

RE: 5961 - MLP KM/Bullets-Government Investment Amounts Into Synergraze Project - Seaweed as a Feed Additive

From: Raymond, Mark AF:EX <Mark.Raymond@gov.bc.ca>
To: Craig, Kira AF:EX <Kira.Craig@gov.bc.ca>
Sent: July 27, 2022 10:48:35 AM PDT
Thank You for looking – appreciated!

From: Craig, Kira AF:EX <Kira.Craig@gov.bc.ca>
Sent: July 27, 2022 10:47 AM
To: Raymond, Mark AF:EX <Mark.Raymond@gov.bc.ca>
Subject: RE: 5961 - MLP KM/Bullets-Government Investment Amounts Into Synergraze Project - Seaweed as a Feed Additive

Hi Mark,

I wasn't able to find any funding provided to either Synergraze or T'Sou-ke First Nation from the Innovation program (CBCAIP, Provincially Significant Projects, Ramp-up/AVAP).

Best,
Kira

From: Raymond, Mark AF:EX <Mark.Raymond@gov.bc.ca>
Sent: July 27, 2022 10:17 AM
To: Craig, Kira AF:EX <Kira.Craig@gov.bc.ca>
Cc: Beyers, Georgina AF:EX <Georgina.Beyers@gov.bc.ca>; Vickers, Lori AF:EX <Lori.Vickers@gov.bc.ca>
Subject: FW: 5961 - MLP KM/Bullets-Government Investment Amounts Into Synergraze Project - Seaweed as a Feed Additive

Hi Kira – if you could please check to see if we have provided any funding to Synergraze or to T'Sou-ke First Nation?

Thank You,
Mark

From: Beyers, Georgina AF:EX <Georgina.Beyers@gov.bc.ca>
Sent: July 26, 2022 11:08 AM
To: Bisschop, Lindsay AF:EX <Lindsay.Bisschop@gov.bc.ca>; Raymond, Mark AF:EX <Mark.Raymond@gov.bc.ca>; Vickers, Lori AF:EX <Lori.Vickers@gov.bc.ca>
Cc: Poon, David AF:EX <David.Poon@gov.bc.ca>; McLachlan, Ian P AF:EX <Ian.McLachlan@gov.bc.ca>; Roth, Myron AF:EX <Myron.Roth@gov.bc.ca>; Giacomazzi, Terri AF:EX <Terri.Giacomazzi@gov.bc.ca>; Jess, Dennis AF:EX <Dennis.Jess@gov.bc.ca>; Nitchie, Erica AF:EX <Erica.Nitchie@gov.bc.ca>
Subject: Re: 5961 - MLP KM/Bullets-Government Investment Amounts Into Synergraze Project - Seaweed as a Feed Additive

Thanks Mark,

General messaging about the potential of seaweed/algae as a mitigation tactic (cattle feed), and/or peripheral benefits of seaweed/algae production as inputs for soil health would be useful in tying back to our priorities around regen/agritech.

Could you also include Jeff in the e-app chain as a watcher?

Thanks,
Gina

Georgina Beyers
Director, Strategic Initiatives

From: "Bisschop, Lindsay AF:EX" <Lindsay.Bisschop@gov.bc.ca>
Date: Tuesday, July 26, 2022 at 9:39 AM
To: "Raymond, Mark AF:EX" <Mark.Raymond@gov.bc.ca>, "Vickers, Lori AF:EX" <Lori.Vickers@gov.bc.ca>
Cc: "Poon, David AF:EX" <David.Poon@gov.bc.ca>, "McLachlan, Ian P AF:EX" <Ian.McLachlan@gov.bc.ca>, "Beyers, Georgina AF:EX" <Georgina.Beyers@gov.bc.ca>, "Roth, Myron AF:EX" <Myron.Roth@gov.bc.ca>, "Giacomazzi, Terri AF:EX" <Terri.Giacomazzi@gov.bc.ca>, "Jess, Dennis AF:EX" <Dennis.Jess@gov.bc.ca>, "Nitchie, Erica AF:EX" <Erica.Nitchie@gov.bc.ca>
Subject: RE: 5961 - MLP KM/Bullets-Government Investment Amounts Into Synergraze Project - Seaweed as a Feed Additive

Thanks Mark – Lori can work with Erica to can add some content on the greenhouse project.

Lindsay Bisschop
Executive Director, Food and Beverage Branch
Ministry of Agriculture and Food
Office: 778-666-0563
Email: Lindsay.bisschop@gov.bc.ca

Respectfully acknowledging that I live and work on the traditional territories of the Coast Salish, Stó:lō, Kwantlen, Katzie, Tsawwassen, Kwikwiltlem, and W̱SÁNEĆ peoples.

For information on AgriService BC webinars, workshops and resources, [sign up here](#).

From: Raymond, Mark AF:EX <Mark.Raymond@gov.bc.ca>
Sent: July 26, 2022 9:31 AM
To: Vickers, Lori AF:EX <Lori.Vickers@gov.bc.ca>
Cc: Poon, David AF:EX <David.Poon@gov.bc.ca>; McLachlan, Ian P AF:EX <Ian.McLachlan@gov.bc.ca>; Beyers, Georgina AF:EX <Georgina.Beyers@gov.bc.ca>; Roth, Myron AF:EX <Myron.Roth@gov.bc.ca>; Giacomazzi, Terri AF:EX <Terri.Giacomazzi@gov.bc.ca>; Bisschop, Lindsay AF:EX <Lindsay.Bisschop@gov.bc.ca>
Subject: 5961 - MLP KM/Bullets-Government Investment Amounts Into Synergraze Project - Seaweed as a Feed Additive

Good Morning Lori,

Following-up on our earlier email today, we have received a request via eApps to pull together some bullets on this company. I will send your way.

- I think it is important that we provide background on seaweed as a supplement to reduce methane (current status)
- I think it is important that we reference our work with TRU through PSP projects
- I think it is important to reference Cascadia Seaweed (and funding that they have received from AF)

If Dave, Ian, Georgina, or Lindsay have touchpoints, please reach out directly to Lori.

Below is background information that on funding they have received from Alberta government.

[\\$33 million announced to advance technology innovations in \(globenewswire.com\)](#)

Synergraze Inc.

Cattle Feed Additive for Reducing Methane Emissions

Project value: \$15,000,000 | ERA commitment: \$5,000,000

Commercially grow and process a feed additive for cattle based on a strain of red macroalgae (Asparagopsis) that could potentially reduce methane emissions from cattle.

From: Sundhu, Ellora AF:EX <Ellora.Sundhu@gov.bc.ca>
Sent: July 25, 2022 4:11 PM
To: MacLellan, Alyssa AF:EX <Alyssa.MacLellan@gov.bc.ca>

Subject: Fwd: Draft of Letter to Premier

Hey Alyssa,

Can we please action for rush bullets as it's for PJH? We're looking for some bullets regarding the investment amount for this project? They received funding from the government that is helping them fund this project. Please see thread below for context on this organization.

Thanks so much!

From: Dunnett, Jennifer PREM:EX <Jennifer.Dunnett@gov.bc.ca>
Sent: Monday, July 25, 2022 3:22:32 PM
To: Sundhu, Ellora AF:EX <Ellora.Sundhu@gov.bc.ca>
Subject: Re: Draft of Letter to Premier

Hi Ellora,

Today's visit is going great, I think it would be a great idea to get MLP out here to visit the greenhouses. Could we get some bullets regarding the investment amount for this project? They received funding from the government that is helping them fund this project.

Thank you,

Jenn

Jennifer Dunnett
Executive Assistant
Office of the Premier
Cell: 250.896.4349
E: Jennifer.Dunnett@gov.bc.ca

From: Dunnett, Jennifer PREM:EX <Jennifer.Dunnett@gov.bc.ca>
Sent: Thursday, July 21, 2022 4:43:31 PM
To: Sundhu, Ellora AF:EX <Ellora.Sundhu@gov.bc.ca>
Subject: RE: Draft of Letter to Premier

Yes, Monday, July 25th – sorry!

Jennifer Dunnett
Executive Assistant
Office of the Premier
Cell: 250.896.4349
E: Jennifer.Dunnett@gov.bc.ca

From: Sundhu, Ellora AF:EX <Ellora.Sundhu@gov.bc.ca>
Sent: July 21, 2022 4:43 PM
To: Dunnett, Jennifer PREM:EX <Jennifer.Dunnett@gov.bc.ca>
Subject: RE: Draft of Letter to Premier

Hi Jennifer,

Just to clarify: is this taking July 25th, as you mentioned on the phone? I will flag for Minister and SMA.

Thanks kindly,

Ellora Sundhu

Ministerial Advisor to the
Honourable Lana Popham
Minister of Agriculture and Food
C: 250-818-0235 | E: ellora.sundhu@gov.bc.ca

With gratitude and respect for the Lekwungen People (the Esquimalt and Songhees Nations) and all Indigenous Peoples of British Columbia

From: Dunnett, Jennifer PREM:EX <Jennifer.Dunnett@gov.bc.ca>
Sent: Thursday, July 21, 2022 4:40 PM
To: Sundhu, Ellora AF:EX <Ellora.Sundhu@gov.bc.ca>
Subject: FW: Draft of Letter to Premier

Hi Ellora,

Here is the info for our visit on July 15th. We will likely bring local media and I can follow up with you after our visit. Please flag for MLP.

Thank you,

Jennifer Dunnett

Executive Assistant
Office of the Premier
Cell: 250.896.4349
E: Jennifer.Dunnett@gov.bc.ca

From: Gordon Planes <chiefplanes@tsoukenation.com>
Sent: July 14, 2022 10:50 AM
To: Dunnett, Jennifer PREM:EX <Jennifer.Dunnett@gov.bc.ca>
Subject: Fwd: Draft of Letter to Premier

[EXTERNAL] This email came from an external source. Only open attachments or links that you are expecting from a known sender.

Jennifer

This is the email from Tamara, please keep me advised if you can not open it, have a good day.

Gordon

Begin forwarded message:

From: Tamara Loiselle <tamara@tamarackstrategies.ca>
Subject: Draft of Letter to Premier
Date: July 7, 2022 at 4:58:24 PM PDT
To: Chief Gordon Planes <gordonplanes@icloud.com>

Hello Chief,

Here is a draft letter of what I was thinking for a message to Premier Horgan's assistant. Feel free to change or revise as you see fit. Also, what you would like to say (or not say) re: involvement by the Nation is fine with me. In this draft I put that the pilot is on TFN reserve lands; it could also say the project is happening in collaboration with the Nation. Or if you have other suggestions I am totally open to what you would like.

The letter is attached and the text is below as well. Talk soon!

Tamara Loiselle

President, Tamarack Strategies

Phone (403) 909-6671

www.tamarackstrategies.ca

Introduction

Cattle emissions account for 30% of all methane emissions globally. Methane is the second most abundant greenhouse gas emitted into the atmosphere from human related activity, after carbon dioxide. However, methane is approximately 25 times more potent as a heat trapping gas than is carbon dioxide.

Synergraze Inc is commercializing a livestock feed additive that is capable of drastically reducing methane emissions from the digestive systems of cattle and other ruminants (including chickens, bison and sheep). The research is proven but not yet commercialized. Research has demonstrated a 90% reduction of enteric methane in cattle and a 50% increase in the rate of weight gain.

Synergraze is a Canadian company incorporated in British Columbia and Alberta. Pilot scale production of Synergraze is located on the reserve lands of T'Sou-ke First Nation.

By significantly reducing methane emissions from cattle, Synergraze can assist Canada and its provinces in meeting their methane emissions reduction goals, help the US dairy industry meet its goal to reduce methane emissions by 25% and California's legislated 40% reduction in methane from dairy cattle by 2030 while helping farmers become part of the solution to global warming and positioning proponents to be world leaders and developers of a cutting-edge solution to global climate change.

Value Proposition to Cattle Operators:

- Green House Gas (GHG) mitigation and social license interests.
- May increase cattle rate of weight gain by as much as 50%
- Voluntary methane mitigation in cattle production qualifies for carbon credits in some jurisdictions
- Increased profits for cattle producers due to reduced feed costs

Canadian Herd Emission Reductions and Offsets:

- If 40% on Canada's cattle were supplemented with Synergraze, methane emissions from cattle could be reduced by 8.9 million Tonnes/CO₂e/yr

Founder and CEO:

Tamara Loiselle BSc, MA is Founder and CEO of Synergraze. From a BC ranching family, Tamara has a background in environmental science from the Faculty of Agriculture at the University of Alberta, and was faculty at Mount Royal University for over a decade where she taught science in the Indigenous Education Program. In 2010, Ms. Loiselle was awarded a Queen's Diamond Jubilee Medal for her work with Indigenous communities and the environment. Ms. Loiselle has also recognized by TIME Magazine as a Hero Mom of the Year.

More information available on request**Contact information:**

Tamara Loiselle, Founder and CEO Synergraze

Phone: 403.909.6671

Email: tamara@synergraze.com

RE: Hi Mark and Lori Media Request on Synergraze project

From: Townsend, Dave H GCPE:EX <Dave.H.Townsend@gov.bc.ca>
To: Vickers, Lori AF:EX <Lori.Vickers@gov.bc.ca>, Raymond, Mark AF:EX <Mark.Raymond@gov.bc.ca>
Cc: Cotton, Brian GCPE:EX <Brian.Cotton@gov.bc.ca>
Sent: July 28, 2022 8:28:54 AM PDT
Thanks Lori and Mark for looking into this.

From: Vickers, Lori AF:EX <Lori.Vickers@gov.bc.ca>
Sent: July 28, 2022 8:17 AM
To: Raymond, Mark AF:EX <Mark.Raymond@gov.bc.ca>; Townsend, Dave H GCPE:EX <Dave.H.Townsend@gov.bc.ca>
Cc: Cotton, Brian GCPE:EX <Brian.Cotton@gov.bc.ca>
Subject: RE: Hi Mark and Lori Media Request on Synergraze project

Good morning,
It is probably too late for the deadline, but Synergraze has not received any BC funding to date.

Lori Vickers MSc, P.Ag | **Livestock Industry Specialist**
Ministry of Agriculture and Food
Phone Number: 778-576-8927 | C: 250-793-5640
Email: Lori.Vickers@gov.bc.ca

From: Vickers, Lori AF:EX
Sent: July 27, 2022 3:48 PM
To: Raymond, Mark AF:EX <Mark.Raymond@gov.bc.ca>; Townsend, Dave H GCPE:EX <Dave.H.Townsend@gov.bc.ca>
Cc: Cotton, Brian GCPE:EX <Brian.Cotton@gov.bc.ca>
Subject: RE: Hi Mark and Lori Media Request on Synergraze project

I haven't been able to confirm any funding from BC on this one either at this time

Lori Vickers MSc, P.Ag | **Livestock Industry Specialist**
Ministry of Agriculture and Food
Phone Number: 778-576-8927 | C: 250-793-5640
Email: Lori.Vickers@gov.bc.ca

From: Raymond, Mark AF:EX <Mark.Raymond@gov.bc.ca>
Sent: July 27, 2022 3:42 PM
To: Townsend, Dave H GCPE:EX <Dave.H.Townsend@gov.bc.ca>; Vickers, Lori AF:EX <Lori.Vickers@gov.bc.ca>
Cc: Cotton, Brian GCPE:EX <Brian.Cotton@gov.bc.ca>
Subject: RE: Hi Mark and Lori Media Request on Synergraze project

Hi Dave – We have no record of AF providing any funding to this project. Perhaps they were referring to the funding they received from Alberta.

Cattle Feed Additive for Reducing Methane Emissions

Project value: \$15,000,000 | ERA commitment: \$5,000,000

Commercially grow and process a feed additive for cattle based on a strain of red macroalgae (*Asparagopsis*) that could potentially reduce methane emissions from cattle.

Additional background info I had on file:

<< File: Greenhouse Tsou-ke Final.pdf >> << File: 896 Tsou-Ke First nation.docx >>

Thank You,
Mark

From: Townsend, Dave H GCPE:EX <Dave.H.Townsend@gov.bc.ca>

Sent: July 26, 2022 2:40 PM

To: Raymond, Mark AF:EX <Mark.Raymond@gov.bc.ca>; Vickers, Lori AF:EX <Lori.Vickers@gov.bc.ca>

Cc: Cotton, Brian GCPE:EX <Brian.Cotton@gov.bc.ca>

Subject: RE: Hi Mark and Lori Media Request on Synergraze project

I'm sure the whole thing will be helpful.

From: Raymond, Mark AF:EX <Mark.Raymond@gov.bc.ca>

Sent: July 26, 2022 2:39 PM

To: Townsend, Dave H GCPE:EX <Dave.H.Townsend@gov.bc.ca>; Vickers, Lori AF:EX <Lori.Vickers@gov.bc.ca>

Cc: Cotton, Brian GCPE:EX <Brian.Cotton@gov.bc.ca>

Subject: RE: Hi Mark and Lori Media Request on Synergraze project

We are currently pulling together bullets for the PMO through eapprovals on this well.

Are you looking for funding related to the methane emission reduction component or the FN greenhouse component?

From: Townsend, Dave H GCPE:EX <Dave.H.Townsend@gov.bc.ca>

Sent: July 26, 2022 2:36 PM

To: Raymond, Mark AF:EX <Mark.Raymond@gov.bc.ca>; Vickers, Lori AF:EX <Lori.Vickers@gov.bc.ca>

Cc: Cotton, Brian GCPE:EX <Brian.Cotton@gov.bc.ca>

Subject: Hi Mark and Lori Media Request on Synergraze project

Hi Mark and Lori,

The Premier visited a facility yesterday in Sooke that is looking to significantly reduce methane emissions. We talked to one of the PO staff who was there and apparently there is a government funding aspect to this. Are you familiar with this project? Is there anything you can pass along to us pls? There are some details in the Sooke News Mirror article below as well.

We wondering if this might be funded by ENV? Pls let us know when you have a minute. Thanks.

Reporter

Mary Brooke, Editor

Island Social Trends

editor@islandsocialtrends.com

250-217-5821

Deadline ASAP

Request

Just wondering if Minister Popham has a statement on the Synergraze Inc project (including any funding provided) which is “commercializing a livestock fee additive that is capable of drastically reducing methane emissions from the digestive systems of cattle and other ruminants” (e.g. chickens, bison and sheep).

BC premier pitches plan for less gas from cattle

Sooke News Mirror

Monday, July 25, 2022

By Rick Stiebel 

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MINISTRY OF AGRICULTURE AND FOOD

BULLET POINTS TEMPLATE

CLIFF#: 198439

Client / Writer: Bullet Request for Premier John Horgan

Main issues: Opportunities for the use of seaweed as a feed additive to reduce methane emission from ruminants.

Bullets prepared by: Lori Vickers

Date prepared: 2022-07-26

Date due: 2022-07-29

Background

- There is significant research globally and in Canada exploring feed additives to reduce methane production in ruminants (cattle, sheep, and bison).
- A strain of red seaweed has recently been shown to reduce methane production by up to 95 percent in ruminants when added to their diets. This particular strain is currently being grown under a license on an aquaculture farm in Sooke.
- There are two B.C. companies researching varieties of seaweed as a ruminant feed additive (Synergraze and Cascadia Seaweed); both companies are exploring how to make their products commercially available.

Enteric methane and BC Livestock Production

- Physiologically, enteric fermentation is a natural part of the digestive process in ruminants. Microbes in the digestive tract, or rumen, decompose and ferment cellulose (food plants) and a by-product of this process (i.e., digestion) is methane.
- Enteric methane emissions are the largest source of greenhouse gas emissions in beef and dairy cattle and a substantial contributor to methane emissions globally.
- According to the June 2021 Opportunity Assessment of British Columbia's Agriculture Greenhouse Gas Reduction and Carbon Sinks Project Summary and Recommendation report prepared for the Ministry of Agriculture and Food by Dr. Smukler and Dr. Borden of the University of British Columbia, 58 percent of agricultural emissions created in B.C. are from the enteric fermentation of beef and dairy cattle.

Feed additives to reduce methane emissions

- FutureFeed is an Australian company that specializes in the research, development and licensing of the intellectual property of a specific variety of red seaweed that has shown to reduce methane production by up to 95 percent, *Asparagopsis*. Thus far, FutureFeed has licensed

Asparagopsis to companies in Hawaii, South Australia, New Zealand, the Philippines, Sweden and Canada. In Canada Synergraze holds the license for *Asparagopsis*.

- There are no Canadian Food Inspection Agency (CFIA) approved red seaweed feed additives in Canada to date; Synergraze is working on obtaining regulatory approval for their product and is expecting this by the end of 2022.
- Other feed additives, including synthetic additives, have been developed and show a reduction of methane emissions by up to 40 percent. Synthetic feed additives are not yet registered in Canada. The CFIA classifies these as drugs due to the mode of action that changes the digestive process within an animal. As a result, these companies must conduct extensive safety testing and livestock trials to commercialize their use in Canada.

BC Companies and Research into Red Seaweed as a Ruminant Feed Additive

Synergraze Inc

- Synergraze is an Alberta based company who has partnered with the T'Sou-ke Nation in Sooke, B.C. The T'Sou-ke Nation is home to a demonstration project producing seaweed and algae in tanks using ocean-harvested seeds; the seaweed and algae produced is used as a livestock feed additive.
- Synergraze recently received \$5 million from Emission Reduction Alberta towards a \$15 million dollar project to commercially grow and process a red seaweed feed additive for cattle, *Asparagopsis*.
- Synergraze is working with Feedlot Health Management Service, a feedlot consulting service in Alberta, to test this product on 135,000 cattle in feedlots over a 6-month period.
- To date, Synergraze has not received any funding from B.C. for this work.
- Synergraze is interested in testing their product on pasture based cattle and bison operations

Cascadia Seaweed

- Cascadia Seaweed is a Vancouver Island based company aiming to be the largest North American provider of ocean cultivated seaweed through regenerative aquaculture. They grow a variety of primarily brown seaweed native to the B.C. coast and have partnered with several coastal First Nations.
- Cascadia Seaweed currently sells their seaweed products under the brand Kove Ocean Food brand. They currently have a line of sea salts in production and many edible seaweed products in development.
- Cascadia Seaweed has contacted B.C. Dairy Association in preparation for establishing a trial targeting dairy farmers as potential customers for their upcoming seaweed products. They are currently engaging with potential partners to support these research efforts.

- Cascadia Seaweed's current livestock feed research explores how native seaweed can improve the performance of livestock (for example, though increased gains, increased feed efficiency, improved carcass quality) as well as produce lower methane emissions. This research is currently focused on beef cattle in B.C.
- Cascadia Seaweed received \$ 259,000 in 2021 through JERI's Agritech Grant Funding to improve farm operations using technology; increase seaweed cultivation productivity; and enhance indigenous relationships.
- In 2021, Cascadia Seaweed also received \$12,500 through the Traceability Adoption Program to develop a traceability system for its business. The funding allowed the company to purchase the necessary software and equipment, as well as provide training to employees on how to operate the different components of the system. This program is jointly funded by Canada and the Province of British Columbia as part of the Canadian Agriculture Partnership.
- Cascadia Seaweed as partnered with Thompson Rivers University to complete a 2-year trial feeding a red seaweed variety from the B.C. West Coast. Preliminary analysis found improvements in weight gain and feed efficiency, but methane reduction was not as high as hoped. As a result, this research has shifted to other varieties of seaweed.
- The current varieties of seaweed being used by Cascadia Seaweed do not require registration with CFIA as they fall within Schedule IV of the Feed Regulations.

Considerations

- Currently, there are minimal incentives, such as carbon credits or reliable gains in livestock productivity, for incorporating this feed additive into ruminant diets. Without legislated mandates for agriculture greenhouse gas reductions or further research showing economic and production advantages to the producer, it is unclear what the voluntary uptake of these additives might be.
- Ministry of Agriculture and Food staff are in ongoing discussions with both Synergraze and Cascadia Seaweed to better understand their current position, research status, B.C. interests, regulatory status, and current endeavours in the livestock feed additive market. These discussions will determine potential funding opportunities under existing B.C. Ministry of Agriculture and Food programs.