterinarian positions on the entire state field-staff, vacancy of 1/3 of these positions is dangerous. The organizational structure of the Livestock Sanitary Board is established and maintained to have a minimum of trained, competent District Deputy State Veterinarians capable - at a moments notice - to recognize and establish emergency disease control measures. This is an absolute essential to the safety of the industry. The inability to attract competent veterinarians to a career in state public service, resulting in a reduction by 1/3 of a minimum staff, is a risk the industry and Montana should not have to take. This same situation exists with scientific personnel required in the laboratory, in meat inspection and in milk inspection work.

Montana's livestock industry and food-producing capabilities are too precious to the state and nation to risk by not having the safeguard of competent veterinary medical scientists readily available on the Montana Livestock Sanitary Board staff.

The valuable work that has been accomplished has been done by a dedicated few who have tried very hard to do their own work and also carry the additional load created by vacancies on the staff. They simply would not be able to stretch their dedication and willingness to work, should we be faced with only a "small" emergency disease outbreak which can happen at any time.

The accomplishments of these dedicated men and women this past fiscal year are presented to the Montana Livestock Sanitary Board with most sincere gratitude.

DIAGNOSTIC LABORATORY DIVISION

The Diagnostic Laboratory and its work is essential to the operation of all Divisions in the Livestock Sanitary Board. The Disease Control Division could not carry out its functions without the assistance of accurate laboratory findings. The Milk and Dairy Inspection Division could not assure the people of Montana a safe, wholesome fluid-milk supply without the assistance of thousands of routine milk tests. The Meat Inspection Division could not assure the people of Montana a safe, wholesome meat supply without laboratory assistance in the diagnosis of livestock diseases and the testing of meat products to determine their labeled content.

Modern technological advances require that a laboratory have proper equipment, facilities and a properly trained staff. The Livestock Sanitary Board is to be commended for their efforts to maintain as good a state diagnostic laboratory as can be found anywhere.

The review of the livestock diseases present in Montana emphasizes the great need for improving the capability of the laboratory in the diagnosis of virus diseases. It is recommended that additional personnel, trained in virus diagnostic techniques, be added to the staff and the necessary laboratory equipment be obtained to meet this important demand.

In 1965 the Montana Horse Racing Commission requested the Montana Livestock Sanitary Board to determine if the Diagnostic Laboratory could run drug-detection tests on race horses, thus avoiding to have the tests made in an out-of-state laboratory. Due to the lack of some laboratory equipment and personnel trained to perform the tests, the Board determined that the laboratory was unable to perform the tests in the 1965/66 racing season. Trained personnel were available the following year and necessary equipment was obtained. The chemistry laboratory section of the Diagnostic Laboratory started to perform the tests in June, 1966. The Montana Horse Racing Commission arranged payment for the running of the tests from the race tracks submitting the samples. The cost of the equipment and running of the tests will be amortized from the fees charged. This not only assists another state agency, by using an available laboratory in Montana, but provides equipment that increases the capability of the laboratory to make toxicological examinations. It also helps provide an additional chemist who will be needed to

perform the required gas chromatography analyses of meat and milk. Capital item funds became available at the end of the fiscal year to purchase the required gas chromatograph to detect pesticides in meat and milk.

A review of the work performed by the Diagnostic Laboratory Division reveals ever-increasing demands for their exacting scientific work. There is every indication that these demands will continue to increase.

DISEASE CONTROL DIVISION

The reports of the Diagnostic Laboratory Division, the Disease Control Division and the Meat Inspection Division combined will reflect the over-all animal disease picture in Montana for the fiscal year. An analysis of the livestock and poultry disease reports indicates that the health of Montana livestock has never been better. There was an absence, during the fiscal year, of outbreaks of such diseases as anthrax, bluetongue, hog cholera, Newcastle disease and scabies which have, in the past, required extraordinary control procedures. Previous costly diseases, such as brucellosis, tuberculosis and pullorum are at a very low level.

Even though the livestock health record is good, there is always the "smoke and flames" of diseases that must be suppressed before they become conflagrations. In addition to the detailed reports of livestock diseases contained elsewhere in this report, it is believed the following diseases merit the continued attention of the Livestock Sanitary Board

Brucellosis

Progress was made during the fiscal year to eradicate brucellosis. More cattle were tested at slaughter, through continued improvement of the market-cattle-testing program which is proving to be a tremendous asset in county recertification and early detection of newly infected herds. Cattle infection rate of 0.311% and herd infection rate of 0.119% at the end of the fiscal year were the lowest ever recorded. Thirty-eight counties, at the end of the fiscal year, had no known infected herds - an increase of one county. No case of human brucellosis was reported.

Even though progress has been made, many problems arise in attempts to effect final eradication. The greatest problem is general apathy. As a disease that once caused great economic loss and public health danger is reduced to a point where there is no over-all economic loss or public health danger, then the stimulus to persist in efforts for final eradication is greatly reduced. This must not happen. If the last persistent effort is not made, there is sufficient foci of infection remaining to reestablish brucellosis.

Encephalitis

The number of cases of Western Equine Encephalitis in August and September of 1965 was the highest recorded since the pandemic in 1938. This indicated a similarity of increase of incidence which preceded the 1938 pandemic. Increased mosquito activity in 1965 and a susceptible horse population were probably two factors contributing to the outbreak.

Every effort was made to encourage horse owners to vaccinate their horses prior to the 1966 season and to carry out mosquito control in and around poultry premises.

It would appear that response to these efforts has been good, leading us to believe there will not be a repetition of the number of cases in 1966 as occurred in 1965.

Epididymitis

It was definitely established during the fiscal year that ram epididymitis is widespread in Montana and is causing quite serious economic loss in flocks having the disease.

In December, 1965 a committee of the Montana Woolgrowers Association met with the Livestock Sanitary Board to explore ways and means to control the disease. Following the meeting, members of the Livestock Sanitary Board and Montana Veterinary Research Laboratory staff assembled all available information on ram epididymitis for review with the Montana Woolgrowers committee. As the result of this study, the Montana Livestock Sanitary Board, in March, 1966, adopted regulations to provide for official vaccination of rams with REO bacterin and revised Regulation 1521, requiring specific clinical examination for ram epididymitis of rams to be imported into Montana. They also made recommendations for vaccination of breeding rams and recommendations for inspection and rejection of rams with epididymitis being offered for sale at public markets.

It is recommended that the Board, with the cooperation of the Montana Woolgrowers Association, continue to observe and study ram epididymitis in order to implement any action which will become necessary to assist in the control of this disease.

Fluorosis

Again this fiscal year, reports were received of cattle showing clinical signs of fluorosis. Again, all cases were located within a 15 mile radius of Garrison.

It seems strange, in this era of technological advancement, that an industry would continue to throw out materials into the environment which affects the health of animals of the most basic and important industry in our state. It is recommended that the Livestock Sanitary Board continue its efforts to seek appropriate measures that would prevent the indiscriminate discharge of poisons. This can be done in such a way that both industries could exist side by side.

Hog Cholera

Culminating about 40 years of effort, hog cholera has been eradicated from Montana. This fact was recognized in February, 1966, by the presentation to Governor Babcock from the United States Department of Agriculture of a plaque declaring Montana a hog cholera-free state. Being free of hog cholera will mean much to Montana swine producers. It will be a little additional measure to assist in providing adequate food to an expanding population.

It will be most worthwhile to maintain this freedom from hog cholera. It is recommended that continued all-out efforts be made to prevent a reintroduction. It is recommended that should hog cholera reappear in Montana, immediate action be

taken to confine the disease and properly dispose of all infected and exposed swine. This should be followed by careful, supervised cleaning and disinfection of premises and contaminated equipment before restocking. To effect such procedure, it is recommended that funds always be available to indemnify owners of swine that are ordered destroyed. Such action will assure continued freedom from hog cholera.

Rabies

This dreadful disease, during the fiscal year, posed a very real threat to livestock and human health. The disease has made its entry into Montana in the skunk population in eastern Montana. It is apparent that skunk rabies has been gradually spreading westward over a number of years.

Fifteen laboratory-confirmed rabid skunks from December, 1965 through May, 1966 established the seriousness of the threat.

It seems inconceivable that Montana, for the first time in history, should have to live in fear of rabies endemic in its animal population. Definite steps were taken to establish an all-out-effort to carry out an intensified skunk-suppression rabies-eradication program in eastern Montana. The objectives were to halt the western migration of skunk rabies and to eliminate all foci of infection in the skunk population.

The cooperation of Montana County Commissioners, U. S. Bureau of Sport Fisheries and Wildlife, Montana Fish & Game Commission, Montana State Board of Health, Montana Livestock Commission, Montana Cooperative Extension Service and the office of the Governor was solicited and willingly obtained. A committee, consisting of representatives of the Montana Livestock Sanitary Board, Montana Fish & Game Commission, U. S. Bureau of Sport Fisheries and Wildlife, Montana Livestock Commission, Montana State Board of Health and Montana Cooperative Extension Service, investigated proposed procedures for a skunk-suppression rabies-eradication program. The cooperative inter-agency recommended program was activated.

The willing cooperation of each of the above agencies for the common good of the people of Montana, lending their special talents and assistance, portends well that the program will be successful.

Scabies

In December, 1965, it was reported that Montana cattle were in a feedlot at Somis, California, containing about 10,400 head of cattle found to be infected with Psoroptic scabies. The feedlot contained 581 head of Montana cattle, consigned in 9 shipments. It was impossible to determine the origin of the outbreak and Montana cattle were suspect.

It was determined that the Montana cattle originated from 151 ranches located in 27 counties. It was imperative to maintain the health status of Montana's cattle industry and inspect the herds of origin of all the cattle in the feedlot. A total of 32,192 cattle was inspected and, where necessary, skin scrapings were submitted for laboratory examination. All cattle and laboratory examinations were negative, thus, again, avoiding a costly eradication program and an embargo against Montana cattle.

Tuberculosis

Tuberculosis in chickens, caused by Mycobacterium avium, results in unprofitable poultry production. Even though good poultry husbandry and management practices can eliminate tuberculosis from poultry flocks, altogether too many flocks have tuberculosis in Montana.

Swine tuberculosis almost always finds its origin from infected chickens. This results in large numbers of parts of swine, and even total carcasses, being condemned on meat inspection.

Avian tuberculosis also results in sensitizing cattle to the tuberculin test and producing small mesenteric lesions in cattle. This greatly interferes with and complicates bovine tuberculosis eradication efforts.

It is recommended that the Montana Livestock Sanitary Board give serious consideration to the adoption and enforcement of regulations that will effect the elimination of tuberculosis from Montana poultry flocks.

Vibriosis

Vibriosis in cattle in recent years posed a serious threat to economical production of beef cattle. The Trivalent Vibrio fetus bacterin developed by the Montana Veterinary Research Laboratory and extensively field-tested by the Ray Foundation of Montana was produced commercially and became available to the industry during the first part of 1966.

The bacterin, from field-test results, promises to provide a means to control and prevent vibriosis.

Distribution of Causes of Animal Diseases

We wish to call particular attention to the distribution of animal diseases reported during the fiscal year and to their causes, as shown in the Disease Control Division Report. (Page 48)

Virus-caused diseases were responsible for over 50% of diseases reported in cattle. It clearly indicates that these are serious disease threats and will have to be handled in the future. Such diseases as shipping fever, rhinotracheitis, enzootic bovine abortion, mucosal-virus diarrhea, vulvovaginitis, rabies,encephalitis, bluetongue, transmissable gastroenteritis and others predominate the disease picture in livestock today. More research, increased diagnostic capability, effective immunizing agents and increased knowledge of the behavior of the diseases will have to be obtained to effectively deal with many of them. We recommend more emphasis be placed on the cause and control of the increasing viral diseases.

Diseases caused by internal and external parasites, this past fiscal year, were responsible for 81% of the sheep disease problems reported. External parasites, such as lice and sheep keds, and internal parasites, such as round worms and tapeworms, are primarily responsible. These parasites can be effectively controlled through application of proper management and modern treatment.

The diseases for which the causes remain unknown were particularly significant in cattle, accounting for over 17% of the diseases reported. They have been and remain costly to the industry. The diseases of "cancer eye", "pink eye", "asthma" and "water belly" take too great a toll. The hope for reduction of these diseases rests in finding the cause through research, early detection and proper treatment.

MILK & DAIRY INSPECTION DIVISION

Another year can be added to the many without a report of a milk-borne disease outbreak from the consumption of fluid milk. This demonstrates the effectiveness of the milk and dairy inspection work being carried out. This also demonstrates the wisdom of enforcing requirements that dairy herds be free of such diseases as brucellosis and tuberculosis.

The Montana Livestock Sanitary Board Official Regulations pertaining to "Dairies, Milk Plants, Milk and Milk Products" were revised in September, 1965, in consultation with dairy industry representatives, to conform with the requirements of the U. S. Public Health Service 1965 recommended Grade "A" Pasteurized Milk Ordinance.

Plans have been formulated and equipment provided to start routine testing of milk samples for the detection of pesticides in the fall of 1966.

Meetings with industry representatives have launched procedures for the industry to conduct Wisconsin Mastitis Tests on producer-dairy milk samples to implement the milk plant's quality-control-program and to stimulate mastitis control at the dairy farm.

MEAT INSPECTION DIVISION

The availability of additional funds on July 1, 1965, provided by the 39th Legislative Assembly, made it possible to establish meat processing and labeling inspection in all establishments operating under the Montana Meat Inspection Act. Meat processing and labeling inspection has long been a requirement under Montana Laws and Regulations. The funds provided enabled the Livestock Sanitary Board to meet their responsibilities assigned to them by these Laws and Regulations.

Meat processing and labeling inspection was inaugurated in 17 establishments during the fiscal year. The cooperation of the meat plants and industry has been excellent in establishing this phase of the meat inspection. All plants required to have meat inspection have done so, with the exception of 4 small meat processing establishments in Missoula. Every effort is being made to obtain their compliance before resorting to required legal action. The establishment of processing and labeling inspection required the obtaining and training of all new personnel. Excellent progress has been made.

It appears that meat inspection demands will continue to increase. Eight additional establishments were granted official meat inspection this fiscal year. It

is anticipated that at least 4 more will request meat inspection during the next fiscal year.

The report of the Meat Inspection Division, showing that 1,571,005 pounds of meat and meat products were found totally unfit for human consumption and condemned, speaks more eloquently than words to justify this public health service.

ARTIFICIAL INSEMINATION

In accordance with Chapter 37, Laws of 1953, 230 licenses were issued to individuals during the fiscal year to practice artificial insemination in Montana.

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.

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 establishing and carrying out a 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

The studies for the 1965-66 fiscal year were divided into three catagories:

I Isolations of bacteria from fecal specimens of newborn calves; normal and scouring calves in the same herd.

II Effects of *E. coli*, *C. perfringens*, mixtures of bacteria, and bacterial toxins.

III Laboratory studies on:

A Colostrum, amounts absorbed, antibody content.

B Toxigenicity and serological characteristics of isolated bacteria.

C Attempt to correlate resistance of calves with "A" and "B" above.

Results:

I Many bacteria have been isolated from fecal samples of calves. Over 600 E. coli and C. perfringens isolates have been obtained and are being processed for serological characteristics. It has been observed that "normal" newborn calves contain only E. coli, while all but one of the scouring calves contained large numbers of both E. coli and C. perfringens, Types A and C. Anerobes were not isolated from a scouring calf that had received two treatments.

II Studies on the effect of bacterial cultures or toxins are inconclusive because we have not had enough animals on the experiment. This work will be carried to completion, and the data obtained will be used to design future experiments with larger groups of calves.

III It is much too early to arrive at any conclusions from our laboratory investigations in which we are attempting to obtain some form of correlation between the quality and quantity of ingested colostrum and resistance to challenge.

Attendance was made to the Western Regional Committee Meeting on Enteric Diseases of Newborn Calves. The Veterinary Research Laboratory is a member of this committee and participates in the annual meeting. Ten different Western Experiment Stations are investigating this problem on a regional basis. The meeting serves for the correlation and exchange of information on this subject of calf scours and to eliminate duplication of effort.

In summary, we feel that, although substantial progress has been achieved during the beginning studies and preliminary results are encouraging, much work remains to be accomplished before the causes of the disease syndrome are fully understood and the time when reliable methods of prevention, treatment and control are established."

OFFICIAL REGULATIONS

Revised:

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

1. Chapter 1, Regulation 101 through 118. "Dairies, Milk Plants, Milk and Milk Products".
2. Regulation 1522. "Importation of Swine".
3. Regulation 2315. "Labeling Meat Products".
4. Regulation 3008. "Per Diem Pay to Deputy State Veterinarians".

New:

The following new Official Regulation was adopted during the fiscal year:

1. Chapter 37, Regulation 3701 and 3702. "Official Vaccination for Ram Epididymitis".

OFFICIAL ORDERS

The following Official Orders were issued during the fiscal year:

1. Order No. 209. "An Order Placing Dawson and Wibaux Counties Under Rabies Quarantine".
2. Order No. 210. "An Order Placing Valley, Daniels, Roosevelt and Sheridan Counties Under Rabies Quarantine".

LICENSES AND PERMITS ISSUED

*Licenses	Total
Artificial Inseminators	230
Garbage Feeding	13
Meat Depots	4
Meat Packing Houses	19
Milk Plants	39
Poultry Slaughterhouses	4
Producer Dairies	479
Rendering Plants	12
Retail Raw Dairies	19
Slaughterhouses	62
Total Licenses Issued	881

Permits (To Import into Montana)	
Chicks and Hatching Eggs	69
Semen for Artificial Insemination (From 6 Breeding Services)	519
Total Permits Issued	588
TOTAL LICENSES AND PERMITS ISSUED	1,469

*License fees collected during the fiscal year and submitted to the State of Montana General Fund..... $2,627.50

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 Independent Meat Packers Association

Montana Livestock Commission

Montana Milk Distributors

Montana Milk Producers

Montana Poultrymen

Montana State Board 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

Ray Foundation

Rocky Mountain Laboratory

U. S. Bureau of Sport Fisheries and Wildlife

U. S. Department of Agriculture:

- Agricultural Research Service, Montana Branch

U. S. Public Health Service

SUMMARY OF OFFICIAL INSPECTIONS AND OFFICIAL TESTS

Following is a summary of official inspections and official tests made during the fiscal year:

OFFICIAL INSPECTIONS OR OFFICIAL TESTS	
Animals inspected and field-tested	3,266,643
Ante mortem and post mortem animal inspections	106,133
Dairy and Milk Plant inspections	1,539
Garbage cooking inspections	199
Licenses issued	881
Meat-product labels inspected and approved	199
Milk Plant equipment tests	158
Pounds of processed meat inspected and reinspected	10,632,977
Slaughterhouse, Meat Packing House, Meat Depot and Rendering Plant inspections	167

FINANCIAL STATEMENT

STATEMENT OF APPROPRIATED FUNDS

FUNDS AVAILABLE 7/1/65

General Fund			
Operation & Capital...	Encumbered.....	$ 1,749	
Operation.....	Appropriations.....	155,435	
Capital.....	Appropriation.....	14,815	
Grants & Benefits.....	Appropriation.....	10,200	
Meat Inspection.....	Appropriation.....	129,230	
Total General Funds Available.....			$311,429
Earmarked Revenue Fund			
Operation.....	Appropriation.....		155,350
Total All Funds Available.....			$466,779

FUNDS EXPENDED

General Fund			
Operation.....		$148,622	
Capital.....		11,065	
Grants & Benefits.....		10,021	
Meat Inspection.....		113,707	
Total General Funds Expended.....			$283,415
Earmarked Revenue Fund			
Operation.....			137,341
Total All Funds Expended.....			420,756
BALANCE 6/30/66.....			$ 46,023

STATEMENT OF LIVESTOCK SANITARY BOARD EARMARKED REVENUE FUND

CASH BALANCE 7/1/65.....		$ 39,314	
Income			
Matured U.S. Treasury Bills.....		20,000	
Interest on U.S. Government Bonds.....		624	
Livestock Taxes (3 Mills on Cattle & Sheep)...		118,807	
Total Cash Balance and Income.....			$178,745
Expended			
Appropriated Funds.....			137,341
CASH BALANCE 6/30/66.....			$ 41,404

*STATEMENT OF LIVESTOCK SANITARY BOARD EMERGENCY EARMARKED REVENUE FUND

U.S. Government Bonds.....	$ 92,838

*Reserve for emergency use in controlling dangerous disease outbreaks.

SUMMARY OF WORK PERFORMED

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

OFFICIAL TEST OR EXAMINATION		NUMBER
Autopsies Performed		1,312
Bacteriology, Pathology, Parasitology and Virology Findings:		
Positive		2,234
Negative		2,173
Bacteriology Milk Tests		14,051
Chemical Analyses		2,438
Serology Tests		151,574
Total		173,782
Tests Performed by Other Laboratories	171	
Serology Field Tests	26,185	
Total		26,356
TOTAL OFFICIAL TESTS OR EXAMINATIONS		147,426

BACTERIOLOGY, PATHOLOGY, PARASITOLOGY AND VIROLOGY REPORT

POSITIVE FINDINGS	BAT	BUFFALO	CAT	CATTLE	CHICKEN	CHINCHILLA	DEER	DOG	DUCK	ELK	GOAT	HAMSTER	HORSE	MOUSE	PHEASANT	RABBIT	SHEEP	SKUNK	SWINE	TURKEY	MISCELLANEOUS Specimen	MISCELLANEOUS No.
Abomasal ulcer				4																		
Achromobacter sp				1									1				1					
Actinobacillus lignieresii				2																		
Actinomyces bovis				3			1															
Adenocarcinoma													1									
Aerobacter aerogenes				5	2								1			1	2		2			
Alcaligenes bronchisepticus								1														
Alcaligenes sp				3	1			1													Ice Balls	3
Alternaria sp				3																		
Anaplasma marginale				22																		
Anemia																			1			
Anoplocephala perfoliata													1									
Anoplocephala sp													1									
Anorexia						1													1			
Aortic rupture				1																		
Arizona sp				2	6												2	1	1		Gold Fish Meat Meal	1 1
Arteriosclerosis																1						
Arthritis				1															1			
Ascaris equorum													1									
Ascaridia galli					7																	
Aspergillus fumigatus				4	3	1							2									
Aspergillus restrictus				1																		
Aspergillus sp																					Hay	1
Asphyxiation				2																		
Astragalus drummondi																					Plant	1
Atherosclerosis																2						
Auto-agglutination titer													3									

Bacteriology, Pathology, Parasitology and Virology Report

POSITIVE FINDINGS	BAT	BUFFALO	CAT	CATTLE	CHICKEN	CHINCHILLA	DEER	DOG	DUCK	ELK	GOAT	HAMSTER	HORSE	MOUSE	PHEASANT	RABBIT	SHEEP	SKUNK	SWINE	TURKEY	MISCELLANEOUS Specimen	No.
Avitaminosis A.....					1																	
Bacillus anthracoid...				1																		
Bacillus cereus.....				3																		
Bacillus sp.....				5																		
Bacillus subtilis.....				9	7			1					1									
Bloat.....				10													1				Ice Balls	3
Bone (Congenital defect)				1																		
Bordetella bronchiseptica.....				1																	Porcupine Guinea Pigs	1 16
Bordetella sp.....				1																		
Botrytis sp.....																					Hay	1
Bovicola bovis.....				1																		
Brain tumor.....				1																		
Breast blister.....					2																	
Brevibacterium sp.....																					Ice Balls	3
Brisket edema.....				3																		
Brucella abortus.....																					Vaccine	1
Brucella abortus, Type 1.....				3																		
Brucella ovis.....																	1					
Candida albicans.....						1	1														Barley	1
Cannibalism.....					2																	
Carcinoma.....							3						1									
Cardiac anomaly.....				1																		
Castorstrongylus castoris.....																					Beaver	1
Cephalosporium sp.....				1																		
Cerebellar aplasia....				2																		
Cerebellar hypoplasia.				2													1					
Chaberta ovina.....																	5					
Cirrhosis of liver....				1																		

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POSITIVE FINDINGS	BAT	BUFFALO	CAT	CATTLE	CHICKEN	CHINCHILLA	DEER	DOG	DUCK	ELK	GOAT	HAMSTER	HORSE	MOUSE	PHEASANT	RABBIT	SHEEP	SKUNK	SWINE	TURKEY	MISCELLANEOUS Specimen	MISCELLANEOUS No.
Citrobacter sp.....				4	2														3			
Clostridium bifermentans																					Casings	2
Clostridium carnis....				2				1														
Clostridium chauvei...				15																		
Clostridium difficilis				1																		
Clostridium hemolyticum				5																		
Clostridium novyi.....				4																		
Clostridium perfringens				2													2					
Clostridium perfringens, Type A.....				5													1					
Clostridium perfringens, Type C.....				15															1			
Clostridium perfringens, Type D.....				6													5		1			
Clostridium perfringens, Type E.....				1																		
Clostridium septicum..				6													2					
Clostridium sp.....				3																		
Coccotetra sporium sp.				1																		
Colitis.....																			1			
Contracted tendons....				1																		
Cooperia oncophora....				2																		
Cooperia sp.....				3													9					
Corynebacterium bovis.				2																		
Corynebacterium diphtheriae.....				1																		
Corynebacterium equi..													1						1			
Corynebacterium ovis..							1										6					
Corynebacterium paurometabolum.....																			1			
Corynebacterium pyogenes				27			2						1				5		3			

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POSITIVE FINDINGS	BAT	BUFFALO	CAT	CATTLE	CHICKEN	CHINCHILLA	DEER	DOG	DUCK	ELK	GOAT	HAMSTER	HORSE	MOUSE	PHEASANT	RABBIT	SHEEP	SKUNK	SWINE	TURKEY	MISCELLANEOUS Specimen	MISCELLANEOUS No.
Corynebacterium renale				4																		
Corynebacterium sp...				15									1				2				Porcupine	1
Coryza.....					2																	
"Crooked calf" syndrome				1																		
Crop impaction.....					1																	
Curvularia sp.....				1																		
Cuterebra larva.....																1						
Cysticercus sp.....							1															
Damalinia ovis.....																	4					
Damalinia sp.....				1													1					
Demodex folliculorum.								1														
Depraved appetite....													1									
Dictyocaulus filaria.																	3					
Dictyocaulus viviparus				1																		
Diplococcus pneumoniae																					Rats	2
Diplococcus sp.....				2																		
Dipylidium caninum...								1														
Distemper.....								2														
Dystocia.....								3														
Edema, gut.....																			2			
Egg bound.....					1																	
Eimeria arloingi.....																	13					
Eimeria auburnensis..				1																		
Eimeria bovis.....				6																		
Eimeria sp.....				5	8								5			1	1		1			
Eimeria stiedae.....																1						
Eimeria zurnii.....				21																		
Emaciation.....																	1					
Emphysema, pulmonary.				1																		
Encephalitis.....				2	1								1									
Enteritis.....			1			1		1														

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POSITIVE FINDINGS	BAT	BUFFALO	CAT	CATTLE	CHICKEN	CHINCHILLA	DEER	DOG	DUCK	ELK	GOAT	HAMSTER	HORSE	MOUSE	PHEASANT	RABBIT	SHEEP	SKUNK	SWINE	TURKEY	MISCELLANEOUS Specimen	MISCELLANEOUS No.
Eperythrozoon.....																			1			
Epicarditis.....				1																		
Equine infectious anemia.....													5									
Erysipelothrix rhusiopathiae.....				1															5			
Escherichia coli:.....			2	306	22	5		6				1	6				31		45		Beaver	1
.....																					Caribou	1
.....																					Goldfish	1
.....																					Gopher	1
.....																					Gulnea pig	1
.....																					Meat	2
.....																					Milk	3
.....																					Mink	2
Exudative epidermitis.																			1			
Fasciola hepatica.....				4																		
Fat necrosis.....				1																		
Fatty degeneration....				1	4																	
Fibroadenoma.....			1																			
Fibroma.....				2				3					2									
Fibromatous epulis....													1									
Fibrosarcoma.....													1									
Fimbriaria sp.....									1													
Fistula.....													1									
Flavobacterium sp.....													1						2		Ice Balls	3
Foot rot.....																	2					
Founder, grain.....				1																		
Fusarium roseum:.....																					Hay	2
.....																					Dirt	1
Fusarium sp.....				1																		
Gastritis.....																			1			

Bacteriology, Pathology, Parasitology and Virology Report

POSITIVE FINDINGS	BAT	BUFFALO	CAT	CATTLE	CHICKEN	CHINCHILLA	DEER	DOG	DUCK	ELK	GOAT	HAMSTER	HORSE	MOUSE	PHEASANT	RABBIT	SHEEP	SKUNK	SWINE	TURKEY	MISCELLANEOUS Specimen	MISCELLANEOUS No.
Gastrophilus equi....													1									
Glosso-pharyngeal paralysis.....				1																		
Gout, visceral.....					3																	
Granuloma.....								1														
Haemobartonella sp...			1	1																		
Haemonchus contortus.				9													1					
Haemophilus gallinarum					5																	
Haemophilus influenzae																					Rat	1
Haemophilus ovis.....																	3					
Haemophilus sp.....				1																		
Haemophilus suis.....																				1		
Hair balls.....																1						
Heart failure.....								1														
Hemanglocarcinoma....													1									
Hematology.....				2				1					1									
Hemorrhage.....				1		2																
Hemosiderosis.....								1														
Hernia.....				1																		
Histiocytoma.....								1														
Hormodendrum hordei..				2																		
Hydrocephalus.....				5																		
Hymenolepis.....																					Worm	1
Hypoglycemia.....																			2			
Infectious bovine rhinotracheitis....				7																		
Infectious sinusitis.					1																	
Infectious synovitis.					1																	
Influenza.....																			1			
Injury.....					2																	
Intestinal obstruction				1		1																

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POSITIVE FINDINGS	BAT	BUFFALO	CAT	CATTLE	CHICKEN	CHINCHILLA	DEER	DOG	DUCK	ELK	GOAT	HAMSTER	HORSE	MOUSE	PHEASANT	RABBIT	SHEEP	SKUNK	SWINE	TURKEY	MISCELLANEOUS Specimen	MISCELLANEOUS No.
Intussusception						1																
Keloid							1						5									
Klebsiella cloaecae																			1		Meat	1
Klebsiella sp				4									1						1			
Laminosioptes cysticole					1																	
Leptospira sp				51				5					6						17			
Leukemia								1														
Leukosis					22																	
Lice, unidentified								1														
Linognathus setosus					3																	
Lipoma			1																			
Lunger																	5					
Listeria monocytogenes																	1					
Lymphocytoma																			1		Meat	1
Lymphosarcoma			1					2					1									
Mandibular phlegmon				2																		
Manila pitophila				1																	Hay	1
Mastitis				18																		
Malanoma				1																		
Menopon gallinae					1																	
Mesenteric aneurysm													1									
Metastrongylus sp																			8			
Metritis				4																		
Microbial sensitivity				19	4		2						4				3		6			
Micrococcus sp				1									1								Ice Balls	3
Microsporum canis													1									
Mixed infection				2									1			2						
Moniezia benedeni				1																		
Moniezia expansa				6													5					
Mucor sp				1									2								Hay	10

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POSITIVE FINDINGS	BAT	BUFFALO	CAT	CATTLE	CHICKEN	CHINCHILLA	DEER	DOG	DUCK	ELK	GOAT	HAMSTER	HORSE	MOUSE	PHEASANT	RABBIT	SHEEP	SKUNK	SWINE	TURKEY	MISCELLANEOUS Specimen	MISCELLANEOUS No.
Mucosal disease.....				2																		
Musca autumnalis.....																					Fly	2
Mycobacterium paratuberculosis.....				5																		
Mycobacterium tuberculosis.....				2	17																Peacock	1
Mycoplasma gallisepticum.....					3																	
Myelocytosis.....								1														
Myocarditis.....																					Guinea Pig	1
Necrotic enteritis...																			3			
Necrotic gingivitis..																			1			
Necrotic laryngitis..				1																		
Neisseria meningitidis																	1					
Nematodirus helvetianus.....				1																		
Nematodirus spathiger				7													1					
Nematodirus sp.....				5													4					
Neoplasia.....				1	1																	
Nephritis.....			1	3	2			1		1												
Nephrosis.....								1														
Nocardia sp.....																			7			
Noguchia cuniculi....					5																	
Nutritional deficiency					14																	
Omphalitis.....					1																	
Osteomyelitis.....				1																		
Osteosarcoma.....													1									
Ostertagia ostertagi.				7													10					
Otitis externa.....																3						
Otodectes cynotis....																3						
Ovine virus abortion.											2											

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POSITIVE FINDINGS	BAT	BUFFALO	CAT	CATTLE	CHICKEN	CHINCHILLA	DEER	DOG	DUCK	ELK	GOAT	HAMSTER	HORSE	MOUSE	PHEASANT	RABBIT	SHEEP	SKUNK	SWINE	TURKEY	MISCELLANEOUS Specimen	MISCELLANEOUS No.
Oxytropis lambertii...																	2					
Oxytropis sericea.....																					Plant	1
Panleucopenia.....				4																		
Papillaria sp.....																					Hay	1
Papilloma.....													1						1			
Parasitism.....				1			1			1							1					
Pasteurella hemolytica				7		3											7		1		Beaver	1
Pasteurella multocida.				4									3			2	3					
Penicillium nigrans...				1																		
Penicillium roqueforti																					Hay	6
Penicillium sp.....				1																		
Penicillium terrestre.				1																		
Pericarditis.....				1	1																	
Peritonitis.....				4	1																	
Phormia sp.....								1											1			
Pleuritis.....																					Caribou	1
Pneumonia.....				27													4		4		Rat	1
Poison: choke cherry..				1																		
larkspur.....				1																		
loco.....																	6					
Proteus mirabilis.....				1																		
Proteus sp.....				8	14	2						1							3		Guinea Pigs Porcupine	2 1
Proteus vulgaris.....				10		2		1								1			4			
Pseudoleukemia.....				1																		
Pseudomonas aeruginosa				18		2										3					Moose	1
Pseudomonas sp.....				9												1						
Psoroptes cervinus....										1												
Pullet disease.....					3																	
Pulmonary emphysema...				9																		
Quail disease.....																					Quail	1

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POSITIVE FINDINGS	BAT	BUFFALO	CAT	CATTLE	CHICKEN	CHINCHILLA	DEER	DOG	DUCK	ELK	GOAT	HAMSTER	HORSE	MOUSE	PHEASANT	RABBIT	SHEEP	SKUNK	SWINE	TURKEY	MISCELLANEOUS Specimen	MISCELLANEOUS No.
Rabies	1																	15				
Ram epididymitis organism																	11					
Rhizopus niger				2																		
Riboflavin deficiency					1										1							
Rickets					3																	
Rizoctenia sp				1																		
Ruptured gall bladder				1																		
Salmonella derby				1																		
Salmonella: infantis													1								Gosling	1
																					Meat Meal	1
newport					1																	
providence				1															1			
pullorum					3																	
san diego					1																	
typhimurium													1						1		Mink	1
typhimurium, var. copenhagen													1									
Salmonella sp																2						
Saponaria vaccaria																					Seed	1
Sarcoptes scabiei													6						2			
Sarcosporidiosis				2					1													
Scopulariopsis sp				7				1					3								Hay	2
Snuffles																1						
Sphaerophorus necrophorus				4																		
Spinal infection				1																		
Staphylococcus aureus				4	2														1			
Staphylococcus sp				132	3			5					7			4	7		9		Porcupine	1
																					Canary	1

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POSITIVE FINDINGS	BAT	BUFFALO	CAT	CATTLE	CHICKEN	CHINCHILLA	DEER	DOG	DUCK	ELK	GOAT	HAMSTER	HORSE	MOUSE	PHEASANT	RABBIT	SHEEP	SKUNK	SWINE	TURKEY	MISCELLANEOUS Specimen	MISCELLANEOUS No.
Stemphyllium sp.								1					2								Straw	1
Streptococcus sp.			3	44	4	3		2					7				3		18		Porcupine	1
																					Ice Ball	1
Streptomyces sp.				4																		
Strongylus equinus													1									
Strongylus sp.				6									12				6		3			
Synovitis				2	1														1			
Tetanus																	1					
Thoracic abscess				1																		
Tooth abscess													1									
Torsion, intestinal				1																		
Trauma			1	2	1								1								Guinea Pig	1
Trauossosius americands																					Beaver	1
Trichophyton gypseum													2									
Trichophyton rubrum								1														
Trichostrongylus sp.				12									3									
Trichuris ovis																	2					
Trichuris sp.								1											1			
Ulcer, colonic				1																		
Unfit for consumption				6			3			1							1					
Uremia					1																	
Urinalysis								1														
Urinary calculi				1				1									1					
Vaginitis																	1					
Vibrio bubulus				2																		
Vibrio fetus				57													9					
Vibrio sp.				1		1											1				Ice Ball	1
Virus pig pneumonia																			1			
White muscle disease				7													1					
Wohlfahrtia larva								1														
Zygadenus sp.																					Plant	1

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POSITIVE FINDINGS	BAT	BUFFALO	CAT	CATTLE	CHICKEN	CHINCHILLA	DEER	DOG	DUCK	ELK	GOAT	HAMSTER	HORSE	MOUSE	PHEASANT	RABBIT	SHEEP	SKUNK	SWINE	TURKEY	MISCELLANEOUS Specimen	MISCELLANEOUS No.
Unsatisfactory specimens.....																					Various	70
TOTAL POSITIVE FINDINGS	1	0	16	1,171	198	26	16	55	2	4	2	2	119	0	1	44	202	17	175	1		179
NEGATIVE FINDINGS																						
Acid-fast bacilli.....				22	6								1		3	1	1				Meat	1
Actinobacillus sp.....				1																		
Anaplasma marginale...				28																		
Anthrax bacillus.....				5																		
Bacterial abortion....			1	520							1		3				11		8		Reindeer	1
Bloat.....				1													1					
Brucella abortus.....		1		13			1	1		4			2						10			
Cerebellar hypoplasia.																	1					
CRD.....					2																	
Clostridium botulinum.					1																Hay	1
Clostridium chauvei...				5																		
Clostridium hemolyticum				14																		
Clostridium perfringens				104		1											21		23			
Clostridium septicum..				1									1									
Clostridium tetani....																	1					
Coccidia.....				2	5																	
Dwarfism.....				2																		
Encephalitis.....													6						2			
Enzootic bovine abortion.....				17																		
Eperythrozoon.....																			1			

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NEGATIVE FINDINGS	BAT	BUFFALO	CAT	CATTLE	CHICKEN	CHINCHILLA	DEER	DOG	DUCK	ELK	GOAT	HAMSTER	HORSE	MOUSE	PHEASANT	RABBIT	SHEEP	SKUNK	SWINE	TURKEY	MISCELLANEOUS Specimen	MISCELLANEOUS No.
Ergot																					Hay	1
Erysipelothrix sp.																			17			
Histomonas meleagridis					2																	
Hog cholera																			1			
Hydrocephalus				9																		
IBR				1																		
Leptospira sp.			2	378				8		5	1		3			1	13		31		Reindeer	1
Leukosis					2																	
Listeria				5													1				Silage	1
Mange mites				15				2					4				1		1			
Mycoplasma gallisepticum					7																	
Mycosis			1	10	1	1		5					13				1		1		Parakeet	1
Neoplasm				3				1														
Ovine virus abortion																	11					
Parasitism			1	26	9	2		2					8			1	2		2			
Pasteurella sp.				8													1	2	1		Beaver	1
Pathogenic algae				1																		
Pathogenic bacteria			1	111	23	2	1	2	3				5			7	4		21		Water	8
Piroplasma													2									
Psittacosis																					Bacterin	2
																					Canary	1
Rabies	23		37	20			1	49				3	1	23				63			Bear	1
																					Badger	1
																					Beaver	1
																					Bobcats	2
																					Chipmunks	2
																					Coyotes	3
																					Foxes	7
																					Gophers	15
																					Muskrats	4

Bacteriology, Pathology, Parasitology and Virology Report

NEGATIVE FINDINGS	BAT	BUFFALO	CAT	CATTLE	CHICKEN	CHINCHILLA	DEER	DOG	DUCK	ELK	GOAT	HAMSTER	HORSE	MOUSE	PHEASANT	RABBIT	SHEEP	SKUNK	SWINE	TURKEY	MISCELLANEOUS Specimen	MISCELLANEOUS No.
Rabies (continued).....																					Raccoons	13
.....																					Rats	2
.....																					Squirrel	1
.....																					Weasel	1
Ram epididymitis organism.....																	5					
Salmonella sp.....				25	10	3		1				1	2						33		Meat Meal	13
.....																					Water	1
.....																					Goose	1
.....																					Pigeon	1
Trichomonas fetus.....				22																		
Trichina.....																			2			
Vibrio fetus.....				50													23					
Virus isolation.....				13																		
White muscle disease...				7													6					
TOTAL NEGATIVE FINDINGS	23	1	43	1,439	68	9	3	71	3	9	2	4	51	23	3	10	104	65	153	0		88

SEROLOGY REPORT

TEST	SOURCE	POSITIVE	NEGATIVE	SUSPICIOUS	VACCINATE	UNSATISFACTORY	ANTI-COMPLEMENTARY	TOTAL
Anaplasma CA	Cattle	215	419	3				637
Anaplasma CF	Cattle	165	381	169		74	5	794
Br. abortus agglutination	Antelope		1					1
Br. abortus agglutination	Buffalo		108	7				115
Br. abortus agglutination	Cattle	577	101,456	5,022	53	19		107,127
Br. abortus agglutination(field)	Cattle		651					651
Br. abortus agglutination	Deer		62	1				63
Br. abortus agglutination	Elk	3	1,232	17				1,252
Br. abortus agglutination	Goat		24	1				25
Br. abortus agglutination	Horse	8	29	19				56
Br. abortus agglutination	Sheep		11					11
Br. abortus agglutination	Swine		281	12				293
Br. ring	Cream		6,545	15				6,560
Br. ring	Milk		4,388	21				4,409
*Colorado Tick Fever CF	Cattle		19					19
*Colorado Tick Fever CF	Horse		4					4
** EBA Neutralization	Cattle	8	79	12				99
** IBR Neutralization	Cattle		39					39
L. pomona agglutination	Buffalo	8	78	7				93
L. pomona agglutination	Cattle	121	2,896	111				3,128
L. pomona agglutination	Chinchilla	1						1
L. pomona agglutination	Dog		3					3
L. pomona agglutination	Elk		158					158
L. pomona agglutination	Horse	2	10					12
L. pomona agglutination	Sheep		8					8
L. pomona agglutination	Swine	6	72	1				79
L. canicola agglutination	Dog		1					1
L. icterohemorrhagia agglutination	Dog		1					1
REO CF	Sheep	119	237	6			19	381
S. pullorum agglutination(field)	Chickens	22	25,512					25,534
*St. Louis encephalitis.CF	Horse		4					4
*Western equine encephalitis CF.	Horse	12	4					16
TOTAL		1,267	144,713	5,424	53	93	24	151,574

*Tests made by Rocky Mountain Laboratory, Hamilton.
**Tests made by Veterinary Research Laboratory, Bozeman.

MILK, CREAM AND COTTAGE CHEESE BACTERIOLOGY REPORT

	IN COMPLIANCE	NOT IN COMPLIANCE
MILK ANALYSES		
Bacterial counts	3,843	366
Coliform counts	3,177	1,045
Mastitis tests	47	199
Penicillin determinations	4,225	10
Total Milk Analyses	11,292	1,620
CREAM ANALYSES		
Bacterial counts	343	36
Coliform counts	315	64
Penicillin determinations	379	-0-
Total Cream Analyses	1,037	100
COTTAGE CHEESE		
Bacterial counts	3	1
Collform counts	3	1
Penicillin determinations	4	-0-
Total Cottage Cheese Analyses	10	2
TOTAL MILK,CREAM AND COTTAGE CHEESE ANALYSES	12,339	1,722

CHEMICAL REPORT

TOXICOLOGY ANALYSES	ARSENIC		COPPER		CYANIDE		LEAD		MERCURY		PHOSPHORUS		STRYCHNINE	
	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.	Pos.	Neg.
Bones						1								2
Bovine blood		6					1	9		3				
Bovine brain							1							
Bovine hair		2												
Bovine kidney	1	6					4	10		1				
Bovine liver		18					7	20		12				
Bovine stomach content	9	61				2	5	65		28				
Canine liver	1	4						3		4				
Canine stomach content	1	10				1		8		4		1	14	17
Cardboard								1						
Caulking compound							1							
Chinchilla stomach content		1						1						
Equine liver		1						1						
Equine stomach content		7					1	3		1				
Feed		1						1		1				
Feline stomach content		3						2		1				3
Grain									1					
Goose		1						1						
Meat		2						2		2				5
Ovine liver			1											
Ovine stomach content	1	1											1	
Paint							1							
Porcine kidney									1	1				
Porcine liver									1	1				
Porcine stomach content	1	3						3						2
Powder		3						2		2			1	1
Soil		1						1						
Water		1												
Total Toxicology Analyses	14	132	1	-0-	-0-	4	21	133	3	61	-0-	1	16	30

Chemical Report

BLOOD ANALYSES	CALCIUM			CAROTENE			MAGNESIUM			PHOSPHORUS			SGOT			VITAMIN A		
	High	Norm.	Low	High	Norm.	Low	High	Norm.	Low	High	Norm.	Low	High	Norm.	Low	High	Norm.	Low
Anticoagulant test...		23						23										
Avian.....								5			9	1					4	2
Bovine.....	25	43	10	6	35	6	11	32		23	50	15	1			23	28	5
Porcine.....						1												1
Ovine.....	1							1				1						
Total Blood Analyses.	26	66	10	6	35	7	11	61	-0-	23	59	17	1	-0-	-0-	23	32	8

MILK AND CREAM ANALYSES

Milk and cream samples..... 1,390

WATER FOR LIVESTOCK CONSUMPTION ANALYSES

	FIT	QUESTIONABLE	UNFIT
Water samples.....	26	4	7

QUANTATIVE NITRATE ANALYSES

	FIT	QUESTIONABLE	UNFIT
Feed.....	6	1	2
Water.....	25	3	5
Total Quantative Nitrate Analyses.....	31	4	7

RACE HORSE DRUG ANALYSES

	POSITIVE	NEGATIVE	SUSPICIOUS
Urine and saliva samples.....	-0-	70	-0-

MISCELLANEOUS ANALYSES..... 98

TOTAL ALL CHEMICAL ANALYSES..... 2,438

AUTOPSIES PERFORMED REPORT

SPECIE	NUMBER
Badger	1
Bats	26
Beavers	3
Bobcats	2
Canary	1
Cats	44
Cattle	565
Chickens	146
Chinchillas	24
Chipmunks	2
Coyotes	3
Deer	1
Dogs	55
Ducks	5
Foxes	6
Geese	4
Gophers	14
Guinea pigs	10
Hamsters	4
Horses	13
Mice	20
Mink	3
Muskrats	4
Parakeet	1
Parrot	1
Peacock	1
Pheasants	9
Porcupine	1
Quail	1
Rabbits	27
Raccoons	12
Rats	2
Reindeer	1
Sheep	111
Skunks	74
Squirrels	2
Swine	104
Turkeys	4
Weasels	5
TOTAL AUTOPSIES PERFORMED	1,312

DISTRIBUTION OF LABORATORY TESTS AMONG SPECIES OF ANIMALS

SPECIE	NUMBER	PERCENT
Cattle	115,920	71.70
Chickens	25,967	16.06
Milk	15,444	9.55
Elk	1,423	.88
Sheep	832	.52
Swine	817	.51
Dogs	254	.16
Horses	240	.15
Buffalo	209	.13
Cats	98	
Skunks	82	
Deer	81	
Rabbits	55	
Chinchillas	35	
Goats	29	
Bats	25	
Moose	23	
Guinea pigs	21	
Gophers	16	
Raccoons	13	
Foxes	7	
Hamsters	6	
Rats	6	
Beavers	6	
Ducks	6	
Porcupines	5	
Pheasants	4	.34
Muskrats	4	
Coyotes	3	
Mink	3	
Caribou	3	
Canaries	2	
Fishes	2	
Bobcats	2	
Raindeer	2	
Moose	1	
Turkey	1	
Pigeon	1	
Goose	1	
Badger	1	
Bear	1	
Peacock	1	
Quail	1	
Parakeet	1	
Weasel	1	
Squirrel	1	
TOTAL	161,656	100%

CATTLE DISEASES

Montana veterinarians reported 44 cattle diseases involving 31,182 cattle on 5,893 ranches. This is an increase of 4 diseases, 4,484 cattle and 115 ranches from the previous fiscal year.

Anaplasmosis

A total of 90 cases of anaplasmosis on 69 ranches was reported by Montana veterinarians. This is a reduction of 179 cases and 61 ranches from the previous fiscal year.

The Diagnostic Laboratory tested 715 blood samples from cattle for anaplasmosis, with the Complement-Fixation Test, and 46% showed positive or suspicious reactions. The Capillary Agglutination Tube Test for anaplasmosis was applied to 637 bovine blood samples, with 32% giving a positive reaction. The tests, again this fiscal year, confirm that the number of carrier animals in the Montana enzootic area is high. The potential remains for a recurrence of the heavy losses reported during the summer and fall of 1964.

The capability of the anaplasmosis infectious agent being carried over from year to year in ticks, deer and possibly other wildlife leaves only one practical way to attempt to control anaplasmosis in a range or semi-range area in Montana..... that way is through an effective immunizing agent.

Fort Dodge Laboratories, Fort Dodge, Iowa, started, during the year, to commercially manufacture the anaplasmosis vaccine "Anaplaz", developed by the College of Veterinary Medicine, University of Oklahoma. Reports received indicate that about 7,517 doses of the vaccine were used in Montana during the fiscal year.

In order to evaluate the effectiveness of the vaccine in Montana, Fort Dodge Laboratories gave 600 doses to the Livestock Sanitary Board to be used in field-trials. The vaccine was administered to 248 cattle in three different herds in the enzootic area. An equal number of cattle was left unvaccinated in each herd. Deputy State Veterinarians will investigate all illnesses and death losses during the summer and fall and will obtain blood samples after the anaplasmosis season late in the fall of 1966.

Brucellosis

A total of 160,969 cattle was tested for brucellosis, revealing 602 reactors (0.31%) and 6,374 suspects (3.35%). Of the total tested, 51,886 were tested out-of-state and 62,909 were tested from samples collected in Montana on the market-cattle-testing program. The total number of cattle tested was 37,091 more than was tested during the 1965 fiscal year. The percentage of reactors was 0.35% in the 1965 fiscal year, compared with 0.31% in the 1966 fiscal year.

There were 10,969 Brucellosis Ring Tests made on milk and cream samples - a decrease of 2,442 from the previous year. Thirty-seven (0.34%) were suspicious to the test, compared with 0.32% in the 1965 fiscal year.

There was a reduction of brucellosis infected herds in Montana. With 37 herds from last year, 44 additional infected herds were found during the past fiscal

year. A total of 51 herds were able to eliminate brucellosis, leaving 30 herds still under brucellosis quarantine at the end of the fiscal year.

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

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%

PROGRESS OF BOVINE BRUCELLOSIS ERADICATION IN MONTANA COUNTIES

County	Herds Infected First Area Test		Herds Infected June 30, 1966	
	No.	Percent	No.	Percent
Beaverhead	75	18.7%	None	None
Blaine	30	4.6%	None	None
Broadwater	54	23.6%	None	None
Carbon	149	13.9%	None	None
Cascade	140	13.9%	None	None
Choteau	35	5.2%	None	None
Daniels	18	5.9%	None	None
Dawson	34	4.6%	None	None
Deer Lodge	26	24.7%	None	None
Fallon	18	5.3%	None	None
Fergus	106	10.7%	None	None
Gallatin	62	6.4%	None	None
Garfield	27	7.5%	None	None
Golden Valley	24	12.1%	None	None
Granite	28	16.3%	None	None
Jefferson	32	13.6%	None	None
Judith Basin	59	12.6%	None	None
Liberty	7	4.2%	None	None
Lincoln	15	5.3%	None	None
Madison	87	14.2%	None	None
McCone	17	3.6%	None	None

Continued

County	Herds Infected First Area Test No.	Percent	Herds Infected June 30, 1966 No.	Percent
Meagher	54	34.3%	None	None
Musselshell	27	9.0%	None	None
Petroleum	27	19.1%	None	None
Powder River	4	1.4%	None	None
Powell	51	17.4%	None	None
Prairie	20	11.9%	None	None
Roosevelt	50	8.4%	None	None
Rosebud	39	3.9%	None	None
Sheridan	23	3.7%	None	None
Silver Bow	8	8.7%	None	None
Stillwater	52	7.1%	None	None
Sweet Grass	56	12.1%	None	None
Teton	35	5.2%	None	None
Toole	13	4.6%	None	None
Treasure	26	15.8%	None	None
Wheatland	17	12.3%	None	None
Wibaux	23	8.4%	None	None
Carter	34	7.9%	1	0.2%
Custer	5	1.7%	1	0.3%
Flathead	30	2.6%	1	0.1%
Hill	31	6.2%	1	0.2%
Lake	105	7.8%	1	1.0%
Lewis & Clark	67	17.1%	1	0.3%
Mineral	3	4.3%	1	0.1%
Missoula	60	10.3%	1	0.3%
Park	50	10.6%	1	0.3%
Phillips	30	4.8%	1	0.2%
Pondera	36	6.4%	1	0.3%
Ravalli	35	3.3%	1	0.9%
Sanders	47	7.5%	1	0.2%
Valley	33	4.4%	2	0.4%
Richland	46	3.9%	3	0.4%
Yellowstone	91	7.7%	3	0.3%
Glacier	88	17.7%	4	0.8%
Big Horn	91	13.2%	5	0.7%

*CALVES OFFICIALLY VACCINATED WITH BRUCELLA ABORTUS VACCINE - STRAIN 19

Year Doses	Year Doses	Year Doses	Year Doses	Year Doses
1957..296,463	1959..294,265	1961..224,576	1963..250,899	1965..267,367
1958..303,090	1960..215,043	1962..209,472	1964..297,002	1966..287,642

*In addition, reports were received that 10,461 doses of Brucella abortus vaccine were sold, indicating that many calves were unofficially vaccinated.

Fluorosis

Montana veterinarians reported fluorosis in 214 cattle on six premises during the fiscal year. Again, as last year, all cases were reported in an area adjacent to a phosphate plant.

Rhinotracheitis

Montana veterinarians reported 2,814 cases of rhinotracheitis on sixty-six ranches. They also reported 295 cases of vulvovaginitis on two ranches. The laboratory was unable to attribute a bacteriological cause to 520 aborted feti. From recent studies, it can be assumed that the cause of the vulvovaginitis and a share of the bacteriologically negative aborted feti were due to the infectious bovine rhinotracheitis virus.

Shipping Fever

This disease was - by far - the most serious disease problem experienced by cattlemen this past fiscal year. Veterinarians reported 11,152 cases on four hundred thirty-five ranches.

Tuberculosis

The tuberculin test was applied to 2,836 dairy cattle and 11,547 beef cattle - a total of 14,383. Two cattle in 2 dairy herds and two cattle in 2 beef herds gave positive reaction and were under quarantine at the end of the fiscal year.

A total of 114,795 cattle was slaughtered under backtag or brand identification. Seventy-four cattle (0.064%) were found to have lesions grossly resembling tuberculosis lesions.

A review of information received on investigation of gross lesions obtained at slaughter for the past four years reveals the following:

1. 156 cattle were reported with gross lesions.

2. Location of Lesions:

72%	Mesenteric lymph nodes.
10%	Mediastinal lymph nodes.
9%	Cervical lymph nodes.
9%	Bronchial lymph nodes, pleural and lungs.

3. Histological Examination:

35%	Suggestive of tuberculosis.
11%	Migrating parasites.
27%	Acid-fast bacilli demonstrated.
27%	Acid-fast bacilli not demonstrated.

4. Mycobacterium Isolations:

24.7%	Mycobacterium avium.
3.2%	Runyon Group IV.
1.1%	Mycobacterium bovis.
71.0%	No isolation made.

A total of 58 herds, containing 5,432 cattle, was tested (from which cattle were found to have gross lesions at slaughter) in which histological examinations were suggestive of tuberculosis, or acid-fasts were demonstrated, or a Mycobacterium was isolated. Three reactors were found in one herd. Slight gross lesions were found in two of the reactors. Mycobacterium avium was isolated from one. We have yet to find bovine tuberculosis in a herd of origin of cattle from which slight mesenteric lymph node lesions or other lymph node lesions were found at slaughter. In some instances, chickens with tuberculosis were found to be associated with the cattle.

Twelve counties were reaccredited Modified-Accredited Tuberculosis Areas during the fiscal year.

Vibriosis

Montana veterinarians reported 129 cases of vibriosis on twenty-four ranches. The laboratory isolated Vibro-fetus from 57 cattle specimens.

Virus Abortion

The enzootic bovine abortion virus has been definitely isolated from a herd of 105 cattle in which a 70% abortion rate had occurred. It is suspected this virus is more widespread than heretofore suspected.

HORSE DISEASES

A total of 11 diseases in 1,231 horses was reported on seven hundred sixty-two ranches. This is an increase of 4 diseases, 255 horses and 303 premises over last year.

Encephalitis

Montana veterinarians reported 333 cases of equine encephalitis on two hundred eighty-five premises. This was a marked increase of 324 cases and 276 premises over the previous fiscal year.

The Rocky Mountain Laboratory summarized their studies of the encephalitis outbreak in the summer and fall of 1965 as follows:

"Human Specimens

Sera from 54cases submitted and 17 (31.5%) were serologically confirmed for Western Equine Encephalitis. Thirty-six were negative; but from 7 of these, only a single (acute) specimen was received. One was confirmed for St. Louis Encephalitis.

Horses

Sera from 55 horses submitted and 20 (36.3%) were serologically confirmed for Western Equine Encephalitis.

The Western Equine Encephalitis virus was active in August, 1965. These were confirmed clinical cases in man and horses. High infection rates were found in Culex tarsalis mosquitos and in chickens. Evidence of infection in snakes has not been found. This question will be investigated further when snakes come out in the spring. After a season when there was so much activity of the virus, they should be positive if they play a role in the ecology of Western Equine Encephalitis."

SHEEP DISEASES

Eighteen sheep diseases were reported during the fiscal year by Montana veterinarians on one hundred eighty-eight ranches in 12,883 sheep. This was the same number of diseases reported last year, but an increase of eighty-seven ranches and 5,091 affected sheep.

Epididymitis

Montana veterinarians reported 79 cases of ram epididymitis on fifteen ranches. The laboratory tested 362 blood sera, using the REO Complement-fixation Test and 34% gave reactions to the test.

Foot rot

Infectious foot rot continued to remain a problem in four bands in Montana. Persistent efforts are continuing in order to achieve complete eradication.

Pediculosis

Due to complaints from buyers of lambs having lice, particularly from one part of the state, many flocks of sheep in that area were inspected. All bands inspected in which lice were found (Damalinia ovis) were placed under quarantine, in accordance with Regulation 1104. A total of 48 bands, containing about 10,800 sheep, was quarantined. At the end of the fiscal year, 23 bands, containing 6,310 sheep, had been dipped and released from quarantine.

SWINE DISEASES

Montana veterinarians reported 12 swine diseases in 570 swine on seventy-four premises.

Brucellosis

No clinical evidence of brucellosis was reported. The laboratory did not isolate a Brucella organism from any swine. Serological tests made on 293 swine blood samples did not disclose any reactors.

The following herds became validated or were revalidated Brucellosis-free Swine Herds during the fiscal year, in accordance with the provisions of Regulation 310:

BRUCELLOSIS-FREE SWINE HERDS

Owner	Location	Effective Date
Calvin Arneson	Bozeman	1-4-66
Fred Bergstrom	Brady	6-6-66
Walter Herman	Bozeman	2-16-66
M. E. Muller & Sons	Corvallis	2-24-66
Perry Farms	Fort Benton	5-18-66
Loran A. Perry	Fort Benton	4-8-66
Howard Rabel	Gold Creek	5-23-66
Robert W. Rogers	Hamilton	3-21-66
Sherman Smith	Bozeman	2-11-66
U. S. Range Livestock Experiment Station	Miles City	11-10-65

Hog Cholera

No hog cholera was reported in Montana during the fiscal year.

The history of hog cholera and its eradication from Montana is illustrated as follows:

1927 - 1946	551 outbreaks.
1948	PROHIBITED USE OF LIVE-VIRUS VACCINES.
1947 - 1956	76 outbreaks.
1953	LAW ENACTED PROHIBITING THE FEEDING OF RAW GARBAGE.
1957 - 1964	6 outbreaks.
1964	PROHIBITED THE USE OF MODIFIED-LIVE-VIRUS VACCINE.
1965 - 1966	No outbreaks.
1966	USDA RECOGNIZED MONTANA AS A HOG-CHOLERA-FREE STATE.

Swine Tuberculosis

State meat inspection findings revealed that out of 55,605 swine, two (0.003%) were condemned as unfit for food because of tuberculosis lesions; and 1,270 (2.280%) swine had tuberculosis lesions requiring condemnation of a part of the animal.

POULTRY DISEASES

Seven poultry diseases were reported on eighteen premises in 472 chickens.

Salmonella

All breeding flocks supplying hatchery eggs were tested for pullorum disease. A total of 25,534 chickens was tested and 22 reactors (0.086%) were found. Salmonella pullorum was isolated from 3 chickens, Salmonella newport from 1 chicken and Salmonella san diego from 1 chicken submitted to the laboratory.

WILD ANIMAL DISEASES

Rabies

The threat of rabies becoming endemic for the first time in Montana history became a reality during the fiscal year. The laboratory conducted 289 rabies tests on specimens submitted from 22 species of animals.

Following is a chronological listing of laboratory-confirmed rabies for the fiscal year:

POSITIVE RABIES

Date	Town	County	Specie
10-11-65	Belgrade	Gallatin	Bat
12-20-65	Hodges	Dawson	Skunk
1-11-66	Larslan	Valley	Skunk
2-1-66	Glendive	Dawson	Skunk
2-4-66	Richland	Valley	Skunk
2-25-66	Wolf Point	Roosevelt	Skunk
3-22-66	Plevna	Fallon	Skunk
3-30-66	Baker	Fallon	Skunk
4-12-66	Plevna	Fallon	Skunk
4-12-66	Baker	Fallon	Skunk
4-15-66	Plevna	Fallon	Skunk
4-15-66	Plevna	Fallon	Skunk
4-18-66	Ekalaka	Carter	Skunk
4-18-66	Ekalaka	Carter	Skunk
4-26-66	Broadus	Powder River	Skunk
5-18-66	Wolf Point (near)	Valley	Skunk

OFFICIAL ANIMAL INSPECTIONS REPORT

SPECIE		TOTAL INSPECTED
Cattle		
Inspected for interstate shipment	753,404	
Inspected at markets	933,717	
Inspected for scabies	32,192	
Backtagged	224,760	
Bled for brucellosis	44,322	
Tested for tuberculosis - Dairy	2,836	
Tested for tuberculosis - Beef	11,547	
Miscellaneous inspections	8,251	
Total Cattle		2,011,029
Horses		
Inspected for interstate shipment	3,874	
Inspected at markets	10,773	
Miscellaneous inspections	658	
Total Horses		15,305
Sheep		
Inspected for interstate shipment	673,431	
Inspected at markets	202,778	
Miscellaneous inspections	8,637	
Total Sheep		884,846
Swine		
Inspected for interstate shipment	306	
Inspected at markets	137,559	
Miscellaneous inspections	2,251	
Total Swine		140,116
Poultry		
Inspected for interstate shipment	589	
Miscellaneous inspections	26,437	
Total Poultry		27,026
Dogs and Miscellaneous Animals		
Inspected for interstate shipment	1,628	
Miscellaneous inspections	410	
Total Dogs and Miscellaneous Animals		2,038
TOTAL ALL OFFICIAL ANIMAL INSPECTIONS		3,080,360

MONTANA VETERINARIANS' DISEASE REPORT

BACTERIAL DISEASES	CATTLE		HORSES		SHEEP		SWINE		POULTRY		DOGS
	Cases	Herds	Cases	Herds	Cases	Herds	Cases	Herds	Cases	Flocks	Cases
Actinomycosis-bacillosis	1,910	1,390									
Bacillary hemoglobinuria	102	78									
Black disease					2	1					
Blackleg	56	33									
Brucellosis	602	51									
Diphtheria	54	31									
Distemper			777	440							
Enteritis, E. coli	1,221	41					15	1			
Enteritis, necrotic							20	1			
Enteritis, S. typhimurium	2	2					1	1			
Enterotoxemia	51	16			225	36					
Epididymitis					79	15					
Erysipelas							300	1			
Foot rot	193	116			588	27					
Leptospirosis	177	61	5	5			10	1			82
Listeriosis	11	6					7	3			
Malignant edema	13	3	1	1							
Pneumonia	74	57					4	2			
Pullorum									32	3	
S. arizona									60	1	
Tetanus			3	3	38	3					
Tuberculosis	4	4							259	5	
Vibriosis	129	124			152	3					
Total Bacterial Diseases	4,599	2,013	786	449	1,084	85	357	10	351	9	82
NUTRITIONAL DISEASES											
Atrophic rhinitis							120	17			
Avitaminosis A	234	15							5	2	
Grass tetany	3	2									
White muscle disease	90	78			154	12					
Total Nutritional Diseases	327	95			154	12	120	17	5	2	

Montana Veterinarians' Disease Report

	CATTLE		HORSES		SHEEP		SWINE		POULTRY		DOGS
PARASITIC DISEASES	Cases	Herds	Cases	Herds	Cases	Herds	Cases	Herds	Cases	Flocks	Cases
Face fly	180	11									
Helminthiasis	1,110	9			7,252	12					
Mange, demodectic											7
Mange, sarcoptic							28	4			
Pediculosis					10,800	48					
Total Parasitic Diseases	1,290	20			18,052	60	28	4			7
POISONING											
Algae	1	1									
Cyanide	4	3									
Fluoride	214	6									
Loco			33	2							
Nitrate	2	1			7	1	4	1			
Photosensitization	70	6	1	1	12	1					
Salt							4	1			
Strychnine											3
Sweet clover	112	2									
Total Poisoning	403	19	34	3	19	2	8	2			3
VIRAL DISEASES											
Contagious ecthyma					1,547	35					
CRD									12	2	
Distemper											903
Encephalitis			333	285							
Enzootic bovine abortion	26	4									
Infectious anemia			11	9							

Montana Veterinarians' Disease Report

Viral Diseases Continued	CATTLE		HORSES		SHEEP		SWINE		POULTRY		DOGS
	Cases	Herds	Cases	Herds	Cases	Herds	Cases	Herds	Cases	Flocks	Cases
Infectious anemia			11	9							
Infectious bronchitis			55	11							
Infectious hepatitis											112
Influenza			9	8			14	3			
Leukemia	1	1									
Leukosis									103	3	1
Malignant catarrhal fever	3	3									
Meningoencephalitis	2	1									
Mucosal disease	708	50									
Posthitis					25	11					
Rhinotracheitis	2,814	66									
Shipping fever	11,512	435									
TGE							60	1			
Ulcerative dermatosis					202	2					
Virus diarrhea	393	8									
Vulvovaginitis	295	2									
Warts	75	22									
Total Viral Diseases	15,829	592	408	313	1,774	48	74	4	115	5	1,016
UNKNOWN ETIOLOGY											
Cancer eye	1,798	1,415									
Enteritis, non-specific	406	8									
Infectious keratitis	1,323	74			1,068	4					
Mandibular phlegmon	13	12									
Pulmonary emphysema	456	178	3	2							
Polioencephalomalacia	9	1									
Urolithiasis	1,492	1,051			25	1					
Total Unknown Etiology	5,497	2,739	3	2	1,093	5					
GRAND TOTAL ALL DISEASES	31,182	5,893	1,231	767	22,276	213	587	37	473	18	1,108

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 1966 fiscal year:

CAUSE OF DISEASES	CATTLE	HORSES	SHEEP	SWINE	POULTRY	DOGS
Bacteria	14.7%	63.9%	4.9%	60.8%	74.2%	7.4%
Nutrition	1.1%	-0-	.7%	20.4%	1.1%	-0-
Parasites	4.1%	-0-	81.0%	4.8%	-0-	.6%
Poisons	1.3%	2.8%	.1%	1.4%	-0-	.3%
Protozoa	10.4%	-0-	.4%	-0-	.4%	-0-
Viruses	50.8%	33.1%	8.0%	12.6%	24.3%	91.7%
Unknown	17.6%	.2%	4.9%	-0-	-0-	-0-

IMPORTS INTO MONTANA

STATE OF ORIGIN	CATTLE	HORSES	SHEEP	SWINE	POULTRY	DOGS & MISC ANIMALS	TOTAL
Alabama.....						2	2
Alaska.....						37	37
Arizona.....	962	78	6			17	1,063
Arkansas.....		3				41	44
California.....	327	76				117	520
Colorado.....	1,959	96	214	16		33	2,318
Connecticut....						2	2
Florida.....						4	4
Georgia.....						3	3
Idaho.....	15,886	73	6,369	2		30	22,360
Illinois.....	50	7		1,734		10	1,801
Iowa.....	851=			12,280		31	13,162
Kansas.....	298	33				26	357
Kentucky.....		1					1
Louisiana.....	444					1	445
Michigan.....	1					4	5
Minnesota.....	2,236	16	850	22,006		54	25,162
Mississippi....						1	1
Missouri.....	189	15				11	215
Nebraska.....	893	135	14	1,858		44	2,944
Nevada.....	349						349
New Jersey.....	7	2					9
New Mexico.....	219	22				4	245
New York.....	14						14
North Carolina.		2				1	3
North Dakota...	24,498	367	7,744	1,940		12	34,561
Ohio.....						4	4
Oklahoma.....	663	26				13	702
Oregon.....	1,441	59					1,500
South Dakota...	10,032	113	8,001	14,306		19	32,471
Tennessee.....						3	3
Texas.....	9,490	49				10	9,549
Utah.....	1,023	54	8			24	1,109
Washington.....	3,554	192	1,433	6	158,741	157	164,083
Wisconsin.....	564	10				12	586
Wyoming.....	23,218	209	18,690	112		37	42,266
FOREIGN COUNTRIES							
Canada.....	30,303	904	9,468	169	1,675	39	42,558
Mexico.....	1,439						1,439
TOTAL IMPORTS	130,910	2,542	52,797	54,429	160,416	803	401,897

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

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

COMPANY	NUMBER OF STUDS
All West Breeders Burlington, Washington	55
American Breeders Service, Inc. DeForest, Wisconsin	147
Armour & Company Denver, Colorado	126
Cache Valley Breeding Association Logan, Utah	29
Curtiss Breeding Service, Inc. Cary, Illinois	141
International Beef Breeders Denver, Colorado	21
TOTAL PERMITS ISSUED	519

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 69 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

MARKET LOCATION	CATTLE	HORSES	SHEEP	SWINE	TOTAL
Billings Commission	152,567	1,746	46,723	-0-	201,036
Billings Public	103,696	2,045	79,391	98,848	283,980
Bozeman	45,334	167	18,461	8,599	72,561
Butte	78,419	221	394	6,130	85,164
Dillon	19,618	620	13,818	3,253	37,309
Glasgow	44,524	289	3,285	8,018	56,116
Glendive	38,704	244	767	2,113	41,828
Great Falls	58,896	356	340	38	59,630
Hamilton	9,160	177	1,968	1,568	12,873
Havre	39,331	218	481	-0-	40,030
Kalispell	22,189	360	834	3,986	27,369
Lewistown	65,329	804	13,800	-0-	79,933
Miles City	54,042	1,553	7,613	188	63,396
Missoula	71,297	2,138	4,704	5,281	83,420
Shelby	26,448	24	258	-0-	26,730
Sidney	100,910	722	8,812	-0-	110,444
TOTAL INSPECTIONS	930,464	11,684	201,649	138,022	1,281,819

GARBAGE FEEDING ESTABLISHMENTS

In accordance with Section 46-2602 (RCM 1947), thirteen garbage feeding establishments were issued licenses during the fiscal year. This is a decrease of three from the previous fiscal year.

The proper cooking of garbage being fed to swine was most instrumental in eradicating hog cholera in Montana, as well as controlling and eliminating diseases of public health significance.

A total of 199 garbage feeding establishment inspections were made during the fiscal year, with the cooperation of the U. S. Department of Agriculture, to assure compliance with Montana Livestock Sanitary Board Regulations.

SUMMARY OF WORK PERFORMED

Montana licensed Milk Plants distributed 23,669,885 gallons of pasteurized milk, cream and fluid milk products to Montana consumers during the fiscal year. This is a total of 64,849 gallons a day.

Montana licensed Retail Raw Dairies distributed 279,590 gallons of raw milk during the fiscal year. This is a total of 766 gallons a day.

Raw milk accounts for 1.2% of the total milk supply offered to Montana consumers; and 98.8% 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

INSPECTIONS AND TESTS	NUMBER
Antibiotic detection tests	4,596
Bacterial counts	4,570
Brucellosis ring tests	10,970
Chemical analyses	1,394
Coliform tests	4,583
Dairy inspections	1,386
Mastitis tests	246
Milk Plant inspections	153
Milk Plant equipment tests	158
Tuberculosis tests	2,836
TOTAL	30,892

MILK PLANT SANITATION COMPLIANCE RATINGS WITH MONTANA LIVESTOCK SANITARY BOARD REGULATIONS

MILK PLANT NUMBER	GALLONS SOLD DAILY	PLANT SCORE	PRODUCER'S SCORE	PASTEURIZED MILK RATING
25-1	2,700	94%	93%	93%
25-2	4,000	93%	91%	92%
25-7	1,500	91%	98%	94%
25-8	150	80%	73%	77%
25-10	7,000	100%	93%	94%
25-11	225	93%	92%	93%
25-13	15	83%	85%	84%
25-14	40	78%	66%	70%
25-15	100	98%	98%	98%
25-16	4,000	91%	93%	92%
25-17	60	90%	92%	91%
25-18	5,000	90%	94%	92%
25-19	2,000	93%	91%	92%
25-20	3,300	91%	92%	91%
25-21	3,650	98%	91%	95%
25-22	148	94%	96%	95%
25-23	100	97%	95%	96%
25-24	200	82%	82%	82%
25-25	3,000	87%	94%	93%
25-28	1,100	77%	94%	92%
25-29	100	95%	97%	96%
25-30	800	91%	90%	90%
25-31	2,000	75%	90%	83%
25-32	7,500	92%	92%	92%
25-33	250	94%	85%	90%
25-35	300	69%	90%	80%
25-36	180	91%	88%	90%
25-37	1,645	83%	95%	89%
25-38	2,400	96%	94%	95%
25-39	1,500	91%	90%	90%
25-40	1,500	90%	94%	92%
25-41	300	88%	97%	93%
25-43	86	86%	93%	90%
25-44	2,000	94%	94%	94%
25-45	200	86%	86%	86%
25-46	400	84%	87%	86%
25-47	4,800	69%	84%	77%
25-49	200	93%	89%	91%
25-50	400	87%	100%	94%
TOTAL	64,849	88%	91%	90%

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

DAIRY NUMBER	GALLONS SOLD DAILY	DAIRY SCORE
R-1	40	94%
R-2	100	99%
R-4	30	97%
R-6	100	73%
R-7	20	96%
R-10	40	76%
R-11	20	97%
R-14	15	87%
R-19	60	78%
R-21	25	80%
R-23	50	91%
R-24	12	71%
R-25	100	87%
R-29	60	95%
R-32	50	86%
R-33	20	87%
R-34	24	97%
TOTAL	766	88%

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 6 slaughterhouses. Thirty-six slaughtering establishments operated without meat inspection.

A total of 572,900 animals was slaughtered in licensed establishments last fiscal year. Of the total, 77% was slaughtered under federal meat inspection, 19% was slaughtered under state meat inspection and 4% was slaughtered in establishments without meat inspection.

An estimated total of 1,571,005 pounds of meat was found totally unfit for human consumption and removed from food channels in the State of Montana during the fiscal year.

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

OFFICIAL ESTABLISHMENT INSPECTIONS

TYPE OF ESTABLISHMENT	NO. OF INSPECTIONS
Slaughterhouses	126
Meat Packing Houses	12
Meat Depots	3
Poultry Slaughterhouses	3
Rendering Plants	23
TOTAL OFFICIAL ESTABLISHMENT INSPECTIONS	167

LABELS AND SKETCHES

ITEM	NUMBER
Labels reviewed which were in use prior to July 1, 1965	43
Labels temporarily approved	8
Labels approved	24
Sketches approved	124
TOTAL	199

ESTABLISHMENTS UNDER STATE MEAT INSPECTION

ESTABLISHMENT NAME	LOCATION	ESTABLISHMENT NO.
Slaughterhouses		
*Barsotti Bros. Meat Packing Plant, Inc.	Great Falls	8
Blastoch 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

ESTABLISHMENT NAME	LOCATION	ESTABLISHMENT NO.
Slaughterhouses		
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
Sigman Meat Company of Montana	Butte	901-A

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

SPECIE	STATE	FEDERAL	WITHOUT
Cattle	44,707	185,648	10,845
Calves	1,343	228	329
Sheep	4,478	35	487
Swine	55,605	257,442	11,753
TOTAL	106,133	443,353	23,414

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

SPECIE	STATE	FEDERAL	ESTIMATED WEIGHT
Cattle	139	593	402,600
Calves	22	-0-	4,400
Sheep	40	-0-	1,880
Swine	120	359	89,094
TOTAL	321	952	497,974

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

SPECIE	STATE	FEDERAL	ESTIMATED WEIGHT
Cattle	1,595	17,678	38,546
Calves	38	1	78
Sheep	980	-0-	1,960
Swine	28,255	22,988	51,243
TOTAL	30,868	40,667	91,827

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

LIVERS	STATE	FEDERAL	ESTIMATED WEIGHT
Beef	13,367	61,930	752,970
Swine	22,500	53,578	228,234
TOTAL	35,867	115,508	981,204

DIAGNOSES OF WHOLE CARCASSES CONDEMNED AT SLAUGHTER UNDER STATE MEAT INSPECTION

DIAGNOSIS	CATTLE	CALVES	SHEEP	SWINE
Abscesses	6	0	1	15
Actinomycosis bacillosis	3	0	0	0
Anasarca	3	0	0	0
Arthritis-polyarthritis	0	1	0	7
Ascites	0	2	0	0
Bruises, injuries, ect.	8	0	1	5
Cachexia	21	3	12	4
Caseous lymphadenitis	0	0	21	0
Contamination	0	0	0	1
Cysticercus bovis	2	0	0	0
Edema	4	0	0	0
Emaciation	0	0	5	0
Endocarditis	1	0	0	0
Enteritis	0	0	0	4
Eosinophilic myositis	1	0	0	0
Epithelioma	18	0	0	0
Hydronephrosis	0	0	0	1
Icterus	1	0	0	28
Immature	0	1	0	0
Leucocythaemia	0	0	0	2
Metastasis	1	0	0	0
Metritis	7	0	0	3
Moribund	0	2	0	4
Neoplasm	1	0	0	0
Nephritis	2	0	0	1
Pancreatitis (purulent)	0	0	0	1
Pericarditis	9	0	0	1
Peritonitis	7	1	0	5
Pleuritis	1	0	0	1
Pneumonia	19	8	0	8
Pyelonephritis	2	0	0	0
Pyemia	4	0	0	3
Pyometa	1	0	0	0
Septicemia-toxemia	15	3	0	16
Sex odor	0	0	0	4
Subdermal gangrene	0	1	0	0
Tuberculosis	0	0	0	2
Uremia	1	0	0	0
Urinary calculi	1	0	0	0
Urinary odor	0	0	0	2
Miscellaneous diseases of the liver	0	0	0	2
TOTAL	139	22	40	120

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

DIAGNOSIS	CATTLE	CALVES	SHEEP	SWINE
Abscesses	448	5	37	2,775
Actinomycosis bacillosis	383	0	0	2
Adhesions	0	0	4	151
Adhesions (pericardial)	221	0	0	418
Arthritis	8	0	0	59
Atrophic rhinitis	0	0	0	2
Bruises, injuries, ect	410	10	5	344
Caseous lymphadenitis	0	0	9	0
Contamination	36	0	0	32
Cysticercus tenuicollis	0	0	51	25
Emphysema	2	0	0	0
Eosinophilic myositis	2	0	0	0
Epithelioma	62	0	0	0
Hydronephrosis	7	0	0	10
Lymphadenitis	1	0	0	0
Melanosis	1	0	0	1
Parasites	0	0	9	0
Neoplasm	4	0	0	0
Pneumonia	1	0	0	6
Sinusitis	1	0	0	0
Taeniasis	0	0	44	0
Tuberculosis	4	0	0	1,270
Unclean heads	0	0	0	657
Miscellaneous diseases of the liver	4	23	821	22,503
TOTAL	1,595	38	980	28,255

DIAGNOSES OF BEEF LIVERS CONDEMNED AT SLAUGHTER UNDER STATE MEAT INSPECTION

DIAGNOSIS	NUMBER CONDEMNED
Abscesses	9,496
Carotenosis	22
Cirrhosis	179
Distomiasis	2,685
Echinococcosis	18
Sawdust	385
Telangiectasis	205
Miscellaneous diseases	377
TOTALS	13,367

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

TYPE OF PROCESSING	POUNDS
Placed in Cure	
Beef	122,509
Pork	1,887,659
Other	14,204
Smoked and/or Dried	
Beef	77,070
Pork	1,713,264
Cooked Meat	
Beef	13,002
Pork	91,128
Sausage Fresh Finished	624,488
Sausage Smoked or Cooked	
Franks, Wieners	1,534,830
Other	453,228
Loaf: Head Cheese, Chili, Jellied Product	397,059
Steaks, Chops, Roasts	651,740
Sliced Product	
Bacon	279,042
Other	10,105
Hamburger	390,699
Miscellaneous Meat Product	87,010
Lard Rendered	729,037
Oleo Stock	395
Edible Tallow	23,729
Rendered Pork Fat	
Rendered	16,290
Refined	800
Compound Containing Animal Fat	17,300
TOTAL	9,134,588

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

ITEM	POUNDS
Reinspected Meat and/or Meat By-Product	1,493,318
Rejected Meat and/or Meat By-Product	4,967
Rejected Ingredients: Pickels, Peppers and Olives (Gallons)	104
TOTAL	1,498,389

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ADMINISTRATION DIVISION

DIAGNOSTIC LABORATORY DIVISION

DISEASE CONTROL DIVISION