

Staying Afloat

An exploration of livestock production and transportation on Galiano Island

LFS 350 Group 24

In collaboration with the Galiano Club and Community Food Program

Introduction

1.1 Background and Context

Galiano Island is located in the Southern Gulf Islands of British Columbia and has a small population of approximately 1000 people (Statistics Canada, 2016). Fourteen farmers grow food to be sold with a total area of 70 hectares on the island being used for agriculture (Southern Gulf Islands Community Economic Sustainability Commission, 2016). The island's intrinsic geography means the community relies on BC Ferries as the main transportation provider to access the mainland, an issue that is affecting farming operations, community livelihoods, animal welfare, and meat quality. For livestock farmers, the cost of ferry transport is particularly high. The round trip cost to transport a truckload of lambs from Galiano Island to a licensed abattoir on the mainland is approximately \$280 CAD¹. This problem of access relates to food justice, as institutionalized inequality affects Galiano Island's ability to operate a sustainable livestock industry. It also affects overall community livelihood due to reliance on an external transportation provider.

This issue was brought forward by our community partner, the Galiano Island Community Food Program. The food program exist to strengthen island food security through knowledge sharing, equal food access, and sustainable food production. The program is led by Jane Wolverton, our main point of contact and support throughout the project.

1.2 Significance

When considering food justice, it is important to address the systemic inequality that is created by access barriers. Island communities, specifically Galiano Island, truly value the ability to define how their food is produced, processed, and consumed. The majority of Galiano Island residents care deeply about the environmental sustainability of their food production as well as traditional forms of knowledge around food production and processing (Jane Wolverton, *personal communication*). Furthermore, Galiano Island also has a goal to become more food self-sufficient, to move away from reliance on external food sources to achieve more independence. It is therefore important that policies and regulations support this community in realizing these values.

¹ An abattoir is a slaughter and meat processing facility. See appendix for calculation.

1.3 Project Objective

Our project aims to shed light on how transportation challenges affect food security and island community food system resilience, specifically regarding livestock farming on Galiano Island, and to propose improvements to the system.

1.4 Inquiry Questions

Our inquiry questions were:

What is the significance of transportation systems to island farmers?

How do these systems affect island food security, livelihoods, and island community food system resilience?

What can we propose to improve the system?

Methods

2.1. Data Collection

Interviews:

We held in person and phone interviews with four livestock island farmers: Sam Maberley, Dave and Sharon Kostar, and Dave Morgan, to gather local knowledge and experience regarding the subject matter.

We interviewed Yanne, a UBC graduate student in the animal welfare department who studies livestock transportation, to gain an academic perspective on the subject matter.

Observation:

We visited Galiano Island to get a “feel” for island life and gain insights into community values and local work being done to promote food security. We cooked with Alison from the Food Club and conversed with various community members. These interactions were facilitated by Jane who helped provide the experiential learning component to our project.

Literature review:

We conducted a literature review on animal welfare during transportation, regulations for small-scale farming and slaughter procedures, abattoir feasibility on islands and the option of a mobile abattoir, and how lack of access to resources and a dependency on a ferry system impacts island food security

2.2. Analysis

Interviews were summarized and patterns of generalization were drawn to understand the main challenges in island farming. We integrated diverse perspectives by combining academic literature and local knowledge from island community members. We investigated farmers’ main concerns regarding BC Ferries regulations, as well as broader recurring themes surrounding access and federal regulations. We assessed the feasibility of implementing a mobile abattoir on the Gulf

Islands and considered potential grants that could offset the start up cost for a mobile abattoir.

2.3. Ethical Considerations

We completed TCPS 2 prior to beginning our work with the community. Beyond that, we also acknowledge that our results may not reflect the opinions of all island residents. While we focus on barriers to access, it is important to recognize BC Ferries' role as a leading transportation provider for the Gulf Islands as well as a major employer. As outsiders, we seek to propose, not impose, solutions for the island community. In conducting interviews, we sought consent in recording our interactions through voice recording and photos.

Results

3.1 Primary reasons for off-island livestock transport

Most island farmers must take their livestock off-island to be slaughtered at a licensed abattoir. The closest abattoirs are on Vancouver Island, Saturna Island, or the Lower Mainland.

3.2 Challenges of ferry transport

Transporting livestock by ferry is difficult, inconvenient, and expensive. Ferry service can be unpredictable².

Transportation for livestock is stressful and inevitably leads to animal welfare issues because livestock often go long periods without water, likely experience fluctuations in temperature, and may experience crowding and discomfort (Yanne, *personal communication*). This affects meat quality as stressed animals at slaughter release hormones that impact meat quality and tenderness (Eldridge *et al.* 1989).

3.3 Non-transport related challenges

Top down agricultural policies³ work for large scale operations but create challenges for small-scale farmers to operate sustainable businesses.

Despite these difficulties, farmers enjoy island farming and have been accommodating federal regulations and transportation difficulties.

Hay is particularly expensive to transport onto the island and must be transported frequently.

A local abattoir is desirable but community members recognize it is a challenging project to undertake (economic feasibility, maintenance, etc).

Some farmers interviewed do not favour or use D or E slaughter licences⁴.

² Includes weather conditions, mechanical issues, etc. causing sudden service cancellation

³ Regarding livestock slaughter and meat processing in federally licensed abattoirs

⁴ D license allows on-farm slaughter for 1-25 animal units for direct sale to consumers and retail sales to secondary food establishments in a boundary (Government of B.C. 2017); E license allows on-farm slaughter for 1-10 of own animal units annually for direct sale to consumers in restricted regions.

3.4 Current BC Ferries policies

BC Ferries currently has a livestock reservation system, which replaced the priority boarding policy in 2005 (BC Ferries, 2017).

Farmers note that BC ferries is not the sole contributor to the challenges they face, though ferry transport is time consuming and expensive.

Discussion

4.1 Data Significance

We have addressed our project objective by revealing how livestock transportation challenges affect island community food security through highlighting the specific impact on Galiano farmers. Our research revealed an overall decrease in Galiano Island food system resilience, increased costs and losses for livestock producers, and animal welfare and meat quality issues.

A reduction in community food system resilience is significant because food is essential to the Galiano community. The food culture of Galiano values local food, maintaining a strong relationship with food, and using the preparation and eating of food to bring communities together (Jane Wolverson, *personal communication*).

The increased costs and losses faced by farmers are significant because they are a barrier to profitable farm enterprises (Sam Maberley, *personal communication*). Farmers have responded in creative ways to these barriers. For example, Dave Kostar has discovered transporting his livestock in the evening and staying overnight on Vancouver Island decreases the stress and discomfort for his animals (Dave Kostar, *personal communication*).

The stress experienced by livestock during prolonged transport is significant not only as an ethical responsibility to animal welfare, but to ensure the quality of meat being delivered to consumers (Eldridge *et al.*, 1989).

Some evidence suggests D/E slaughter licences have the potential to improve community food security, however these licenses were not favoured by the farmers we interviewed. Thus, a graduated licensing system cannot be successful in isolation and is only one aspect of a larger movement to preserving sustainable food production on island communities. Moreover, they are not enough to fully eliminate the structural barriers farmers may experience with processing and selling their own meat (Miewald *et al.* 2013). Therefore we explored the feasibility of a mobile abattoir by highlighting some benefits and challenges. Farmers would benefit from a reduction in travel time and fewer ferry fees. Livestock would be slaughtered in a familiar environment and would not undergo long transportation durations, increasing their pre-slaughter welfare. Some challenges are limited processing capabilities and high startup costs (Morrigan, 2005).

4.2 Limitations and Improvements

Gathering information from BC Ferries was difficult because the worker we spoke to was unaware of the previous livestock boarding policy. Another limitation was our small sample size

consisting of three farmers. An improved study design would be to interview more island producers, and compare these results to the experiences of mainland livestock producers.

Conclusion

Our project has revealed how island livestock farmers manage to deal with transportation challenges, as well as the strong food values reflected in their community's food system. We have identified how island community food security and resilience are affected by transportation challenges. Finally, because federal regulations appear to be the biggest hinderance to remote and rural farmers, an improvement to the system will require a significant investment on the part of the provincial and federal governments.

5.1 Project Contributions

Our project confirms that island communities value self-reliance and local food production and consumption. We have highlighted some major challenges faced by island farmers, particularly a dependence on a ferry system. Moreover we have discovered their ability to adapt in response to these challenges.

5.2 Unanswered Questions

How difficult would it be to secure a grant to fund the initial cost of a mobile abattoir?
How feasible is it to change the regulations in a way that small farms can slaughter their livestock easily, without facing legal issues?
How many other islands face this same issue, and how have they adapted?

5.3 Moving Forward

Looking forward, we have combined our research and experiential learning as a team to develop proposed solutions for the Galiano Island community to consider. One solution we propose is a mobile abattoir that would service all of the Southern Gulf Islands. We urge the provincial government to provide grants to support this project. Furthermore, we advocate changes to current slaughter and meat inspection regulations. As we have elucidated, the economic viability of small scale farming can be negatively influenced by federal government regulations that are designed for larger agribusinesses. The feasibility of these suggestions may appear bleak because of their economic and political nature. However, changes in regulations and investment in an accessible abattoir may be the most effective ways to improve the challenging situations faced by small scale island farmers.



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Appendix

Feasibility of Mobile Abattoir

The feasibility of implementing a mobile abattoir on Galiano Island to provide the services of slaughter and butchering of livestock for entry into the human food chain depends primarily on the funding available to these small-scale producers.

There are many benefits to using a mobile slaughter unit starting with the animal welfare implications. Transportation time would be completely eliminated and stress factors leading to death would be significantly reduced (Morrigan, 2005). Furthermore, the on-farm slaughter would occur in a familiar environment where familiar people handle the animals.

However, an estimated \$200,000 (CAD) is required upfront for a single unit capable of processing 8 head of cattle each day (Munroe, 2005), as well as about \$30,056 (US) to cover the salary of the two butchers needed to operate the unit ((Business Seminole, 2006). On top of financial challenges, there are many regulatory issues as well. The final point to consider is the fact that these units are short-term facilities with limited holding space; so carcasses must be delivered to government-inspected facilities within 48 hours (Morrigan, 2005).

Farmers may write some of these expenses off as well applying for government grants through various funding applications. Further investigation into these options would prove to be useful.

Policy Brief (April 2017)

BC Ferries and Livestock Transportation on Islands

Introduction

We were initially instructed to review livestock transportation laws and regulations, however our project has shifted to determining what Galiano farmers require, and how to help them. Access is an important aspect of food justice. Currently, Galiano Island farmers are restricted in this respect because of federal regulations, affecting their food sovereignty because of their lack of control over policies that affect their island. Island communities such as Galiano value the ability to define local food production, processing, and consumption within their food system. Current regulations limit some food production on Galiano due to inadequate resources for livestock slaughter.

We aimed to determine how farmers can utilize their local economy and fulfill their values to produce sustainable and responsible food. We aimed to do so in the most immediate time possible, as the current system is limiting with regards to the resources that are allowed to be transported to the island as well as the cost of transport.

A previous policy from BC Ferries was found to accommodate farmers and livestock transportation, but was quickly revoked. Top down agricultural policies are the current regulations

for transporting livestock, but often satisfy the needs of big operations and are left unsuitable for small farms.

Approach and Results

In March 2017, we met with some current farmers on Galiano Island and contacted a few by phone. From these interviews, we were able to determine that the farmers agreed BC Ferries is time-consuming and costly, but is not their main transportation concern. These farmers significantly value keeping their food on the island, and since no abattoir is available on Galiano, they are required to transport livestock to and from the island, with a minimum round trip cost (excluding slaughter and processing costs) of 280\$.

Farmers have determined ways in which they can decrease animal stress and avoid busy ferries by taking late night ferries and staying overnight for animals to get slaughtered early morning. Unfortunately, this is not the most convenient system. Current limitations beyond transporting livestock include costs of transporting resources. Livestock are only slaughtered a few times a year, but resources such as hay are transported more frequently.

By a combination of interviews with BC Ferries and online research, we were able to determine that a previously policy in 2005 gave “special considerations” to livestock transportation on BC Ferries.

Vehicles transporting livestock are given special loading privileges if they arrive at the terminal 30 minutes prior to scheduled sailing time and if there is over-height deck space available. For greater clarity, if a customer arrives at 09:25 AM for the 10:00 AM sailing the customer is assured loading on the 11:00 AM sailing. In practice, this has meant that most of the time customers were accommodated on the next sailing; that is, usually they waited only a half hour.

“BC Ferries previous policy, 2005”

Sadly, this policy was revoked and replaced with a new policy in 2005, that was proposed to be “more flexible” for livestock transporters. This new policy (and the current policy for livestock transportation on BC Ferries) is the same reservation system available to commercial customers.

We proposed that future changes should include :

1. Exploring the option of a mobile abattoir for all the Southern Gulf islands
 - a. Some resources we were able to find for potential future funding opportunities:
 - i. Government of Canada small business loans (accessible to small businesses operating for profit in Canada, with gross annual revenues of 10\$ million or less)
 - Allows funding up to a maximum of 1 000 000\$
 - To apply: contact financial institutions

- ii. Government of Canada: Grants and Financing
 - Grants available include:
 - Equity investments
 - “AgriInnovation Program”

AgriInnovation Program

AGRICULTURE AND AGRI-FOOD CANADA, GOVERNMENT OF CANADA

If you have an agri-business and are working on innovative projects, you can apply for assistance. Apply for:

- A contribution for pre-commercialization R&D and knowledge transfer
- A repayable contribution to help get your agri-based products or services ready for the market

There are two streams within this program:

- Industry-led Research and Development Stream — you may receive a non-repayable contribution of up to \$5 million
- Enabling Commercialization and Adoption Stream — you may receive a repayable contribution of up to \$10 million

“Government of Canada Grants, 2017”

- 2. Change to current slaughter and meat inspection regulations
 - a. Education about slaughtersafe
 - Complete slaughtersafe training is mandatory for all Class D and E applicants
 - One day course divided into two sessions
 - b. Provincial Slaughter Licence

Licences available under the Graduated Licensing System					
Licence Type	Activities Permitted	Sales Permitted	Geographic Scope	# of Animal Units	Oversight
Class A	Slaughter, and cut and wrap	Retail and direct to consumer	B.C.	Unlimited	Pre and post slaughter inspection of each animal
Class B	Slaughter only	Retail and direct to consumer	B.C.	Unlimited	Pre and post slaughter inspection of each animal
Class D	Slaughter only (own animals and other peoples' animals)	Retail and direct to consumer	Sales restricted within the regional district where meat is produced	1 - 25	Periodic site assessments and audit of operational slaughter records
Class E	Slaughter only (own animals only)	Direct to consumer only	Sales restricted within the regional district where meat is produced	1 - 10	Periodic site assessments and audit of operational slaughter records
Personal use No licence required	Slaughter only	None	For producer only	Unlimited	None

“BC Meat Licensing, 2017”

- Urge provincial government to subsidize livestock production

Cost breakdown for return trip from Galiano Island to Mainland

Ferry fees = \$82.50 (1 passenger and vehicle, mainland to island) + \$36.90 (1 passenger and vehicle, island to mainland)

Time: 12 hours at minimum wage (\$10.85/hour) = \$130.30

52 L gas at \$1.30/L = \$67.60

Student Reflections:

Student 1

LFS 350 has taught me about various food systems, it has encouraged me to get involved with the community and has shown me how easy it is to make a change. Besides food sovereignty, and food security which were common terms I was introduced to before this class, we were shown how to use these phrases by making a difference in the community. I initially came into this project with big goals and ideas about how we would propose change with BC Ferries. Quickly, I learned that things often don't go the way we want them to, and that was the majority of our project, running into dead ends and trying again. You don't often get encouraged to make mistakes, or try new things in school, but I felt as though LFS 350 allowed us to make mistakes and run into problems, while giving us the knowledge to solve these big issues that may otherwise appear inaccessible. The tutorials were a great place to ask questions and feel comfortable with a small number of students and a TA, it was refreshing from the bigger classroom size of the regular lecture, and allowed me to ask questions and participate in activities to expand my knowledge. Overall, this was a challenging course and community project, both of which required a lot of work, but was a great experience, nonetheless. Having the extra time allocated to work on group projects and with community partners was helpful and necessary to get the work done!

Student 2

In the past few months we worked on the Galiano Island project. The purpose of our group project not only has allowed us to investigate BC Ferries regulations regarding livestock transportation, but also has helped us to get involved with Galiano Island community and learn about populations living in isolated and remote areas. When we six were working on our project, we were following specific goals and concerns. We were trying to organize our meet up sessions and focus on limited information we were provided with. We have tried our best to prepare our blogs and presentations successfully and eventually lead out our findings to the future groups.

While I was very unfamiliar with community-based projects as I have very little background information in this area, I kept telling myself I need to educate myself and catch up with the terms and procedure. I was lucky I was taking ADHE330 course at the same time which really has helped me to acquire information I needed regarding service-learning and community-based projects, their effectiveness and limitations.

What I have learnt about farming communities maybe was the most valuable part of the project. I was truly surprised how knowledgeable our local farmers are. I really appreciate their insights about sustainable farming and combating food insecurity while coping with many compromising

factors such as accessibility and limited resources. They have taught me a big lesson: morality comes first even when you are being challenged to keep your business alive.

I was very fortunate to work with my group members as they are great companies and informative in their own fields. They have always triggered my creativity and have helped me looking at the issues from different perspectives. Our project contained many tasks from reading papers and interviewing farmers to in public presentation. I believe helping to conduct this project was just a start in my research life.

Student 3

Overall I felt that the CBEL project experience was a very interesting experience in learning more about not just food system in the area but also broadly some systemic issues in the Lower Mainland and province. Being able to visit Galiano Island and learn from very knowledgeable community members were most helpful in gathering our information for the group project. Personally, this gathering of “local knowledge” made clear the biases we hold in academia in which knowledge and information we prefer to disseminate. Doing research on our topic, it was difficult to gather external sources to back up our community perspective. External research was hard simply because no one has brought up the issues yet, reflecting the importance we put on certain geographical areas, topics, and livelihoods, in academia.

During our visit, we happened to encounter historic spots that also reflect the rich diversity in the history of food and community here in BC that are not made mainstream. We visited the remains of a Japanese charcoal pit kiln and saw names of Japanese Canadian community members serving at the Food Club location. We later learnt from Jane that in fact, there used to be thriving Japanese fishing community at Galiano. There were also Japanese farmers growing and supplying a large quantity of vegetables to the lower mainland from the surrounding Gulf islands; these were small but highly productive agricultural practices which promoted self-sufficiency. Yet these practice and communities were lost due to racialized policies and remain an untold history today, erasing the roles of Asian-Canadian in the narrative of local food security and resiliency model. This experience reminded me of the in-class reading on parallel alternatives in the Metro Vancouver “local” food system (Gibb and Wittman, 2012) as it reflects on the kind of narratives we privilege in our mainstream discussion on “local” food.

Prior to this project, I had never considered or even thought of island livestock farming and the challenges they may have. The structural barriers such as transportation is taken as a given, almost in a “you asked for it” mentality towards people who chose to live on the islands. However, when we have issues with transportation system in the mainland not meeting expectation (e.g. Vancouver recent snowpocalypse, busses not coming on time, etc), all hell broke loose. In fact, unreliable transportation system is something island community face daily while we take reliability for granted here in the mainland.

These are some among the many learnings that I’ve experienced through this project and I am grateful to be able to recognize some privileges that I take for granted living in Vancouver as well in learning the unknown history of racialized community members in their contribution to “local” food security. I appreciated the flexible learning model as it had allowed us to tailor our learning experience in a context that mattered for our project and community partner. Having the blog to

keep us accountable is also important. I was very surprised when Jane mentioned that she had read our profile on the blog and considered us to be an “active, outdoorsy” group. It was a good way to create familiarity and maintain communication with our community partner beyond the constraints of emails, which are often only initiated when there are questions, concerns, or requests.

Student 4

I have learned a lot from this CBEL project and have enjoyed an overall positive experience. Coming from an animal welfare background, I was intrigued by our topic and therefore I felt very invested in the experience. I was grateful to have been able to travel to the island because I think it gave me a much deeper and genuine understanding and appreciation of our topic and project question. What was even more interesting was how much I was able to learn about the complexities of a food system, and how our project only touched on one small aspect in an globally dominating, overarching issue. I was inspired from the Galiano community by their sustainable and responsible food production (and waste) values.

I enjoyed the group work aspect of this project. It was both helpful and made conversations and assignments more interesting because we have come from different backgrounds: both educationally and personally. This allowed our project to have greater meaning and represent diverse opinions and perspectives, and allow members of our team contribute in various ways. I feel the lectures designed for us to work on our community project were very useful because the project was time consuming indeed, and not having to come directly to lecture helped motivate us to make that time for our project. The readings and tutorials helped support my learning and understanding of our project. I prefer on-line submissions so the platform worked well for me.

Student 5

Throughout the semester working with my (awesome!) group with the Community of Galiano I gained many great experiences and had the privilege to see things from the perspectives of many others. This opportunity to apply classroom theory in a real world application, taught me the many challenges of succeeding in a career in food production. It was very interesting to compare our values and concerns with those of the farmers we were trying to assist. The classroom setting which promoted discussion and encouraged active participation made the experience quite enjoyable for me. The workload, dispersed among teammates was very reasonable and I found value in most assignments. Overall, our team’s success was hugely due to the amount of support from not only our Professor and teaching assistants, but from all of the community members we reached out to during our journey.

Student 6

Our CBEL project taught me the importance of listening attentively to community members when addressing an issue in their community as an outside team. Coming into a project with assumptions about the issue, the community, and the potential solutions is to be expected, however it is imperative that we do not hold so tightly to our assumptions that we do not let community members communicate the actual situation to us. If this communication step is missed, we will produce “solutions” that are ill fitting at best and damaging at worst.

Working within such a diverse group taught me the importance of being able to communicate and collaborate across disciplines, backgrounds, and perspectives, and that doing so leads to surprising discoveries and stronger, more balanced project deliverables.

Overall the flexible learning experiences supported my learning in this course, even if they were not always directly related to the project outcome. The time allotted for group and community partner meetings was necessary in order to be able to complete the project within the required timeframe. I appreciated the blogs and infographic assignments because they gave us the ability to report our learning in unconventional ways, and shifted the focus of the course away from purely academic reporting.