



# AIC2018

Education in Agricultural Sciences and  
Technology - Ready for the Future?

## Envisaging Future Graduates Forum Presentation

**Jessica Bowes**, Manager, Business & Technology  
Bioenterprise Corporation

**Engaging New Graduates in Ontario Agri-Tech:  
Findings from Bioenterprise's 2018 Pilot Program**



**COACH**  
**CATALYST**  
**DEAL BROKER**  
**MATCH MAKER**

## Engaging New Graduates in Ontario Agri-Tech

Findings from Bioenterprise's 2018 New Graduate  
Employment & Mentorship Pilot Program

## ✓ Agricultural and agri-food innovation

- encompasses **science and technology, research and development** and the **adoption** of science-based innovations such as new production/processing techniques or improved farm management practices.
- is an important driver of **economic growth**, enabling greater **competitiveness**, as well as opportunities to meet food security and sustainability goals in Canada and around the world.



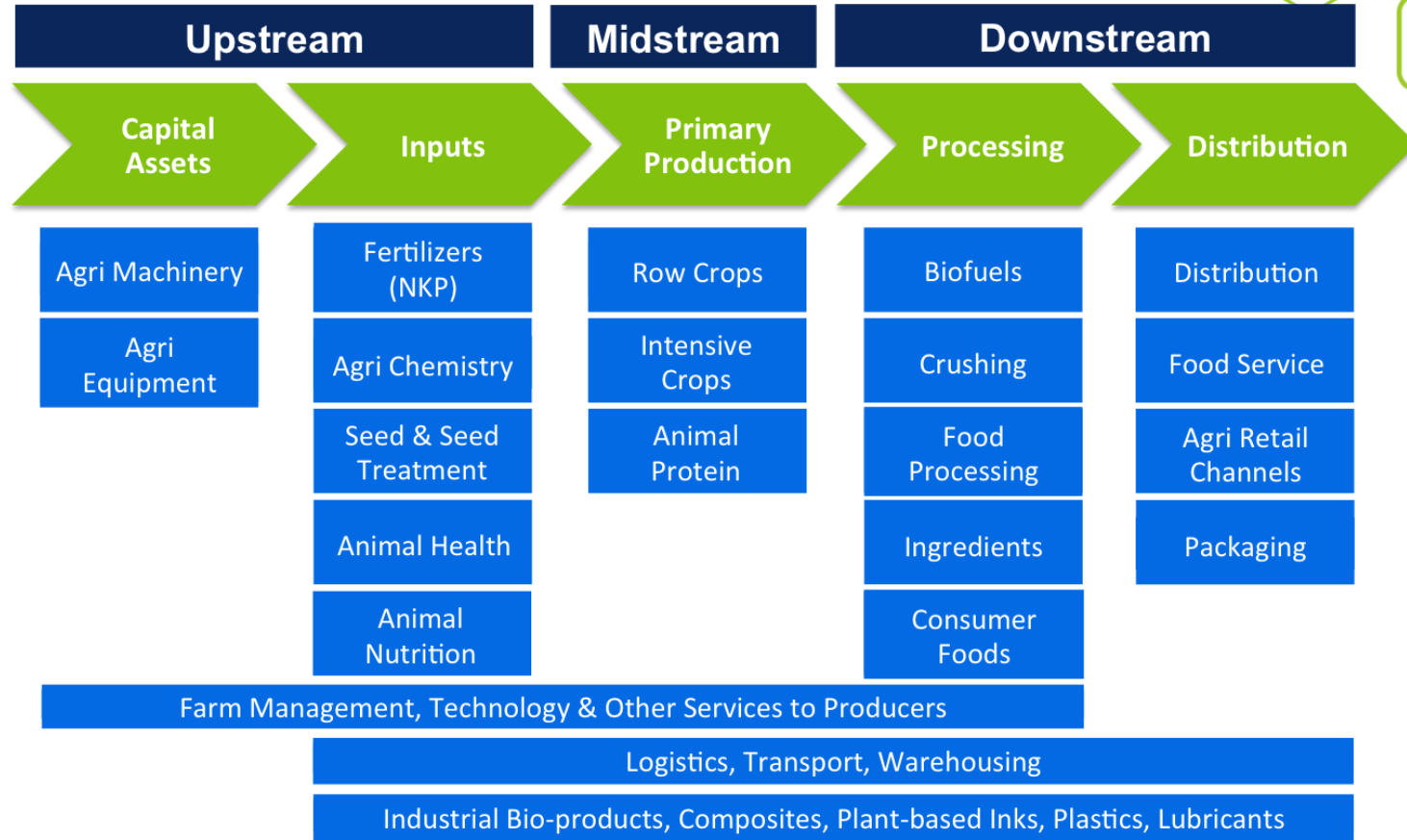
# Setting the stage

- Canada's agricultural system employs 1 in 8 Canadians<sup>1</sup>
- Ontario's agri-food sector contributes more than \$37 billion to the province's GDP and provides employment for more than 800,000 people<sup>2</sup>
- The next few decades will bring global and national challenges such as climate change, food and nutritional security, soil degradation and loss, fresh water concerns, declining biodiversity...
- Agri-technology addresses these challenges through R&D, commercialization, and industry adoption of agricultural, agri-food, and bio-based innovations
- High demand for human capital with specific knowledge and skill sets
- Critical need to develop and manage innovative technologies here in Ontario

1. CAHRC  
2. OMAFRA



# Innovation across the value chain



# Canada's agri-innovation ecosystem



- ✓ A dynamic, demand-driven, collaborative approach to supporting innovation and facilitating commercialization
  - Funding
  - Knowledge creation, dissemination and adoption
  - Human capital
  
- ✓ Not-for-profit business incubators and accelerators provide:
  - Infrastructure
  - Business support services
  - Technical advice
  - Ongoing support

# Bioenterprise Corporation

- As Canada's agri-tech accelerator, we work with innovative agri-tech companies to grow their business by providing **customized commercialization** services designed to help them become investment ready, commercially viable companies.
- **We know agri-tech** – For almost 15 years Bioenterprise has provided industry knowledge, business services, scientific and technical expertise, and global connections to early stage businesses.



# Agri-technology sectors

## AGRICULTURE



- Agricultural Management Tools
- Agricultural Waste Management
- Animal Health & Sciences
- Aquaculture & Ocean-Tech
- Crop Science
- Equipment & Machinery Development
- Plant Genetics
- Precision Agriculture & Data Analytics
- Seed Technology
- Water Management

## AGRI-FOOD



- Agri-Based Life Sciences
- Cosmeceuticals & Nutricosmetics
- Feed
- Food & Beverage
- Food Processing
- Natural & Non-Prescription Health Products
- Seafood

## AGRI-PRODUCT



- Agri-Clean Technologies
- Bio-Energy
- Bio-Fibres & Composites
- Bio-Products (Industrial & Commercial)





# Facilitating commercialization



## RESEARCH AND DEVELOPMENT



## COMMERCIALIZATION

## EMERGING

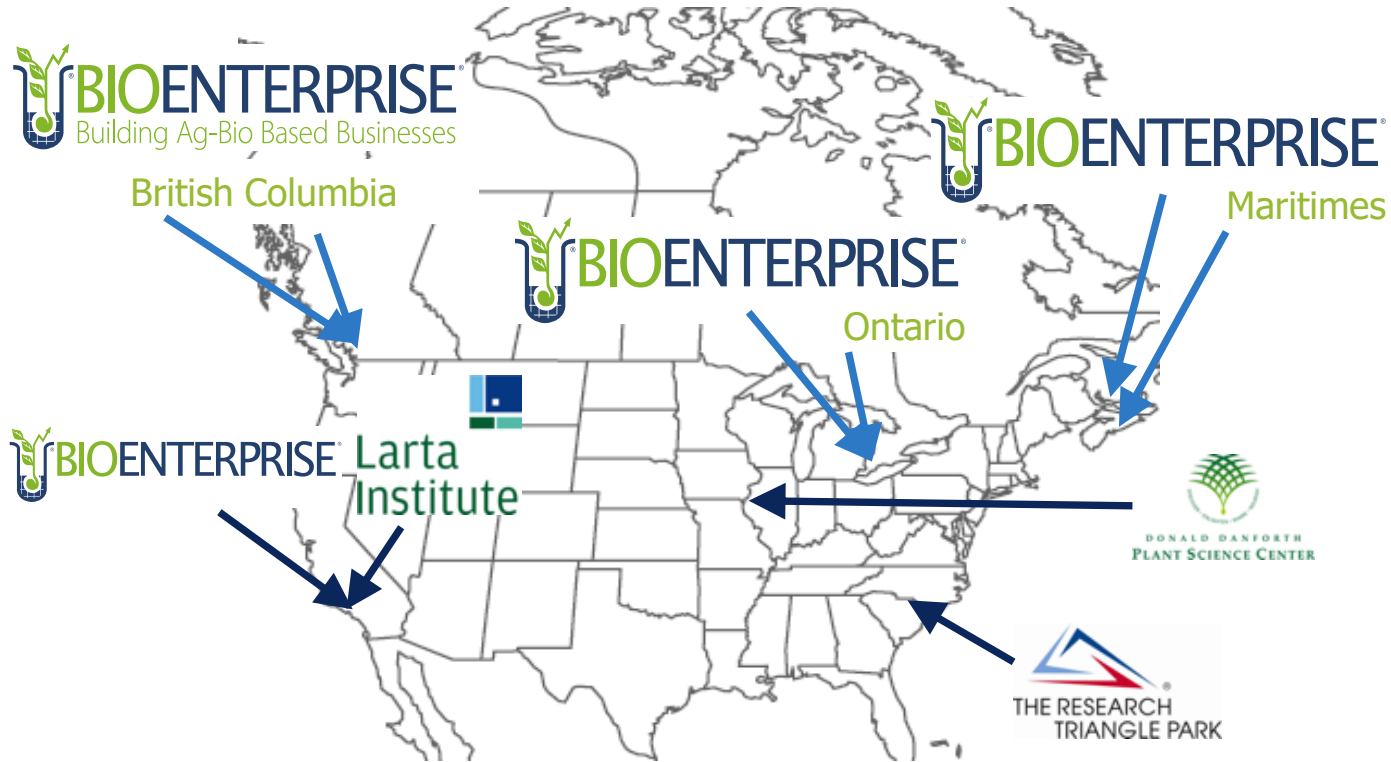


# How Bioenterprise works

- Pro-active identification of leading global innovations and technologies
- Determination of critical success factors
- Establish “Go Forward” acceleration team
- Minimum engagement of 6 months
- Typical client relationship is 2 - 3 years
- Non-cohort based model
- Resource intensive- fully integrated model
  - Continuity from start to finish



# Coverage and collaboration



# National collaboration





# Programs & Services



- We actively seek out **regional partnerships** with support from federal/provincial programs, to strengthen our service offering across Canada and serve more companies through programs such as:

- **Bioenterprise Ontario**

- Accelerating Innovative Research Pilot Program
- New Graduate Employment & Mentorship Pilot Program
- Seed Funding Program

- **Bioenterprise Maritimes & Bioenterprise British Columbia**

- Commercialization Support Program



**COACH**  
**DEAL BROKER**  
CATALYST  
MATCH MAKER

## **New Graduate Employment & Mentorship Program**

**Highlights & Analysis**

# New Grad Employment & Mentorship Program

- Designed to assist new graduates enter the various sub-sectors within ag-tech, while supporting and enabling innovation in Ontario.
- Connects Ontario-based innovators with Highly Qualified Personnel (HQP) and creates employment opportunities by providing financial support to mitigate costs associated with expansion.
  - Delivered by rolling intake from August 30 2017 to December 31 2017
  - 29 *Industry* applicants
  - 93 *New Graduate* applicants
  - 18 active engagements
  - Program completion date is March 31, 2018



# Program Objectives

- Connect innovation, early-stage and small agri-businesses across the province with newly graduated Highly Qualified Personnel (HQP);
- Facilitate exposure to Ontario's agri-technology value chain for HQP;
- Create new job opportunities for skill grads from Ontario's universities and colleges;
- Provide commercialization support through funding assistance and mentorship;
- Engage HQP in real-time workplace scenarios to accelerate employment process and provide mentorship & training, and;
- Identify and formalize collaborative partnerships with HR organizations.



# Program Overview

## Letter of Interest - New Graduates

The Bioenterprise New Graduate Employment & Mentorship Program is designed to assist new graduates enter the various sub-sectors within agri-technology, while supporting and enabling innovation in Ontario. Agri-technology can be categorized into the following sectors, including but not limited to: food & beverage processing; natural health products & cosmeceuticals; animal health & welfare; biomaterials, bioproducts, and bioenergy; crop inputs, and; agriculture management tools (e.g. precision agriculture).

This Program connects Ontario-based innovators with Highly Qualified Personnel and creates employment opportunities by providing financial support to mitigate costs associated with expansion. Cash flow and time spent recruiting and training new staff are two common barriers to expansion for early stage business.

Bioenterprise is looking to pair motivated and highly qualified graduates up with innovative companies in the agri-technology sectors. Graduates interested in entering the Program are invited to complete and submit this form, which highlights skills, interests and experience.

If invited to participate, the Bioenterprise team will work with the graduate to find a company match and facilitate introductions, conduct interviews, develop a learning plan, and provide financial compensation until the end of February 2018.

\*Please note that filling out this form does not guarantee participation in the Program. Correspondence with the Analyst Team Manager will occur within 3 business days of submission regarding next steps.

The Program is supported by the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA).

Bioenterprise is funded in part through Growing Forward 2, a federal-provincial-territorial initiative.

## Applicant Information

This section focuses on collecting contact information for administrative purposes.

### Contact Name \*

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Title	First	Last	Suffix

### Address \*

<input type="text"/>	
Street Address	
<input type="text"/>	
Address Line 2	
<input type="text"/>	<input type="text"/>
City	State / Province / Region
<input type="text"/>	<input type="text"/>
Postal / Zip Code	Country

### Email \*

### Primary Phone Number \*

<input type="text"/>	-	<input type="text"/>	-	<input type="text"/>
###		###		####

### LinkedIn profile

## Eligibility Criteria

This section focuses on collecting information related to basic eligibility criteria for the Program.

### Are you still in school? \*

Yes  No

### Have you graduated within the last 3 years? \*

Yes  No

### What did you graduate with? \*

- Bachelor's Degree  
 Master's Degree  
 Technical Diploma/ Certificate  
 Other

### What was your major/ minor, area of focus? \*

Maximum Allowed: 150 characters. Currently Used: 0 characters.

### Have you had paid employment in your field since graduating? \*

Yes  No

### Comments

Maximum Allowed: 150 characters. Currently Used: 0 characters.

### Are you legally entitled to work in Canada? \*

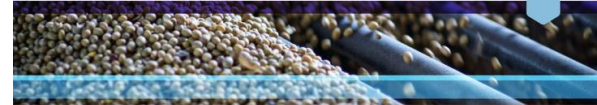
Yes  No  Unsure (please explain)

### Do you speak a second language? \*



# Program Overview

- All employment contracts/advisory agreements with clients were wrapped up between Feb 28 and Mar 31 2018
- All participants were surveyed for feedback and outcomes
- HQP participated exit interviews with Bioenterprise's HR coordinator
- **Full-time employment was considered a successful outcome!**



## Growing Graduates Into Ag Leaders



Join **Bioenterprise Corporation** for a **workshop** and **networking** event that will bring together agri-tech businesses, agri-employment resources and experts, and recent graduates from across Ontario for a day of education, knowledge sharing, and networking.



Hear from keynote presenter **Rob Henderson**, President & CEO, BioTalent Canada about resources available to recent graduates.



# Program Highlights

- Attracted **85+ graduates** from Ontario universities and colleges with varied levels of education and technical expertise;
- Connected 20+ agri-businesses with HQP from **Windsor to Kingston**
- Provided **critical commercialization services** to 16 early-stage/small agri-businesses
- Demonstrated **value-chain collaboration** through partnerships with 2 prominent HR organizations
- Brought together 60+ stakeholders for a day of **education, knowledge sharing and networking**



- Bioenterprise's hiring model has always been focused on **engaging new graduates as analysts** to work as a team to deliver commercialization services.
- Many of our alumni have gone on to **become leaders within agri-tech**, working across the sectors holding impressive roles with **private industry, investment firms, government, academia**, and other **support organizations**.



# Participant Eligibility



- Graduated within 3 years
- No paid employment in field of expertise
- Undergraduate/graduate degrees in agricultural or agri-food related sciences, business, engineering
- Specialized college diploma/degree
  - E.g. food processing technology or public relations



# Assessment & Recruiting Activities



## Industry:

- ✓ Program eligibility
- ✓ Short-/long-term priorities
- ✓ Economic impact outcomes (E.g. job creation)

## HQP:

- ✓ Education / skills
- ✓ Geographic location
- ✓ Availability
- ✓ Interests

## Bioenterprise:

- Posted job descriptions on industry/academic job boards
- Facilitated telephone & in-person interviews and follow-up meetings with all parties
- Assist with development of a *Learning Plan & Statement of Work*



# Engagement



- **HQP seconded, worked on location**
  - E.g. MBIOT HQP worked with Escarpment Laboratories Inc. as a Junior Analyst to assist with HACCP planning, marketing activities, and lab-based microbial analysis
- **HQP seconded, worked out of Bioenterprise office**
  - E.g. BSc Agribusiness HQP worked with AgriBrink Ltd as Business Development Coordinator to assist with pricing strategy & website development
- **HQP seconded, worked remotely**
  - E.g. BA Business Communications worked with Local Line Inc. as Sales Rep to support regional sales activities and identify new customers
- **HQP worked on Bioenterprise client activities & collaborations**
  - E.g. MABE HQP worked with Bioenterprise on Livestock Research Innovation Corporation's alternative protein project



# Mentorship & Training

## Mentorship:

- Exposure to agriculture and agri-food sectors in a group setting
  - E.g. offsite excursions
- Sector-specific, one-on-one coaching
- Lunch & Learns
  - E.g. Corporate partner sessions
- Seminars
  - Delivered by VP of Technology, such as Due Diligence 101



*Bioenterprise facilitated group tours of the Elora Dairy Research Station and Harster Greenhouses.*

# Mentorship & Training



## Training:

- Conferences, events & seminars
  - E.g. Precision Agriculture Conference (London, ON)
- Education & training courses (online and in-person)
  - WHMIS
  - E.g. Forum for International Trade Training (FITT) courses
    - *International Sales/Marketing*
    - *International Market Entry*
    - *Inventory Management*

# Workshop & Networking Event / Showcase

- 60+ attendees
- HQP workshop in the morning
- Stakeholder networking event & showcase in the afternoon
- Collaborations with:
  - BioTalent Canada
  - AgCareers.com
  - TalentEgg

**22 | FEBRUARY | 2018**

Workshop: 9:00 AM – 3:00 PM      Location: Cutten Fields,  
190 College Ave. E.,  
Guelph, Ontario  
N1H 6L3

Networking: 3:00 PM – 6:00 PM

9:00 AM – 9:30 AM	Opening Remarks & Industry Overview
9:30 AM – 10:00 AM	Expert Topic Presentation: How to Market Yourself
11:00 AM – 12:00 PM	Mentor Presentation: Innovation Across the Value Chain
12:00 PM – 1:00 PM	Networking Lunch
1:00 PM – 2:00 PM	Expert Topic Presentation: What to Look for in an Employer
2:00 PM – 2:30 PM	Expert Topic Presentation: BioTalent's Recent Graduate Resources
2:30 PM – 3:00 PM	Final Thoughts & Workshop Closing Remarks
3:00 PM – 6:00 PM	Networking Event

**RSVP By: February 12**

**To Register, Click [HERE](#)**

Thank you to our generous sponsor.



# Collaborations



Building skills for Canada's bio-economy  
Un monde de ressources pour la bioéconomie canadienne





**COACH**  
**DEAL BROKER**  
CATALYST  
MATCH MAKER

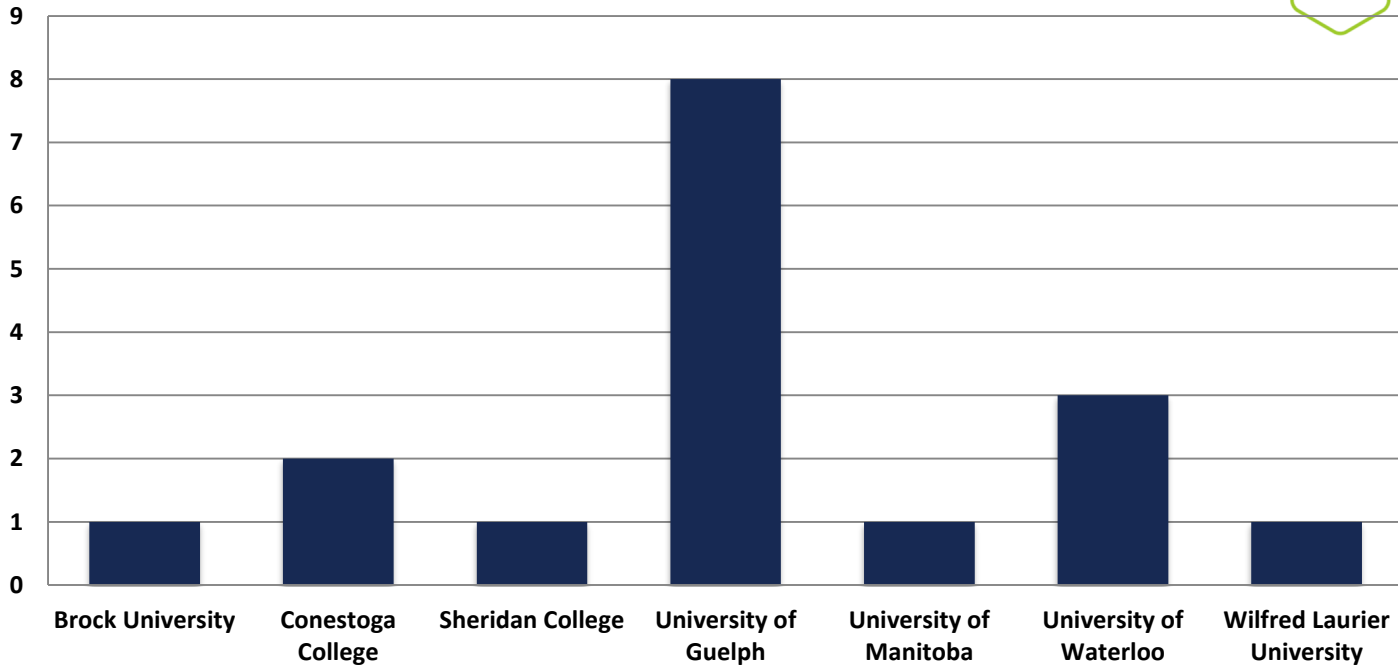
## **Outcomes & Analysis**

# Participant Benefits

## New Graduates:

- Mentorship/coaching
- Exposure to agri-technology sectors
- Peer and professional networking opportunities
- Short-term employment / Paid internship
- Access to Bioenterprise resources
- Real work experience
- Full-time employment
- Assistance with recruiting, interviewing & onboarding activities
- Bioenterprise managed payroll and provided support for some role-specific training
- Access to commercialization support services
- Ongoing mentorship/coaching
- Low-risk growth opportunity

# Outcomes & Analysis



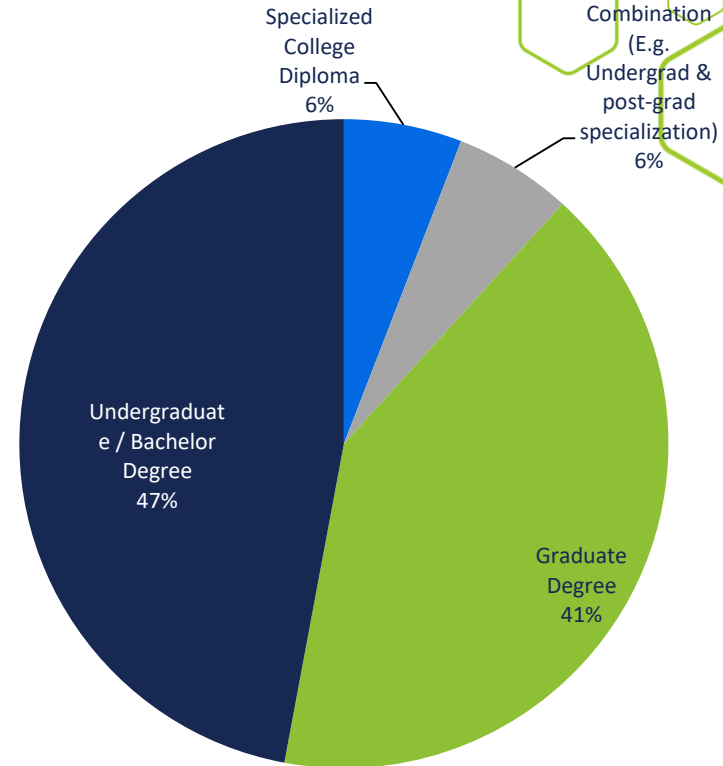
○ **Graduates from Colleges and Universities across Ontario applied to the program:**

- Centennial, Lambton, Mohawk, Fanshawe, Humber and Seneca
- Ryerson, York, Queens, Windsor, and Western



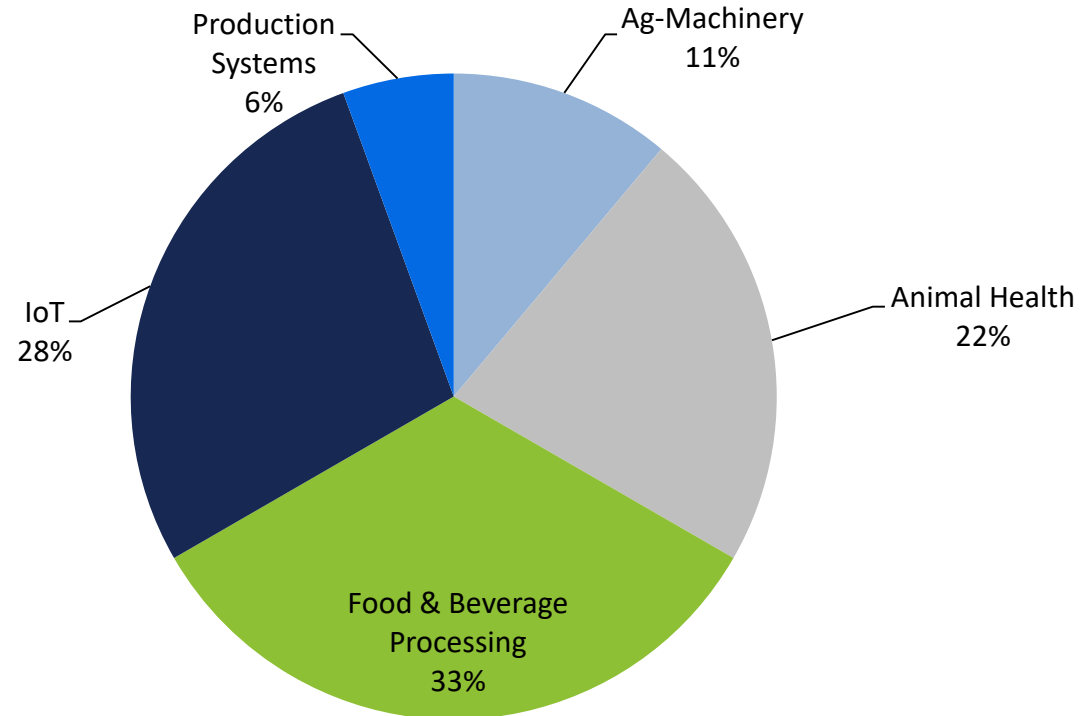
# Outcomes & Analysis

- Agribusiness
- Animal Health
- Arts/Business Economics
- Biotechnology
- Business Communications
- Environmental Sciences
- Food Science
- Human Health & Nutritional Science
- Marketing / PR
- Mathematics
- Mechanical Engineering
- Software Development / Computer Programming





# Initial Findings: Participant Sectors



# Outcomes & Analysts



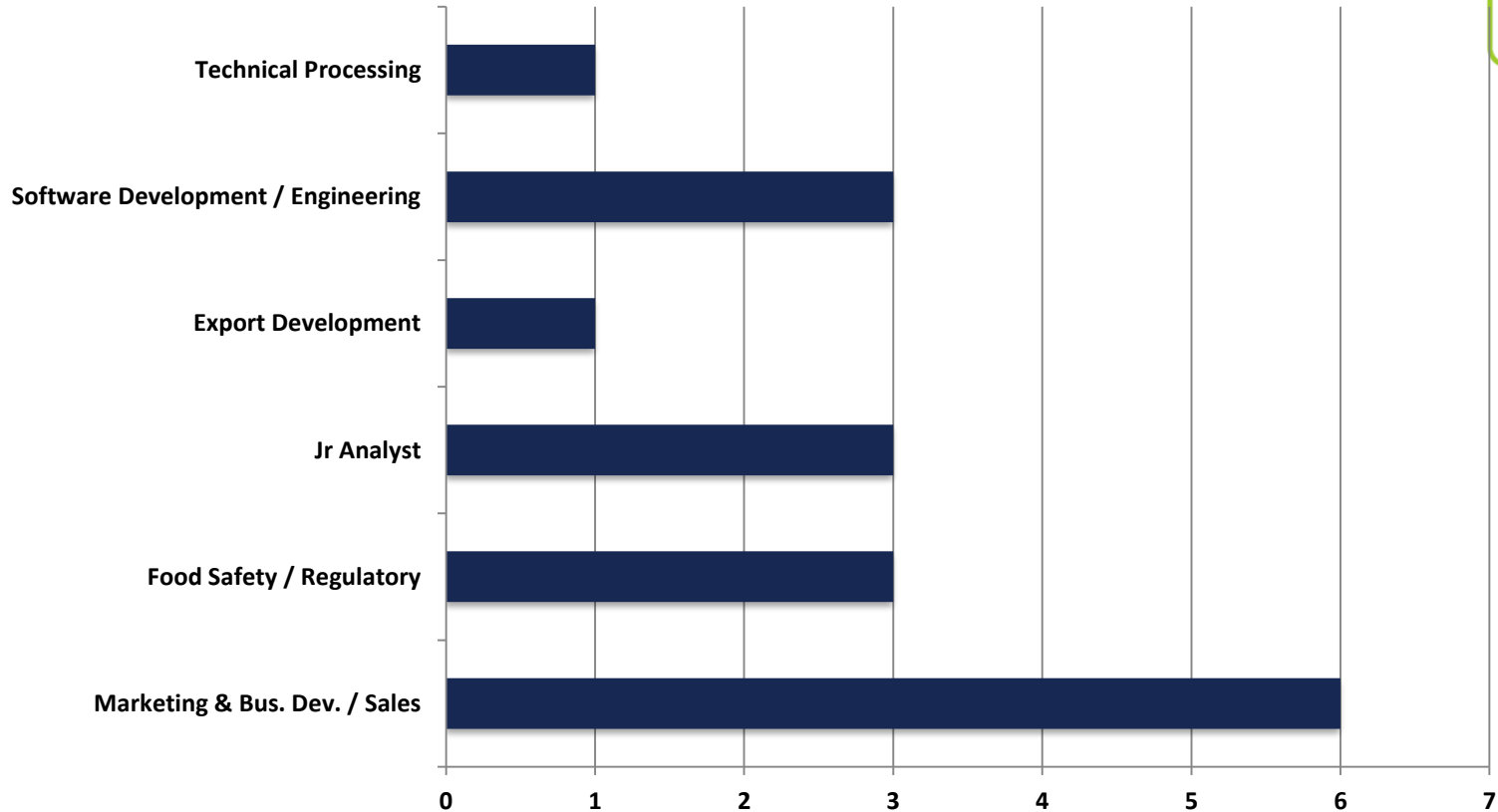
the chufa co.



LOCAL LINE



# Outcomes & Analysts



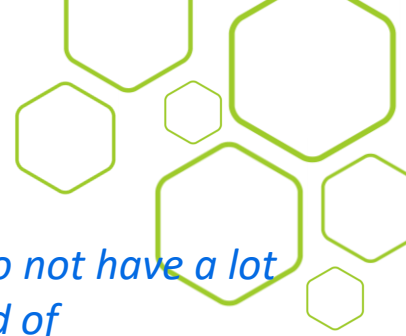
# Outcomes & Analysts



**Building skills for Canada's bio-economy**  
**Un monde de ressources pour la bioéconomie canadienne**

**AG** Careers.com

# HQP Testimonials



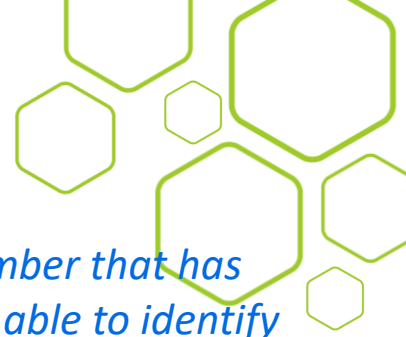
*“This program is extremely beneficial for recent graduates like myself who do not have a lot of work experience...giving me a platform to gain work experience in the field of agriculture...”*

- *Kristen Celotto, Programming Certificate, Conestoga College 2017 / Bachelor of Mathematics, University of Waterloo 2015 (Farm Health Monitor Inc.)*

*“Being a participant in the program has given me the opportunity to gain valuable work experience in the agri-sector, to attend networking events and workshops to enhance my professional portfolio, and has provided me with the required resources and guidance to be successful in the industry...The Program was able to assist me in finding a job and in making introductions within the agri-tech sector. “*

- *Alex Mitro, Master of Biotechnology, University of Guelph 2017 (Escarpment Laboratories Inc.)*

# Industry Testimonials



*“The New Graduate Program has allowed us to add an invaluable team member that has and will contribute to our company's success. The team at Bioenterprise was able to identify the ideal candidate that fit seamlessly into our company and has increased our output and efficiencies. Thank you!!”*

- *Andrea Orazi, Co-Founder, The Chufa Company*

*“Bioenterprise has been able to create a program that truly addresses the many challenges of acquiring, training, integrating a top talent new employee. The GEM program reduces some of the risks (financial, training, etc.) while providing a service and process that is focused on a successful integration in to the company. I would highly recommend this program for companies looking for top talent, highly educated new employees.”*

- *Jamie Draves, President, Katan Kitchens / Quinta Quinoa*



# Conclusions & Lessons Learned

- Timelines were the biggest challenge
- Training allowances were very impactful
- Operational tweaking to ensure smooth program delivery (E.g. agreements, invoicing and payroll)
- Need to provide longer lead time for marketing and promotion to broaden talent pool

✓ **Program was a success!**



# Thank you!

Jessica Bowes, Manager Business & Technology Analyst Group  
Bioenterprise Corporation

(e) [jessica.bowes@bioenterprise.ca](mailto:jessica.bowes@bioenterprise.ca)

(t) 519-821-2960

[www.bioenterprise.ca](http://www.bioenterprise.ca)

