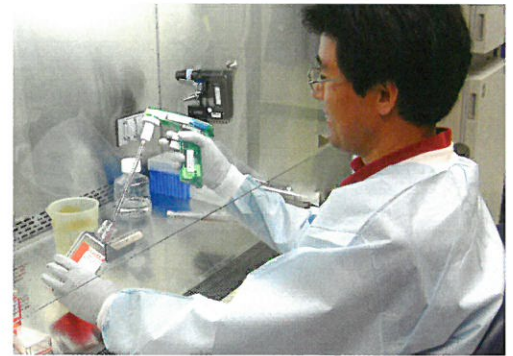


Iowa's Only Full-Service Veterinary Diagnostic Laboratory

IMPACT: A 1% increase (or decrease) in Iowa's animal agriculture economy = \$325 million impact on Iowa

- Partners to serve and grow Iowa's \$14.6 billion livestock and poultry industries and \$17.9 billion animal protein processing sectors
- Provides timely, comprehensive, high-quality diagnoses for diseases and toxicoses
 - > 75,000+ cases/year
 - > 1.2 million tests/year
 - > Many with same-day results
- Protects the safety and security of our food supply
- Fully accredited by the American Association of Veterinary Laboratory Diagnosticians
- One of 14 Tier 1 labs in the U.S. National Animal Health Laboratory Network



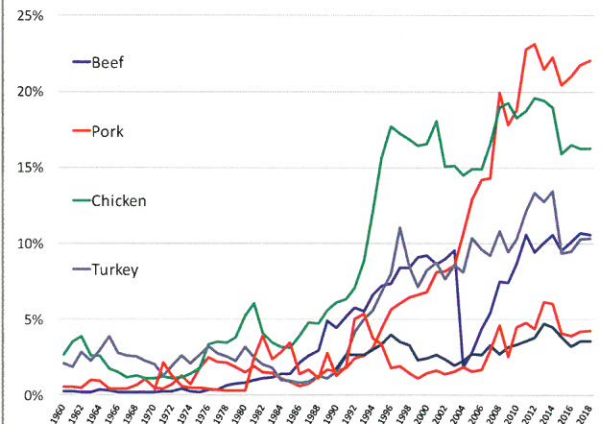
The caseload at the diagnostic laboratory has doubled over the past five years.

The \$4 million direct appropriation through Agriculture and Natural Resources allows us to:

- Continue to provide unbiased, critical diagnostic services to meet the needs of Iowa animal owners and consumers
- Position Iowa to continue to participate in national animal health networks and surveillance programs for domestic diseases
- Detect and capably respond to the introduction of transboundary (porcine epidemic diarrhea virus 2013-14), foreign animal diseases (highly pathogenic avian influenza virus 2015), and emerging diseases (Senecavirus A 2015-16)
- Provide the research infrastructure to be the nation's leader in food-animal diagnostic medicine
- Preserve and continue to grow Iowa's access to export markets: ~23% of U.S. pork, ~11% of U.S. beef, ~19% of U.S. chicken is exported

Preserving Animal Health and Access to Export Markets

U.S. Exports as a % of Total Domestic Production



Agricultural Economies Are Increasingly Dependent on Exports

Economic Contribution of the Iowa State University Veterinary Diagnostic Laboratory

January 30, 2017

Prepared by Lee Schulz, David Swenson, Dermot Hayes, and Derald Holtkamp

Executive Summary

The Veterinary Diagnostic Laboratory is a fully accredited, diagnostic, teaching and research laboratory located on the campus of Iowa State University's College of Veterinary Medicine. The laboratory offers comprehensive advanced diagnostics with fast and reliable results and prompt expert interpretation and consultation.

The laboratory serves as a primary hub of activity, yet its economic benefits extend well beyond campus borders. Iowa citizens, veterinarians, and agricultural industries benefit from the services provided by the Iowa State University Veterinary Diagnostic Laboratory (ISUVDL).

The overriding objective of this study was to describe the economic contribution of the ISUVDL. Particular objectives included:

1. Estimate the total economic contribution of the ISUVDL.
2. Estimate the total economic contribution of construction activity associated with a new ISUVDL.
3. Estimate the total economic contribution of animal agriculture production in Iowa.
4. Estimate the total economic contribution of the animal processing sector in Iowa.
5. Describe the contribution of the ISUVDL in relation to business continuity in animal agriculture, competitiveness, surge capacity, and the importance to human, companion animals, wildlife, research, and teaching.

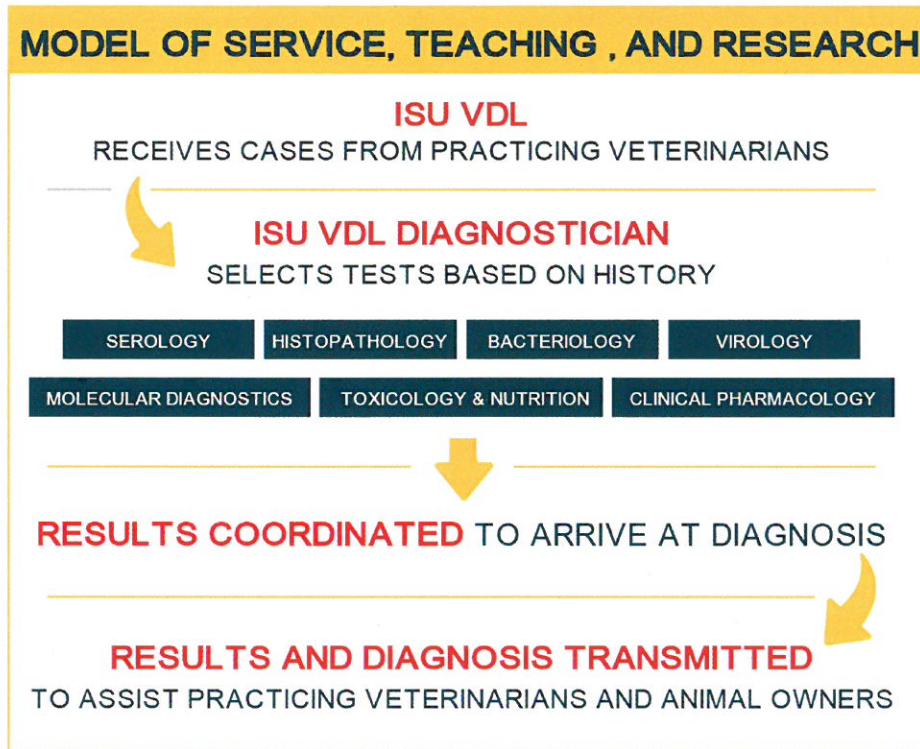
Objectives 1 through 4 considered the contribution of various workings to the Iowa economy. Impacts were calculated using the IMPLAN Input-Output (I-O) modeling system. Objective 5 describes the contribution of the ISUVDL across several key aspects. Many of these benefits cannot be precisely quantified and others will exist only in times of emergency. Therefore, a panel of experts was used to evaluate the contribution of the ISUVDL. These experts are all independent of the ISUVDL but familiar with its services.

Key Findings

- The ISUVDL had \$22.5 million in expenditures in 2015, and 140 jobholders earning \$11.0 million in labor income. After considering all multiplied through relationships with suppliers to the ISUVDL and workers converting their incomes into household spending, the ISUVDL annually supports \$39.0 million in regional output and \$23.34 in value added, of which \$19.57 million is labor income to 265 jobholders.
- Construction-related spending of \$124 million between 2016 and 2020 for a new ISUVDL would stimulate \$41.16 million in total annual output in the region and \$20.10 million in value added, of which \$14.95 million would be labor income to 227 total jobholders.
- Iowa livestock production provides \$14.62 billion in direct economic output and livestock processing provides \$17.96 billion in direct economic output. **The combined direct economic output of livestock production and processing, \$32.58 billion, equates to \$10,487 for each of Iowa's 3.107 million people. For the livestock production and processing industries, direct economic output is analogous to annual sales. The \$124 million cost of a new ISUVDL equals about 0.38% of the annual direct economic value of the livestock sector. Therefore, a contribution to the size of the Iowa livestock sector by the ISUVDL of 0.38% would, from a statewide perspective, pay for a new lab within just one year.**
- Workers linked to animal producing sectors generated \$339 million in state tax receipts for Iowa in 2015. Those in animal products processing industry accounted for \$140 million in state taxes. The total tax contribution from both groups is \$479 million.
- A panel of stakeholders was asked about the contribution of ISUVDL to the livestock sector in Iowa. They were asked to provide this value as a percent of the total added value of the livestock sector under both normal conditions (peacetime) and under an animal health emergency. This value was then compared to the income and sales taxes paid by participants in the livestock sector to the state of Iowa. **The results suggest that the lab generates enough tax receipts to repay a \$124 million state investment in two years under normal circumstances and in less than one year in an animal health emergency.**

Diagram 1 illustrates the processing of samples received at the ISU VDL.

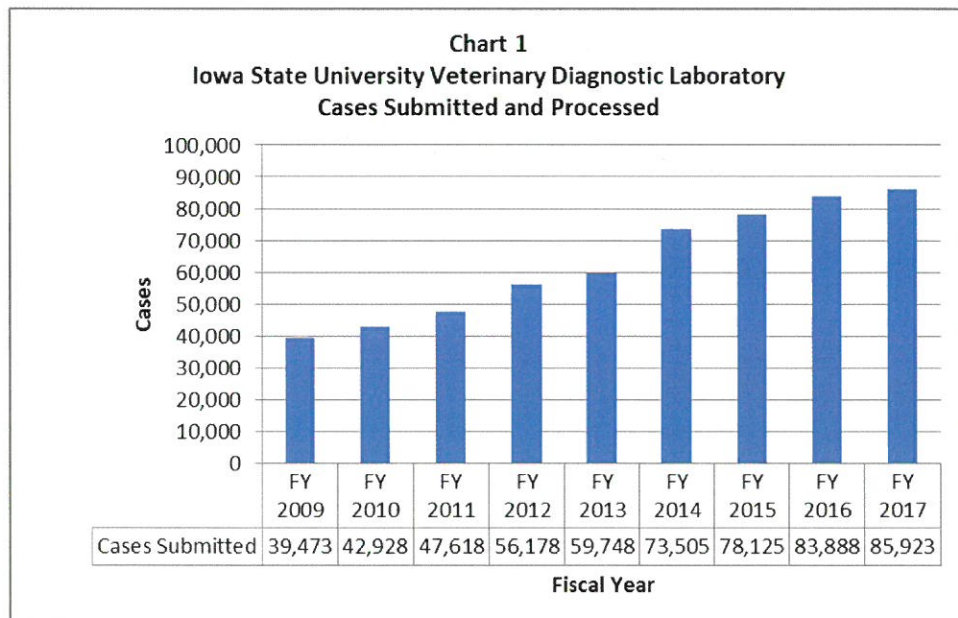
Diagram 1
Sample Processing at ISU VDL



Source: ISU VDL

Cases Submitted and Processed

The volume of diagnostic services at ISU VDL has increased in recent years. Processed case submissions increased by 50.0% over the past five years and 100.0% over the past eight years. **Chart 1** depicts the number of cases submitted and processed by the ISU VDL from FY 2009 through FY 2017.



Teaching and Research

Clinical case submissions serve as the primary source for research questions. The ISU VDL provides a location for teaching the next generation of veterinarians, animal health-related scientists, and veterinary diagnosticians.

BUDGET IMPACT**Funding**

The ISU VDL's core diagnostic service operations are funded by clinical diagnostic service fees and contract payments, a General Fund appropriation from the Iowa General Assembly, ISU funding to support salaries, and funding from the USDA NAHLN. The USDA NAHLN funding is approximately \$200,000 to \$300,000 per year and is provided for ISU VDL's contributions as a Level 1 Facility. Payments by the USDA NAHLN support infrastructure and personnel expenditures at the ISU VDL.

The General Fund appropriation to the ISU VDL has been funded at \$4.0 million since FY 2015. The ISU CVM provides additional financial support for faculty salaries and facility expenditures for operations and maintenance. The ISU VDL currently resides within the larger ISU Veterinary Medical Complex at the College of Veterinary Medicine.

Although State and ISU funding levels have been generally flat in recent years, the overall budget and operations at the ISU VDL have grown significantly in response to increased demand for diagnostic services and related research efforts. The key drivers in the increased number of case submissions and associated service fees have been due to ISU VDL's role in responding to emergency diseases affecting animal agriculture and wildlife. This includes USDA's funding of \$11.0 million for diagnostic services in FY 2015 through FY 2017, most notably in response to the PEDV and the HP-AIV outbreaks.

The USDA NAHLN is the federal veterinary diagnostic reference and confirmatory laboratory; however, the USDA NAHLN has State or university laboratories perform routine diagnostic tests for native animal diseases as well as targeted surveillance and testing for foreign animal diseases. During an emergency outbreak, the number of tests needed increases and the funding paid by the USDA NAHLN also increases. The USDA NAHLN also asks State and university laboratories to participate in the development of new testing methodologies. However, USDA-funded diagnostic testing has been reduced dramatically in FY 2018 since the emergency animal disease outbreaks.