A laboratory leader: Keeping Ontario’s animals safe

Through the Ontario Agri-Food Innovation Alliance, the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) invests in laboratory testing and emergency planning to make Ontario’s food system one of the safest in the world. U of G’s Laboratory Services Division, comprised of the Animal Health Laboratory (AHL) and Agriculture and Food Laboratory (AFL), provides comprehensive, reliable, accredited testing services to help build transparency and public confidence in the agri-food sector.

The Animal Health Laboratory works with partners to determine the health of livestock, poultry, horses and pets through a wide array of tests, and in turn provides disease surveillance data for the province of Ontario.

With new lab tests continually developed and validated, AHL stands on guard, ready to respond to emergencies and keep Ontario open for business.

AHL at a glance

- National leader in animal health testing, providing world-class laboratory services
- Works with veterinarians, government and university partners across Canada
- Accredited by international standards
- Fully computerized veterinary diagnostic lab employs analysts with post-graduate training and specialty board certification
- Monitors trends in existing diseases and sends real-time alerts to OMAFRA to ensure rapid and efficient response to health threats in the livestock and poultry industries
- Enables policy makers to have information readily available to assess risks, evaluate control strategies, identify research needs, and facilitate planning
Unique position in Canada

Uniquely positioned as a laboratory leader, AHL greatly benefits the agri-food and rural sector in Ontario. With funding from OMAFRA, through the Ontario Agri-Food Innovation Alliance, AHL uses new, cutting-edge technologies to continuously improve the services they offer. Proceeds from fee-for-service revenue is reinvested into the lab’s various sections, providing innovative testing services to clients from multiple sectors.

**Inputs**

- **$5.7M** from OMAFRA
- **$8.6M** from testing services

**11 laboratory sections**
- Bacteriology
- Client Services (Specimen Reception)
- Clinical Pathology
- Histotechnology
- Guelph Anatomic Pathology
- Kemptville Anatomic Pathology
- Molecular Biology
- Parasitology
- Surveillance
- Toxicology
- Virology

**Virology Lab Roche Flow—1 of only 5 instruments in Canada**—enables AHL’s capacity for high-volume export and surge testing in the event of a foreign animal disease outbreak.

**Multiple accreditations**
- American Association of Veterinary Laboratory Diagnosticians (AAVLD)—full accreditation, all species
- Standards Council of Canada (SCC) to ISO/IEC 17025:2017 standard for accredited techniques
- Orthopedic Foundation for Animals Inc. (OFA)—fT42s, TgAA, cTSH

**125 staff**
By the numbers (2020/21)

- AHL performed 770,377 procedures to complete 77,584 submitted cases
- 10%+ in revenue over 2019/20 to $8.6 million
- 98.5% compliance with published turnaround times
- 24 new tests developed or improved by AHL scientists
- 94.8% client satisfaction with AHL services
In some instances, AHL clients do not know what type of tests they need to solve their problem so AHL diagnosticians use their expertise to determine appropriate test(s).

Immediately notifiable results* are sent automatically twice a day to regulatory authorities (CFIA and/or OMAFRA).

* Includes any of the 81 immediately notifiable diseases named in the provincial Animal Health Act, 2009

“AHL technicians will generate results from the raw data and review.

The technician will pass the reviewed results along to the Supervisor who will conduct a secondary review to verify the results.

All verified results are sent immediately to the client electronically.

“Without access to a lab that can run screening and diagnostics that generate timely and reliable results, we would not be able to maintain the health of our clients’ herds.”

—Dr. Kevin Vilaca, veterinarian, Southwest Vets Services
Making an impact

The following two examples showcase how the Animal Health Laboratory is making an impact in Ontario’s agri-food sector and rural communities.

1. **Partner of choice for Ontario’s livestock trades**

2. **Emergency preparedness for African swine fever**
AHL is integral to Ontario’s multi-million dollar livestock export industry—as well as Canada’s poultry exports—by providing rapid and reliable confirmatory tests required by import countries. To ensure the livestock industry meets the rigorous requirements of import countries, AHL remains at the forefront of refining tests for more rapid service to the sectors while maintaining the integrity and reliability of the results.

AHL’s reinvestment approach ensures the purchase of up-to-date lab instruments and equipment, enabling multiple tests to be performed at once. With the ability to test a wide variety of non-human animals—including falcons exported to Saudi Arabia—AHL provides the comprehensive, quality testing program required for successful export industries.

“There are a lot of labs out there, but you need a certain level of confidence in the lab, which is what we have with AHL.”

—Dr. Kevin Vilaca, veterinarian, Southwest Vets Services
Metrics and impact

**2020 ONTARIO ANIMAL EXPORTS**

- **$102.3M** live cattle
- **$105M** live pigs
- **$306.3M** total live animals

**IMPACT**

- **Cutting-edge technology**
  Utilizes up-to-date technology that optimizes efficiency and surge capacity

- **Verifies negative status**
  for disease in flocks and herds eligible for the export market

- **Unique in Ontario**
  Only Ontario lab with capacity for export testing

- **Innovative**
  Develops new tests related to export requirements

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"Due to their accreditation status, we utilize AHL in order to satisfy the requirements of domestic and international testing programs."

—Christa Arsenault, DVM, Canadian Swine Health Intelligence Network (CSHIN) manager
Disease monitoring and surveillance
Emergency preparedness for African swine fever

AHL plays a leadership role in disease monitoring and surveillance to support Ontario livestock producers and consumers.

For example, African swine fever (ASF) is a highly transmissible viral disease that affects hogs and poses a major threat to the commercial pork industry. AHL provides a local option for testing in Ontario and has the ability to detect that potential first positive case quickly and increase testing capacity rapidly to help monitor the spread of the disease. If ASF were detected in Ontario, it would have devastating economic implications for the pork industry, such as border closures and major animal health and welfare implications, including morbidity and mortality.

AHL supports the current provincial and national ASF disease-free status with quick, confirmatory testing of samples from animals that may present with symptoms similar to those of ASF. It is critical for Ontario and Canada to maintain this disease-free status to ensure a safe, healthy and profitable commercial pork industry.
2020 ONTARIO PORK INDUSTRY METRICS¹

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
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<tbody>
<tr>
<td>Hogs</td>
<td>5.6M</td>
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<tr>
<td>Producers</td>
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<tr>
<td>Full-time-equivalent jobs</td>
<td>15K+</td>
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<tr>
<td>Economic output</td>
<td>$2.7B</td>
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</tbody>
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**Ontario leader**
Only Ontario lab providing testing for African swine fever

**Collaborative**
Establishes and maintains collaborative relationships with veterinarians and the Canadian Swine Health Intelligence Network

**High capacity**
High-volume test capacity for urgent situations

“The data and information that AHL provides into this network [Canadian Swine Health Intelligence Network] is extremely valuable to monitor endemic swine disease as well as to monitor for new and emerging swine pathogens.”
—Christa Arsenault, DVM, Canadian Swine Health Intelligence Network (CSHIN) Manager

“Comprehensive monitoring and surveillance
Monitors the industry through screening and diagnostic tests to ensure a disease-free sector

“A quick turnaround time for test results we can be confident in is critical to disease monitoring and surveillance and AHL provides that assurance and are ready to go beyond regular work hours to address our urgent needs, which is critical to the success of the industry.”
—Dr. Kevin Vilaca, veterinarian, Southwest Vets Services

¹ 2020 statistics [ontariopork.ca](http://ontariopork.ca)
The Ontario Agri-Food Innovation Alliance is a collaboration between the Ontario Ministry of Agriculture, Food and Rural Affairs and the University of Guelph.

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