

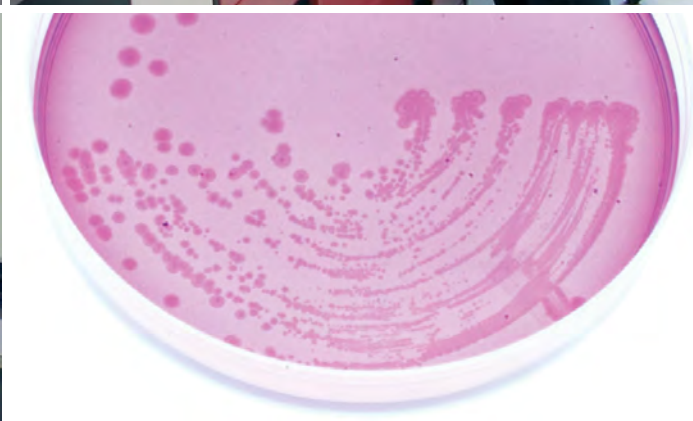
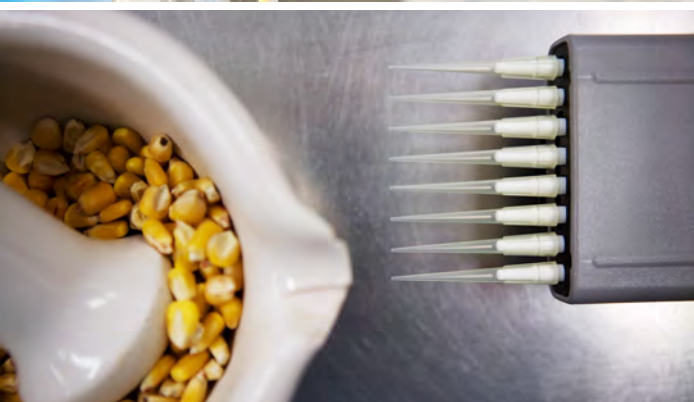


IMPROVE LIFE.

Ontario Agri-Food Innovation Alliance Impact Case Study



Agriculture and Food Laboratory



A laboratory leader: Keeping Ontario's food 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 Agriculture and Food Laboratory (AFL) and the Animal Health Laboratory (AHL), provides comprehensive, reliable, accredited testing services to help build transparency and public confidence in the agri-food sector.

The Agriculture and Food Laboratory works with partners across the food, veterinary and agriculture sectors to help ensure that our food is safe and that our plants, animals, people and environment are healthy.

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

AFL at a glance

- Delivering clients accurate and dependable results for more than 30 years
- Focusing on agriculture, food and beverage, corporate and research sectors
- AFL has capabilities that are unmatched anywhere in Canada
- In-house scientific expertise, high-value laboratory services, applied research, method development, and provincially aligned emergency response programs
- Supporting OMAFRA in securing public confidence in the quality and safety of the agriculture, environment, and food sectors in Ontario



At the forefront of food safety testing in Canada

Uniquely positioned as a laboratory leader, AFL greatly benefits the agri-food and rural sector in Ontario. With funding from OMAFRA, through the Ontario Agri-Food Innovation Alliance, AFL 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

\$6.8M

from OMAFRA

\$7.9M

from testing services

132 staff

Leading-edge technology unique to AFL

- X-ray electron microscope and an infra-red analyzer to identify contaminants
- Exclusive Canadian provider of "DNA-MultiScan" plant pathogen identification

15 specialty laboratory sections across 3 laboratory units

Chemistry

- Pesticide Lab
- GLP Service Lab
- Drug Residue/Inhibitor Lab
- Method Development Lab

Analytical Biology

- Molecular Biology Lab
- Dairy Lab
- Microbiology Water Lab
- Microbiology Culture Lab
- Microbiology Special Projects & Method Development Lab

Diagnostics

- Canadian Veterinary Urolith Centre Lab
- Foreign Material Lab
- Plant Disease Clinic
- Immunochemistry/Allergens Lab
- Soil and Nutrient Lab
- Toxicology Lab



Multiple accreditations

- Standards Council of Canada—ISO/IEC 17025
- Standards Council of Canada Good Laboratory Practices (GLP)
- Canadian Association for Laboratory Accreditation Inc. (CALA)—ISO/IEC 17025
- Licensed under the *Safe Drinking Water Act* Ontario Safe Drinking Water
- Licensed by Health Canada under the *Cannabis Act* for analytical testing

By the numbers (2020/21)

44K+ tests

completed as part of Provincial Food Safety
and Other Regulatory testing

1M+ tests

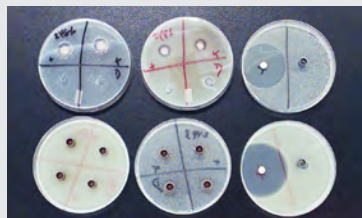
completed for external clients

99.9%

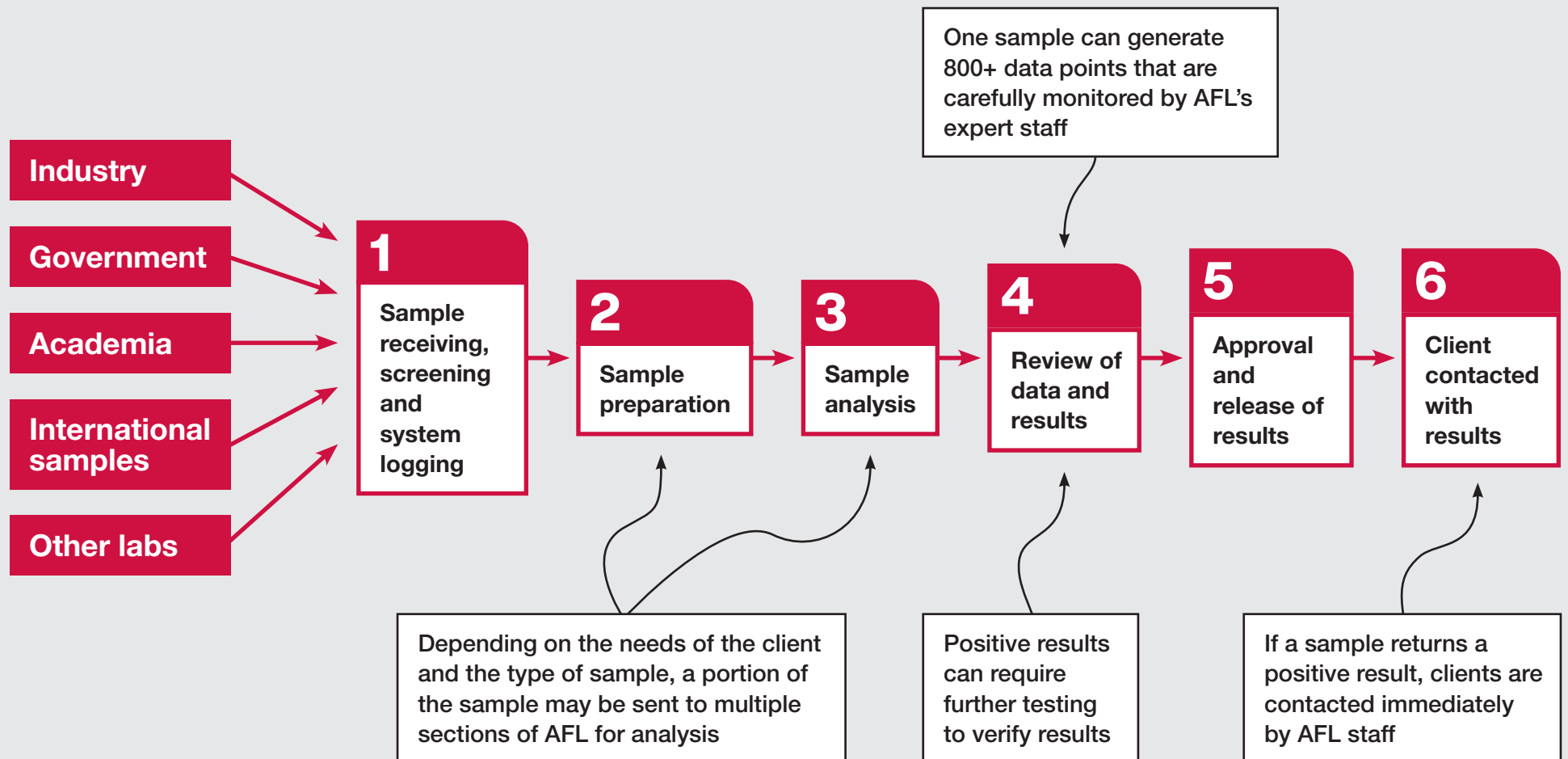
of all tests reported accurately

99.9%

turnaround compliance for the Food Safety Program



AFL sample flow chart



Making an impact

The following two examples showcase how the Agriculture and Food Laboratory is making an impact in Ontario's agri-food sector and rural communities.

- 1** Pesticide, pathogen and veterinary drug residue testing
- 2** Partner of choice for Ontario's dairy sector





Pesticide, pathogen and veterinary drug residue testing



The AFL's pesticide, pathogen and veterinary drug residue testing program contributes to the health of Ontario's animals, food and environment, and supports OMAFRA's various monitoring and surveillance programs. AFL aligns their services, method development and testing with OMAFRA's needs to sustain regulatory and food safety initiatives.

With a focus on pathogen detection and identification, AFL's microbiology lab tests finished food products, raw ingredients, water and environmental samples to determine microbial growth and pathogen transmission risks in the farm-to-fork supply chain. This provides OMAFRA with reliable laboratory data, while supporting compliance with regulatory standards and requirements of various food safety legislation.

"Our unique partnership with AFL has allowed us to develop customized program- and commodity-specific testing methodology and sampling programs."

—Troy Jenner, manager, Food Safety Science Unit, OMAFRA

Metrics and impact

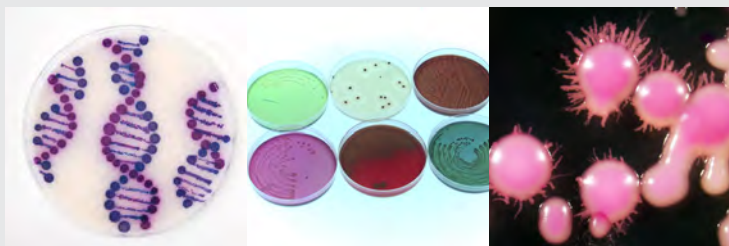


800+

active pesticide compounds
can be tested at AFL, including
herbicides, fungicides and
insecticides

~3,700

AFL lab samples analyzed per week



15,000+

microbiology samples

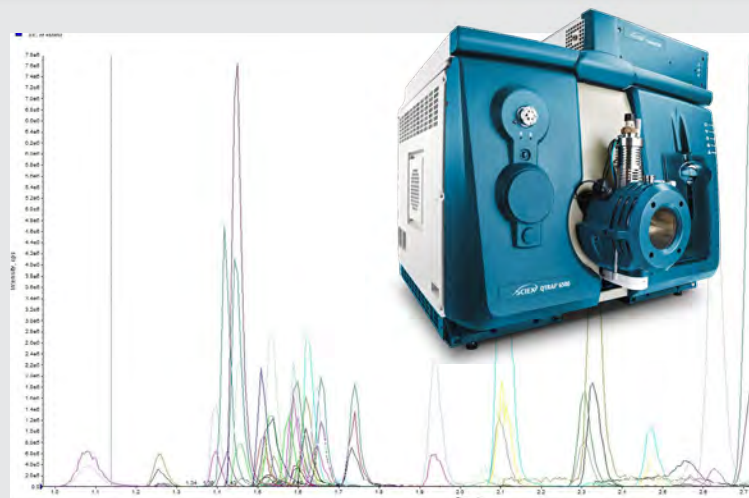
anticipated in 2021/22 from OMAFRA



200+

**food types
monitored**

for veterinary drug
residue including
raw and processed
food and agriculture
samples



**Multiple Target Analytes—Customized testing
method created by AFL**

Concurrent testing of 85 different drug residues
in meat from duck, turkey, chicken, pig, cow,
goat and sheep at one time, enabling efficient
and rapid testing

**“The high quality test results received in a short
time frame from AFL allows OMAFRA and
the public to have a high level of confidence
and assurance regarding the safety of food
produced and processed in Ontario.”**

—Troy Jenner, manager, Food Safety Science Unit,
OMAFRA



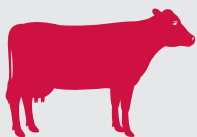
Partner of choice for Ontario's dairy sector



AFL is a partner of choice for industry and government thanks to its in-house expertise and commitment to critical thinking and problem solving. AFL offers clients a wide variety of laboratory tests and timely, reliable results, making it the place to go when clients need a lab partner that will go the extra mile.

For over 50 years, AFL has supported Ontario's raw milk testing program, providing trusted laboratory testing services to the Dairy Farmers of Ontario and OMAFRA. As the dependable testing service, AFL has consistently gone above and beyond to help ensure the safety of Ontario's milk supply. AFL's commitment to excellence not only supports Ontario's dairy sector, it contributes to the overall public good.

Metrics and impact



ONTARIO DAIRY INDUSTRY
(2019/20 Dairy Farmers of Ontario)¹

\$2.433B

farm gate value of milk sales

3,351

dairy farms in Ontario

102,696

loads of milk delivered
across Ontario

¹ Dairy Farmers of Ontario 2019–20
Annual Report

IMPACT



Ontario's dairy testing lab

As part of OMAFRA's regulatory program, AFL tests more than 42,000 samples a year for total bacteria in raw milk from all dairy farmers in the province

800K+

dairy samples processed annually by AFL

50+

years testing dairy

making AFL a global model for dairy testing

Pioneer of dairy composition testing in Ontario

AFL developed, validated and refined milk testing methods that are now in use across North America

Quick turnaround time

Same day results for dairy farmers helps monitor herd health and milk quality



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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