Annual Report

Fiscal Year 2016

MINNESOTA BOARD of ANIMAL HEALTH

Board Members

Dean Compart, President of the Board, Swine Producer, Nicollet

Paul Hanowski, Poultry Producer, Swanville

Peter Ripka, Cattle Producer, Ogilvie

Dr. Matt Anderson, Veterinarian, Zumbrota

Dr. Graham Brayshaw, Veterinarian, Minneapolis

Board Meetings

September 16, 2015

December 16, 2015

February 17, 2016

April 6, 2016

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

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Table of Contents

Letter from the State Veterinarian 3

Dogs and Cats 4

Deer and Elk 5

Horses 6

Swine 7

Cattle 8

Scrapie 8

Poultry 9

Minnesota Poultry Testing Laboratory 10

Rabies 11

Exhibitions 11

Emergency Planning 12

Budget 13

Veterinary Diagnostic Laboratory 14

Letter from the State Veterinarian

It is an honor to have been chosen for the Executive Director position, and I look forward to working with our farmers and veterinarians to keep our animals healthy.

So far, 2016 has been a fairly quiet year, as compared to the Highly Pathogenic Avian Influenza (HPAI) response efforts in 2015. Our poultry farmers who were directly or indirectly impacted by the outbreak are back in business, while we are keeping watch for any possible recurrence. The staff at the Board continue to be grateful for all cooperation and assistance we received from the Governor's office, the legislature and all agencies and individuals. Help came from within the State of Minnesota, other states, and from the U.S. Department of Agriculture (USDA). Everything we do at the Board is in preparation for a disease event. We have now gone back to that work, equipped with lessons learned from avian influenza.

We have some new faces within our group of close partners. Dr. Jerry Torrison is the director of the University of Minnesota Diagnostic Laboratory, and Dr. Stephan Schaefbauer is the Assistant Director for USDA in Minnesota. The three of us are meeting on a regular basis, and have formed good bonds, which are essential for the work we do.

Likewise, I urge all who work with the Board, especially our farmers and veterinarians, to call and talk with either myself or Board staff as problems and issues arise, or if there are any ideas we can help with. Good communication is the basis of solid relationships, and increases the possibility of success.

To all of our farmers and everyone who works with livestock and the state's domestic animals, thank you for what you do!

Beth Thompson
Executive Director and State Veterinarian

Dogs and Cats

Commercial Dog and Cat Breeders

Minnesota's commercial dog and cat breeders must be licensed and inspected by the Board of Animal Health. A commercial breeder is defined in Minnesota Statutes 347.57: *"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."*

To become licensed, a commercial breeder must submit a license application, accompanied by the initial license fee. The fee for licensure is $10 per adult intact animal, up to a maximum of $250. The commercial breeding facility must then be inspected by the Board of Animal Health to verify it meets all the requirements specified in Minnesota Statutes 347.57 to 347.64. Inspections include evaluation of the facility, standards of animal care, animal identification, records, and veterinary care. Licenses must be renewed annually.

There are currently 115 licensed commercial dog or cat breeders in Minnesota. In the process of licensing commercial breeders, the Board of Animal Health also identified 458 other dog or cat breeders in the state who do not need a commercial breeder license because they have fewer than 10 animals or produce less than six litters of puppies or kittens per year.

Kennels

Kennels, where dogs or cats are kept, must be licensed and inspected by the Board of Animal Health if the dogs or cats were (1) obtained from municipalities, pounds, auctions, or by advertising for unwanted dogs or cats, or (2) dogs or cats strayed, abandoned or stolen (Minnesota Statutes 347.31 and 347.34).

This requirement does not apply to a pound owned and operated by any political subdivision of the state, a person's home where dogs or cats are kept as pets, a veterinarian licensed to practice in the state of Minnesota who keeps, congregates, or confines dogs or cats in the normal pursuit of the practice of veterinary medicine, or kennels used for the sole purpose of boarding or training dogs or cats for individual pet owners.

To obtain a kennel license, an owner must submit a license application, accompanied by the initial license fee. The fee for licensure is $15. The kennel must then be inspected by the Board of Animal Health to verify it meets all the requirements specified in Minnesota Statutes 347.31 to 347.40 and Minnesota rules 1721.0520. Inspections include evaluation of the facility, standards of animal care, animal identification, records, veterinary care, and holding periods for impounded, stray and abandoned animals. The license must be renewed annually.

There are currently 74 kennels licensed in Minnesota.

Deer and Elk

People who raise farmed deer or elk (members of the family *Cervidae*) in Minnesota must be registered with the Board of Animal Health and meet all the requirements specified in Minnesota Statutes 32.153, 35.155 and Minnesota rules 1721.0370 to 1721.04.

There are many types of deer and elk, including white-tailed deer, mule deer, red deer, elk, moose, caribou, reindeer, and muntjacs. Farmed deer or elk registered with the Board of Animal Health are livestock and are not wild animals for purposes of game farm, hunting, or wildlife laws.

To register a farmed deer or elk herd, the owner must submit a registration application and inventory report accompanied by the inspection fee. The fee for inspection is $10 per animal in the herd up to a maximum of $100. The farmed deer or elk facility must then be inspected by the Board of Animal Health each year to verify it meets all the requirements specified in Minnesota Statutes 35.153, 35.155 and Minnesota Rules 1721.0370 to 1721.04. Inspections include evaluation of animal inventories, fencing, records, animal identification, movement reports, and testing for chronic wasting disease (CWD). Registration must be renewed annually.

Type	Inventory
Caribou	9
Elk	3,917
Fallow Deer	215
Moose	10
Mule Deer	44
Muntjac	32
Red Deer	207
Reindeer	92
Sika Deer	54
White-Tailed Deer	6,226
TOTAL	**10,833**

All farmed deer and elk producers are also required to test their animals for CWD. From each herd, all animals 12 months of age and older that die or are slaughtered must be tested for CWD. Tissue samples are tested for CWD at the University of Minnesota Veterinary Diagnostic Laboratory. In order to maintain accurate CWD surveillance information, producers must report to the Board of Animal Health all deer or elk that die or are moved out of the herd to other locations.

CWD is a disease of deer and elk caused by an abnormally shaped protein called a prion, which can damage brain and nerve tissue. The disease is most likely transmitted from one animal to another through shedding of abnormally shaped prions in saliva, feces, urine, and other bodily fluids or tissues. CWD is a slow and progressive disease without any known treatment or vaccine.

During fiscal year 2016, CWD tests were conducted on 1,432 farmed deer or elk and all tests were negative. No new cases of CWD were found and no herds are under quarantine.

There are 462 farms in Minnesota where deer or elk are raised: 127 with elk, 328 with white-tailed deer, and 57 with other species.

Horses

Equine Infectious Anemia (EIA)

Equine infectious anemia (EIA) is a viral disease most frequently transmitted by large biting flies between horses in close proximity. There is no vaccine or treatment for EIA. Once a horse is infected, it remains infected for its entire life and is always a potential reservoir for spread of the disease.

In order to control the spread of equine infectious anemia (EIA) in Minnesota, the Board of Animal Health requires: (1) horses be tested with negative results for EIA within 12 months prior to importation or attendance at public exhibitions and (2) horses infected with EIA be permanently quarantined and isolated or be euthanized (Minnesota Rules 1721.0240 to 1721.0260).

During fiscal year 2016, EIA tests were conducted on 19,861 Minnesota horses, and all tests were negative. No new cases of EIA were found, and no horses are under quarantine.

Equine Herpesvirus Myeloencephalopathy (EHM)

Equine herpesvirus type 1 (EHV-1) is a virus that infects horses and can cause neurological disease, respiratory disease, neonatal death, and abortion. Equine herpesvirus myeloencephalopathy (EHM) is a term used to describe the neurologic form of the disease that can develop as a result of EHV-1 infection.

The virus is usually spread in nasal secretions between horses in close contact with each other or that share water or feed pails. 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. Infected horses are generally treated with supportive care. Anti-inflammatory drugs and antiviral medications are often used for the neurologic form of the disease.

In order to control the spread of EHV-1 in horses and minimize the risk of other horses developing EHM, horses confirmed to have EHM and all exposed horses must be quarantined. All horses on a premises where an EHM positive horse is identified must: (1) be monitored closely for fever or symptoms of illness consistent with EHV-1, (2) have rectal temperatures taken and recorded every 12 hours until the quarantine is released, and (3) be officially tested for EHV-1 if they have a fever greater than or equal to 102°F or exhibit clinical symptoms consistent with EHV-1 infection. Quarantines can be released 21 days after the date when all horses with clinical symptoms of illness due to EHV-1 infection have recovered.

During fiscal year 2016, no new cases of EHM were found, and no horses are under quarantine.

Swine

Minnesota ranks third in the United States for the number of pigs raised and second in the value of pigs in the state. Minnesota hog farmers and veterinarians are at work every day, feeding and caring for the hogs, and applying new ideas based in science. There are more than 3,000 hog farms in the state.

Biosecurity is an important part of raising healthy hogs. Additionally, hog farmers in Minnesota are fortunate to have highly regarded researchers and diagnosticians at the University of Minnesota. An ongoing disease concern is the swine coronaviruses, which include porcine epidemic diarrhea virus (PEDv). These transboundary diseases were first diagnosed in the United States in April 2013. They continue to appear in Minnesota, with approximately 240 confirmed cases of porcine epidemic diarrhea virus since 2013. The Board tracks diagnostic reporting of this disease within the state.

Early in the 2016 fiscal year, Senecavirus A was diagnosed in hogs in a neighboring state. The clinical signs included vesicles, or blisters, on the snouts of pigs (see photos below), and lameness. These clinical signs are identical to the signs of foreign animal diseases, including Foot and Mouth Disease, swine vesicular disease, and others. Cases of Senecavirus A have been diagnosed in Minnesota and in hogs moving to slaughter from Minnesota. Veterinarians and farmers have worked together with Board staff on foreign animal disease investigations on each of these cases. These investigations are imperative and maintain confidence in the health of our state's livestock.

Senecavirus A vesicle on coronary bands of foot

Senecavirus A vesicle on snout

Cattle

We continue to participate in national surveillance for bovine tuberculosis (TB) and brucellosis in Minnesota cattle, even though the state regained TB free status in 2011 and the state has been free of brucellosis in cattle since 1985. TB and brucellosis infections in cattle continue to be found at low levels in the United States. Disease investigations of the infected herds have occasionally traced animals from these herds to Minnesota.

This year, we traced the sale of 57 cows from a TB-infected herd in Texas to Minnesota. Most of the animals were returned to Texas, but a few of the animals stayed in our state. Minnesota's animal health regulatory staff were involved in an extensive investigation and testing effort to determine if any of the animals exposed to this group were infected with TB. The investigation included testing more than 3,600 cows. No TB infection was found in Minnesota's herd.

Scrapie

Scrapie eradication remains a goal for the United States. This brain-impacting disease threatens the health of our sheep and goats. For more than 15 years, the Board has partnered with the sheep and goat industry, as well as the U.S. Department of Agriculture (USDA), to accomplish this goal. Progress continues across the nation, with Minnesota reporting no positive scrapie cases this year, bringing the state close to six years with no cases. To continue toward the goal of scrapie eradication, Minnesota must remain vigilant in its efforts to investigate any potential exposures to scrapie while also continuing disease surveillance. Here is a summary of this year's activities:

Disease Investigations

- 7 investigations were initiated to evaluate animals imported into Minnesota and previously exposed to scrapie in another state. No evidence of infection was found.

Scrapie Testing and Slaughter Surveillance

- 237 sheep and 83 goats were sampled and tested for scrapie in Minnesota.
- 1,275 sheep and 157 goats from Minnesota were tested at slaughter nationwide.

Official Identification

- The USDA continues to offer free official ear tags to Minnesota producers and veterinarians. A total of 105,128 official ear tags were distributed this year.

Poultry

With the 2015 HPAI outbreak behind us but still fresh in our minds, Minnesota poultry producers began the slow road to full recovery. With time, the Board, along with Minnesota poultry producers, was able to focus on other activities to improve poultry and poultry products and protect the health of the industry. The Board conducted more outreach activities this year, which included three Authorized Poultry Testing Agent training courses, inspections of all poultry hatcheries and breeding flock facilities, poultry dealers, poultry slaughter plants, and commercial table egg-layer operations participating in National Poultry Improvement Plan (NPIP) programs. These inspection activities not only ensure facilities are being maintained in clean and sanitary conditions, they also provide verification that surveillance testing is being conducted according to NPIP and Board standards. These one-on-one interactions with producers provide the baseline for disease control and prevention in our poultry populations.

The Board continued its active partnership with Minnesota poultry producers and the University of Minnesota by meeting with the Emergency Disease Management Committee (EDMC) in May. The EDMC, an advisory group to the Board for the implementation of the Minnesota H5/H7 Low Pathogenic Avian Influenza Initial State Response and Containment Plan (The Minnesota Plan), met to discuss the 2015 HPAI event in Minnesota, future avian influenza preparedness efforts in Minnesota, and to update the Minnesota Plan.

The Board also worked with the NPIP to begin discussions of minimum biosecurity principles for NPIP Participants. A proposed USDA interim biosecurity rule would require a statement from producers saying, at the time of detection of HPAI in their facilities, they were following a written biosecurity plan. These biosecurity principles would serve as the minimum any NPIP Participant or poultry operation should follow. More detailed, site-specific plans should be developed from those minimum biosecurity principles.

Minnesota Poultry Testing Laboratory

The Minnesota Poultry Testing Laboratory (MPTL) is a joint venture between the Minnesota Board of Animal Health and the University of Minnesota Veterinary Diagnostic Laboratory (VDL). It serves as the official or authorized laboratory for the NPIP in Minnesota.

Minnesota Governor Mark Dayton signed a bonding bill in June 2015, which was passed by the Minnesota Legislature and provided $8.5 million to expand the veterinary diagnostic testing capabilities of the MPTL. Soon after the bill was signed, the design and planning process began. In December 2015, a ground-breaking ceremony marked the beginning of the process. The MPTL renovation and expansion project stayed on target and finished in August 2016. The laboratory offers new services to the poultry industry, including molecular based testing, which was critical in the control, eradication and permitted movement efforts during the 2015 HPAI event. In addition, necropsy and other expanded diagnostic services are available at the MPTL.

During the construction process, the MPTL moved its operation to a temporary facility nearby and continued to monitor poultry flocks for Board and NPIP program certification, as well as conducting other non-program testing. In FY16, 225,244 non-billable services (procedures) for Board and NPIP programs were conducted, along with 79,707 billable, non-program services.

Rabies

The Minnesota Board of Animal Health performs investigations for domestic animal exposures and potential exposures to the rabies virus. Several groups of people work collaboratively within the state to manage various aspects of the rabies program, including the Minnesota Department of Health (MDH), the University of Minnesota Veterinary Diagnostic Laboratory, and private veterinary practitioners and physicians.

This year, 1,836 Minnesota animals were tested for rabies. The majority of animals tested were bats (662), dogs (503), and cats (451). Rabies investigations involved 966 animals, the majority of which were cattle. People associated with 898 animals were advised to observe the animals for signs of rabies. Five official quarantines were issued due to confirmed rabies exposures. The MDH recommended post-exposure prophylaxis for 108 people as a result of exposure to rabid or potentially rabid animals.

Species	Rabies Positive
Bat	28
Bovine	2
Feline	3
Skunk	9
TOTAL	**42**

A total of 42 Minnesota animals tested positive for rabies this year. Skunks and bats are both wildlife carriers of this virus in Minnesota. The state continues to see about 4 percent of submitted bats testing positive for the rabies virus. While the recent historical average for skunks is significantly higher, at about 50 percent, this year 36 percent of submitted skunks tested positive for the virus.

Exhibitions

An exhibition brings livestock or poultry from many owners to one location in Minnesota for judging or display to the public. Livestock and poultry at county fairs are exhibitions, and the Board of Animal Health works with fair managers and each fair's official veterinarian to ensure the Board's requirements are met to properly identify the animals, ensure they are free of disease, and housed in sanitary conditions at the fair. In January of each year, Board staff speak at the Minnesota Federation of County Fairs Annual Convention to discuss the Board's exhibition requirements. In 2015, poultry exhibition was banned due to the outbreak of highly pathogenic avian influenza (HPAI) in Minnesota; the ban was lifted November 30, 2015. This year, fair participants were encouraged to make preparations for

Emergency Planning

As we were winding down our 2015 HPAI event last fall, we remained vigilant in case there was another HPAI introduction. Fortunately, this did not happen, and we were able release the last HPAI quarantines by the end of the year. Following the Indiana high-path/low-path H7 AI event at the beginning of 2016, a formal written Minnesota HPAI plan was developed to respond to an unexplained poultry mortality event. We developed an electronic form to handle notification of a mortality event, along with a notification email chain. A field investigation protocol and case manager/Foreign Animal Disease Diagnostician (FADD) checklist was also developed. We had two training sessions with case managers and FADDs to go over these protocols. We implemented these protocols twice during the spring of 2016, each time negative for AI.

In May 2016, two of our field veterinarians participated in the Multi-State Partnership for Security in Agriculture and Veterinary Services (VS) Foreign Animal Disease (FAD) table top exercise in Kansas City. This was a day-long event focused on Incident Command and Resource Management in the face of an expanding Foot and Mouth Disease (FMD) incident. Eleven states, three VS districts, livestock trade associations and local agencies participated. This FAD tabletop exercise is the first event in a progressively complex series, culminating in a functional exercise in May 2018. Further planning for drills and exercises continues.

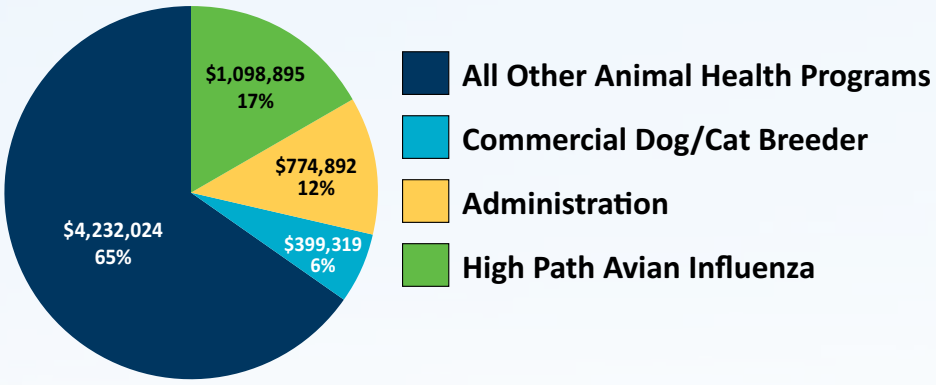
During the late summer of 2015, there were reports in Iowa of Senecavirus A (Seneca Valley virus, or SVA) appearing in pigs that had been at exhibitions. SVA is a vesicular disease and can look very much like FMD. Cases of swine showing vesicles, especially on the coronary bands (near the foot) and snout, must be investigated as a FAD. We saw our first cases of SVA in Minnesota in late August, and they continued to be identified in swine herds throughout the fall of 2015 and spring of 2016. We developed protocols for handling these cases, and we continue to investigate all swine vesicular cases when they arise.

exhibiting poultry during the 2016 season, and staff fielded questions at the convention about poultry exhibition at the fairs. The Board was cautiously optimistic as the spring progressed, and poultry exhibitions were allowed as HPAI did not occur during the 2016 fair season.

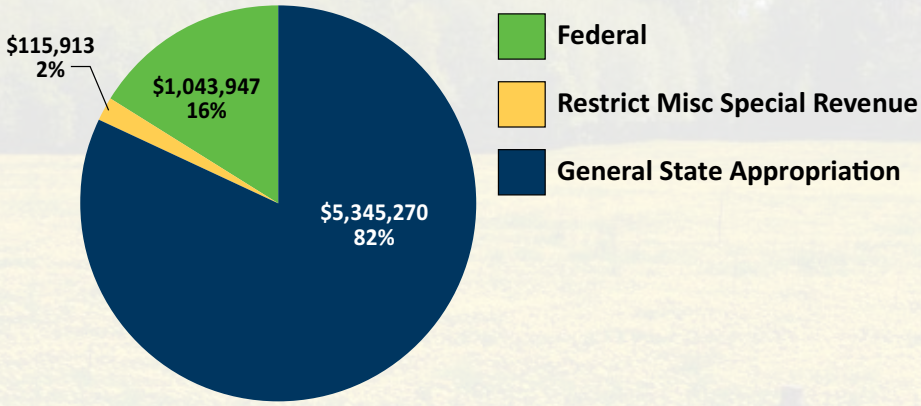
There are 96 county fairs in Minnesota, including the Tri-County Fair, a one-day fair in Mankato in Blue Earth County; two St. Louis County Fairs; two Otter Tail County Fairs; two Morrison County Fairs; and two Cass County Fairs. The only county without a county fair is Cook County. The first county fair of the season started June 16, and the last county fair ended September 11.

Budget

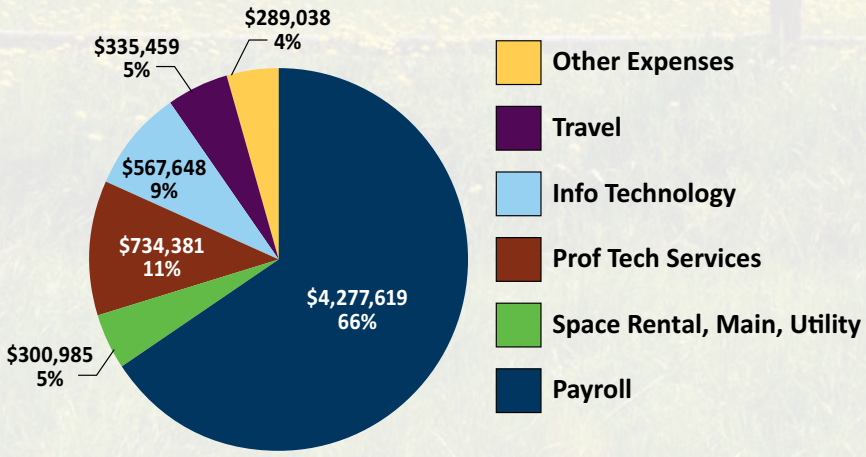
Board of Animal Health - FY 2016
Total Expenses by Program $6,505,130

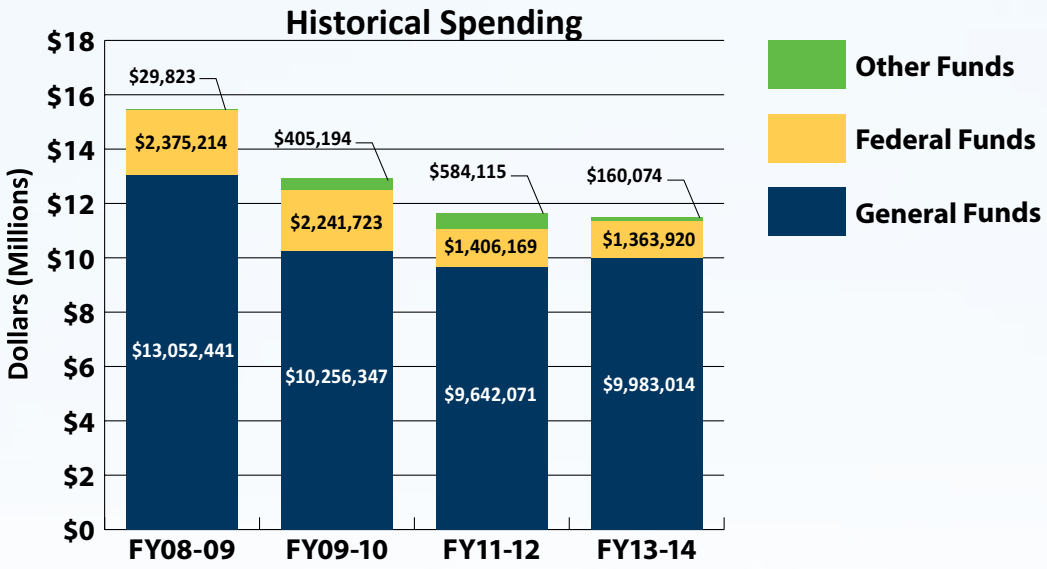


Board of Animal Health - FY 2016
Total Expenses by Funding Source $6,505,130



Board of Animal Health - FY 2016
Total Expenses by Category $6,505,130





Veterinary Diagnostic Laboratory (VDL)

University of Minnesota VDL - FY16 Procedures by Species

Bovine	186,770
Canine	15,632
Cervidae	12,962
Equine	8,148
Feline	5,964
Fish	7,291
Misc. Avian	8,429
Misc. Mammal	5,798
Non-Animal	930
Other	1,242
Porcine	697,159
Poultry	317,224
Small Ruminant	9,942
GRAND TOTAL:	**1,277,491**

University of Minnesota VDL - FY16 Procedures by Laboratory

Bacteriology	53,904
Clinical Pathology	322
Comparative Immunology	2,655
Development	1,720
Electron Microscopy	619
Histology	49,183
Immunohistochemistry	5,489
MN Poultry Testing	304,609
Molecular Bacteriology	35,868
Molecular Diagnostics	428,827
Necropsy	19,002
Outsourced	8,193
Parasitology	5,919
Serology	236,749
Udder Health	112,854
Virology	11,578
GRAND TOTAL:	**1,277,491**

University of Minnesota VDL - FY16 Animals Submitted

Bovine	131,318
Canine	6,507
Cervidae	5,639
Equine	6,152
Feline	1,584
Fish	3,907
Misc. Avian	4,461
Misc. Mammal	3,242
Non-Animal	799
Other	290
Porcine	443,234
Poultry	178,818
Small Ruminant	6,559
GRAND TOTAL:	**792,510**

MINNESOTA BOARD of ANIMAL HEALTH

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