



Public Presentation Committee

Subject:	Highline Mushrooms - Economic and Social Impact
Date:	April 17, 2024
Presenter:	Jose Cambon, Rob MacKay, Nobuto Ikeda with Highline Mushrooms

REPORT SUMMARY

Highline Mushrooms will provide a presentation on Highline Mushrooms - Economic and Social Impact.

ADMINISTRATION'S RECOMMENDATION

THAT the Public Presentation Committee receive the Highline Mushrooms - Economic and Social Impact presentation as information.

BACKGROUND

The Public Presentation Committee provides a forum for members of the public and stakeholder groups to present information and updates to the County to ensure the County understands the needs and concerns of its communities. One of the Committee's functions is to hear presentations from organizations, groups, or individuals such as Highline Mushrooms.

DISCUSSION

The purpose is to demonstrate the positive economic and social impact of the Highline Mushrooms Crossfield facility, and the urgent need for the site to be connected to mains water supply to ensure the facility's longevity and realise the potential for any future expansion and growth. The Crossfield facility has operated at the same site for 40+ years and was recently upgraded at a capital cost of circa \$35 million in 2020, creating an additional 120 jobs. Importantly the facility has contributed to Alberta's food self-sufficiency, while supplying a fresh, healthy and nutritious product to the wider population.

ATTACHMENTS

- Attachment A: Highline Mushrooms Request to Present Form
- Attachment B: Highline Mushrooms Presentation



ROCKY VIEW COUNTY PUBLIC PRESENTATION COMMITTEE (PPC) REQUEST TO PRESENT FORM

Name of the group/individual:	Highline Mushrooms
Representative(s) for the group:	Jose Cambon, Rob MacKay, Nobuto Ikeda
Contact telephone/cell number:	368-997-9906
E-mail:	nikeda@highlinemushrooms.com
Presentation Topic:	Highline Mushrooms - Economic and Social Impact

Do you have an active planning application on this matter? Yes No

Are you planning on submitting a planning application on this in the next six (6) months? Yes No

Please check off the appropriate information about the presentation:

Information - Public Interest Community Group Update Development Proposal

Other, please explain

Overview of the topic and purpose of your presentation:

The purpose is to demonstrate the positive economic and social impact of the Highline Mushrooms Crossfield facility, and the urgent need for the site to be connected to mains water supply to ensure the facility's longevity and realise the potential for any future expansion and growth. The Crossfield facility has operated at the same site for 40+ years and was recently upgraded at a capital cost of circa \$35 million in 2020, creating an additional 120 jobs. Importantly the facility has contributed to Alberta's food self-sufficiency, while supplying a fresh, healthy and nutritious product to the wider population.

If a group, tell us about your group (mandate/membership, including a statement on why this matter should go before PPC)



Highline[®]

MUSHROOMS

**THE ONLY MUSHROOM
GROWER IN ALBERTA AND
THE LARGEST IN CANADA**

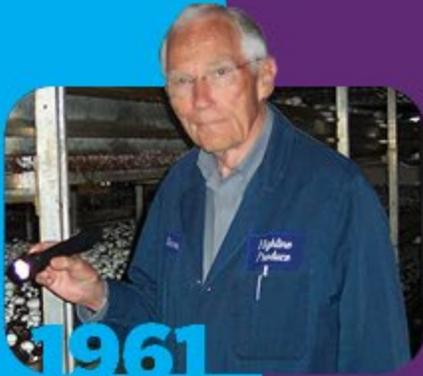
Speaking **30+** Languages | Associates from **40+** Countries
2100+ Associates growing mushrooms 365 days a year



salesinquiries@highlinemushrooms.com
highlinemushrooms.com



ABOUT US



1961

HIGHLINE
Founded by Dr. O'Neil



2016

WEST EXPANSION
Acquires All Season
Mushrooms – 3 Facilities



2020

CROSSFIELD
Builds highly automated and
efficient Mushroom Farm



900 pallets are shipped



4,000,000 mushrooms
are hand picked



30,000 cases are packed – over
15 million cases per year



200,000 pounds of
mushrooms are grown

HIGHLINE'S ACHIEVEMENTS

- Use Dutch-Style Technology – producing a cleaner, whiter, denser mushroom
- Grown without Pesticides and Fungicides
- Large Scale Certified Organic Production
- Use Compost at Casing “CAC” with Dutch-Style Technology
- Rapid Cooling of Mushrooms Using Vacuum Technology
- “One Touch” Harvesting Directly into Tills
- Use Clear Recycled PET (rPET) Mushrooms Tills

	NORTH AMERICA	THE WORLD
Use Dutch-Style Technology – producing a cleaner, whiter, denser mushroom	#1	
Grown without Pesticides and Fungicides	#1	
Large Scale Certified Organic Production	#1	
Use Compost at Casing “CAC” with Dutch-Style Technology	#1	#1
Rapid Cooling of Mushrooms Using Vacuum Technology	#1	
“One Touch” Harvesting Directly into Tills	#1	
Use Clear Recycled PET (rPET) Mushrooms Tills	#1	

DUTCH STYLE GROWING PROCESS

KEY ELEMENTS OF HIGHLINE'S SUPERIOR QUALITY:
Complete Control from Substrate to Shipping;
Superior Growing Processes; and
Superior Farm Design.

Highline[®]
MUSHROOMS

highlinemushrooms.com



CROSSFIELD FARM OVERVIEW

- One of the **largest** employers in the area
- Only commercial mushroom growing facility in Alberta
- Expanded growing capacity in 2019 by investing c. \$35 million
- Integrated operations from composting to packaging/distribution
- Selling product to major retailers in Alberta, Saskatchewan and Manitoba
- More room for expansion & export



Key Facts	
Years in Operation	40+ years
Acres of land	148.60 acres
Number of Associates	240+
Annual Production	10 million lbs
Annual Spend (OPEX)	c. \$30 million
Annual Water Consumption	c. 53,000 m ³

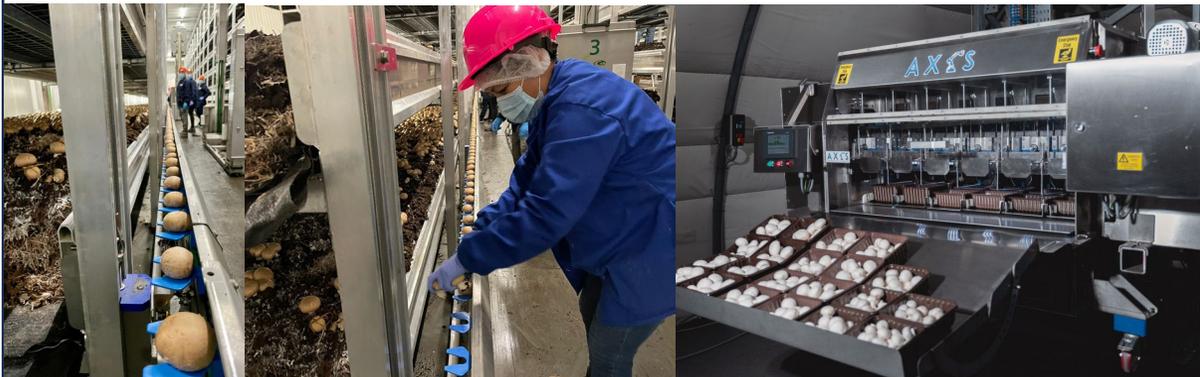
INNOVATION & TECHNOLOGY

Labour shortages in mushroom harvesting is one of the major challenges faced by mushroom growers around the world. As industry leaders, Highline has been actively investing in new technologies to find solutions.

- In 2020, Highline was the first in the world to introduce the Axis Harvesting System in Crossfield, \$7M+ for equipment & machinery.
- Since 2020, Highline has partnered with 4AG to develop a fully autonomous, vision-guided mushroom harvesting robot. In January 2024, Highline became the first mushroom grower in the world to purchase and install robots at a farm.

AXIS
HARVESTING

- Half the number of harvesters required compared to traditional hand harvesting.
- Mushroom Processing Unit and Harvest Conveyors enable us to pick more efficiently including weighing functions



4AGTM
ROBOTICS

- Full autonomous harvesting technologies with AI vision system. Robots pick mushrooms, trim stems, and bring the harvested mushrooms out of the growing rooms.
- Potential to increase yield as robots can pick mushrooms 24/7





17.97 MILLION

households buy mushrooms in CANADA.

50%

Of consumers who purchase groceries at Loblaws, have purchased mushrooms within the last year.



In the US, organic mushroom sales make up

10.8%

of sales & perform above average.



1/2

Of Canadians have purchased mushrooms in the past year.

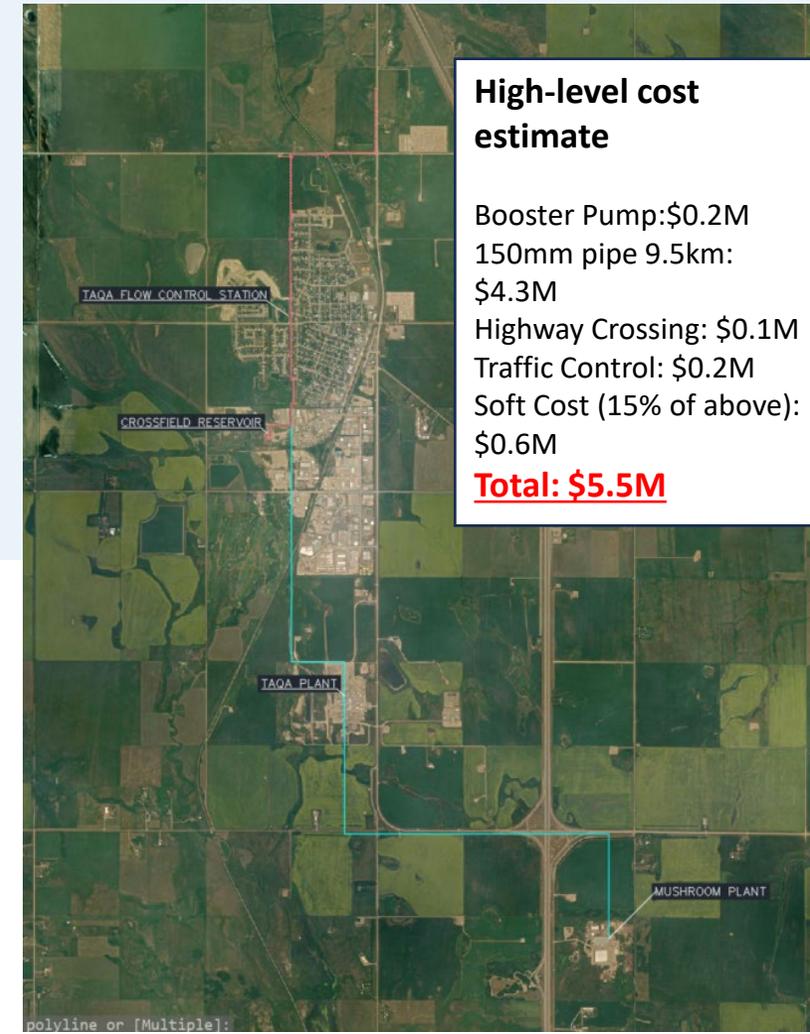


- In Canada, the largest markets by mushroom share are Ontario and the Western Region with high household penetration
- Opportunity to increase consumption and education based on the health benefits
- Locally grown mushrooms in Alberta are only grown by Highline
- Local straw & chicken manure are converted into mushrooms



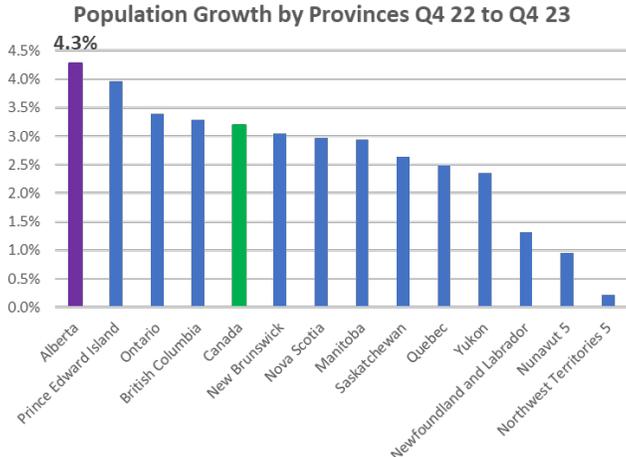
CROSSFIELD FARM WATER RESOURCES

- The facility is not connected to a main water supply
- Trucking water to the site on a daily basis, with to **6 to 10** tanker deliveries per day
- All trade wastewater from growing rooms and operations is captured for recycling, with wastewater from washrooms being disposed of in a septic system
- The site uses c. 1,200 m³ of water per week or **53,400 m³ per annum**
- Have 3 water tanks on-site to hold water for 24/7 operations
- The trucking of water to the site is a significant cost. Extra direct cost is total c. **\$0.3 million** per annum (Drivers, Fuel, Own truck maintenance etc) excluding Water costs which is another \$0.2 million per annum
- Not only direct costs, but also logistical challenges especially having to transport water in freezing temperatures in winter
- In the process of drilling a test well on-site to see the availability

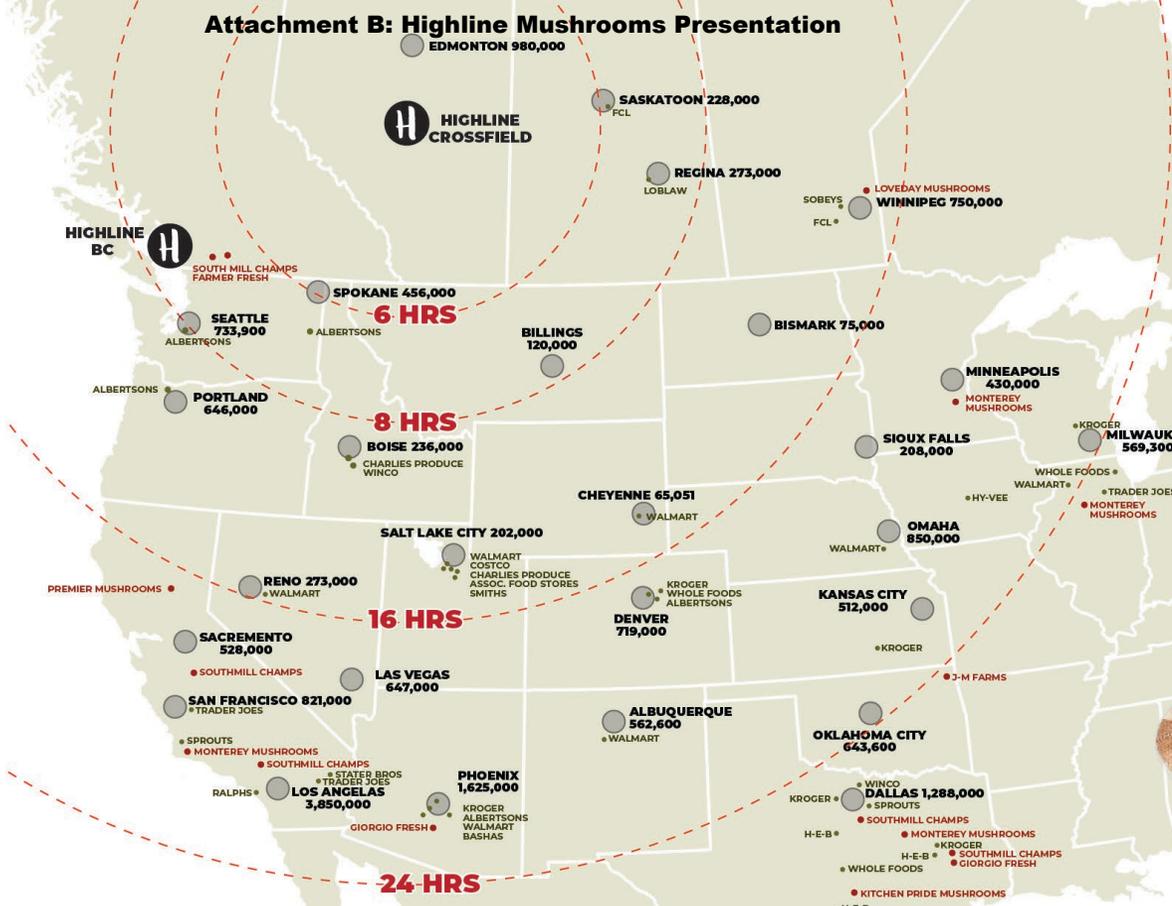


CROSSFIELD WATER RECENT DIALOGUES

June 2023	<p>Prepared <u>“Economic and Social Impact Brief”</u> and sent it to the following parties.</p> <ul style="list-style-type: none"> • Rocky View County • Town of Crossfield • Mrs. Angela Pitt, MLA for Airdrie East • Consulate General of Japan in Calgary
July-Sept 2023	<p>Highline had a virtual meeting with Rocky View County and separately with the Town of Crossfield. Advised that it is not under their jurisdiction.</p> <p>Consul General Japan brought up our water issues with the Minister of Agriculture and Irrigation in Alberta. After that, the following parties visited us for a tour and started discussions:</p> <ul style="list-style-type: none"> • Consulate General of Japan in Calgary • Ministry of Agriculture and Irrigation in Alberta • Mountain View Regional Water Service Commission (MVRWSC)
Oct 2023	<p>MVRWSC advised us that they have capacity to supply water to Highline and recommended we submit an application. However, after their discussions at the board, we were advised that the application has to be from Rocky View County not from Highline.</p> <p>In parallel, MVRWSC provided a high-level cost estimate to connect to the mains water from south or Crossfield. Estimated cost is \$5.5 million for 9,500 meter pf 150 mm line.</p>
Nov 2023	<p>Highline had a virtual meeting with Rocky View County with support from the Ministry of Agriculture and Irrigation and MVRWSC. They advised us to present our issues to Council and the recommended approach would be to present at the Public Presentation of Rocky View County held on a quarterly basis.</p>
Jan 2024	<p>In parallel, with a support from the Ministry of Agriculture and Irrigation, Highline is exploring multiple options such as on-site wells and installation of water treatment to cover our water requirements even partially.</p>
Feb 2024	<p>Manager, Economic Development of Rocky View County and the Ministry of Agriculture and Irrigation in Alberta visited Crossfield farm and had a meeting on water matter as well as farm tour.</p>



Source: Statistics Canada



FUTURE OPPORTUNITIES

- Alberta was the highest population growth province in 2023
- Committed Highline Crossfield Team
- 148 acres land availability
- Controlled Environment Agriculture (“CEA”)/Indoor Growing Facility
- Accessibility to US Cities. Highline Crossfield made 1st shipment to US city (Salt Lake City, Utah) in March 2024. More opportunities exist

- 3 Phase I Bunkers
- 7 Phase III Tunnels
- 115,728 ft² Growing Rooms
- 446 m² Packing / Cooler