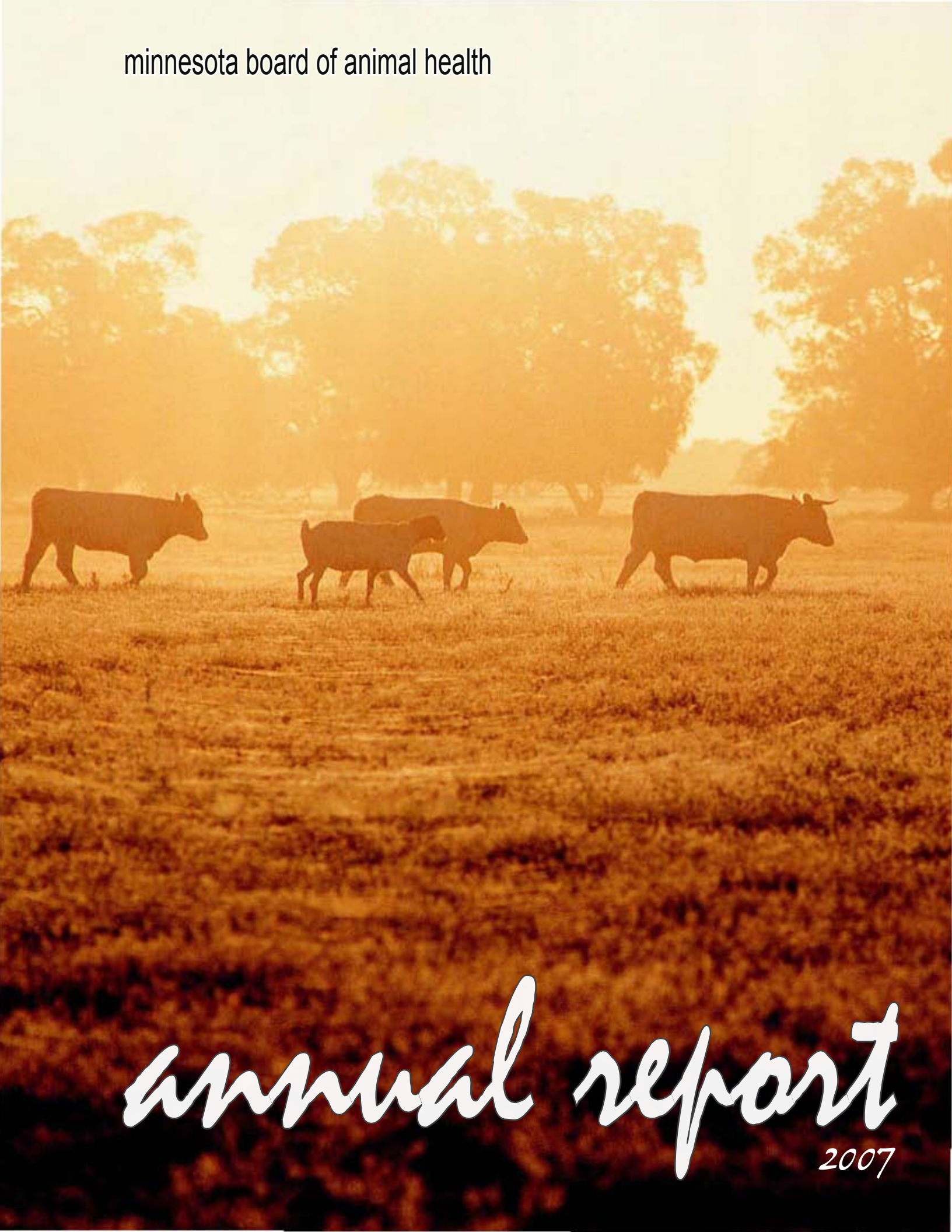
minnesota board of animal health



annual report

2007

Minnesota board of animal health

July 1, 2007

Dear Friends of Minnesota Agriculture:

For more than 100 years, the Minnesota Board of Animal Health has been safeguarding one of Minnesota's most important resources: animal agriculture. Our challenges vary from year to year but the goal is always the same - to protect Minnesota's domestic animals from disease. The Board is part of a network of state and federal agencies, industry representatives, private practitioners, and academic institutions, all working together to help the industry produce a healthy, wholesome, and abundant product.

This past year we saw tremendous progress in our effort to eliminate bovine tuberculosis. This disease has changed the way that Minnesota cattle producers conduct business and we will continue to work diligently to return our cattle industry to "business as usual." The past year also saw an unprecedented increase in poultry disease surveillance, particularly for avian influenza (AI). As we keep an eye on AI and other emerging disease threats around the globe, emergency preparedness is also a major focus. We are working with stakeholders to ensure that Minnesota is prepared to respond to any animal disease.

I would like to take this opportunity to thank our many partners across the state. We are fortunate to enjoy the support of so many producers, industry leaders, and veterinarians across the state. There are a number of important things to accomplish in the upcoming year and as the State Veterinarian, I know that we have the cooperative spirit to achieve our goals.

I take great pleasure in sharing with you the Minnesota Board of Animal Health Annual Report. The information contained within is from July 1, 2006 to June 30, 2007. For further information on our disease programs, I encourage you to explore the Board's website at www.bah.state.mn.us.

Sincerely,

W J Hartmann

Dr. William Hartmann
State Veterinarian

Board Members

Dr. Mahesh Kumar, President.....St. Cloud
Dr. John Whitten, Vice-President...Alexandria
Dr. Holly Neaton.....Watertown
Paul FitzSimmons.....Good Thunder
Steven Brake.....Wilmont

Quarterly Board Meetings

December 13, 2006
February 21, 2007
April 11, 2007
September 12, 2007

The Board minutes are recorded in the Official Minute Book of the Board of Animal Health and are kept on file at the Board's office.

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cattle health

Bovine Tuberculosis (TB)

Two TB-infected beef cattle herds were discovered this year, bringing the total number of infected herds to seven, all of which were located in close proximity in northwestern Minnesota and have since been depopulated.

The elimination of this disease is a cooperative effort of state and federal agencies and cattle producers with the goal of regaining Minnesota's TB-Free status. Progress was made by depopulating the infected herds, tracing animal movements, and conducting area and statewide surveillance.

Because of the discovery of TB-infected deer in the vicinity of formerly infected cattle herds, certain management practices are now required of cattle herds within the Core Area and the TB Management Zone, areas of concern defined by the Department of Natural Resources (DNR) based on the location of infected deer. For more information on the infected deer, visit the DNR website at www.dnr.state.mn.us.

All cattle producers in the Core Area and TB Management Zone are required to TB test their herds annually. In addition, producers in the Core Area must obtain a movement permit from the Board and ensure that each animal has a negative TB test within 60 days before moving animals off the farm. Core Area producers must also implement the recommendations of a wildlife risk assessment to reduce the likelihood of interaction between deer and cattle.

Maps of the Core Area and TB Management zone can be found in the Appendix.

Anthrax

The Board tracks anthrax cases in Minnesota and encourages producers to vaccinate grazing animals in areas where the fatal disease has been seen in the past. Board of Animal Health district veterinarians investigate all confirmed cases and provide oversight for proper carcass disposal. Farms with anthrax infected animals are quarantined for 30 days following the last animal death due to the disease. These efforts aim to prevent livestock from developing anthrax and reduce the likelihood that additional spores will be introduced into the soil.

During the year, more than 70 animals, including cattle, horses and bison, died of anthrax on 19 premises in northwestern Minnesota - the second largest number of anthrax deaths in Minnesota's history.

Johne's Disease (JD)

The Board administers a voluntary Johne's disease (JD) control program. Almost 2,000 Minnesota cattle producers (1600 dairy and 400 beef) are enrolled in the program. Participating herds are visited each year by a specially trained veterinarian who performs a risk assessment and develops a herd management plan to help eliminate the disease. Board staff visit about half of the herds. Certified private practitioners visit the other half.

Johne's disease is a chronic, contagious enteritis characterized by persistent and progressive diarrhea, weight loss, debilitation, and eventually death. Caused by the bacteria Mycobacterium avium paratuberculosis, it can affect cattle, sheep, goats, llamas, farmed deer, and other animal species.

A national voluntary control program for Johne's disease has been developed and funded by the United States Department of Agriculture (USDA) in cooperation with state regulatory officials and cattle industry leaders. During the past year, 74,471 Minnesota cows were tested for Johne's disease; 68,915 tested negative and 4,447 tested positive. Approximately 25 percent of participating herds have qualified for negative herd status while the remainder have implemented management plans to eliminate the disease from their herds and prevent introduction from outside sources. Feedback from cattle producers indicates that the program is effective. Significant progress has been made in Minnesota to reduce the prevalence of infected cattle in participating herds.

Bovine Brucellosis

Although Minnesota has been bovine brucellosis-free since 1984, surveillance and vaccination efforts continue nationally to ensure that brucellosis is not present in U.S. Cattle are tested at slaughter, all dairies must have milk tested twice a year, and some cattle are tested for brucellosis at markets or before private sale. All suspicious test results are investigated and follow-up samples are collected. No bovine brucellosis infected farms were identified in the past 12 months. Detailed information on brucellosis testing is available in the Appendix, chart 1.4.

Chronic Wasting Disease (CWD)

The Board of Animal Health administers a mandatory registration and disease control program for farmed cervidae in Minnesota. These efforts aim to prevent the introduction of CWD into Minnesota's farmed cervidae population, which includes elk, red deer, reindeer, fallow deer, sika deer, white-tailed deer, muntjac, and a variety of other deer species. CWD is a fatal brain and nervous system disease found in elk and deer in certain parts of North America.

In order to possess live cervidae in Minnesota, a producer must register with the Board and comply with Minnesota Statute 35.155, including fencing specifications, certification of animal movements and CWD surveillance. Most producers comply with these laws, although there have been a few cases in which legal action was initiated to ensure compliance.

There are 668 farmed cervidae producers in Minnesota with approximately 20,000 animals. Each herd is inspected by Board personnel at least once a year. During the last year, Minnesota farmed cervidae producers tested 2,111 animals for CWD. All tests were negative.

deer and elk health

horse health

West Nile Virus (WNV)

In Minnesota, cases of WNV in horses must be reported to the Board. The Board publishes these results as a mechanism to remind horse owners to vaccinate against the disease and to alert human health officials of specific areas in the state where WNV has been found.

West Nile Encephalitis is a viral disease of both humans and horses that is transmitted by infected mosquitoes and maintained in a transmission cycle between birds and mosquitoes. Vaccines for WNV are now available for horses and are effective when used according to manufacturers' guidelines. Most horses in the state are vaccinated.

This year, 18 Minnesota horses were confirmed to have WNV. Cases occurred in all parts of the state. Most cases were in unvaccinated horses.

Equine Infectious Anemia (EIA)

The Board administers a control program for EIA, an infectious, highly contagious disease of horses that proves fatal more than 50 percent of the time. The disease is closely related to human immunodeficiency virus (HIV).

Infected and exposed horses are quarantined and held in isolation to limit spread of the disease. There is no treatment or cure for EIA, so infected horses must remain quarantined indefinitely. Quarantines on exposed horses can be released if tests show the animal is negative for EIA.

Once a horse is infected, it is infected for life and can spread the disease. It is usually transmitted between horses in close proximity to large biting insects, such as horse flies and deer flies. Mosquitoes are not a vector for EIA.

This year, 44,704 Minnesota horses were tested for EIA, with one new case identified in Todd County. The infected horse was euthanized. Ten other EIA-positive horses remain quarantined across the state.

poultry health

Avian Influenza (AI)

Surveillance was expanded this year for AI due to global concern for a human influenza pandemic. In Minnesota, 68,317 samples from 3,803 flocks were tested across segments of the poultry industry. Low pathogenic (LPAI) strains were identified in 23 flocks. In each case, disease investigations concluded that the virus had not spread to other flocks.

The Board and the poultry industry developed the Minnesota H5/H7 LPAI Initial State Response and Containment Plan (Minnesota Plan). H5 and H7 LPAI strains are of particular concern as they are the most likely strains to mutate into a highly pathogenic (HPAI) form of the virus. Key components of the Minnesota Plan include an Emergency Management Committee (EMC), biosecurity requirements, emergency awareness, and management plans for exposed and infected flocks. The USDA approved the Minnesota Plan.

In Spring 2007, a commercial turkey flock from Brown County in south-central Minnesota was identified with LPAI antibodies at the Minnesota Poultry Testing Laboratory with results confirmed by the National Veterinary Services Laboratory as strain H7N9. Based on the Minnesota Plan, the Board restricted poultry movement to and from the premises, increased biosecurity at the premises, and conducted area surveillance. All samples were negative and the Board's investigation found no clinical signs, unusual mortality, or virus spread.

Avian Pneumovirus (APV)

APV was first identified in Minnesota turkey flocks in 1998. Because of the economic impact the disease has had on the turkey industry, the Board and the University of Minnesota have been researching eradication strategies, including the USDA Avian Pneumovirus Field Eradication Project. Over a three-year period, this project evaluated the USDA-approved modified-live vaccine in a controlled pen study, designed and implemented a coordinated vaccination field project, and analyzed the data to determine if a coordinated vaccination strategy is possible and successful.

The percentage of APV positive flocks identified at processing declined from 28 percent in July 2006 to 5 percent in June 2007. In addition, decreasing serology titers and fewer reports of clinical illness suggest that Minnesota is moving toward disease eradication. Vaccination associated with the now-completed APV project may have played a role.

The success of this project supports the control strategy that has been used in Minnesota for years, suggesting that a successful APV eradication strategy must include breeder vaccination programs, biosecurity plans, and individual commercial premises eradication programs.

sheep health

Scrapie

Scrapie is a disease of sheep and goats marked by progressive neurological deterioration and eventually death. Minnesota participates in a federally funded Scrapie Eradication Program. Infected flocks are identified by testing animals that exhibit signs of the disease or through a slaughter surveillance program. When a scrapie-positive farm is identified, government veterinarians work with the producer to eliminate the disease from their flock and trace any exposed animals.

During the federal fiscal year 2006 (October 1, 2005 through September 30, 2006) 1811 Minnesota sheep were tested for scrapie at slaughter plants. In addition, 302 surveillance tests were performed within Minnesota, including 120 sheep and goats at two processing plants in Minnesota. Additional scrapie eradication program activity is provided in the Appendix, chart 1.2.

Eartags and registered tattoos are used as official identification and are critical to successfully tracking the origin of animals. All producers that buy or sell sheep or goats in Minnesota are required to register their flock or herd with the Board. As of June 30, 2007, 1732 goat herds and 3955 sheep flocks were registered.

Scrapie Flock Certification Program

A total of 38 flocks are currently enrolled in the Scrapie Flock Certification Program. Fourteen of those flocks are now certified Scrapie-free.

swine health

Pseudorabies

The Board currently administers a surveillance program for pseudorabies, a disease that was eradicated from Minnesota swine herds in October 2002. Slaughter surveillance is used in Minnesota to maintain Pseudorabies-Free status. During the past year, 92,271 Minnesota sows and boars were tested at slaughter plants across the U.S. Tests on 15 of these animals were positive for pseudorabies, all of which were determined to be false-positives. No infected herds were identified.

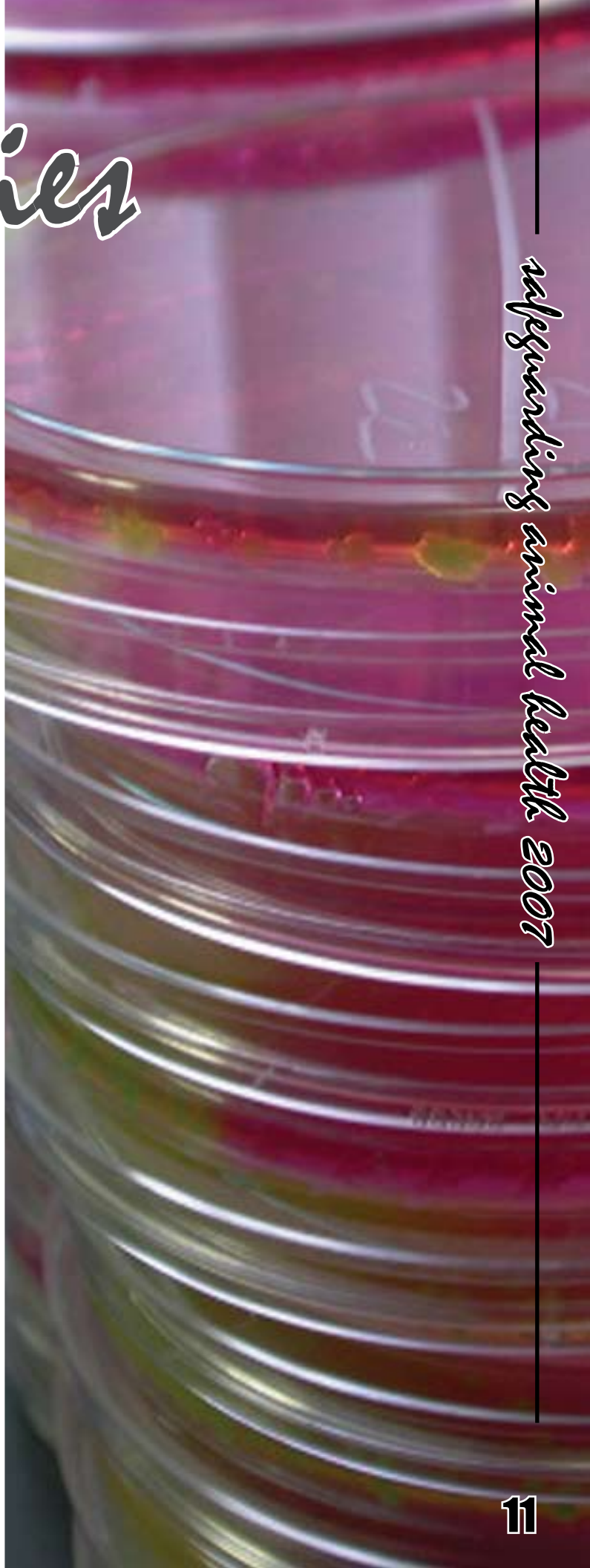
Pseudorabies, also known as Aujeszky's Disease, is caused by a herpes virus. Once infected, swine are infected for life and may shed the virus intermittently. Mortality rates vary in swine, but when cattle, sheep, goats, dogs or cats are infected, the disease is always fatal. Pseudorabies does not infect humans or horses and is not a food safety concern. The disease has been eradicated from domestic swine in all 50 states yet the prevalence of pseudorabies in feral swine populations throughout the U.S. remains high. There is a risk that pseudorabies could be reintroduced into domestic swine from these feral populations and for this reason we conduct surveillance. If an outbreak should occur, the Board is ready to respond and eradicate the disease.

Swine Brucellosis

Swine brucellosis was eradicated from Minnesota in 1975 and the Board now administers a slaughter surveillance program to maintain the state's Swine Brucellosis-Free status. During the past year, 97,069 Minnesota sows and boars were tested for swine brucellosis. Tests on 40 of these animals were positive for swine brucellosis. All samples were traced back to the farms of origin and all herds were evaluated. No high-risk herds were identified and no further herd testing was required.

Brucellosis in swine is caused by the Brucella suis bacteria which is spread by ingestion of infected tissues or fluids or through semen. The bacteria can infect humans and most commonly affects processing-plant workers and feral swine hunters. Swine brucellosis has been eradicated from domestic swine in every state except Texas, but the prevalence of the disease in feral swine populations remains high. There is a risk that swine brucellosis could be reintroduced into domestic swine from these feral populations and for this reason we continue to conduct surveillance.

laboratories



Minnesota Poultry Testing Laboratory (MPTL)

The MPTL serves as the official laboratory of Minnesota's nation-leading poultry industry. The MPTL is also the state's authorized National Poultry Improvement Plan laboratory, a field laboratory for avian disease surveillance, and a poultry research center. A laboratory renovation project began in May 2007 to expand the MPTL's testing capacity and more efficiently serve a growing client base.

In February 2007, the MPTL collaborated with the University of Minnesota to implement an online service that enables clients to access test results via a secure website.

A project was initiated this year to collect poultry premises data for use in disease alert notifications. Modeled after the premises identification system of the Minnesota Turkey Growers Association, the program has identified over 2,500 premises.

University of Minnesota Veterinary Diagnostic Laboratory (VDL)

The VDL is the official laboratory of the Minnesota Board of Animal Health. The Veterinary Diagnostic Laboratory's mission is to protect and promote animal and human health through early detection and monitoring of animal diseases. The VDL fulfills its mission by identifying emerging diseases, developing new diagnostic methods, and training diagnosticians, veterinarians and graduate students. The laboratory is a part of the College of Veterinary Medicine and serves as Minnesota's only full service, accredited animal health diagnostic facility.

In fiscal year 2006-07, the University of Minnesota provided $2.5 million of funding for a Biosafety Level 3 (BSL-3) addition to the necropsy laboratory. Construction began in March, 2007 and is scheduled for completion and commissioning by November 1, 2007. The new BSL-3 necropsy laboratory will provide a safe working environment for VDL employees in the event of an outbreak of HPAI in the U.S. It will also be used for containing other high risk zoonotic pathogens.

Communications
As the Minnesota TB investigation continued this year, so did the Board's communications needs. Communications staff held several meetings around the state to inform cattle producers about the ever-changing investigation. Of 14 news releases last year, nine were related to bovine TB. Topics included the discovery of the sixth and seventh infected herds, a tax credit for producers who TB-test their herds, and statewide surveillance.

Additionally, the Board conducted nearly 100 media interviews and continued to release the Animal Bytes newsletter to veterinarians on a monthly basis. Communications staff began a website redesign in Spring 2007.

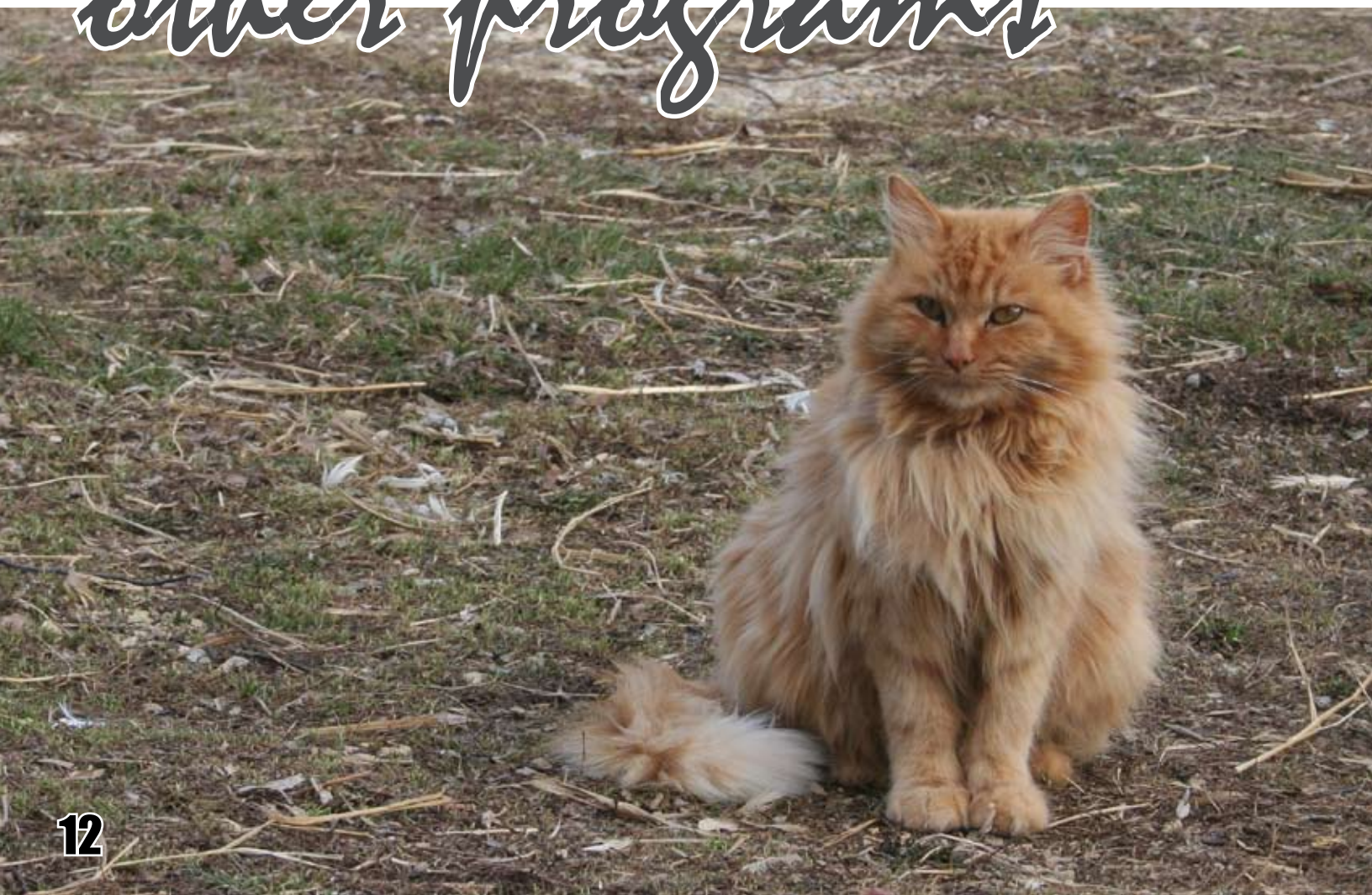
Garbage Feeding
The Board regulates the practice of feeding garbage to livestock in order to prevent the accidental introduction of foreign animal diseases that could be found in uncooked meat (i.e. Foot and Mouth Disease and hog cholera).

In Minnesota, no person may feed garbage to livestock or poultry unless a permit has been issued by the Board. 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 nine 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, which allows producers to feed uncooked, non-meat food waste ("exempt materials") to livestock and poultry. There are 17 producers who have obtained permits from the Board to feed exempt materials.

Imports and Exports
All domestic animals that are exported from or imported into Minnesota are tracked by the Board through certificates of veterinary inspection. Detailed information on imports and exports is available in the Appendix, chart 1.1.

other programs



Information Technology

The Board administers a database for Minnesota's livestock disease control programs. By maintaining the database locally, the Board is able to respond quickly to livestock disease events while at the same time keeping historical data.

With field staff located through out the state, the Board implemented an information system which allows remote access to live data through internet and cell phone technology. Utilization of Global Positioning Systems (GPS) for more accurate premises location and Geographic Information Systems (GIS) to map areas of surveillance ensures that personnel and equipment are in the right place at the right time.

Partnerships with the University of Minnesota and the USDA place test results in the hands of decision makers in a timely manner. This enables rapid identification, response, and containment of livestock diseases and minimizes the impact on commerce. The information technology division at the Board continues to monitor technical developments and evaluate them for innovative and cost effective solutions to Minnesota's livestock disease control programs.

Kennel, Dealer, and Institution Licenses for Dogs and Cats

The Board inspects and licenses kennels that house impounded, abandoned or unwanted dogs and cats in order to ensure that animals are cared for properly. In the past year, the Board licensed 121 kennels throughout the state.

The Board also licenses research institutions which obtain dogs and cats from an impound facility for use in investigative or instructive purposes as well as animal dealers who sell or transfer dogs and cats to such institutions. During 2007, the Board was responsible for the inspection and licensing of two research institutions and one animal dealer.

Livestock Brands

The Board approves, registers, and maintains records on livestock brands in the state as a service to the livestock industry. This year, 762 brands were registered.

Rabies

The Board, in conjunction with the Minnesota Department of Health, is responsible for investigating all known positive animal rabies cases in Minnesota. To prevent the spread of rabies, the board issues quarantines for all exposed domestic animals. This year, 32 animals tested positive for rabies. Detailed information on rabies cases is available in the Appendix, chart 1.5.

Regulated Animals

Minnesota statute 346.155 prohibits private citizens from purchasing, obtaining, or owning bears, exotic cats, and nonhuman primates. People who owned these animals prior to January 1, 2005 were allowed to retain them contingent upon registration with their local animal control authority. As of June 30, 2007, twenty individuals or organizations had registered 101 animals. The Board serves as a repository for this information.

appendix

Chart 1.1

Imports & Exports

Type of Animal	Imported	Exported
Cattle	415,916	196,198
Chickens - Broiler/Layer	8,040,869	21,020,933
Farmed Cervidae (Deer and Elk)	164	1,084
Goats	3,804	1,345
Horses	8,474	11,992
Poultry - Non Commercial	1,584,024	382,330
Sheep	28,892	10,532
Swine - Breeding	130,500	150,997
Swine - Feeding	4,766,775	1,768,574
Turkeys - Commercial	13,730,734	33,792,384

Chart 1.2

Scrapie Eradication Program Activity

	Quantity
Scrapie Investigations completed	74
Genotype tests performed during scrapie investigations	1,125
Scrapie tests conducted	134
Infected flocks identified	5
Scrapie-positive sheep identified	45
Prevalence of scrapie in animals tested	34%
Flock quarantines issued	5
Flock quarantines released	5

Chart 1.3

Regulated Animals Registered

County	Registrants	Large Exotic Cats	Small Exotic Cats	Bears	Primates
Anoka	1				1
Beltrami	1	4	1		5
Clay	2	1			1
Cottonwood	1				17
Goodhue	2	1			4
Hennepin	1				10
Martin	1	1			
Morrison	2	13	2	3	
Nicollet	1			4	
Ramsey	3				3
Stearns	2		1		2
Washington	1		2		6
Wilkin	1		18		
Winona	1	1			

Chart 1.4

Bovine Brucellosis Activity

	Quantity
Cattle or bison tested at markets	12,053
Cattle or bison tested on farms	6,991
Calves vaccinated	106,654
Investigations completed on MN cattle	24
Positive herds identified	0

Chart 1.5

Rabies Cases by County and Species

County	Skunk	Bat	Bovine	Canine	Feline	Equine
Anoka		1				
Becker	1					
Benton	4					
Hennepin		5				
Kandiyohi	1					
Marshall	1		1			
Meeker		1				
Morrison	1					
Mower					1	
Murray	2					
Olmstead		1				
Polk	1					
Ramsey		1				
Scott		1				
Stearns	1					
Steele	2					
Todd	1		1			
Wadena	1					
Washington		1				
Winona		2				

Chart 1.6

Minnesota Poultry Testing Laboratory Statistics

Program	Birds/Samples Tested	Birds/Samples/ Flocks Positive
Avian Influenza	68,317	23
Avian Pneumovirus	26,559	500
Mycoplasma Program (MG)	27,269	3
Mycoplasma Program (MM)	46,165	0
Mycoplasma Program (MS)	63,788	0
Salmonella Enteritidis	1,887	0
Salmonella Pullorum-Typhoid	23,740	0
Salmonella Sanitation Monitored (Environmental and Pre-Placement)	1,530	343
Salmonella Sanitation Monitored (Hatchery Debris)	3,534	757
Salmonella Typhmurium	39,485	0

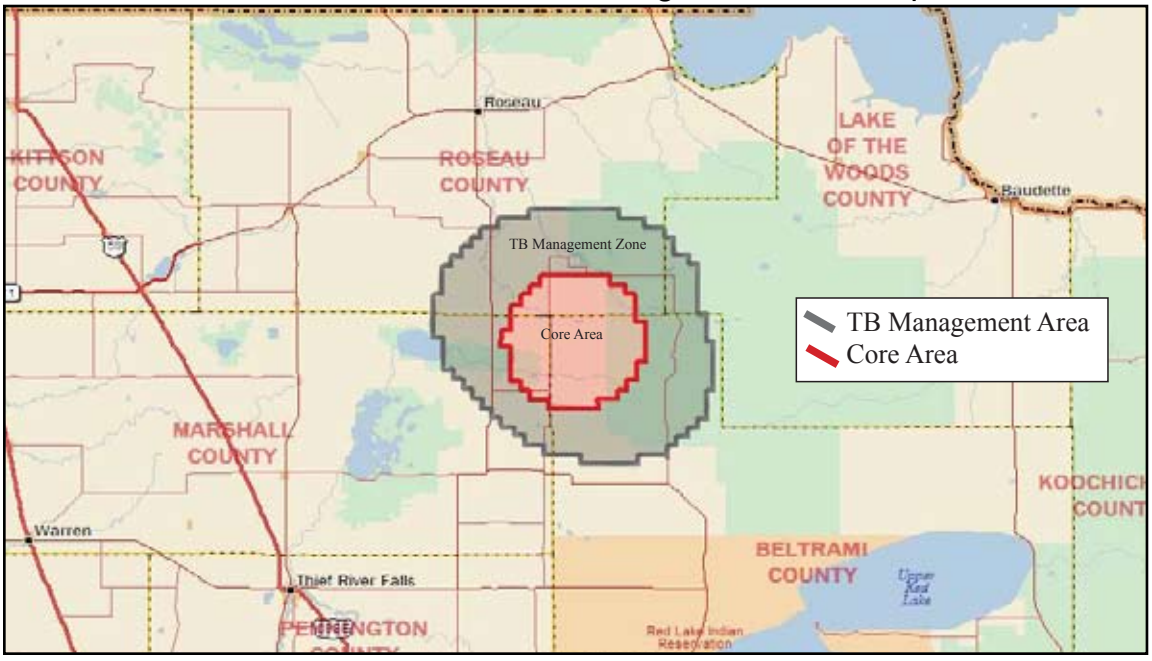
Chart 1.7

Poultry Hatcheries, Dealers, and Testing Agents

Item or Employee	Quantity
Poultry Dealer Permits	201
Hatchery and Independent Flock Owner Permits	110
New Authorized Testing Agents	68
Authorized Testing Agents	409
District Veterinarian Field Instructions	30

Map 1.1

Bovine Tuberculosis Core Area and Management Area Map



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

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