Fiscal Year 2014 Annual Report













MINNESOTA BOARD of ANIMAL HEALTH

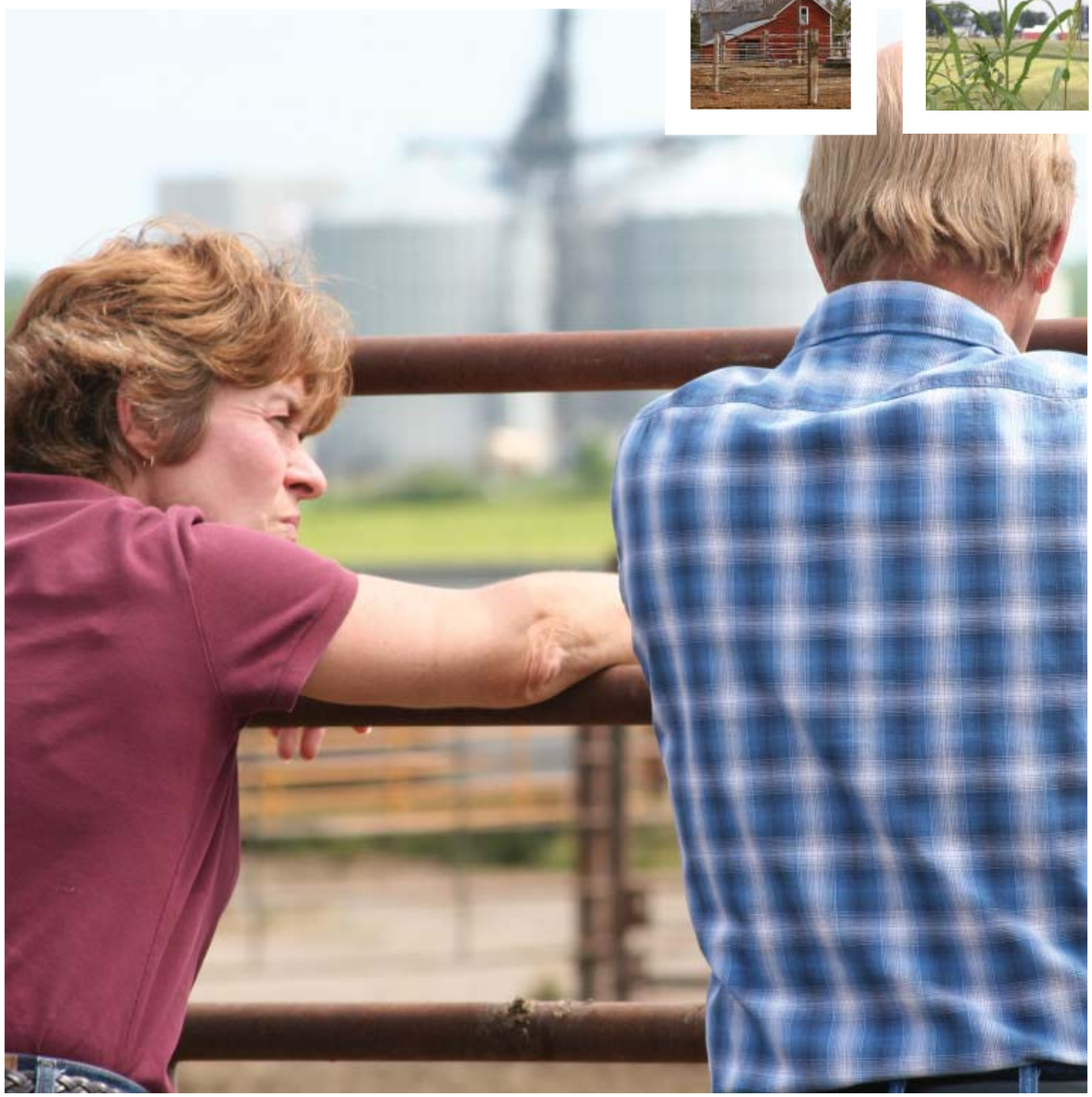
Table of Contents

Board Members

Steve Brake - Wilmont
Dr. Holly Neaton - Watertown
Dean Compart - Nicollet
Paul Hanowski - Warroad
Dr. Matt Anderson - Zumbrota

Board Meetings

September 3, 2013
January 22, 2014
April 16, 2014



The Annual Report of the Minnesota Board of Animal Health is published in accordance with the provisions of Minnesota Statutes. To receive additional copies, please send a request to animalhealth@state.mn.us.

Letter from the Executive Director

Dear Friends of Minnesota Agriculture,

This year we have been challenged by a new disease in swine, implemented a commercial dog and cat breeder program and saw success in our ability to track cattle.

A disease never before seen in the United States struck Minnesota's swine population. Porcine epidemic diarrhea virus (PEDv) swept through our country leaving millions of dead pigs in its wake. On June 5, 2014 the U.S. Department of Agriculture (USDA) issued a federal order making PEDv a reportable disease which freed up $26.2 million dollars for research and control of the disease.

After years of debate new statutes were enacted requiring commercial dog and cat breeding facilities to be licensed and inspected by the Board of Animal Health. We have been busy working with interested parties to implement this new program.

We have updated our database application to allow us to track animals electronically. This new database application, CoreOne, is the same database that USDA is using in all Veterinary Services offices nationwide. I am happy to report that it is working extremely well. The USDA has been working on setting animal disease traceability standards that states will have to meet. Our transition to CoreOne and electronic record keeping has helped us perform very well in the USDA trace exercises and the disease traces that we have been involved in with other states.

I take great pleasure in sharing with you the 2014 Minnesota Board of Animal Health Annual Report. The information contained within is from July 1, 2013 through June 30, 2014. For more information on our disease programs, I encourage you to explore the Board's website at www.mn.gov/bah.

Sincerely,
Bill Hartmann
Executive Director and State Veterinarian

Poultry

Minnesota is the number one turkey producing and processing state with approximately 47 million turkeys raised annually. Minnesota poultry farmers also grow roughly 47 million chickens annually and care for about 10.4 million egg-laying hens that produce about 2.9 billion eggs each year. One component of sustaining this successful growth is the cooperation the Board enjoys with the industry and our poultry surveillance and response programs. These cooperative relationships are developed when industry and regulatory partners come together to solve difficult problems.

This past February, a joint exercise was planned and held with industry and University of Minnesota partners to discuss poultry and poultry product movement during a serious disease event. This is called business continuity planning. A broad range of topics were discussed to enhance industry and regulatory understanding of normal business operations as well as disease control needs. Participants visited a hatchery, a broiler farm and a processing plant. These visits provided an opportunity to view the operations involved in the movement of live poultry. The event concluded with a tabletop exercise designed by the Board called "Notifiable Avian Influenza: A Practical Response in Minnesota." This exercise allowed participants to discuss various options and come to a consensus when working through a disease event. These cooperative relationships carried through this year as the Board identified several influenza introductions in Minnesota poultry flocks (H6N8 – 6 flocks; H3H9N2 – 2 flocks). All the introductions were eliminated with no general spread.

Implementation of the Board's new rules underscores the importance of clean and sanitary conditions in hatcheries and breeder flock facilities. We inspected 227 hatcheries and breeder flock facilities around the state to make sure that these conditions were met. With the assistance of the industry, samples were collected from Minnesota's hatcheries and breeding flock facilities to ensure healthy baby poultry are produced for local, state, national and international customers.

Our rules require that field testing of poultry or samples collected for Board programs must be done correctly. That is why we train individuals every year to become authorized poultry testing agents. The process requires training in the classroom and on the farm. Being an authorized poultry testing agent is serious work as those trained act as extensions of the Board in our efforts to control poultry diseases. The Board currently has 807 authorized poultry testing agents.

Understanding the industry, training and teamwork creates a successful disease control formula for Minnesota's poultry industry.

Farmed Cervidae

Minnesota boasts a diverse livestock population. In addition to thousands of cattle, hog and poultry farms, there are 489 producers in Minnesota who raise deer, elk or other species in the cervidae family. The state's current farmed cervidae population is 11,286 animals. This inventory is made up of 10 caribou, 4,213 North American elk, 215 fallow deer, two moose, 30 muntjacs, one pudu, 370 red deer, 83 reindeer, 50 sika deer, 6,245 white-tailed deer, 18 mule deer and 1 Pere David's deer.

People who raise farmed cervidae have unique challenges. The industry is strictly regulated, and in Minnesota there are rules pertaining to fencing, identification, movement and surveillance testing for chronic wasting disease (CWD). Each farm must be registered with the Board and inspected at least once every 12 months. While it is our job to make sure regulations are being followed, it is a priority to work with the industry to identify problems and find solutions that work in real life. To engage our stakeholders in such conversations, we hosted a Farmed Cervidae Advisory Committee twice in the last year. This group is made up primarily of deer and elk producers and representatives from the Minnesota Departments of Agriculture and Natural Resources, Deer Hunters Association, University of Minnesota, Minnesota Zoo and USDA.

CWD is a fatal nervous system disease that affects cervidae. The disease is caused by an abnormally shaped protein called a prion. In order to identify CWD-infected herds, producers participate in a mandatory surveillance testing program. All animals 12 months of age and older that die or are slaughtered must be tested. During the previous 12 months, farmed cervidae producers tested 1,791 animals for CWD. All tests were negative. Herds that have been subject to five or more years of CWD surveillance with all negative results are classified as CWD Certified. There are 458 CWD certified negative herds in Minnesota.

There is currently one CWD-quarantined red deer herd in Ramsey County. In May 2012, a red deer from the herd was found to be infected with CWD. The USDA has offered to pay indemnity to the owner of the herd and euthanize the remaining animals. If an agreement is reached between the owner and USDA, the herd could be depopulated as early as August 2014.

Farmed cervidae producers also participate in programs for control of tuberculosis (TB) and brucellosis. In the last 12 months, 2,231 animals were tested for TB and 1,682 animals were tested for brucellosis. All tests were negative. There are 166 TB accredited free cervidae herds and 88 brucellosis certified free cervidae herds in Minnesota.

Cattle

Although Minnesota was declared free of brucellosis in cattle 30 years ago and the nation is working toward brucellosis free status, national surveillance for the disease is still conducted in slaughter plants. One Minnesota slaughter plant participates in this surveillance effort to monitor the U.S. cattle population for any brucellosis infection by testing adult cattle slaughtered in their facility. Cattle from many states to the west of Minnesota are slaughtered at the facility and testing animals at this plant provides surveillance for a large area of the country. Suspicious test results from an animal prompt an investigation by animal health officials to find the animal's herd and determine if other animals in the herd are infected with brucellosis.

Producers continue to have their female cattle vaccinated for brucellosis by accredited veterinarians. This year over 65,000 calves were vaccinated in the state. A change to our rules last year allows adult cattle to be vaccinated for brucellosis in Minnesota. This was not allowed previously as vaccinating older animals caused them to test positive for the infection; the current vaccine does not trigger a positive test. This rule change allows Minnesota producers to sell any breeding animals to states that require cattle to be vaccinated for brucellosis.

The Board is investigating cattle movement into Minnesota from two states with TB-infected cattle herds - Michigan and North Dakota. Groups of Holstein steers were imported from Michigan that could have included animals from a Michigan dairy infected with TB. To date, no TB-infected steers have been found in Minnesota feedlots and all the animals in these groups will be shipped to slaughter by the end of September 2014. We are also investigating cattle movement from two North Dakota herds; one beef herd, one dairy. Animals sold from these herds at North or South Dakota sales barns were purchased by Minnesota slaughter buyers or producers. Field staff will investigate these movements to verify the animals were slaughtered. If they find animals that are still alive, they will follow up with testing to determine if any of the animals are infected with TB.

Commercial Dog and Cat Breeders

During the 2014 legislative session a law was passed requiring commercial dog and cat breeders to be licensed and inspected by the Minnesota Board of Animal Health. The purpose of this new program is to protect the health and well-being of dogs and cats that are kept and produced by commercial breeders. A commercial breeder is defined in the law as a person who possesses or has an ownership interest in animals and is engaged in the business of breeding animals for sale or for exchange in return for consideration, and who possesses ten or more adult intact animals and whose animals produce more than five total litters of puppies or kittens per year.

Between July 1, 2014 and June 30, 2015, all commercial breeders in the state must complete a one-time registration with the Board. A one-time registration fee of $50 must be submitted to the Board with the registration application.

During the first 12 months of the program, commercial dog or cat breeders may also elect to skip the registration process and become fully licensed right away. To become fully licensed, the facility owner must submit a license application accompanied by the initial license fee. The fee for full licensure is $10 per adult intact animal (minimum of $100) up to a maximum of $250. A commercial breeding facility must then be inspected by a Board of Animal Health representative and meet all the requirements of the new laws.

Beginning July 1, 2015, licensure becomes mandatory and a commercial dog or cat breeder must obtain an annual license from the Board for each facility owned or operated in Minnesota.

This is a new program for us and the commercial dog and cat breeders. The Board is committed to carrying out its mission to safeguard the health of domestic animals in Minnesota. We have worked with livestock farmers for over a century to eradicate disease and enforce regulations that help keep animals healthy. We are fully confident that Minnesota's commercial dog and cat breeders will continue the tradition of animal owners and animal health officials working together towards a common goal.

Sheep and Goats

Scrapie

Scrapie eradication continues to be a priority in the U.S. In Minnesota, we work with our producers to identify the disease in sheep and goats and to implement procedures to eliminate the disease when found. We are pleased to report that despite intensive surveillance, no scrapie-infected flocks have been identified in our state since January 2011.

The following activities conducted over the last year support these efforts:

- Sheep and goats sampled and tested for scrapie in Minnesota: 280
- Flock investigations related to scrapie: 5
- Infected flocks identified: 0
- Scrapie program eartags distributed free of charge to Minnesota producers and veterinarians: 118,333
  - To producers: 99,032
  - To veterinarians: 13,301
  - To dealer/market: 6,000
  - Distributed from the office: 2,956

Ovine Progressive Pneumonia

The Board is one of several partners participating in a project to apply new flock management methods to eradicate Ovine Progressive Pneumonia (OPP) from infected flocks. OPP is a chronic debilitating disease in sheep caused by a virus.

Recent research findings show the virus is spread between sheep differently than previously thought and that sheep genetics play a role in which animals are more likely to get infected. Based on these new findings, experts developed recommendations for managing infected flocks to reduce or eliminate the infection. The project is the first of its kind in the nation. Participation by sheep producers is voluntary.

Board field staff collect blood samples for testing from sheep in flocks enrolled in this project. The project will last for three years and flocks will be evaluated at the end of that time to determine how successful these new management methods are in reducing OPP infection.

HORSES

Like most livestock, horses move around the state and country constantly, comingling with other animals. This makes disease prevention even more important.

Equine Infectious Anemia

Equine infectious anemia (EIA) is a viral disease of horses most frequently transmitted by large biting flies between animals in close proximity. There is no vaccine or treatment for EIA. Once a horse is infected, it remains infected for life and is always a potential reservoir for spread of the disease. Our rules require horses to have a negative test for EIA prior to importation or attendance at public exhibitions in Minnesota. Infected horses are quarantined and need to be permanently maintained in isolation or be euthanized to prevent the disease from spreading to other horses. One EIA-infected horse remains under permanent quarantine and isolation in Clearwater County.

During the last 12 months, 32,515 Minnesota horses were tested for EIA. Because of this testing, an infected horse was identified on a Wadena County farm and prevented from attending an exhibition. We quarantined the infected horse and required an EIA test on 17 other exposed horses. No other infected horses were identified.

Equine Herpesvirus Myeloencephalopathy

During March and April of 2014, Equine Herpesvirus Type 1 (EHV-1) was detected in horses in central and southeastern Minnesota. The virus spread rapidly between horses and was also found in Wisconsin, Iowa and South Dakota. Seven of the infected horses in Minnesota developed the neurologic form of the disease, also known as equine herpesvirus myeloencephalopathy (EHM). EHV-1 is a common disease in horses and it occurs throughout the U.S. each year. Infected horses may show no symptoms. Some may develop mild respiratory disease and pregnant mares may abort. This outbreak was unusual because of the high number of infected horses that developed neurologic symptoms. Some of the infected horses with neurologic disease recovered, but others were severely affected and had to be euthanized.

The Board followed the seven neurologic cases closely and kept horse owners and veterinarians informed about the location (county) and progression of the disease. In an effort to stop the spread of the disease, many equine exhibitions, shows and training events were voluntarily cancelled.

At the quarterly meeting of the Board of Animal Health held on April 16, 2014, equine veterinarians and horse owners from around the state asked that EHM be added to the list of reportable diseases in the state. They also requested that the Board quarantine premises with positive cases of EHM, conduct epidemiological investigations and post related information on the Board's website. The Board agreed to make EHM a reportable disease and will work with veterinarians and horse owners to develop guidelines for the Board's response to future cases.

Equine herpesvirus is usually spread in nasal secretions between horses that are in close contact with each other or that share water or feed pails. The virus does not infect people. It has been associated with neurologic cases in llamas and alpacas, but has no effect on other types of livestock. The virus does not typically survive very long in the environment or on people or equipment. It is killed readily by most disinfectants, ultraviolet light and by drying. The weather in March and April 2014 was unusually cold, cloudy and wet and may have played a role in the severity of the epidemic.

Traceability

The Board continues to work hard to improve Minnesota's ability to trace livestock such as cattle and bison. The ability to trace livestock quickly and accurately is vital to protect the livestock industry here in Minnesota while encouraging free trade between states and nations.

The summary data for domestic animals imported and exported from Minnesota each year, in the chart below, shows the important role the state's livestock industry plays in interstate commerce. We also capture individual animal information for all officially identified cattle and bison reported to the Board. This year, we captured over 230,800 individual animal records, including cattle/bison imported into Minnesota, exported from Minnesota, tested for program diseases or sighted at livestock markets or sales.

The number of records captured in the Board's animal health database continues to grow. Each record gives us a greater ability to find livestock quickly and better protect Minnesota's livestock industry. At the end of FY2014, there were nearly 1.3 million livestock records captured in our database, the majority from cattle.

The Board also adopted a new animal health database in the last year. We have many staff members working on developing features to make the database more powerful in order to further advance our traceability efforts.

Animal	Imported	Exported
Cattle	487,972	195,894
Swine	5,314,170	2,075,269
Sheep	13,936	10,971
Goats	2,602	2,904
Farmed Cervidae	182	1,394
Horses	5,877	8,763
Poultry	30,664,644	29,925,273

Farm Visits

In an effort to keep records on Minnesota livestock operations current and accurate, our staff members visit farms throughout the state. They update information on the livestock kept on each farm and on the producers who own and care for the animals. The accuracy of this information is critical to the Board's ability to respond quickly and efficiently to animal disease events. During the previous 12 months, Board staff members visited and updated records on 8,317 Minnesota farms.

Offical Ear Tag Distribution

During an animal disease event, animal health officials need the ability to trace animals quickly. Official identification is now required in Minnesota for movement of cattle, bison, pigs, farmed cervidae, sheep and goats.

To help livestock producers meet these requirements, the Board started a program to distribute official ear tags to producers and veterinarians free of charge. During the previous 12 months, we distributed a total of 292,336 official ear tags including:

- 50,557 radio frequency identification (RFID) tags
- 46,792 plastic national uniform eartagging system (NUES) tags
- 194,897 metal NUES tags

The Board also coordinated efforts for the development and distribution of a special RFID ear tag containing the 4H clover to be used during the 2014 fair and exhibition season. All exhibitors of 4H cattle, pigs, and other livestock participating in 4H exhibitions were provided with the new official identificiation for their 4H animals.

Swine

Minnesota remains the number two hog producing state in the U.S. The state is home to hard-working and dedicated families, employees, owners and veterinarians who care for their hogs, and produce food for the state, country and the world.

In 2013, porcine epidemic diarrhea virus (PEDv) was found in the U.S.; this was the first time this disease had been diagnosed in this country. Within months, PEDv spread through many of the hog-producing states, including Minnesota. The disease causes death in piglets and holds back the growth of older pigs. During 2013, it is estimated that 6-8 million piglets died.

In June 2014, the federal government issued an order requiring the reporting of the virus and other related diseases. Throughout the year, veterinarians and producers have worked to get rid of the disease. While the challenge continues, we continue to support these folks through help with testing costs, educational opportunities and other important areas. The Board is also a member of the Swine Health Advisory Committee, a group of producers and veterinarians who share their experiences and work to find solutions.

Exhibitions

Early every year, thousands of Minnesota families and children begin work on their exhibition livestock. There are 90+ county fairs across the state each summer, and 4H, FFA and open class are the opportunity for the kids to showcase their hard work. The Board begins its involvement with each of these fairs early in the year, too, through education and staff assistance. Through our permitting process, important information is given to the fair boards, livestock superintendents and veterinarians involved with the fairs.

At the end of the year, the Minnesota State Fair hosts livestock exhibitors from every county. Our work continues, with Board staff members helping when the livestock is trucked to the fairgrounds in St. Paul. Tracking the official identification and making sure that livestock are healthy is the Board's role in the great Minnesota get-together.

Emergency Planning

If a foreign animal disease is identified in another part of the U.S., the Board may need to monitor agricultural-related vehicles coming into our state to make sure the disease is not moved into Minnesota. We are working with the Minnesota Department of Agriculture (MDA) and border states' animal health officials to outline a plan for monitoring agricultural traffic during the first days of a national foreign animal disease response. In this planning effort, we work with the Minnesota Departments of Transportation and Public Safety, our partner agencies that have authority for traffic control on Minnesota state roads. We discuss the Board's needs for traffic control during a disastrous animal disease event.

We are also working with the MDA and the University of Minnesota's Center for Animal Health and Food Safety to develop a 'Secure Milk Supply Plan' for Minnesota. The plan will provide guidelines for movement of raw milk during a foreign animal disease event. The idea is to allow dairies in a control area with healthy animals to continue to move milk off the farm for processing. The plan will also include guidelines on minimizing the risk of disease spread that comes with vehicles entering and leaving livestock premises. To develop a practical, workable plan, we need partners from the production side, regulatory agencies and academia.

Carcass Disposal

The first job of the day and last task of the night for Minnesota livestock producers is feeding, watering and making sure their animals are healthy. Unfortunately, the unexpected can happen. When producers need help with carcass disposal because of disease or natural disaster, the Board of Animal Health is ready to lend a hand. The options for disposal include rendering, burial and composting, and all methods are based in science. Our field staff are trained in all types of disposal and can give good advice that's based in common sense.

Rabies

The rabies program continues to be effective in minimizing domestic animal exposures to this fatal disease. We communicate with veterinarians in the state to make them aware of all domestic animals that test positive for the rabies virus. This information can then be used by veterinarians to educate their clients and serves as a reminder that the disease is still endemic in Minnesota.

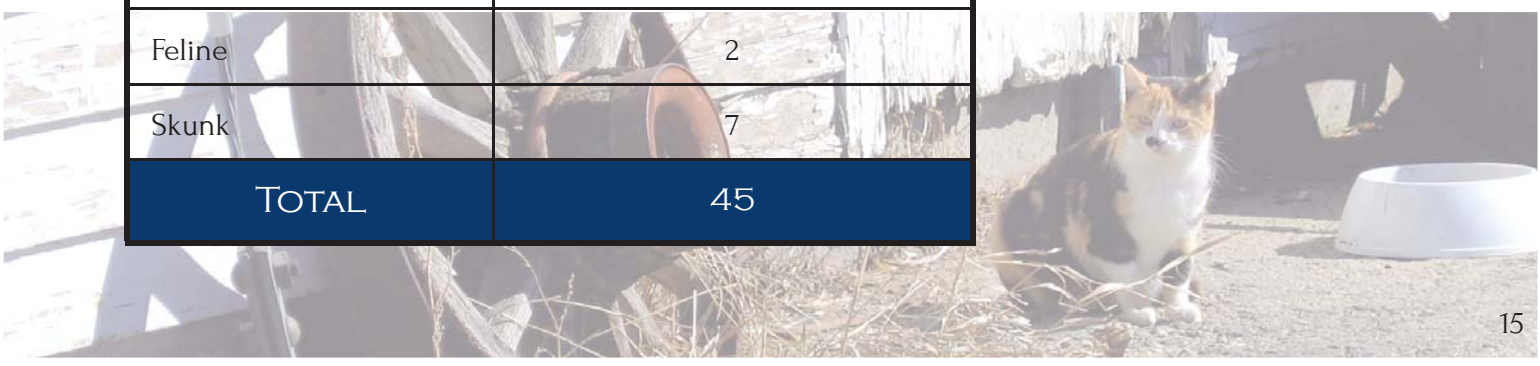
- About 50 percent of the skunks tested at the University of Minnesota Veterinary Diagnostic Laboratory (VDL) each year test positive for the rabies virus.

- About 3 percent of bats tested are rabid.

Skunks and bats make up the majority of rabies cases in Minnesota each year and are the wildlife vectors that expose domestic animals to the disease.

The rabies program is administered in cooperation with the Minnesota Department of Health and the VDL. In addition, private practicing veterinarians greatly assist with the program by reporting clinical cases of the disease and possible rabies exposures to their patients.

Species	Rabies Positive
Bat	33
Bovine	2
Canine	0
Caprine	0
Deer	0
Equine	1
Feline	2
Skunk	7
Total	45



Veterinary Diagnostic Laboratory

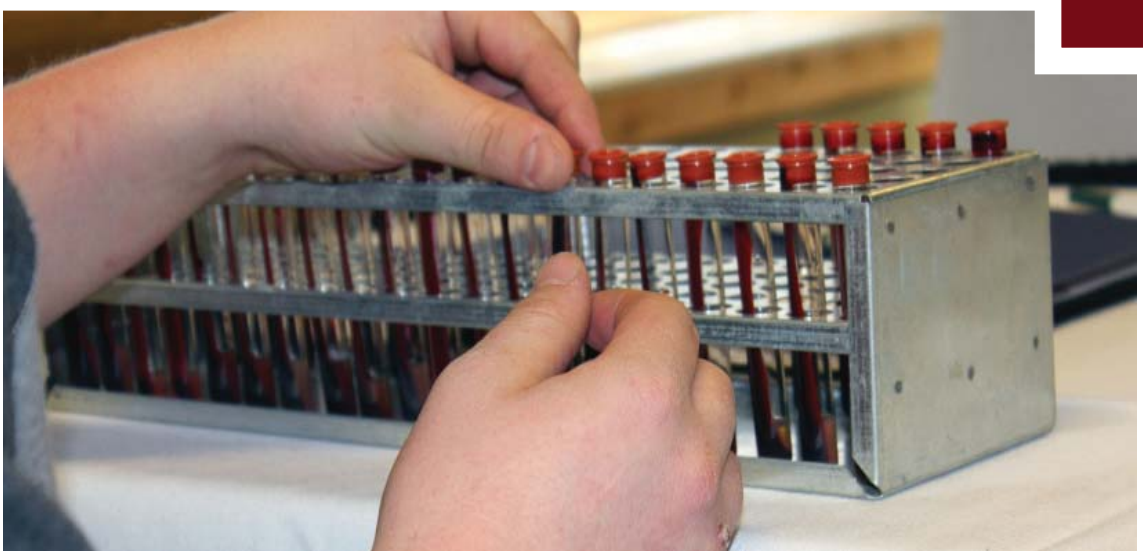
The University of Minnesota's Veterinary Diagnostic Laboratory (VDL) is the official laboratory of the Minnesota Board of Animal Health. The VDL is a national leader in providing rapid diagnosis of animal diseases, identifying emerging diseases and developing new diagnostic methods as well as training diagnosticians and veterinarians.

The VDL is dedicated to protecting and promoting animal and human health through early detection and monitoring of animal diseases. A unit of the College of Veterinary Medicine (CVM), the VDL is the only full-service public laboratory in the state of Minnesota, processing over 60,000 cases from livestock, poultry, wildlife, fish and companion animals annually.

The VDL was again fully accredited by the American Association of Veterinary Laboratory Diagnosticians (AAVLD) after accreditation audits were conducted in August 2013. Accreditation audits occur every five years and the VDL was congratulated by the CVM and AAVLD auditing team for successfully meeting all requirements and earning full accreditation status.

In the past year the VDL continued to dedicate resources to rapidly respond to PEDv. New molecular assays were developed to assist the state's animal agriculture, such as PEDv real-time PCR, porcine deltacoronavirus (PDCoV) real-time PCR, and full genome sequencing of PEDv and PDCoV via Next Generation Complete Genome Sequencing. Plans are already underway to sequence other important and emerging animal pathogens and thus the VDL purchased one of the most technologically advanced genomic sequencing platforms to facilitate these efforts. Investments were also made in the VDL's most important resource, faculty and staff, with the hiring of a full-time molecular biologist to further advance the VDL's molecular diagnostic capabilities and a board-certified veterinary pathologist dedicated to food animal diagnostic pathology.

The Veterinary Diagnostic Laboratory is committed to combating infectious disease and protecting Minnesota's agricultural and natural resources.



Communications

As we move into a new era of mobile devices, social media and smart phones, the Board has worked towards communicating with stakeholders in new ways. In the last year, we moved from a PDF version of our newsletter, Animal Bytes, to an electronic, web-based version. This gives us the ability to gage reader interest by looking at the number of newsletters viewed and links visited. On average, 1,100 individuals view Animal Bytes each month. This group is made up of veterinarians, livestock producers, animal owners and leaders of the agriculture industry.

A few years ago, the Board began notifying Minnesota veterinarians and veterinary clinics whenever the rabies virus was found in domestic animals. This year we issued five Rabies Alerts using the new web-based system. The Board continues to receive great feedback on making this information readily available to veterinary professionals.

We issued two news releases in the last year – one focused on the new commercial dog and cat breeder program. Board communications staff members worked closely with communications staff in Governor Dayton's office to issue the press release. The language included showed the governor's support of the Board and highlighted the main components of the program.

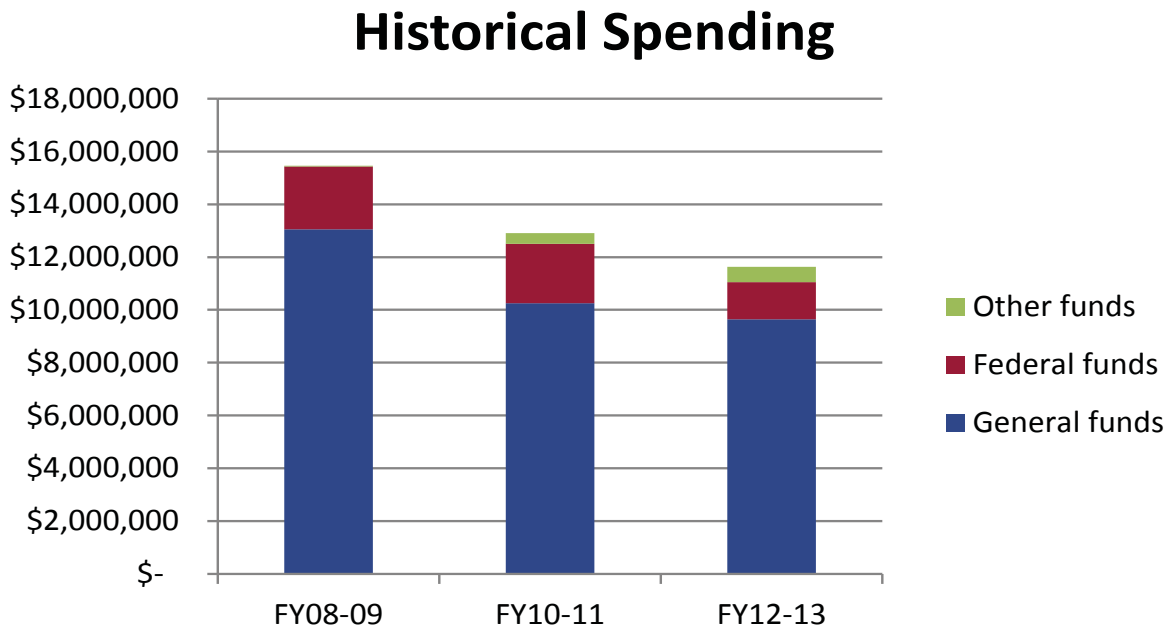
Another exciting change in the area of Board communications included a complete overhaul of our website. We began work on this huge project in 2013 and launched our redesigned website in January 2014. Thanks to the collaboration with Minnesota Information Technology (MN.IT), our new website has a responsive design which makes for easy viewing on mobile devices. Additionally, the website is more user-friendly and easier to navigate.

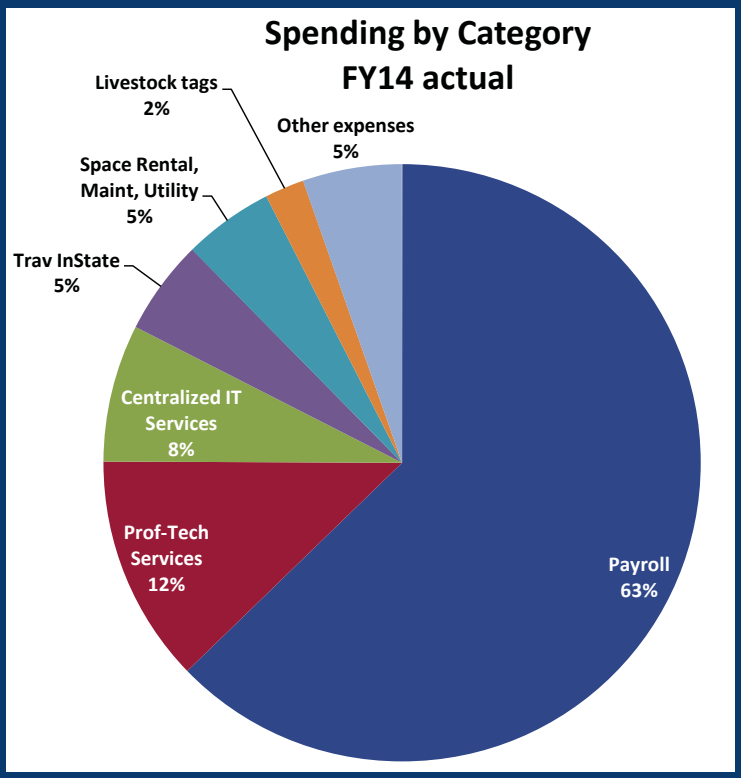
Though technology is ever-changing, we do not lose sight of what is arguably the most important interaction we have with the citizens of Minnesota. We continue to have face-to-face communication with our stakeholders through participation in important events in Minnesota, including but not limited to:

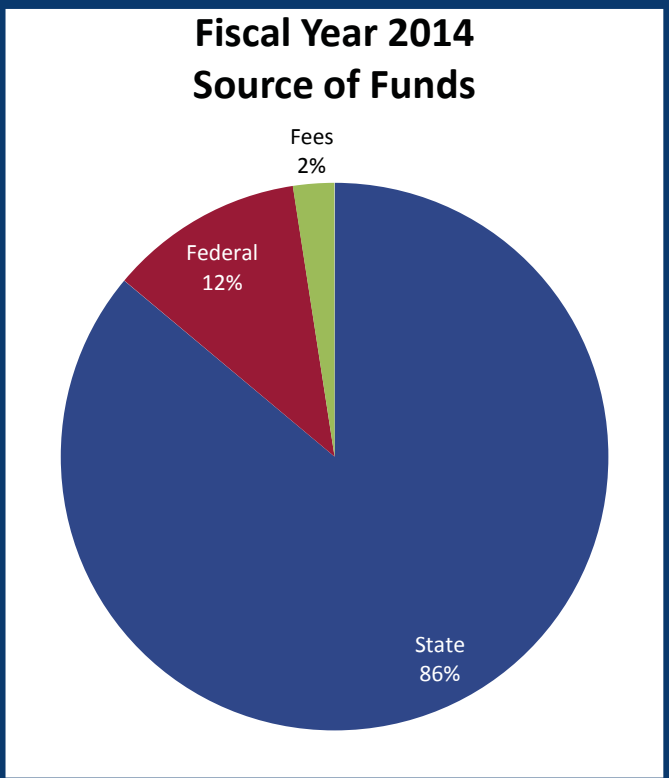
- Turkey Growers Summer Conference
- County Fairs
- State Fair
- Leman Swine Conference
- Beef Expo
- Farmers Union State Convention
- Farm Bureau Annual Meeting
- Midwest Dairy Expo
- Agri-Growth Annual Meeting
- State Cattlemen's Annual Convention
- Minnesota Veterinary Medical Association Annual Meeting

Budget

During Fiscal Year 2014 the Board expended $5,361,000 to carry out our many animal health and disease programs. Of this amount, $4,615,000 came from state general fund dollars appropriated during the FY 2014-2015 biennium. About $131,000 was obtained from fees and $615,000 was from federal cooperative agreement awards, which supported specific state-federal disease programs such as animal disease traceability, animal disease surveillance and emergency preparedness.







Minnesota Board of Animal Health

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