MINNESOTA BOARD OF ANIMAL HEALTH

Annual Report

Safeguarding Animal Health in Minnesota for 100 years

MINNESOTA BOARD OF ANIMAL HEALTH

Message from the Executive Director

November 1, 2003

In 1903, lawmakers recognized the value of protecting the animal agriculture industry in Minnesota when the Minnesota Livestock Sanitary Board was formed. One hundred years later, this organization is known as the Minnesota Board of Animal Health, but its mission remains the same.

The Minnesota Board of Animal Health Board was created to protect the health of the state's domestic animals. In carrying out its mission, the Board is part of a team of state agencies that protect public health and provide a wholesome food supply to consumers in Minnesota.

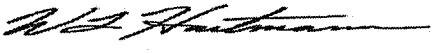
The Board operates under the direction of a five-member board consisting of livestock producers and veterinarians appointed by the Governor. The Board has had numerous successful animal disease eradication efforts in the state over the past 100 years. Some of them include:

- Glanders eradicated from horses in 1938;
- Hog Cholera eradicated from hogs in 1972;
- Tuberculosis eradicated from cattle in 1976;
- Brucellosis eradicated from cattle in 1984;
- Minnesota achieved National Pseudorabies Stage IV Level with no infected herds in the state in 2002;
- Mycoplasma Gallisepticum eradicated in meat-type chickens in 2003; and
- Mycoplasma Synoviae eradicated in turkeys in 2003.

Minnesota animal health statutes and rules are designed to safeguard the health of the state's domestic animals. As you can see from the past successes, the Board's team of veterinarians and animal health officials are dedicated to this mission.

For more information on the Board, please log onto the website at www.bah.state.mn.us.

Sincerely,



Dr. William L. Hartmann
Executive Director
Minnesota Board of Animal Health

MINNESOTA BOARD OF ANIMAL HEALTH

2003 Annual Report

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Minnesota Board of Animal Health

Animals contribute to Minnesota by providing food, income, recreation, assistance, and companionship to millions everyday. That is why the Minnesota Board of Animal Health has been actively reducing, controlling, and eradicating diseases for the last 100 years.

As the official animal disease control and eradication agency of the state of Minnesota, the Board was created to protect the health of the state's domestic animals. In carrying out its mission, the Board is part of a network of state agencies protecting public health and providing an abundant, wholesome food supply to Minnesota consumers.

Minnesota Poultry Testing Laboratory

The Board operates the Minnesota Poultry Testing Laboratory (MPTL) in Willmar in cooperation with the Minnesota Diagnostic Laboratory. The MPTL assists Minnesota's poultry industries in providing an abundant supply of wholesome food by conducting avian health testing services. These tests are essential to maintaining vigorous and healthy poultry populations in the state. The MPTL serves as the National Poultry Improvement Plan (NPIP) authorized laboratory for Minnesota. The MPTL also serves as the field laboratory for avian disease surveillance, along with being a research, field and educational center.

Board Meetings

Board Meetings

Quarterly Meeting	September 13, 2002
Quarterly Meeting	December 13, 2002
Quarterly Meeting	February 11, 2003
Quarterly Meeting	April 16, 2003

The Board minutes are recorded in the Official Minute Books of the Minnesota Board of Animal Health. These minutes are on file at the Board's office located at 90 West Plato Boulevard, St. Paul, MN 55107.

Board Members

Ms. Sharon Baker, President	Cyrus
Mr. Todd Searles, Vice President	Spring Valley
Dr. Mahesh Kumar	St. Cloud
Dr. John Whitten	Alexandria
Dr. Darrell Zehrer	Rogers

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The Annual Report of the Minnesota Board of Animal Health is published in accordance with the provisions of Minnesota Statutes.

Staff Members

Executive Director ... Dr. William L. Hartmann

Assistant Director ... Dr. Keith Friendshuh
Administrative Assistant ... Melissa Petersen
Administrative Assistant ... Sandy Hinrichs

Assistant Director ... Dr. Kristine R. Petrini
Administrative Assistant ... Lindsey Aipperspach
Administrative Assistant ... Helen Woodford

Assistant Director ... Dr. Paul L. Anderson
Administrative Assistant ... Kimberly Blackford
Administrative Assistant ... Bethany Mitchell
Administrative Assistant ... Ginny Kasper
Administrative Assistant ... Janice Schmidt

Assistant Director ... Dr. Dale Lauer
Administrative Assistant ... Kelly Adolphson

Administration Manager ... Barbara Troyer
Accounting Officer ... Rita Hatch
Administrative Assistant ... Marie Marty

Communications Specialist ... Malissa Fritz

Information Technology Specialist ... Dave Wiklund
Information Technology Specialist ... Milan Tomaska

Emergency Response Coordinator ... Dr. Dale Neirby

District Veterinarian ... Galen Adkins, DVM, Pine River
District Veterinarian ... Terry Boldingh, DVM, Breckenridge
District Veterinarian ... Arnold Jostock, DVM, Dawson
District Veterinarian ... Brad Peterson, DVM, Owatonna
District Veterinarian ... L. Kern Schwartz, DVM, Worthington
District Veterinarian ... Jeff Smith, DVM, Zumbrota
District Veterinarian ... Greg Suskovic, DVM, North Mankato

Agriculture Regulatory Specialist ... Carl Denkinger, Faribault
Agriculture Regulatory Specialist... Glenn Korman, Porter
Agriculture Regulatory Specialist ... Don Myren, Pierz

Cattle Programs

Voluntary Johne's Disease Control Program

Minnesota's Johne's Disease Program started in 1998 in an effort to assist producers in identifying and controlling Johne's disease in their herds. This program includes the following elements:

Education: The Board, in cooperation with University of Minnesota, College of Veterinary Medicine and Extension Service, helps increase awareness of Johne's disease throughout the State. Current information is disseminated to veterinarians and farmers through meetings, brochures, publications, letters, and the Board's website. Educational efforts for FY 2003 in Minnesota included the following:

- Three presentations to the State Cattlemen Association;
- Three presentations at the University of Minnesota Dairy Seminar;
- A Johne's Advisory Committee was formed with one meeting held;
- Two presentations to county Dairy Herd Improvement Associations;
- One presentation to county Holstein Association;
- One presentation at local Cattlemen Association meeting; and
- One presentation at a technical college.

Herd testing: The Board provides financial assistance to producers who wish to test their herds for the disease. Since 1998, a total of 262,545 cattle have been tested in the state. Of the cattle tested, 5,581 (11.6 percent) have tested positive.

During FY 2003, the Board paid the laboratory cost for testing 30 cows in a herd as a screening test for the disease. If infection was found, tests were performed on 14,908 cattle in 1,243 herds.

Approximately 52,955 cattle were ELISA tested and 8,042 cattle were fecal tested as part of Minnesota's Johne's Disease Program. Approximately 689 cattle were tested by other means, such as the PCR, AGID or TIP. The Board paid for a whole herd test, with a maximum of 200 tests per year.

Cattle tested for Johne's Disease
FY2003

Program	# of premises	# tested	# negative	# positive	# pending
Demonstration Herds	9	4,388	3,882	342	164
Screening tests	85	1,712	1,519	192	1
Management/ Testing Herds	390	37,458	33,216	4,221	21
Status Herds	84	2,705	2,587	114	4
Special Project Herds	2	515	465	50	0
Total	571	46,778	41,669	4,919	190

Johne's Disease Control on the Farm: Minnesota's district veterinarians are available to perform a thorough assessment of farm management practices to help identify areas of Johne's disease risks and to make recommendations for changes to reduce the transmission of disease on the farm.

During FY 2003 **414** risk assessments and herd control plans were completed.

Voluntary Johne's Disease Control Program Continued

Identification of test-negative herds: Test-negative herds provide a source of low risk replacement animals for producers throughout the State and are eligible for participation in the *U.S. Voluntary Johne's Disease Herd Status Program*. The number of Minnesota herds participating in this program is listed below.

Research: The Board, in cooperation with University of Minnesota, College of Veterinary Medicine, supports a variety of research efforts to identify better testing and more effective prevention and control methods. One of these projects is the ongoing surveillance of the demonstration herds. In FY 2001, six dairy herds and three beef herds of varying sizes and with varying management systems were identified to participate in this project. These herds have tested positive for Johne's disease and serve as a model for control programs. These herds are closely monitored and evaluated to determine the effectiveness of the disease control programs that have been implemented.

Minnesota Herds in Herd Status Program
As of September 30, 2003

	Dairy	Beef	Total
Level 1	16	9	25
Level 2	39	6	45
Level 3	6	2	8
Level 4	23	5	28
Total	84	22	106

During FY 2003, approximately 2,194 ELISA tests and 2,194 cultures were performed on these demonstration herds. Information from risk assessments and test results are maintained on a data base and analyzed regularly.

Bovine Tuberculosis Surveillance

Minnesota was classified a Bovine Tuberculosis Accredited Free State by USDA in 1976. USDA, FSIS maintains a bovine tuberculosis (TB) surveillance system that checks all Minnesota cattle slaughtered for evidence of tuberculosis. If positive cattle are found, the Board of Animal Health is notified. Utilizing the back tag applied to that animal, the herd of origin is located and an investigation is done. Additionally, the Board of Animal Health follows up on all cattle that test positive on the intradermal test. The follow up consists of a comparative cervical intradermal test and an investigation of the herd of origin. Special testing requirements and permits are required on ruminants imported from Michigan due to the discovery of TB in free-ranging whitetail deer in the northeast part of that state. One hundred forty one ruminants were imported from Michigan under permit during this fiscal year.

FY 2003 had no investigations or herd tests as there were no infected cattle found.

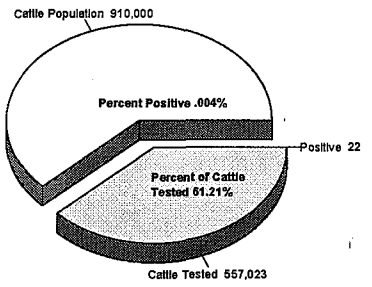
One cattle herd and one bison herd were accredited tuberculosis-free as of June 30, 2003.

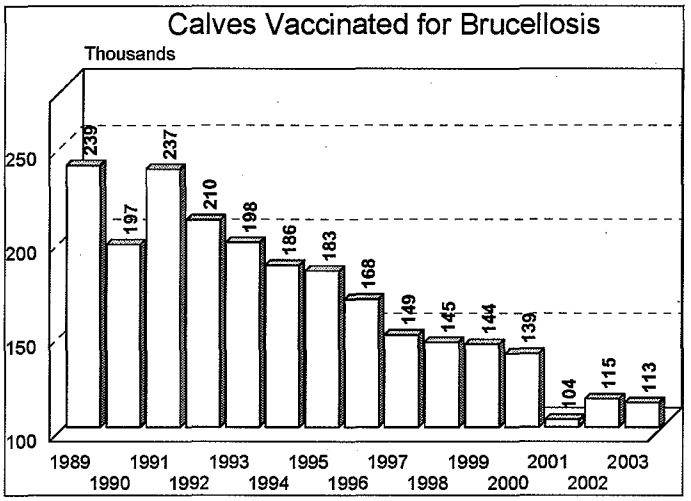
Follow-up on Positive Intradermal Tests	
Cattle tested with the intradermal test	5,551
Number of positive tests	0
Percent positive	0.0%

Bovine Brucellosis Surveillance

Minnesota was classified a Bovine Brucellosis Certified Free State by USDA on October 1, 1984. Calfhood vaccination and surveillance are carried out to maintain that status. Surveillance consists of testing cattle at slaughter and testing milk from all dairy herds.

Seven investigations and one herd test were completed because of the positive test results at slaughter.





Change of Ownership Testing in Cattle	
At Livestock Auction Markets	
Cattle Tested	12,235
Positive	0
Percent Positive	0%
On Farm Testing	
Cattle Tested	5,658
Positive	0
Percent Positive	0%

Bovine Anaplasmosis

Effective June 2, 2003, the Minnesota Legislature repealed the Anaplasmosis rule and all Anaplasmosis import regulations.

Anthrax

In March, 2002, the Biologics rule was changed to allow producers to vaccinate their own animals against Anthrax. This resulted in almost all the cattle in the northwestern Minnesota Anthrax area being vaccinated.

In FY 2003, no Anthrax was diagnosed in Minnesota.

Cervidae Programs

Chronic Wasting Disease (CWD)

Chronic Wasting Disease (CWD) is a fatal brain and nervous system disease found in elk and deer in certain parts of North America. The disease is believed to be caused by an abnormally shaped protein called a prion, which can damage brain and nerve tissue. Infected animals show progressive loss of body weight with accompanying behavioral changes. In later stages of the disease, infected animals become emaciated (thus "wasting" disease).

CWD in Minnesota: The first Minnesota case of CWD was identified on August 30, 2002. The disease was found in a five-year-old bull elk on a farm near Aitkin. The animal had been ill for several months and died with symptoms typical of CWD.

An investigation was initiated by the Board of Animal Health to locate, euthanize and test all other cervidae that might have been exposed to the disease. The process took more than 12 months to complete and involved 51 Minnesota elk herds and 28 herds in other states. Exposed animals were traced to Colorado, Indiana, Iowa, Montana, North Dakota, Oklahoma, South Dakota and Wisconsin. The investigation was completed on September 15, 2003.

During the investigation, two more CWD infected elk were identified. One was found on January 15, 2003. It was a three-year-old elk cow from a farm near Sauk Centre, Minnesota. This animal was euthanized and was not ill at the time of its death. The other was found in March 2003. This animal was a seven-year-old elk cow on a farm near Valders, Wisconsin. The animal had been ill for a short time before it died.

The source of the infection was not determined, but the three CWD infected elk did have a connection. All three were housed on the Sauk Centre, Minnesota, farm during the summer of 2000. Clinical histories for the elk strongly suggest that exposure may have occurred during this period of time. The timing from exposure to development of clinical symptoms in all three of the animals is consistent with a normal incubation period for CWD in elk between 16 to 34 months.

By the time the investigation was completed, 332 elk had been euthanized and tested in Minnesota and 77 elk were euthanized or quarantined in other states. Producers were compensated for their animals through an indemnity program administered by the United States Department of Agriculture (USDA), Veterinary Services (VS) .

New legislation for CWD eradication: New laws for CWD eradication in captive cervidae were passed by the 2003 Minnesota Legislature. These laws, effective January 1, 2004, require all cervidae producers in Minnesota to participate in a CWD surveillance and eradication program.

These new laws apply to all animals that are members of the family "Cervidae" which includes, but is not limited to white-tailed deer, mule deer, red deer, elk, moose, caribou, reindeer, and muntjac.

Effective January 1, 2004: (1) regulation of all Minnesota captive cervidae will be under the Board of Animal Health, (2) registration of all cervidae will be mandatory, and (3) surveillance for Chronic Wasting Disease will be mandatory. Specific requirements are also included for fences, animal identification, inspection fees, and reporting of animal movements are included in the new laws.

Cervidae Imports and Exports

Imported or exported between July 1, 2002, and June 30, 2003.

Animal	Imported	Exported
Elk	123	607
Deer	3	74

Equine Programs

West Nile Virus in Horses

West Nile Virus (WNV) arrived in Minnesota in July 2002. Between July and October, 994 Minnesota horses were confirmed to have the disease. Approximately 40 percent of these horses died.

West Nile Encephalitis is a viral disease of both humans and horses and is transmitted by infected mosquitoes. The virus is maintained in a transmission cycle between birds and mosquitoes. There is no documented evidence of natural transmission from person-to-person or animal-to-person.

A vaccine for West Nile Virus in horses was granted a conditional license by the USDA during the summer of 2002. When the WNV arrived in Minnesota, most horses had not been vaccinated or were vaccinated too late to save them from the devastating effects of the disease. Horses that had received two doses of vaccine at least three weeks prior to exposure seemed to develop a fully protective immunity.

Equine Infectious Anemia

During Fiscal Year 2003, three new cases of Equine Infections Anemia (EIA) were identified. The cases occurred in Carver County, Hennepin County, and Anoka County. Since 1972 when the national program to control EIA began, 636 Minnesota horses have been diagnosed with EIA.

EIA is a viral disease of horses. It is also known as swamp fever, malarial fever, mountain fever, or slow fever. There is no vaccine or treatment for the disease. Once a horse is infected, it is infected for life. Once infected, a horse is always a reservoir for spread of the disease. EIA kills from 30 to 70 percent of infected horses.

EIA Testing Activity
July 1, 2002 to June 30, 2003

Type of Test	Test Charts	Horses Tested
Diagnostic	48,879	48,879

EIA is caused by a retrovirus. It is closely related to the human immunodeficiency virus (HIV), which causes acquired immunodeficiency syndrome (AIDS) in humans.

It is transmitted between horses by the transfer of blood. It is most frequently transmitted between horses in close proximity by large biting insects, such as horse flies and deer flies (tabanids). Mosquitoes are not a vector for EIA because they do not transfer enough blood between horses to cause infection.

Horse Imports and Exports

Imported or exported between July 1, 2002, and June 30, 2003.

Type of Animal	Imported	Exported
Horses	8,545	12,320

Poultry Programs

Pullorum-Typhoid

Minnesota received the Pullorum-Typhoid Free State Classification for turkeys in January, 1973 and the U.S. Pullorum-Typhoid Clean State Classification in August, 1975, both from USDA. Since July 1, 1975, commercial-type turkey and chicken hatcheries can participate in the program and qualify their breeding flocks without a test. Exhibition, game and waterfowl hatcheries are still required to have their breeding flocks tested under a partial testing schedule. Blood samples from turkey and egg-type chicken flocks submitted to the laboratory for other purposes are still monitored for Pullorum-Typhoid Disease using a combination antigen.

PULLORUM-TYPHOID PROGRAM TESTING

POULTRY TYPE	INITIAL TESTS	BIRDS TESTED	BIRDS IN FLOCK	RESULTS
Turkey breeders	75	33,688	767,465	Negative
Egg-type chicken breeders	8	600	65,693	Negative
Chicken broiler breeders	30	0	397,092	No test required
Waterfowl, game, backyard, including wild turkeys Serology	41	5,241	11,531	Negative
Waterfowl, game, Backyard Hatchery, debris testing	42	239	25,345	Negative
Waterfowl, game, Backyard Serologic reactors	0	0	0	
Ratites	0	0	0	
TOTALS	**196**	**39,768**	**1,267,126**	

Exhibition Testing (Individual Flocks)

Poultry exhibited or sold in Minnesota must meet the Pullorum-Typhoid test requirements. Poultry test records, health certificates, statement of origin and other forms are submitted to the Board at the completion of exhibitions, fairs and sales. Forms are checked for accuracy and contact is made with the testing agent, exhibition/sale managers or veterinarians when required. Out of state poultry being exhibited in Minnesota must also meet the state's import requirements.

POULTRY TYPE	# LOT TESTS	BIRDS TESTED	# IN FLOCK	RESULTS
EXHIBITION BIRDS	268	4,301	4,891	NEGATIVE
SALES	367	7,940	8,230	NEGATIVE
WILD/EXHIBITION TURKEYS	14	88	88	NEGATIVE
TOTALS	**649**	**12,329**	**13,209**	NEGATIVE

Salmonella Enteritidis (Egg-Type Chickens)

All egg-type chicken breeding flocks and hatcheries participate in the Salmonella Enteritidis Program. Environmental samples and blood samples were submitted from 23 flocks supplying two Minnesota hatcheries. Six hundred blood samples were tested serologically for Salmonella Enteritidis and all samples were negative. Environmental samples (1,119) from 23 flocks on four premises were tested for Salmonella. Samples (330) from 15 flocks on four premises were positive for Salmonella. Seven different Salmonella serotypes were identified, but all environmental samples were negative for Salmonella Enteritidis.

Salmonella Control (Turkeys)

The Minnesota Salmonella Typhimurium Program was established in 1971 to identify flocks infected with S. Typhimurium. These flocks cannot be used for the production of hatching eggs if the hatchery elects to maintain its "S. Typhimurium tested" classification. All turkey breeder flocks participate in the Sanitation Monitored Program to reduce and monitor Salmonella levels in their breeder flocks. The NPIP program sets the guidelines for Salmonella test standards. In addition, a cooperative Salmonella Control Program was established in 1980 to help control Salmonella in Minnesota turkey breeder flocks.

Both the Minnesota turkey industry and the primary breeders have agreed to specific test standards for Salmonella, and have agreed to report their Salmonella serotypes to each other. The goal is to differentiate the serotypes that are transmitted through the parent stock and the serotypes that are transmitted from the environment and feed.

- 33,688 turkeys from 75 flocks were serologically tested for Salmonella as part of the Official Test using a S. Pullorum-typhimurium plate antigen. All samples were negative.
- 42,180 turkeys from 85 flocks were tested for Salmonella via rectal swabs as part of the Official Test. 43 flocks were positive for Salmonella with 524 Salmonella paratyphoid recoveries. 20 different Salmonella serotypes were identified. S. Typhimurium was isolated from two recycled flocks.
- 1,029 environmental samples from 63 flocks on 37 premises were tested. 44 flocks were positive for Salmonella with 360 Salmonella paratyphoid recoveries. 16 different Salmonella serotypes were identified.
- 825 pre-placement environmental samples from 54 flocks on 30 premises were tested. Three flocks were positive for Salmonella with four Salmonella paratyphoid recoveries. Three different Salmonella serotypes were identified.
- 229 hatchery debris samples from 102 parent breeder flocks were tested. 19 flocks were positive for Salmonella with 15 Salmonella paratyphoid recoveries. Six different Salmonella serotypes were identified.
- 2,901 hatchery debris samples from six Minnesota turkey hatcheries were tested. 902 samples were positive for Salmonella. A total of 15 different Salmonella serotypes were identified.

Exotic Newcastle Disease

Exotic Newcastle Disease (END) was confirmed in California on October 1, 2002, and spread throughout backyard flocks and to some commercial chicken layer operations in the state. END was also diagnosed in poultry flocks in Nevada, Arizona and Texas. As a result the Board responded with an END response plan that consisted of the following components:

- An END Plan that involved the Foreign Animal Disease Diagnostic (FADD) Team with the ability to trace an END case as well as plan an emergency response plan;
- END Surveillance Program;
- Outreach and education through dealer and hatchery inspections, MBAH website (fact sheets, links, updates), press releases, Animal Bytes and other public speaking engagements; and
- Enforcement of the Board import rules.

Two END investigations were conducted. All test results were negative and there were no cases of END diagnosed in Minnesota.

Mycoplasma

All turkey breeder flocks participate in the Mycoplasma gallisepticum (MG), Mycoplasma meleagridis (MM) and Mycoplasma synoviae (MS) test programs. All egg-type and meat-type chicken breeder flocks participate in the MG and MS programs. MG and MS programs are required breeder programs. Any breeder flocks positive for MG or MS are quarantined. No products can be used until all positive birds are removed unless the breeder flock and hatchery agree to participate in a salvage program that has been approved by the Board. Positive flocks are usually depopulated. Mycoplasma meleagridis is a voluntary program and positive flocks are not quarantined or restricted.

Minnesota received the U.S. Mycoplasma gallisepticum Clean State -Turkey classification in February 1980. Minnesota also received the U.S. Mycoplasma synoviae Clean State -Turkey and U.S. Mycoplasma gallisepticum Clean State - Meat Type Chicken classifications in March 2003.

Four egg-type chicken breeder flocks on one premises were diagnosed with MS. The flockowner and hatchery agreed to participate in an approved salvage plan. As part of the plan the flocks were quarantined, an investigation was conducted by a district veterinarian and the premises was depopulated. Approval to repopulate was given after cleaning, disinfecting and inspecting of the premises.

Two turkey flocks on one premises were diagnosed with MM. There are no restrictions on products with MM but the hatchery did not qualify for MM NPIP Clean status. One wild/ exhibition turkey flock was positive for MG. The flock was depopulated.

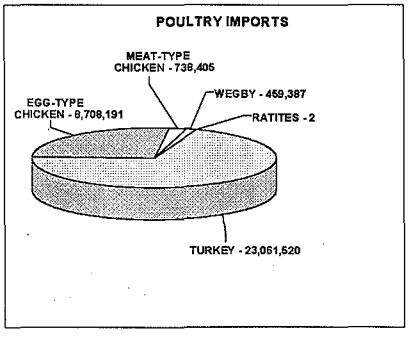
Program results reflect flocks listed based on the year of their Initial/Official Test. Flocks are then divided, moved and reassembled in different locations for their egg production cycle and monitored there.

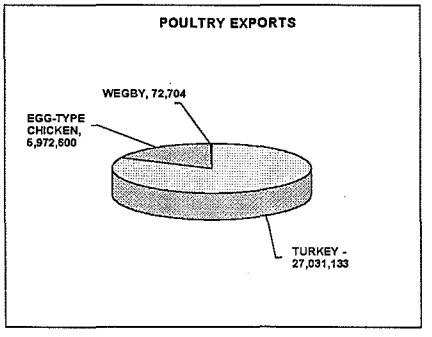
Mycoplasma Program Testing

POULTRY TYPE	FLOCKS	BIRDS IN FLOCK	MG TESTS	MM TESTS	MS TESTS	POSITIVE FLOCKS
Egg-type Chicken breeders	8	65,693	3,655		4,019	4-MS
Broiler breeders	30	397,092	11,270		11,306	0
Turkey breeders	85	860,415	19,562	38,200	38,085	2-MM
Wild/ exhibition turkeys	25	418	449	363	367	1-MG
TOTALS	**148**	**1,323,618**	**34,936**	**38,563**	**53,757**	

Poultry Imports and Exports

Poultry import permits were issued to 154 out of state hatcheries. These permits are issued on an annual basis. The numbers below include hatching eggs, baby, and adult poultry , except for slaughter poultry . With poultry export, the NPIP papers are examined to assure compliance with destination requirements.





Avian Influenza

In response to the changing Avian Influenza (AI) situation locally, nationally and internationally, surveillance of AI has increased due to a number of different factors:

- The ability of Low Pathogenic Avian Influenza viruses to mutate to Highly Pathogenic Avian Influenza viruses has been documented worldwide;
- Persistence of Avian Influenza viruses in Live Bird Markets; and
- Global and world trade issues relating to AI.

The Board has participated at the national level developing an Avian Influenza Model Program to address the concerns of the poultry industry. Components of a national program will include:

- Participation in the NPIP Avian Influenza Monitoring program;
- Commercial Bird Diagnostic Surveillance Program approved by USDA; and
- Initial Containment and Control Plan approved by USDA.

In 1984, a Minnesota Poultry Industry Task Force was formed to identify four objectives for a control program for Avian Influenza. The objectives include:

- Develop guidelines for preventing introduction of AI into Minnesota poultry flocks;
- Develop guidelines for the voluntary control and eradication of an outbreak;
- Develop and present an educational program for all segments of the industry; and
- Establish a united, voluntary control and eradication program for AI.

In 1986 a cooperative, voluntary processing plant monitoring program for commercial turkeys began as surveillance for Avian Influenza if and when it is introduced into the Minnesota poultry industry. This cooperative program between the Minnesota turkey industry and the Board of Animal Health continues today. Twenty blood samples per flock are tested for Avian Influenza using Agar Gel Immunodiffusion (AGID) test reagents from the National Veterinary Services Laboratory (NVSL). When a flock is identified based on a positive AGID test, samples are immediately sent to NVSL for sub-typing. In addition, positive AI samples from industry laboratories are forwarded to the MPTL for submission to NVSL. As part of the control program a reporting network is activated to alert the rest of the poultry industry. A district veterinarian conducts an epidemiological investigation to determine if disease has spread from the index flock and to determine the source of introduction. In addition to the Voluntary Processing Plant Program, there are breeder flocks participating in the Voluntary Avian Influenza Clean Program of the NPIP.

Avian Influenza Program Testing

POULTRY TYPE	AGID TESTS	FLOCKS	POSITIVE FLOCKS	AI TYPE
Comm. Turkey Surveillance	68,353	2,218	6	H9N9, H?N?, H1N1
Turkey breeders	340	33	0	
Broiler breeders	1,750	77	0	
Other commercial Turkey flocks	15	3	1	H1H3N1N2
TOTALS	**70,458**	**2,331**	**7**	**H9N9, H?N?, H1N1, H1H3N1N2**

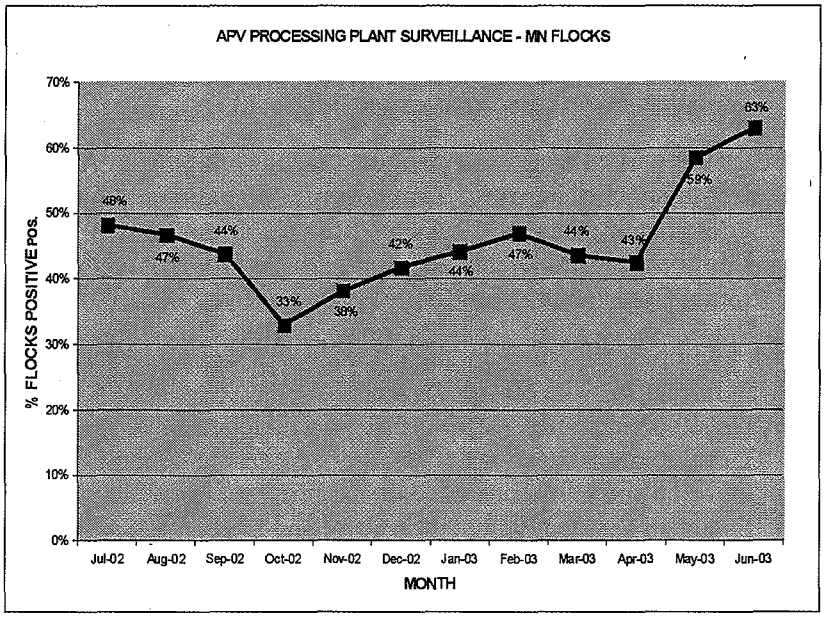
Avian Influenza Program Test Summary;

There were five introductions of Avian Influenza into seven flocks on six farms in Minnesota. One field investigation was conducted. The majority of introductions into turkey flocks are influenza spillover from swine herds in the state. The flock details follow:

Brown Co. ... 1 flock – H1H3N1N2
Dodge Co. ... 1 flock – H1N1
Roseau Co. ... 2 flocks – H9N9
Waseca Co. ... 1 flock – H1N1
Watonwan Co. ... 2 flocks – H?N?

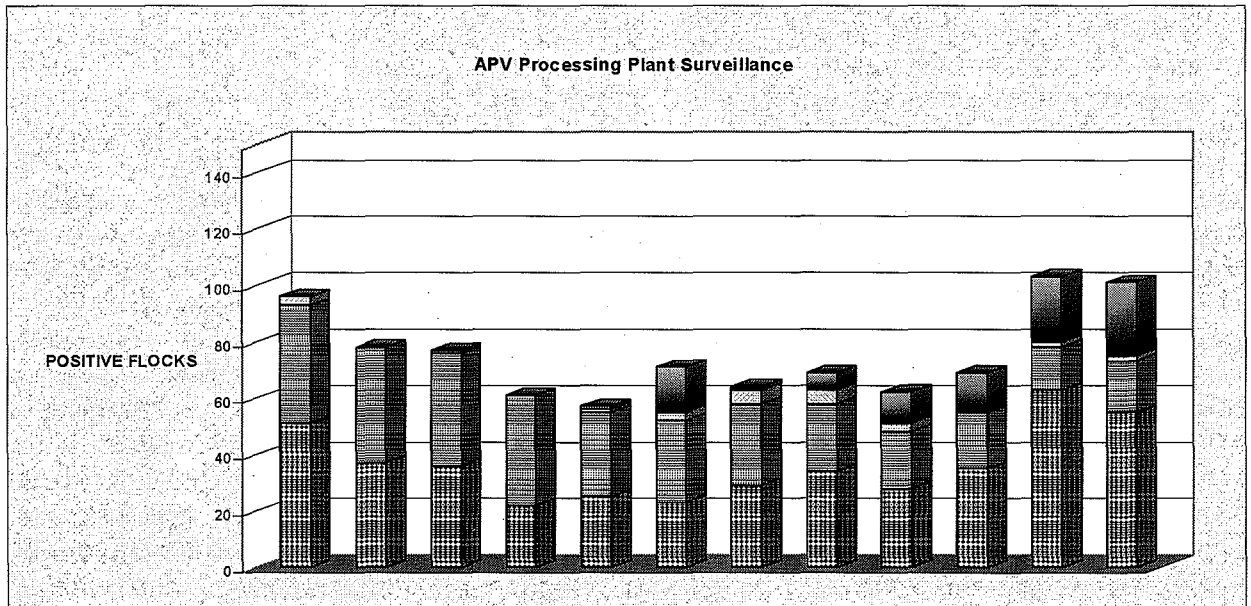
Avian Pneumovirus

The Board continues to investigate and identify flocks infected with Avian Pneumovirus (APV), a viral disease of turkeys that has affected the Minnesota turkey industry since 1997. The disease has been diagnosed in Minnesota and a few neighboring states, with the majority of turkey flocks in Minnesota.



The Minnesota turkey industry has requested the Board develop an APV Prevalence Program to identify infected flocks. The program developed uses the Avian Influenza processing plant monitoring samples from all flocks grown or processed in Minnesota. The program began in August 1998 using an ELISA test developed at the University of Minnesota. The MPTVL tested 25,484 turkeys from 2,663 flocks were tested for APV. There were 1,231 flocks that were positive for Avian Pneumovirus.

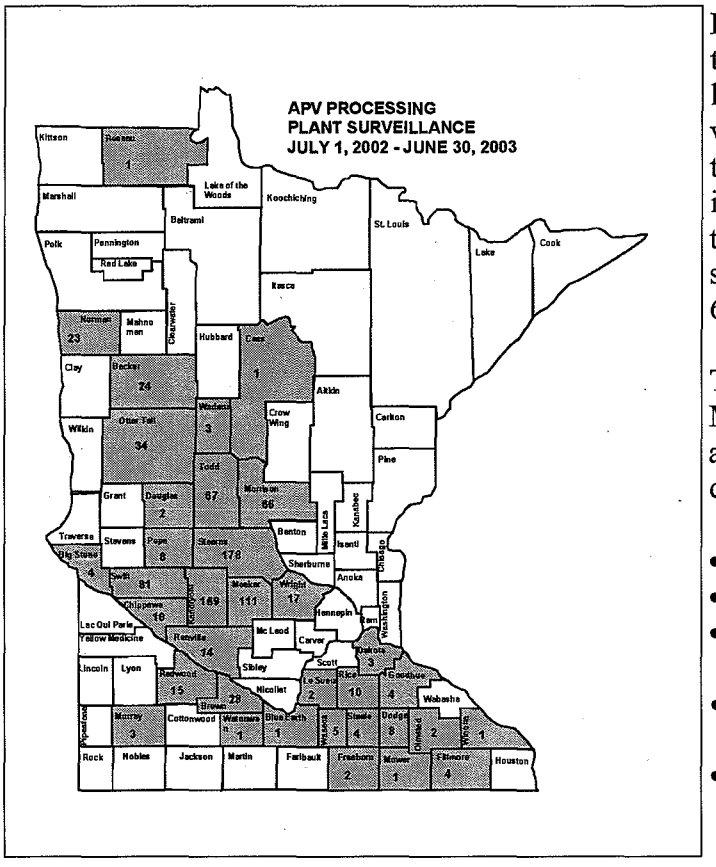
Based on information that has been generated from the prevalence program, flocks are serologically positive as result of field virus exposure (FIELD), vaccination with a killed vaccine (VACC), modified-live vaccine (PMUNE) or Controlled Exposure (CE) in the field. A graph that details these differences for the processing plant surveillance data follows:



	Jul-02	Aug-02	Sep-02	Oct-02	Nov-02	Dec-02	Jan-03	Feb-03	Mar-03	Apr-03	May-03	Jun-03
PMUNE	0	0	0	0	1	16	1	6	11	14	23	26
VACC	3	0	1	0	1	3	5	5	3	0	2	2
CE	42	41	40	39	30	29	29	24	20	20	15	18
FIELD	51	37	36	22	25	23	29	34	28	35	63	55

Avian Pneumovirus Continued

The CE Virus Distribution Program from the MPTL to the Minnesota turkey industry is complete. From June 2001 through August 2002 a total of 223 vials of p41 virus and 4,362 vials of p63 virus were distributed to turkey growers for exposure of 18,600,000 Minnesota turkeys in an effort to reduce the level of APV.



In response to the need to develop an APV vaccine to control the disease, a modified-live USDA licensed and approved vaccine was developed. The vaccine is distributed through a permit process under the supervision of the Board in order to maintain the integrity of the prevalence program. Minnesota turkey growers were issued 56 permits. Vaccine sales of 10,065,926 doses for 258 flocks containing 6,150,081 turkeys were reported to the Board.

The MPTL continues to cooperate with the Minnesota turkey industry in the research, control and eradication of APV through a number of different programs:

- Monthly disease reports and maps;
- Supervision of the vaccine permitting process;
- Coordination and dissemination of a Clinical Signs Reporting System for growers;
- Providing APV prevalence reports at industry meetings; and
- Continued coordination of field research efforts with the University of Minnesota.

Poultry Disease Program Participation

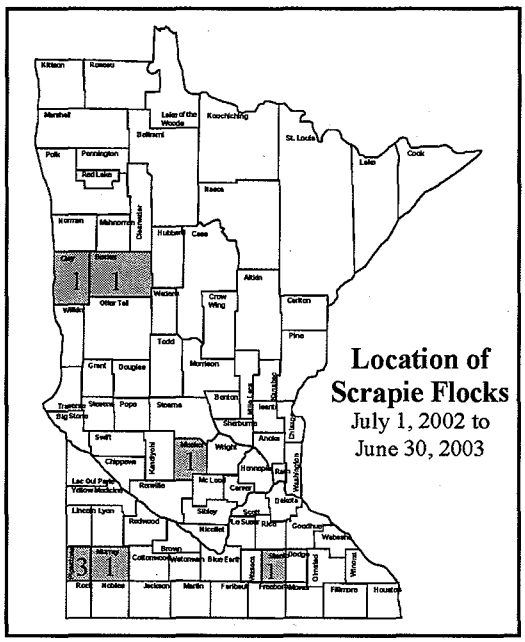
- Hatcheries and independent flock owners operating under permit from the Board
  - Chicken 4
  - Turkey 11
  - Waterfowl, Game Exhibition and Backyard Flocks 111
  - **Total** **126**
- Poultry Dealers operating under permit from the Board 237
- Hatchery, independent flock owner and poultry dealer inspections 361
- Poultry training courses conducted 1
  - Attendance at the Benson Course 16
- Field Instruction Schools conducted by district veterinarians 7
- Testing authorizations issued (effective for three years) 53
  - Temporary authorizations 0

Sheep and Goat Programs

Scrapie Eradication and Flock Certification Programs

National Scrapie Eradication Program

The Scrapie Eradication Program requires that many classes of sheep and goats be officially identified to allow trace-back of Scrapie-infected animals to their flock of origin. As of June 30, 2003, producers had registered and received official identification for 1,924 sheep flocks and 469 goat herds.



Scrapie Eradication Activity
July 1, 2002 through June 30, 2003

Total Scrapie Investigations conducted	114
Investigations resulting from infected flocks trace-outs	104
Investigations due to Scrapie suspect animal	8
Other investigations	2
Infected flocks identified	4
Source* flocks identified	4
Flock plans initiated to eliminate and prevent spread of Scrapie	86
Sheep genotyped to determine susceptibility to Scrapie	368
Total Sheep tested for Scrapie by immunohistochemistry	405
Positive test	15
Negative test	388
Inconclusive test	2
Prevalence of Scrapie in sheep tested	3.7 %

*Source flocks are flocks in which a Scrapie- positive animal was born.

The Scrapie Eradication Program also requires that Scrapie positive, suspect, and trace animals are investigated, reported, and control measures implemented. Activity relating to Scrapie eradication within Minnesota during FY 2003 is summarized in the graph to the right.

Scrapie Flock Certification Program

The Scrapie Flock Certification Program is a voluntary program which provides producers the opportunity to protect their sheep from Scrapie and to enhance the marketability of their animals through certifying their origin in Scrapie-free flocks. The intent of the program is to monitor flocks over a period of five years or more to identify flocks that are free of Scrapie.

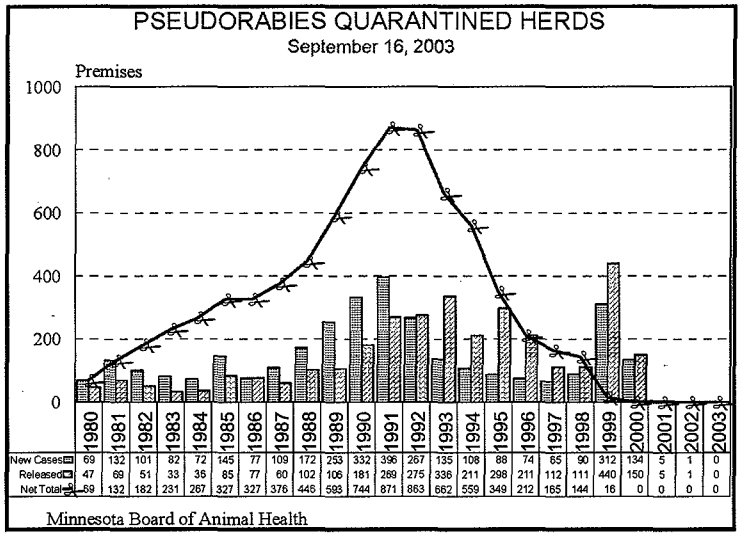
The longer a flock is enrolled and following program requirements, the more likely the sheep in the flock are to be free of Scrapie. The Board registers and maintains records on all participants in this program. As of June 30, 2003, there were 25 flocks enrolled in the program. One of these flocks has been certified as Scrapie-free.

Swine Programs

Pseudorabies Control and Eradication

The last pseudorabies-infected swine herd in Minnesota was released from quarantine in October 2002. Two pseudorabies-infected herds were identified during 2002. A herd in Nobles County was quarantined in April 2002. A herd in Mower County was quarantined in October 2002. Both herds were depopulated within 15 days.

Minnesota was granted Pseudorabies Stage IV Status in April 2002, and will be eligible for Stage V Pseudorabies "Free" Status in October 2003. For a state to qualify for Stage IV, there may be no infected herds in the state. For a state to qualify for Stage V, the state must have had no infected herds for one year since the recognition of Stage IV status.



The program to eradicate pseudorabies from Minnesota began in 1975. Efforts intensified when the National Pseudorabies Eradication program was endorsed in 1989. In the next three years, all swine herds in the state were tested. Infected herds were identified and quarantined.

Progress toward eradication was temporarily halted when an unexpected pseudorabies epidemic began in January 1999. By the end of the year, over 312 new premises in six counties had been placed under quarantine. Clinical reports during the epidemic described outbreaks where death losses in swine herds were unusually high. Death losses in other species, including sheep, dogs, cats, and cattle were also reported.

Pseudorabies Testing Activity

Type of Test	Test Charts	# Pigs Tested
Monitoring Tests	173	5,122
Circle Tests	62	3,911
Traces from Infected Herds	0	0
Traces from Slaughter Tests	25	1,440
Infected Herd Tests	2	284
Qualified Herd Tests	1,118	38,174
Imported Swine	914	18,697
Private Sale	114	3,729
Show or Exhibition	395	2,627
Tests at Slaughter Plants	451	76,279
Diagnostic Tests	365	7,387
Total	**3,619**	**157,648**

Progress was halted once again in February 2000. This time, the outbreak occurred predominantly in Waseca and Blue Earth counties. These counties had been relatively free of pseudorabies and producers were not prepared. Few pigs in these counties were vaccinated and 134 new premises were infected before spread was brought under control.

Pork producers vaccinated pigs for pseudorabies from 2002 to 2003. Federal dollars were still available and producers were reimbursed $665,320 (.25/dose) for vaccinating 2,661,281 pigs.

Swine Brucellosis

Minnesota was granted Validated Swine Brucellosis Free Status until April 30, 2005. Minnesota was declared Validated Swine Brucellosis Free on May 1, 1975. A slaughter Surveillance program is used in Minnesota to maintain Swine Brucellosis Free status where at least five percent of the state's breeding swine population is subjected to an official brucellosis test each year. All suspects are traced to the herd of origin and such herds may be subjected to an official random sample herd test.

Swine Brucellosis Testing Activity
July 1, 2002 to June 30, 2003

Type of Test	Number Tested
Validated Herd Tests	32,346
Diagnostic Tests	3,251
Tests at Slaughter Plants	75,458
Traces from Slaughter Tests	209
Private Sale Tests	215
Total	**112,022**

Swine Tuberculosis Surveillance

Swine can become infected with bovine tuberculosis, but only by direct contact with infected cattle. When bovine tuberculosis was eradicated from the Minnesota cattle population, it was also eradicated from the swine population. All currently occurring cases of tuberculosis in swine in Minnesota are caused by avian tuberculosis which is an environmental contaminant and is inhaled or ingested by swine in close contact with infected birds or their environment.

The Food Safety Inspection Service (FSIS) does maintain a program to identify tuberculosis lesions in swine. If the lesions appear in one location, the affected area is trimmed and the carcass is passed. If the lesions appear in two locations, the affected areas are trimmed and the carcass is passed for cooking. If the plant has no facility for cooking, the carcass is condemned. If the lesions are generalized, the carcass is condemned.

Swine Imports and Exports

Imported or exported between July 1, 2002, and June 30, 2003.

Type of Animal	Imported	Exported
Breeding Swine	121,510	183,512
Feeding Swine	4,589,848	1,977,173

Other Programs

Brands

The Board approves, registers, and maintains records on livestock brands in the state. Thirty-six new brands were issued during this fiscal year. Total brands now registered in Minnesota is 941.

Dead Animal Disposal

The Board of Animal Health investigates complaints concerning the disposal of dead livestock. These complaints come from the general public, law enforcement personnel, municipalities and other agencies. Agriculture Specialists visit the premises to ensure disposal of carcasses complies with Board of Animal Health rules. 26 visits were made to 15 premises. One fine was issued and warning letters were sent to additional premises.

Dead Animal Composting

Composting is approved in Minnesota as a method for disposal of poultry, sheep, goat, and swine carcasses. The process converts waste products such as animal carcasses, straw, sawdust, and poultry litter into an odorless, inoffensive, generally pathogen-free product that can be used as an organic fertilizer. Board of Animal Health rules require that composting facilities must be constructed on an impervious pad using rot resistant materials.

Feeding of Garbage to Livestock and Poultry

No person may feed garbage to livestock or poultry in Minnesota unless a permit has been issued by the Board of Animal Health. All garbage fed to livestock must be cooked at 212 degrees Fahrenheit for 30 minutes and facilities and trucks must be inspected each month. There are currently 11 producers in Minnesota who have obtained permits from the Board to feed garbage to pigs.

Livestock producers may also apply to the Board for an "Exempt Materials" permit. Such a permit allows producers to feed certain non-meat food waste ("exempt materials") to livestock and poultry without cooking it prior to feeding. There are 15 producers who currently have obtained permits from the Board to feed exempt materials.

Pet Food Processing

Board of Animal Health Agriculture Specialists inspect all pet food processors that use dead animals or discarded animal parts for compliance with agency rules and state statutes. Permits are issued yearly to establishments to process pet food. Three permits were issued in this fiscal year.

Kennel, Dealer and Institution Licenses for Dogs and Cats

The Board inspects and licenses kennels that house stray, abandoned, or unwanted dogs or cats. The Board also inspects and licenses any research institution which conducts investigations or instruction using dogs and cats obtained from a pound, as well as animal dealers who sell or transfer dogs or cats to such institutions. Two-hundred twenty-one inspections of these facilities were conducted by Board employees during FY 2003.

Licenses Issued
July 1, 2002 through June 30, 2003

Licenses Issued	Dealers	Humane Societies & other kennels	Veterinary Clinics	Research Institutions
New	0	13	1	0
Renewals	1	77	55	3

Rabies

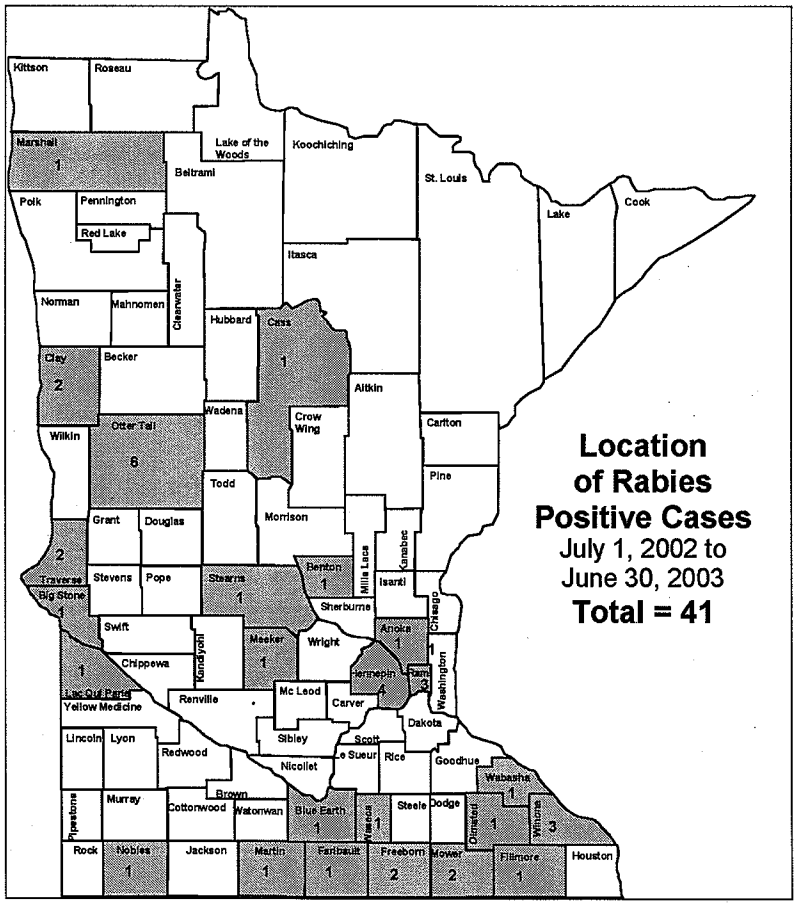
The Board investigates all reported rabies cases and quarantines exposed animals to prevent the spread of disease.

During FY 03:

- 57 rabies investigations were conducted by district veterinarians.
- 150 animals were quarantined on 17 premises because of exposure to a rabid or potentially rabid animal. This includes 132 cattle, 16 dogs, and 2 cats. An additional 11 dogs and 16 cats were euthanized due to exposure to a rabid animal.

Number of Rabies Cases by Species
July 1, 2002 through June 30, 2003

Species	Suspect	Positive
Bat	1	17
Skunk	3	15
Bovine	1	5
Feline	0	3
Equine	0	1
Canine	0	0
All Species	5	41



Rendering Plants

Permits to operate a rendering plant or act as an independent hauler are issued yearly. Agriculture Specialists inspect all rendering facilities and trucks for compliance with Board of Animal Health rules.

Number of Permits Issued	
Minnesota Rendering Plants	10
University of Minnesota	1
Independent Haulers	8
Out-of-state Plants	3
Inspections conducted at rendering facilities, pet food establishments and reload stations	16
Minnesota trucks inspected	157
Out-of-state trucks	3

Emergency Planning

Minnesota's Emergency Animal Health Response Plan is a framework that will facilitate early detection, control and eradication of a highly contagious Foreign Animal Disease as quickly as possible, so a crisis can be avoided, and the consequences minimized.

Five veterinarians on staff with the Board are trained as Foreign Animal Disease Diagnosticians (FADD). They respond to unusual animal health events that are reported to the Minnesota Board of Animal Health and to USDA APHIS.