The effects of the BSE crisis on farmers and farming communities in Nova Scotia

Report prepared by

Tanya Barber and Barbara Clow

ACKNOWLEDGEMENTS

Appreciation and gratitude is extended to the men and women who participated in this study. Without their willingness to share their experiences and perceptions, we would not have been able to compile this analysis and we would know much less about the impact of BSE on farmers, farm families and farming communities in Nova Scotia.

We also want to acknowledge the leadership of Dr. Wilhemina Thurston, Principal Investigator on the National Farm Family Health Research Project, and the work of the members of the National Farm Family Health Research Team: Carol Amaratunga, Barbara Clow, Michael Eliasziw, Elaine Enarson, Lorraine Greaves, Margaret Haworth-Brockman, Louise Lemyre, Diane Martz, Lynne McIntyre, Stéphane McLachlan, Tracey O'Sullivan, Lauranne Sanderson, Christine Saulnier, Frances Shaver, Alan Smart, Josephine Smart, Deborah Stiles.

Special thanks go to Linda Snyder and Christine Saulnier at the Atlantic Centre of Excellence for Women's Health. Linda and Christine helped to design the interview and focus group guides and Linda conducted more of the interviews and focus groups with farm families and key stakeholders.

The research was made possible through funding from PrioNet Canada ; Alberta Prion Research Institute; Faculties of Medicine and Veterinary Medicine and the Vice-President Research, University of Calgary; Women's Health Contribution Program, Health Canada. The views expressed herein do not necessarily represent the views of the funders, including Health Canada.

Atlantic Centre of Excellence for Women's Health
301-1819 Granville Street
Halifax, Nova Scotia B3J 3R1
Telephone: (902) 494-7850
Fax: (902) 423-8572
Email: acewh@dal.ca

This report is also available on our website: www.dal.ca/acewh

Cover image: Steve Baccon/Thinkstock

TABLE OF CONTENTS

EXECUTIVE SUMMARY

In May 2003, Bovine Spongiform Encephalopathy (BSE), known colloquially as 'mad cow disease' was identified in Alberta. Fear surrounding the potential health risks of BSE to humans, such as Creutzfeldt-Jakob disease, drove decisions to close borders to Canadian imports of live ruminants (cattle, sheep, goats, deer, bison) and related products, including butchered beef (Bloom, 2005; O'Neil, 2005; Le Roy, Klein & Nii Arbenser, 2007). It was estimated in August 2003 that the BSE crisis was costing the Canadian agricultural industry $11 million per day (O'Neil, 2005). Policies and programs were implemented to assist with the crisis, however many of these were created rapidly with limited consultation and were not able to support farmers or stabilize the industry (Le Roy, Klein & Nii Arbenser, 2007). Despite the economic toll of BSE, little research has been conducted on the effects of the BSE crisis on farm families and communities, including experiences post BSE (Amaratunga et al., 2007). The Farm Family Health project was developed to address this gap. Data was gathered in Manitoba, Saskatchewan, Ontario, Quebec, Nova Scotia, and British Columbia with the goal of advancing knowledge about how different regions were affected by the closure of international borders, the policy and practice response of provincial and federal governments, and the impact of the BSE crisis on farm family and community health. Research results from the pan-Canadian study of farm family health are available (Cook, 2011; Mitra, et al. 2009; Amaratunga, et al. 2007), but to date the findings from the Nova Scotia portion of the project have not been analyzed separately.

This report demonstrates the particular impact of BSE on Nova Scotia agriculture and the ways that the BSE crisis revealed the need for regional and provincial policies and practices tailored to the realities facing farm families and farm communities in Nova Scotia.

Key findings include:

1) The impact of the BSE crisis on farm families

BSE was identified as a crisis by the farmers and family members, and the key informants who participated in this study. The financial implications of BSE (loss of income, increased debt) left

many feeling helpless and caused strain within family relationships. Participants described facing role changes, depression, arguments, and uncertainty about whether or not they could afford to keep the farm in the family. In order to address these issues and assist with family finances, many respondents explained that they often worked off-farm, but this also caused strain through added responsibilities and less work/life balance. Despite these challenges, the majority of participants remained committed to farming. They noted that unlike some other occupations, it is difficult to separate the business of farming from farming as a way of life. Farm families used a variety of strategies to address the hardships caused by BSE, including diversification of farming operations, such as changing the commodities they produced and investing in organic farming.

2) The health effects of the BSE crisis for farm families

Participants reported poor physical and mental health outcomes due to the added strain and stress caused by BSE. In addition, while some believed that farming allowed for healthy lifestyles, including growing foods for family consumption and getting exercise through working outdoors, others felt it did not provide healthy work/life balance. These participants reported that farm labour was not the "right kind of exercise" for maintaining health and that farming took up so much time and effort it was hard to maintain a healthy lifestyle or cope with physical and mental health issues through leisure, social activities or additional exercise. Neighbours and, to a lesser extent, community organizations played an important role for many of the farmers and key informants we spoke with, particularly in providing support and ways to cope through the strains of the BSE crisis.

3) The impact of the BSE crisis on farm communities

The impact of BSE on the agricultural sector was extensive. It affected not only beef farmers, but also poultry, dairy and sheep farmers as well as farm communities, families, and industry. Participants described how decreases in income along with increases in expenses during the crisis extended into high debt loads, a decline in the numbers of small to medium-sized farms and reduced feed and equipment sales – all of which negatively affected the economic status of the community. For instance, participants reported fewer services and loss of infrastructure

within their communities, as well as concerns regarding farm sustainability. Changes within the community and landscape were also noted, as were growing rifts between smaller and larger farms and farming and non-farming community members. A broader issue of food sovereignty in Canada was also significant to many of the respondents. BSE was seen as the tipping point for an already unstable agricultural sector in Nova Scotia.

4) Nova Scotia experiences with federal and provincial policies and programs in the context of the BSE crisis and more generally

The policies and programs that were implemented prior to and during the BSE crisis were identified as factors that contributed to the decline of Nova Scotia agriculture. For instance, participants reported that prior to BSE the closure of local, federally inspected slaughter/processing plants and the subsequent increase of American-owned plants in Canada had a substantial, negative impact. They also felt that national policies in general were applied as "one size fits all", neglecting the specific farming needs of each region. For example, Nova Scotia was described as being more diversified compared to the single-commodity farming programs in other provinces and these differences affected eligibility for relief funding and other programs.

Participants also reported that the provincial and federal governments were slow to react and create programs to assist farmers or address BSE efficiently and effectively. They explained that the programs that were implemented were confusing, difficult to use and, in some instances, caused more hardship for farmers. The main program discussed was the Canadian Agricultural Income Stabilization (CAIS). Although it was implemented to insure farmers against declines in income, the majority of individuals we spoke to found it inaccessible and unclear, which resulted in confusion or errors surrounding payments to farmers. Participants also felt that the distribution of compensation among the provinces was unfair: the needs of farmers in the East were not well represented and therefore received less compensation than their Western counterparts.

5) Lack of public awareness of the state of Nova Scotia farming and the BSE crisis

Participants commented that they felt the non-farming public did not understand the economic realities of farming and the financial status of most farmers in Nova Scotia. Respondents were also concerned that the public did not receive accurate or timely information about the state of farming or specific crises, such as BSE, and this contributed to misconceptions about food production, local food sources, and who was gaining from the crises. Participants stressed the need for people to know more as well as to support 'buy local' campaigns and to look for various ways to ensure Canada's food security and sovereignty.

BSE had a profound impact on farming families and their communities in Nova Scotia- altering the landscape, the amount of services available, employment rates, relationships between family and community members, and overall health. It was not surprising, then, that the many of the participants felt that the outlook for farming in Nova Scotia was bleak. However, the participants' strong commitment to farming as a way of life, to farm sustainability, and to food sovereignty in Canada provided hope for the future of Nova Scotia farmers and agriculture. Participants provided many suggestions for key changes in the industry and in agricultural policies in order to re-build, improve and sustain agriculture in Nova Scotia, and more generally Canada. Based on these suggestions and our findings from the study data we developed the following list of policy recommendations.

RECOMMENDATIONS

1. Build stronger relationships between farmers and decision-makers, specifically by re-establishing regional government representatives who work directly with farmers. This action would improve understanding of regional farming needs in the creation of appropriate regional policies.

2. Provide education for the non-farming public – through events, school curricula, etc. – on the process of food production and the realities of farming, both the distinctive features of regional agricultural systems and the differences that exist across the country.

3. Create space and increase support for new models of agriculture, including organic farming, new co-operatives, food levies, and diversification.

4. Re-implement local, federally-inspected and standardized meat packing and processing plants in Nova Scotia and the Maritime region.

5. Produce accessible information about agricultural programs, policies, and processes and support farmers applying for services.

6. Improve planning for agricultural crises and ensure fair and equitable programs for farmers in diverse contexts.

7. Increase support for buying Canadian-grown and processed foods to advance food security and sovereignty.

INTRODUCTION

Bovine Spongiform Encephalopathy (BSE), known colloquially as 'mad cow disease', was identified in Alberta in May 2003 and in response the USA and several other countries closed their borders to Canadian imports of live ruminants (cattle, sheep, goats, deer, bison) and related products, including butchered beef (O'Neil, 2005; Le Roy, Klein & Nii Arbenser, 2007). Fear surrounding the potential health risks of BSE to humans, such as Creutzfeldt-Jakob disease, drove decisions to close borders to potentially contaminated meat (Bloom, 2005). It is estimated that in 2002 40 percent of Canada's beef exports were sold to the US market, amounting to nearly $3.5 billion (O'Neil, 2005). However, months following the ruminant trading bans, beef exports in Canada fell to almost zero and by August 2003 – although the ban was beginning to ease – it was estimated that the BSE crisis was costing the Canadian Agricultural industry $11 million per day (O'Neil, 2005). Policies and programs were implemented to assist with the crisis, however many of these were created hastily and had limited ability to support farmers and stabilize the industry (Le Roy, Klein & Nii Arbenser, 2007).Farmers and their entire communities suffered considerable social and financial hardship due to the closure of international markets to Canadian beef and other ruminant exports. Yet little research has been conducted on the effects of the BSE crisis on farm families and communities, including experiences post BSE (Amaratunga et al., 2007). The Farm Family Health project was developed by a group of researchers across the country to address this gap. Data was gathered in Manitoba, Saskatchewan, Ontario, Quebec, Nova Scotia, and British Columbia with the goal of advancing knowledge about how different regions were affected by the closure of international borders and the policy and practice response of provincial and federal governments. The project also aimed to increase understanding of the impact of the BSE crisis on farm family and community health and the ways that farmers and other stakeholders sought to adapt to and mitigate these effects. Research results from the pan-Canadian study of farm family health are available (Cook, 2011; Mitra, et al. 2009; Amaratunga, et al. 2007), but to date the findings from the Nova Scotia portion of the project have not been analyzed separately. The interviews and surveys we conducted with Nova Scotia farmers and stakeholders attest to

the distinctiveness of Nova Scotia agriculture and the need for regional and provincial policies and practices that are tailored to the realities facing farm families and farm communities in Nova Scotia.

RESEARCH DESIGN AND METHODS

We conducted 27 semi-structured interviews with farmers or key informants who could speak directly about farming or about the impact of BSE on farm families and communities in Nova Scotia. Key informants were individuals who represented agricultural organizations but who were also, or had been at some point, farmers themselves. In addition to interviews, we conducted two focus groups with male and female farmers and key informants. Ethics-approved focus group and interview guides were utilized. The focus groups and interviews lasted approximately one to two hours and were audio-recorded.

Sample

Adults over the age of 18 who lived on a farm and had knowledge or experience of the BSE crisis were eligible to participate. Theoretical and purposive sampling was used to ensure a cross-section of participants that represented: women and men; various farming occupations; large and small scale farms; owners and operators; dairy and beef farms; those directly affected by BSE and those who did not have BSE in their stock; and family members. Participants were recruited through agricultural organizations and events in rural communities, through professional and personal contacts, and by posting information and invitations in local organizations and businesses utilized regularly by the farming. Saturation of the data (Cresswell, 1998) was reached by interviewing 17 participants and holding two focus groups in Nova Scotia, meaning no new codes or categories were identified in the data. Of the 27 participants, 17 self-identified as male and 10 self-identified as female. We did not ask participants about their sexual orientation or the nature of relationships, but all appeared to be in heterosexual partnerships.

Analysis

Data analysis was conducted through five iterative phases: "(a) describing, (b) organizing, (c) connecting, (d) corroborating/legitimating, and (e) representing the account" (Miller and Crabtree, 1999, p.130). The first phase consisted of questioning the data, the process, any original assumptions, and potential next steps. The second involved choosing approaches for data management and analysis. Open coding of topics and themes began during this phase. The third phase consisted of implementing the analytic plan and locating common themes in the data, which were then compared and included in the explanation as the analysis proceeded. The fourth phase involved examining alternate explanations and refuting evidence through additional data analysis to ensure the emerging interpretations were reflective of the data. The final phase included determining methods to display and describe the data. QSR N6 was used to code, describe, and share the data between researchers (display and describe). Ongoing dissemination during the study allowed for new issues to be explored and discussed prior to finalizing the five themes identified within the data.

FINDINGS

The analysis of the interview and focus group data resulted in the identification of five key themes: 1) the impact of the BSE crisis on farm families; 2) the health effects of the BSE crisis for farm families; 3) the impact of the BSE crisis on farm communities; 4) Nova Scotia experiences with federal and provincial policies and programs in the context of the BSE crisis and more generally; and 5) lack of public awareness of the state of Nova Scotia farming and the BSE crisis. These five themes are presented below and demonstrate the concerns, needs, and experiences of Nova Scotia farmers not only in face of the BSE crisis, but also in the changing world of agriculture.

The Impact of the BSE Crisis on Farm Families in Nova Scotia

The impact of the BSE crisis on farm families was substantial, particularly in relation to loss of income. Participants told us that during and after the BSE crisis, they had to make difficult decisions about their debt load and the crops and stock they produced, as well as about their

family and farming obligations and future. Four main issues emerged in relation to this theme: 1) increased financial and family strain; 2) changes to farm and family obligations; 3) challenges to keeping the farm in the family, and; 4) commitment to farming as a way of life.

Financial and Family Strain

The individuals we spoke with reported that they and their families experienced a great deal of stress as a result of the BSE crisis, which also strained family relationships. The most significant factor was economic: as markets closed and the value of livestock declined, farm incomes dropped precipitously and left farmers and families worried about financial solvency.

> *Even calves that went to market, the price dropped drastically. In fact we had one calve that we sold that we got a bill for $1.47 for selling her.*
>
> *…of course we lost probably 50,000 to 60,000 a year in income and we're still losing that….and it certainly has affected our bottom line on our farm…*
>
> *Oh, yes. If we lose the farm, we lose everything. And all along, …anything that we didn't use, it just went into the farm as owner's contributions. So we haven't been putting any money away. We've got nothing.*

Participants described how they felt forced into making decisions to take on more debt or rely on family members for additional financial support to address the loss of income. These decisions affected the farmers greatly, leaving them with a sense of helplessness and lack of control:

> *We refinanced then. And [daughter] and [son] bought in with us now. That was a turning point. But you know, we were making our payments before BSE. That is what is hard. And it's hard having people out there that we owe money to who are good enough to let us keep going.*
>
> *The most frustrating thing is that this whole feeling of helplessness. Like being on the farm we're used to handling things that pop up but there's nothing we can do to change this whole BSE mess. There's nothing we can do really to change the immediate financial mess we're in. Any change of direction is going to require more debt.*

In some cases, the loss of income and higher debt load meant that farmers and their families changed the commodities they produced, invested in organic farming, or found off-farm work – temporarily or permanently:

> *So yeah we, the organic is the biggest change that we've made. I would have liked to have expanded and got more cows and quota, but quota went up so much in price, we couldn't afford it.*
>
> *...when I look at our own community now, yes we've switched to sheep and also grape but there's still going to be a fair amount of land that's certainly not going to be used the way it had been...*
>
> *…and so many now have off farm jobs that's the only way they've been able to survive and in some cases you have both the farmer himself and his wife having off farm job.*
>
> *She, you know when she went to work. … it was just, you know something that was necessary to do.*
>
> *…our son made the choice to go out West and to work because he felt that you know he could make more money out there. He did come back but he didn't come back to farm…*

Fiscal exigencies and related changes in life and work took a toll on family relationships. Many participants described having arguments with their spouses and other family members about finances and how to manage the farm during and post BSE. As one participant said,

> *Sometimes there are arguments. And the financial thing, there's a lot of arguments on financial stuff….*

In some cases, financial and other strains led to the breakdown of relationships:

> *It got to the point [where it was] the cows or the marriage….the stresses and the strains of things was driving a wedge in the marriage…*

In addition, some participants noted that the isolation their spouses, particularly farm wives, experienced contributed to relationship strain. The men felt that they could share their worries and stresses with their wives, but their wives were left alone to handle their own fears and anxieties:

Part of the trouble is I can come talk to her but it winds her up at the same time it's unwinding me a bit and then I go back to work and she's home stuck wound up with nobody to talk to...

I mean [wife's name] has a much more isolated life that I do. Well she has to be here. Somebody has to be here and, ah, from that point of view, it's been hard on her the last two years.

Participants also reported that they had to sacrifice many things to ensure money was being used for the farm business. Despite knowing their children and spouses had other needs, participants explained that on-going investment in the farm was essential because if the farm failed, there would be nothing left for their families:

It affects them [kids] because there's things that they see the other kids doing that they can't do….And we get into a little conflicts over our dinner table like if I've got a few bucks, I go buy a ton of grain and she's thinking well we need this but and she's right, we do need whatever but if I can't feed the sheep and the lambs don't live, then we don't have them to sell, and when the sheep are nursing you've got to give them grain or they're not going to have milk to grow the lamb so there's a bit of a conflict….Because if the sheep don't grow, then you're really at the end of it.

When asked what they did to offset worries and strain around finances and farm life during and after the BSE crisis, many participants talked about trying to lower household costs or increase income by means other than farming. For example, some farmers mentioned cutting trees and using or selling the lumber, while others relied on their own gardens and the products of their farms to feed their families:

Well, 3 days a week, I start the day by milking my cow by hand. Because we have 11 grandchildren so there's lots of milk consumed. And milk costs quite a lot so that keeps the cost down…

The strategies farmers used to deal with fiscal realities during and post BSE changed relationships, but also individual and family obligations and responsibilities.

Changes to Farm and Family Obligations and Responsibilities

The standard farm work-day consists of a many different tasks and responsibilities, depending on the type of farm and the individual's role within the farm. Participants described working

long days, sometimes getting up at four or six in the morning and working until seven in the evening or later in summer months. They also balance farming duties, such as maintaining the land, animals, equipment and paperwork, with family responsibilities and volunteer work. Many of the partnered participants described making farm decisions together, working as equal partners on the farm or dividing farming duties and responsibility for decisions according to their skills. This created mutual learning opportunities as well as time to work side by side:

> *Um, mostly if it's to do with the cows and the milking then I make the decisions and if it's to do with the calves, then I make the decisions. If it's to do with anything with the feeding or the cropping, then (husband) has always made those decisions…. Now that (son), this is his first year full time year on the farm, we're trying to get him into making a few of those decisions.*

> *I was considered a partner…we bought his Dad out. … when we were in the partnership, it worked well 'cause we, like you said, he taught me most of what I know so I'm likely to (chuckle) agree with him. You know, I mean I have my own views…And there have been things I've talked him out of.*

> *… we milk every morning together so unlike most couples, I mean we always have about two and a half hours together each day. It might be in the milking parlour but you know it's sometimes you talk, sometimes you don't but I mean this is one of the advantages that many people don't see and it's very fortunate even from a beef farmers point of view that don't have that time together, working together.*

While some families shared work and responsibilities, the division of labour and decision making on farms was often gendered. Some women reported helping with the farm work or decision making, but final decisions lay with their husbands while they managed the domestic realm:

> *Ah, my job is to milk the cows and feed the cows and the lambs and the housework, majority of the housework and the cooking.*

> *Well, [husband] always has the final say but we all have input… Around the farm, oh, I can suggest things and stuff but no, [husband] will do that.*

Those women who were in charge of farms or in equal partnerships described the challenges of working in a male-dominated industry:

Oh, no my mother didn't do any work on the farm. She did the housework and fed the men that worked on the farm and Dad did the farm work with the men that were employed but things changed … as I grew up there was less men employed on the farm and I always enjoyed the farm work so I would get out there and milk the cows and drive combine harvesters and the tractor work and my father and I did it all at that point. Even after I got married, I traveled home to work on the farm but I had to go through… The males you know dominated area… we enjoyed once I broke through that barrier of the, the girl.

The BSE crisis posed challenges to accepted approaches to decision-making and farm work in many families. Some participants reported that they continued to deal with their obligations and decisions as a family, but that decisions now focused on keeping the farm and the family afloat:

So how do we make decisions? Around the breakfast table. We're having to get more and more into business planning and budgeting and this type of thing. Before BSE in our situation there was always cash. …[Post BSE] There was no cash. So you have to plan more. You're having to look further down the road.

Others felt completely paralysed by the BSE crisis and the impact it had on their families and businesses. As one participant commented:

I can't make any. We are in limbo. We can't make any decisions. We can't.

The type of tasks performed by farmers and family members also changed as a result of the BSE crisis. With funds in short supply, farmers were less able hire help on the farm, with the result that family members had to take on more and/or new work:

I spend a lot more time in the office than I should just because of shuffling money around to try to… [upset]…I do a little bit of outside stuff with animals. And I like to do that. In the summer, I do a garden which I don't do in the winter. And I do a lot of telephone stuff….I am just a general dog's body. You know, if anybody has to go anywhere or do anything, I do it.

Well, a typical day for me is totally different than what it used to be. When I was pushing the envelope as it were, and being the best, when we were producing fat beef, I was either buying cattle or selling cattle and farm-related activities. The farming side of the operation is only running about half throttle. …So my week, Monday is my day of rest. Tuesday I am generally involved in management decisions to do with trying to find

money, trying to wonder what is coming from where, etc., etc. Wednesday most of my day is taken with collecting the meat … Thursday is a sales day….So I'm on a meat truck on a Thursday. Friday is the same. Saturday is the same. Sunday is the same. So most of my time now physically is spent on my feet in the back of that meat truck. I don't like it. I hate it. But needs must. Because we are cash strapped, I can't do the job properly. I can't move on to the next stage and employ somebody to do it.

Because these tasks were often taken on out of necessity, rather than by choice, they led to feelings of helplessness and hardship.

Changes in farming as well as the economic hardships occasioned by BSE meant that many participants understood why farm families would consider or felt forced to sell their farms or take on off-farm work. They also recognized the stress of having to juggle changing obligations on top of their usual responsibilities (families, farming, paperwork, housework, off-farm work, volunteering) with little reward in return. As two participants stated:

I went out West and worked in the oil patch two winters ago and last winter I worked in the woods cutting trees see, with a processor, a machine. … Um, mostly for income I guess. I get paid more than I would here.

It's [farming] just too much work. Too much work. And you don't have any, we don't take vacation. We never go on vacations.

These shifts in responsibilities and the ever growing pressure to meet financial demands led many to question the future of family farming, whether or not they wanted to stay farming, and whether or not they would encourage their children to take on the family farm.

Challenges to Keeping the Farm in the Family

In the aftermath of the BSE crisis, some participants were hesitant about encouraging their children to pursue farming or to take on the family farm. Many still wanted their children to farm but worried that it was not a viable occupation or one that would provide a secure future, given the precarious state of agriculture and the threat of agricultural crises such as BSE:

...the BSE crisis, was a real crisis for many of our beef people and it was, it could be described I guess as the final nail in the coffin for, for many of them. Ah, it's also the thing that really convinced people that maybe they shouldn't be encouraging their children to take over farms because they saw that when BSE happened they were still all

on their own…. A lot of them don't encourage their children because they've had such a hard life themselves trying to keep things rolling the last twenty years that they don't want to see their family get into that same sort of pressure.

But I don't know, it's not… It's not us that I am worried about most, it's [son] who has put his whole life into this place. He has 5 children, and they are all interested in farming. They all want to be on the farm.

Participants also noted that the way farms changed hands was different than in the past and this might pose a barrier to children taking on the family farming business. In previous generations, parents would stay on the farm while adult children moved in to take care of them and the farm, but now parents were more inclined to sell-out and use the proceeds for their retirement, which meant that adult children had to save enormous sums or take out large loans to purchase the family farming business:

I feel sorry for the young ones who want to do it. … it's hard on them trying to buy a farm. They've got to have so much money.

We're interested in the family but, you know there was a time when farms changed hands from one generation to the next and the transition was fairly easy because the older generation didn't take the equity out of the farm. They were content to live in the back kitchen or in a trailer out back and pass the farm on and now, you know they live the same as everybody else. They want to retire and they want to take enough out of their life's work to satisfy that retirement and when they do, they take the equity out of the farm which makes it impossible for the next generation to take it over…

At the same time, some participants recognized that their children were not interested in farming or saw farming as more difficult and less profitable than other lines of work. This led to questions about whether or not the farm could be kept within the family:

I think the younger ones see their friends not working the long hours, all summer long you know, and see that their friends have more you know money to spend on things. So yeah they go out and then they look for their other jobs….

And you know there's very few younger people who want to take over the farm. It's hard to find people who want to make the commitment to work that hard for such a relatively small return.

It's starting to look more like that all the time [selling farm to non-family]. We have four children and well our oldest daughter, she was always the one that was going to take over the farm but then she went to PEI, met a guy, got married and lives over there now. The next two girls had no interest in the farm whatsoever. Never did and probably never will… and our son, well he's only 18 so heaven's knows which direction he's going to go… I mean even to sell it, you can say oh our farm is worth 5.5 million dollars. It's (chuckle) only worth 5.5 million dollars if somebody's got it and most young people nowadays certainly don't have that kind of money and you know where, who, what is going to happen to the farm?

The uncertainty about the future of individual farms translated into uncertainty about the future of agriculture in general. As one participant noted, a decline in both experienced farmers and a new generation of farmers meant that knowledge, expertise and practical farming skills were not being passed along:

…so you know there's a critical issue here … we've lost a critical mass of skilled people so regardless of what happens from here on out, I'm not sure that we can rebuild the industry because … where are you going to find skilled people to teach livestock husbandry 'cause you can't learn that in a book… I was two generations removed from the farm when I started the farm right and I had the benefit of learning from [older farmer] and [he] was a mentor of mine and I also had the benefit of a neighbor who taught me a lot of shepherding… Well I would defy anybody to go out today and find people that have the knowledge and skills that those people have… and you can't teach that right. You can learn it though by experience.

Many participants linked the decline in family farming and agriculture in Nova Scotia to BSE specifically, arguing that the personal, family and financial strains created by the crisis and the changes required to continue operating and managing farms were likely to have long-term consequences:

It [BSE] has probably led to more, what shall we say? Breakdown of the farm family I would suspect and it is certainly making the continuation of the family farm much more in question. I don't think you'll see a lot of these farms continue unless there are some dramatic changes in the next few years.

It [farming] might improve a little bit if there isn't any more cases of BSE I think but I don't think it'll improve a whole great deal.

The BSE crisis and other developments in the agricultural sector had robbed many farm families of their hope for their own businesses but also for the future of agriculture in Nova Scotia.

Commitment to Farming as a Way of Life

Despite the challenges farmers faced and the poor outlook for agriculture in Nova Scotia, a number of participants remained committed to farming as a way of life. They were realistic about the hardships they faced as farmers and about how little they had to show for their hard work. As a number of participants noted:

> *…there's so many easier ways to make money. (Laughter)*
>
> *You know I just think there must be an easier way to live.*

Yet most of the participants we interviewed did not want to leave farming and felt that people did not understand how intertwined the business of farming is with farming as a way of life:

> *His comment to me was maybe I should start thinking about my way of life more like a business (chuckle) rather. Well I responded to him and I told him my business is my way of life and my way of life is my business and when doctors and mechanics start living in their garage or the doctor's office and are on call twenty-four hours a day, seven days a week, then we're all in the same playing field.*

These participants also described a strong commitment to farming and working their land; even in the wake of the BSE crisis, they wanted to raise cattle, work out-of-doors and work for themselves:

> *It's, it's not an, an occupation. It's a, it's a way of life.*
>
> *It wouldn't matter if government pulled out altogether. People would still do it [agriculture] … Well and they're so committed 'cause it's …It's a lifestyle.*
>
> *But there's a great value to me in being able to stay in bed till 9 o'clock if you don't feel like getting up and work 'til midnight if you have to get your work done. (Chuckle) …I'd rather go throw bales of hay around all day than be stuck in six lanes of traffic and sit in an office so I mean…*

One farmer, when asked if he could imagine doing something other than farming, replied:

No, 'cause I never wanted it. I can tell you a quick right now. I went for a job one time and on the way home, I said I'll never apply for another job in my life.

Farm Family Health: Effects of BSE

When asked about their personal health status, or the health status of their families, participants described varying perceptions. Some felt that farming provided a healthy lifestyle through access to nutritious foods, the need for physical activity, and the presence of supportive communities: others described low income, lack of work/life balance and lack of community support – or the lack of time to be involved in community activities – as factors that contributed to poor health. The majority of participants agreed that while farming can be stressful, crises like BSE intensify these strains and can compromise the mental and physical health of farmers and their families:

They [farmers] have additional pressures that the rest of the community tend not to understand. Um, for example, when things don't go right in the agriculture industry and there's a huge number of barriers that farmers have to get over now and they're faced with the prospect of losing the farm. You know if I lose my job tomorrow, I go home. Um, when I was farming, if I lose my job, I lose my home so that creates you know an additional kind of pressure that I don't think people understand.

Mental health, ability to get up in the morning. I have never been a person to be depressed. I think I now know what depression means. I now know what despair means…. You may look at me and say I am a fairly healthy guy…. But I am not the man I was 3 years ago. And I am taking in water. I used to have faith, very strong faith, not religious faith but faith in the democratic principles and systems that eventually things would be put right. … I find my belief system has been eroded…I've got no pension. I've got nothing. I've got nothing to look forward to except a tar-paper shack, unless I can keep this going. So it occupies my whole waking thought – what am I going… What if they are not going to look after this [effects of BSE]?

Participants shared how stress, worry and depression, as well as the physical labour involved in farming, manifested in physical symptoms and illnesses such as high blood pressure, heart attack, carpal tunnel syndrome, stroke, and back and knee problems. Participants also described illnesses such as arthritis and diabetes and were aware of the risks specific to farming

– such as farming accidents and loss of limbs. The financial stress and worry created by the BSE crisis, however, had a profound effect on these families and their health.

The farmers we spoke with described various methods to cope with the physical and mental strains of their work and lives:

> *Like it's just like I've got a knot here and like you just feel like you're going to explode, like in the wintertime I go out and walk up and down the deck here 'cause the cold air seems to work but in the summer I can go lean against the shower door and the cold on my back makes this let go …it's a knot, like a muscle spasm in my back that seems to set it off.*
>
> *Oh, sometimes I just cry. Sometimes I just go out for a walk.*

Three main coping techniques were described during interviews and focus groups: 1) food and nutrition; 2) exercise and/or leisure, and; 3) the role of extended family, neighbours and organizations.

Food and Nutrition

Consuming "home-grown" foods served a dual purpose: it ensured healthy, nutritious diets for farmers and their families and it helped farming families to deal with the economic hardships during and following the BSE crisis. Participants described healthy eating, eating together, and supporting the 'Buy Local' campaign as ways in which farm families and their communities could remain healthy and maintain healthy lifestyles. Purchasing foods that they could not grow themselves from neighbours and others in their communities also meant that they could support local agriculture:

> *We eat our own beef primarily. We eat old-fashioned kind of food. Very little processed food. Most of the vegetables that we eat are from the garden in the freezer.*
>
> *I think most farm families do recognize that well, we're all promoting now buy local foods. It's better for you. And if you believe in it, you have to believe that when you buy local food, you're helping one of your neighbors, and you're buying something that you know how it was raised…*

Some respondents noted that a traditional farming lifestyle was healthy, but they worried that changes in the agriculture sector and perhaps in life in general, were eroding healthier habits

and behaviours. One participant felt that the farming lifestyle was becoming increasingly similar to other, less healthy, family lifestyles:

> *… at one time I think farm families…had a different lifestyle that was probably healthier than most people's lifestyle but I think that farmer's lifestyle now is probably getting to be almost the same. It's not, you know used to be, three meals a day. A big breakfast which is supposedly important in maintaining your health and they ate at noon on a regular basis. They ate every night on a regular basis and usually with the whole family and I think that's changing now and so a lot of things that have contributed to that change.*

Exercise and/or Leisure

Participants had varied opinions about the role and value of exercise in a healthy lifestyle. There were quite a few who mentioned engaging in regular exercise, such as swimming, running, walking or going to the gym, while others felt that the physical labour involved in farming was exercise enough. Some participants worried that farm labour wasn't the 'right' type of exercise to stay healthy and others noted that increasing dependency on machinery meant that farmers were not getting much exercise at all:

> *But they don't get out there for the extended walks and that seems to be what you need to keep your heart healthy.*
>
> *I'm trying to tell him that he needs at least half an hour of hard walking to get your heart rate up to strengthen the heart muscles and he doesn't.*
>
> *You jump in and out of the machine and that's the most exercise.*

A lack of time to exercise was again an issue that some participants felt contributed to their health issues. This expanded into work/life balance and rarely having time to relax, enjoy friends, social activities, or maintain relationships with their partners:

> *We never go anywhere. We never go anywhere together. And generally when we are in the house together in the evenings, we fall asleep. Sometimes we watch a movie.*
>
> *It would be just nice to work five days a week, not seven days a week… You know have Saturday and Sundays off you know. There's no weekends.*

This lack of leisure time was also hard on the whole family, as children often worked on the farm through school holidays:

> *No, we never took them [children] anywhere. … March break was a really hard time. (Chuckle) All the teacher's children would be heading off to Florida. (Laughter) And our two had to work.*

Although respondents did describe various hobbies or activities, such as four-wheeling, fishing, or camping, they either did not have time to engage in these activities often, or were so tired at the end of the day that they preferred to use any leisure time for stationary activities, such as reading or watching TV. Maintaining a healthy lifestyle through exercise and work/life balance was therefore difficult for many participants and their families.

Role of Extended Family, Neighbours and Organizations

It was apparent that neighbours played a key role in supporting one another through difficult times and maintaining healthy communities. Farm families relied on extended kinships networks when they could, but many participants reported that they turned to neighbours because their families were not geographically close, or were too busy to offer support. Having friendly, reliable neighbours was consequently a cornerstone of health and well-being for many farm families:

> *You need a piece of equipment or help, go see your neighbor. We help one another.*
>
> *We had a lot of help from the community when he [had accident] and if it wasn't for them, I don't know how we would have survived… well and they took a donation for us down at the local community store there…There's under 300 people in the community and they gathered up 5,000 dollars.*
>
> "*Yes, they [friends/neighbours] are important because when we need somebody to talk to".*

While many participants emphasized the importance of community for health, some did not feel they were close to their neighbours, did not want to engage with members of the community, or did not feel that farming allowed the time to make friendships they could rely on:

He likes meetings and he likes meeting people and talking to people and I'd rather go and talk to the animals.

…when you're farming twenty-four hours a day, you don't often have time to make friends or to have friends who are really good supports too you know.

In some cases, the divide between farming and non-farming families in communities could also acted as a barrier to health and well-being. One participant stressed the importance of working together and recognizing the strengths of all community members:

…if a community is to be an active and friendly community for those living in it, farmers have to…[understand] that non-farmers want to be able to enjoy their properties as much as possible so they need to be careful perhaps when they time the spreading of their manure and things like that. Now on the other hand, farmers usually are some of the best contributors to community efforts like if you're having a bake sale or a yard sale for a community event, you quite often find that it's the farm families that are the most active in helping out and getting stuff geared up so in terms of kind of a healthy community, they're the ones who… quite often form the backbone of the community.

When participants were asked about the role of organizations in supporting farm families and healthy communities, there was again a mixed response. Some participants found that being involved in community or agricultural organizations was helpful and provided a source of support:

So if I hadn't been involved in all of these organizations [community association], I think I would have really gone nuts.

My wife is coming out of it [depression] now perhaps because she's [involved in agricultural organization]. But week after week after week, it was just tears, tears, tears, tears. "We can't pay the bills. What are we going to do? How are we going to do this?"

But others reported that there was a lack of organizational support as well as a lack of time to engage with such organizations and activities. Indeed, in some cases, involvement in organizations could create more stress:

The things that bother me too is he's on these like the [agricultural boards] and all of a sudden, if something goes wrong, they're backlashing at him calling him up and saying you single handily ruined the industry.

Those who worked with organizations also mentioned that stress hot-lines had been set up to assist the community, but they were rarely used:

> *And that surprised many of us [stress lines not being used] but if you look at farmers, farmers are a very resourceful and they're very independent so. And private so we've heard, we know of people who have killed themselves but they have not called the farm stress line.*

Although organizations attempted to create supports for farmers, it was apparent from the data that participants relied more heavily on neighbours or their nuclear families for support in addressing stress, worry and other health related issues.

Effects of BSE on Farm Communities

BSE not only affected farmers and families, but also farming communities as a whole. When asked about the effects of BSE on their farm communities, participants described it as a crisis Four interconnected sub-themes emerged in analysis of the interview and focus group data: : losses, "choices", and selling-up; farm sustainability issues; fewer services & loss of infrastructure; and food sovereignty.

Losses, "choices", and selling-up

Beef farmers were the most obvious victims of the BSE crisis, but it also had an immediate impact on other farmers, farm workers, and local businesses. For example, one farmer told us that the BSE crisis led to a devaluation of livestock and other commodities:

> *There was definitely an immediate decline in income and livestock values from my commodity, the dairy side, had gone from actually historic highs in, in selling the genetic replacement stock to all-time lows.*

Economic privation also made it difficult or impossible for farm families to retain waged farm workers:

> *… it'll make a difference to the community certainly. Ah, we had a lady that used to come in to do some milking for us. She's no longer with us anymore. There's no cows to be milked so, so certainly the unemployment level will be going up in communities as you lose the producers.*

When the bottom fell out of the beef market, farmers were forced to consolidate debt and quotas because the cost of keeping animals was higher than the selling price:

> *Once we lost that stream of revenue, a lot of folks in my area basically said well we're going to make it up but I think it forced a lot of consolidation in the industry… but the consolidation of quotas led to increased debt loads too.*

Greater debt load led to farm closures and sales, which affected the farming community more broadly by reducing the demand for feed and other products, limiting the supply of second-hand machinery, and generally reducing the amount of money flowing through rural communities:

> *[I]t's not just the farms that are lost, it's feed sales. It's the tractor sales. It's the machinery sales you know that something from a big farm would put in as second hand and those smaller farms would take that. Now there's no market for the second hand machinery.*
>
> *And actually it affected the whole agricultural community whether you were in beef or not. It also for me as a poultry producer, it put the feed manufacturers that I buy manufactured feed from in a situation where they weren't able to buy certain meat products because those manufacturers… that use those by products weren't able to use products and they had to clear out their systems etcetera that added a cost, which in essence was passed along to those of us in the feather industry that rely on that as a protein source so you know it, it's had a financial implication to not just the beef or dairy sectors.*
>
> *Also, also as far as the community goes, many businesses, many beef farmers could not pay, you know everything that they got from businesses and a lot of businesses do understand that. Um, my daughter is a vet and she's been paid in dogs. She's been paid in horses…The money moves around in a community and if somebody doesn't have anything, that also moves around in the community…*

Interestingly, participants reported that BSE was not the sole cause of this crisis. But they did feel it was the tipping point in a long list of changes occurring within the agricultural community. As one farmer noted:

> *And it's the struggles with farming. … it's the struggles with what we've had as commodity agriculture. BSE was on top of it.*

These changes included a lack of proper representation in agricultural organizations, such as the Federation of Agriculture; a disconnect between those making decisions, those working the farms and society as a whole; the manner in which government programs are delivered; and the price of quotas. A participant explained that these changes meant a decline in medium-sized and smaller agricultural enterprises, which caused a rift within farming communities:

> *…but it's changed the demographics of or changed the profile of agriculture in the community as well and in that whole buyers thing, the large, small thing. What we're seeing now is many more small farms and a few more or a bunch more very large farms and yet we're, the medium size enterprises as far as agriculture on a private scale, we're losing that and that's creating some polarization amongst our membership is to, you know, who should benefit from government programs? Big farms are saying well those little guys gotta get out of the way and the little guys are saying the big guys are getting everything, and it's creating stress amongst ourselves in a way.*

The conversations that took place with farmers revealed how much interconnection there is between decisions being made through the government level, the health and continued success of farming, and the vitality of their rural communities.

Farm Sustainability Issues

Participants identified two main issues regarding the sustainability of farming in Nova Scotia and in Canada more generally. First was the decline of small farms and young people in farming. Participants reported seeing the disappearance of small farms within their own communities. This caused concern because many participants saw the small farms as the way to encourage the next generation to step into agriculture. They explained how they themselves had started out with small farms:

> *[T]he young ones, because the smaller farms are disappearing, even the dairy farms, they're disappearing and that's how we got into farming and that's how the young farms can get into farming …you can't sell your farm to your children now because they can't afford to buy it.*

The disappearance of small farms was linked, in part, to the current quota system. As one farmer explained:

One family, one person, 20 calves could make a living. He had, you know he had a beautiful little facility and today, if you're not milking 100 cows, you're not going to be in business long but the trouble is the guys that are milking the 40 calves cannot afford, cannot pay the quota and expand to get to the 100 cow bracket because the debt load kills them.

Second, participants discussed changing attitudes toward farming within rural communities. In the past, many rural communities had been populated principally by farmers, who had shared experience with the realities of managing crops and animals. But non-farmers increasingly bought up rural property and brought with them different expectations about rural living. These differences result in conflicts, as when non-farming residents complained about manure spreading or animals on the roads. One farmer described the fines he faced when his non-farming neighbours reported him for having cows in the road:

Like it used to be there was several farms, like I told them, I said the only people that don't have cows out are people that don't have any. If you got cows, you're going to have a cow out once in a while. …Now they've sold out in the last year so it's just me now but when the County took me to Court, they had all these complaints about cows out they attributed to me. They weren't even my cows for the first part of it. …It cost me twelve hundred bucks to avoid a fifteen hundred dollar fine to make my point that not every cow on the road here is mine.

These kinds of experiences frustrated farmers and reinforced their convictions that the non-farming public required more education about local food production and the status of agriculture in Nova Scotia.

Food Sovereignty

Participants were concerned about a growing reliance on and support for food imports rather than investments in Canadian food production:

In other words, we talk about it [food security] in terms of maintaining some capability to produce food here and generally what food security is meant and in most circles food security is related to making sure that poor people have a supply of food, that they can afford to buy so it's quite a difference.

NS doesn't produce enough beef to feed itself…And isn't that a very un-green thing to be doing? Most of the beef comes from Alberta, I think, through the Superstore and

Sobeys. And that is a very un-green thing to be doing when we have land here that is going to waste in some areas. It should have beef on it.

Participants not only wanted to increase Canada's sovereignty over its food supply, but also to improve public understanding of the food production process. Indeed, some felt that the disconnect between those who produce food and those who only consume it was a direct challenge to Canada's food sovereignty and security. One farmer explained:

Honestly and truly, unless someone sees the light and realizes that yes, Canada is a beautiful country, it is a great country but the disconnect between what starts the process and the rest of society is getting greater and greater and greater. I'm talking about the state of agriculture here, not just the beef. I am talking that for every $60 of debt, there's $1 of income. I mean imagine. Without food security, you have… And the more successful that we have been as farmers, the more we disconnect ourselves from the people who no longer have to think about it.

Fewer Services & Loss of Infrastructure

One of the biggest issues that surfaced in interviews and focus groups was the discrepancy between government supports and services available to farmers in the East and West. Nova Scotia farmers explained that Western farmers claimed greater losses as a result of the BSE crisis, with the result that they received more compensation. Some farmers felt that lack of government infrastructure in the East meant that policy makers did not have accurate information about agriculture and so made wrong assessments about the impact of BSE and the state of agriculture in general. As one farmer explained:

And the one program that is really hurting me here is that in Manitoba and west where 98% of the cattle population is, per thousand head of cattle, the average drop in value they said, those governments said, was $450,000. But our government [in Nova Scotia] said it was only $150,000 here. In 2003 when they introduced the City Program, they took 30% off the top. So that meant that of the $450,000 or $450 a head loss, the government was going to compensate you 50% of $300. So the Manitoba farmer doing exactly what I am doing gets $150,000, and I get $50,000. That is not fair. Now, I am still arguing that… and there was a taskforce set up. Because all of the infrastructure has been taken away here, the Department have no field staff any more. So they really don't know what is going on. So they are in their ivory towers more so than they ever used to be.

Farmers also noted that funding cuts to agriculture organizations meant that supports for farming communities were becoming scarce or disappearing altogether:

> *Farmers' organizations have fewer funds – they used to do education sessions every other week, and they can't do those anymore because they have no funds. They can't provide the support that they used to provide for farmers.*

The effects of the crisis on farming communities were also felt well beyond agricultural sector. Schools and stores closed, volunteer and recreational services declined:

> *When we lost the AG reps [Provincial Agricultural representatives], it wasn't the information they gave. It was nice to have somebody come and talk to you. …And our rural communities are getting less and less of that. You see churches closing. We see the post office closing. Communication is what happened on a Sunday. You talked on a Sunday. You talked to the post office. You see the local store gone. See agriculture in this province is at a crossroads. It either has to take off or it'll die.*

This loss of infrastructure not only made it difficult for farm families to live well in their communities, it also created barriers to attracting new farmers and businesses. A greater loss even than the businesses, and organizations, and infrastructure was the sense of community that had prevailed prior to the BSE crisis.

BSE and Experiences Industry, Policies and Programs

Industry

As mentioned earlier, participants identified the BSE crisis as a tipping point, the latest in a long line of developments that were undermining the agricultural industry. For instance, two farmers explained that even before the BSE crisis, national agriculture policies did not address the distinct needs of Maritime farmers who mostly engaged in diversified faming rather than single commodity farming. The disconnect between national policy and local realities exacerbated the BSE crisis because lack of accurate information among policy makers led to the creation of ineffective or inappropriate policies and programs:

> *We're not represented by the Canadian Cattle Producers very well because we're such a small little fragment of the national picture. Ah, we feel kind of isolated and left out of the loop. Most of the bigger beef industry producers out west are large single*

commodity farms. Most everything Atlantic Canada is at least diversified into two things. Many farms are a lot more than that and most of the solutions that have been made to assist with BSE don't work for smaller diversified family farms. They might work for the big you know mass production farms out west but they don't work here and we don't feel that we really have anybody to talk to that cares as far as the national industry goes.

We have a chronic income problem because the way Canadian agriculture policy is structured it deals with whole farm margins so if you lose 50,000 dollars on beef, but you might have made 50,000 dollars on blueberries and sheep in that year so then in the eyes of the policy, you don't have a problem…because our agriculture economy is structured so differently that we don't always fit with Canadian agriculture policy which is almost totally focused on risk management dealing with past income problems.

Others discussed how the lack of resources, relationships and trust between Maritime farmers and the government contribute to pre-BSE agricultural issues and the manner in which BSE was addressed:

But you know there was a different, like government structure was different. You know when they had a drought in '97, you know the way we dealt with that was we went to government and I called my counterpart in the Department and he said well, let's spend a couple of days and go around and talk to farmers and see what's going on but the Department doesn't have those resources anymore….So you know it's just basically farmers are on their own.

…our commodities have been highly stressed financially the last five years, BSE being the classic example… it puts pressure points on our ability as farmers through our organizations to relate to government, that relationship becomes very pressured and very, at times, adversarial, lack of trust, lack of whatever, confidence that the system works. That plays back to the confidence of our members in the Federation [of Agriculture] and our commodity groups to think whether these commodity groups are capable of doing anything meaningful to effect something positive on these issues which are international in scope… and we are on the verge of a meltdown if we do not re-instill that confidence and that confidence comes in part in our ability to work with government, provincial and federal to truly effect change to deal with these overwhelming issues…

Those participants who were also involved in farming organizations, such as the Federation of Agriculture, described their efforts in compiling information from farmers in order to lobby the

government, present the needs of farmers to government, and build relationships. But they commented that final decisions about agricultural policies and programs lay with federal and provincial governments, who they felt did not always listen to what farmers were telling them or understand the full picture. As one farmer noted: *"I don't think a lot of people in government understand what has happened".*

Farmers also expressed concern that local and even Canadian control of agriculture was being undermined. They mentioned, for example, how closure of local packing plants affected the livelihood of Nova Scotia farmers:

> *Because of events beyond the control of farmers locally, basically to do with western expansion after the Feed Freight or Crow Rate was taken off, and the concentration of power – retail and processing – we ended up losing our local packing plant in 2000. Since then, it has been quite a struggle… It [beef farming in NS] worked for a while but then when the government policy caused some imbalances, it was devastating. In fact, when the demise of the Crow Rate, etc., was announced, I felt literally sick to my stomach. And the next time I felt that same way was when BSE was announced.*

Similarly, some farmers worried that the Canadian agricultural industry was increasingly falling under the control of American corporations that owned major packing and processing plants and cattle in Western Canada. One farmer discussed the power imbalances resulting from local plant closures:

> *In Nova Scotia about ten years ago we lost the only federally inspected plant in the Maritimes… and to my way of thinking that was a bigger blow to us here than BSE ever should have been. … Like [Company X] and [Company Y] are the huge American owned companies you see. They have bought basically, well they own 90 percent of the processing capacity in Canada.*

The effects of these changes in industry had substantial consequences in the wake of BSE, particularly regarding the border closures between Canada and the USA. Farmers maintained that greater dependency on the export market to USA meant drastic losses for Nova Scotia farmers when the USA-Canada border was closed:

> *You know I mean the big thing for Canada was the border closed for the U.S. and we are so heavily like tied to the U.S.*

Well as a farmer (chuckle), I mean it hit us very, very hard because well of course the borders closed so you couldn't sell any replacement heifers so you basically lost your income from selling of heifers.

And the sheep people too, ah, suffered for a while… Because the border was shut down to ruminants basically.

I don't have anything against the United States but I think because these companies are United States owned, they've just got too much… They've got control on both sides of the border.

It [money from consumers trying to support beef] went to the processors but you see our processing industry's controlled in this country by two processors and both American companies…. All [what is going to happen post BSE] depends what the States want to do. (Laughter) …They do run the show and that's the influence and that's why you've got to get control of your own market.

American cattle owners and processors not only benefitted from control of markets and borders, but also directly from Canadian government policies and programs related to the BSE crisis. According to one farmer,

Besides that, the Federal government made their payment program on per head of cattle in Canada and it didn't matter who owned them. Millions and millions of dollar, dollars were, were paid to American owned cattle in American owned feedlots in Alberta.

Many participants wanted Canada to control its own markets so that Canadian producers and processors would reap the benefits of their own hard work.

The individuals we spoke with recognized that the state of the agriculture in Canada prior to BSE had already laid the foundation for a crisis. Farmers in Nova Scotia were already in a precarious situation – with limited resources and connections to government and an American monopoly over meat production and processing – when BSE hit. When asked how they felt about the programs and policies that were put in place to deal with BSE, it is not surprising that farmers were dissatisfied.

BSE Policies and Programs

Many of the farmers maintained that governments had been slow to respond to the outbreak of BSE and that more action and preparedness was required:

> *The government in one sense was slow to respond…So I mean it was, we had no action plan. I mean it's the same when any disaster hits, we have no, we're slowly getting better and better at EMOs, emergency measures, this type of thing but…*
>
> *Ah, the time that it takes to get a response, you know government, the whole process was just too time-consuming for producers. It took just too long to get any response from government, period, and then when you got money from government, they were stalking you trying to get it back because of how the system was set up or that's the way it was perceived by a lot of people in my area.*

Of all the programs put in place to address BSE, CAIS (Canadian Agricultural Income Stabilization) was the most talked about amongst our participants. Implemented in 2003, CAIS replaced previous programs, such as the Farm Income Disaster Program, that had acted as a type of safety net for producers during crises. CAIS was designed to insure farmers against declines in income. A reference margin was established for each farmer – essentially an average of annual income for the preceding five years – and when income fell below that margin, benefits were supposed to flow (Shmitz, 2008). But a review of the CAIS program in 2004 found that the program was overly complex, relied on farmers to catch miscalculations, and had a high rate of payment errors. In fact, many farmers did not receive any payments, despite the severe inroads that the BSE crisis made on their businesses (Schmitz, 2008). The individuals we spoke with echoed these conclusions: they described difficulties in understanding the process, payments being handed out to some farmers and not others, and also being unclear as to whether or not benefits had to be paid back. A few participants described a Catch-22 situation, in which CAIS payments bumped their incomes up past their reference margin triggering requests from CAIS for repayment of these benefits.

> *Yeah and one of the, there was one program that I called the CAIS extortion program because they said to farmers that, you know we'll give you a hundred bucks a calf. You joined CAIS so farmers get the hundred dollars a cow. When they joined CAIS, you know the CAIS administration looked at their records and gave them an advance because they*

knew they'd receive a payment but then they got their hundred dollars a cow and that raised their income enough so the advance was repayable.

Other issues mentioned were the cost of joining CAIS – farmers were asked to pay a third of their insured amount (Schmitz, 2008) – and how provincial governments required membership in the federal CAIS to be eligible for any provincial programs that were created to assist with BSE:

The provincial program (chuckle) I had a real bone of… because you had to sign up for CAIS in order to be eligible for it. You had to sign up for a Federal program and then in the event you've got this notice in the mail that you owe that money back that they gave you…Oh yeah, it ended up we got it [financial support] but then we (laughter) had to give it back. …

Oh the deposit no. $75,000 for us for CAIS, I'm like $75,000! What, are you guys out of your mind? (Laughter) I said no we couldn't. That was the CAIS program.

Eligibility for CAIS was also an issue raised by participants. Again they felt that the diversified nature of farming in Nova Scotia was largely ignored by the federal government, thus creating a program that could not adequately meet the needs of Nova Scotia farmers or allow them to utilize its services:

I'm not getting my costs but I'm not far enough in the hole to trigger, you know based on my margins, to trigger a payment through CAIS so…

… you see out West on the grain farms, they're going to have a good year this year so if they have a bad year next year, CAIS will come in and give them a lot of money but if you're, well here if we had a bad year in sheep, you wouldn't know because our dairy cows would look after it.

Similarly, there were many farmers who felt the impacts of BSE, particularly through border closures, who were not eligible for compensation because they did not produce beef:

I've been annoyed and still am annoyed about the fact that basically the sheep industry, anybody that wasn't in the cattle industry was totally on hold for about as far as the whole impact of BSE and, what government's response to the whole issue was so, the border was closed for sheep and all ruminants basically and you know there was a huge

segment of agriculture and livestock that was impacted that nobody really took any interest in.

The overall conclusion of participants was that CAIS was poorly organized, confusing, costly and inaccessible, and, in the end, did little to help farmers.

The lack of appropriate and accessible policies and programs for those struggling with the effects of the BSE crisis, led some to consider leaving cattle farming altogether:

…but that's our biggest problem is that there's just not the demand, the money, nothing is coming back like it did before and I don't know if it ever will so we've kind of looked at our own situation and said okay, we can't rely on beef anymore.

My beef herd is going. There will never be another calf born on this place… it cannot be. I've just lost too much money. If I continue to keep beef, I will continue to lose equity…I may buy and pasture some. I may buy and private sell. I can sell something like ten to twenty, privately and I may do that…. you know if I'm losing money on calves, so is everybody else.

The participants shared various and sometimes conflicting suggestions for risk management in the future. These suggestions came from their own experiences dealing with BSE, the agriculture industry, and related programs and policies:

Well, the CAIS Program, I had written to [person] at the time that rather than put money into programs to the benefit of the banking system, we should be designing programs that provided a safety net but let farmers soar to their individual heights. But if there was a crash, that they wouldn't fall to certain death.

But farmers have got to change because we've always gone to government and said if we have a bad time, give us the money. Consumers have to come on side. Processors have to come on side and that we're all in this together.

We need fair trade, not free trade.

Participants also used their experiences farming elsewhere in Canada to make suggestions for Nova Scotia agriculture. For instance, in one focus group participants discussed differences between farming in Quebec and farming in Nova Scotia, and proposed that policies modeled on the Quebec example might benefit farmers in Nova Scotia:

What we have in Quebec, that is called ASRA (Assurance Stabilisation Des Revenus Agricoles), it's really based on the production cost so producers (chuckle) get paid…

I mean producers in Quebec are, they've worked hard, they work together and the provincial government has decided that they're going to make agriculture a priority in the province right and I mean politically they've been able to do that but I mean the Federal government put money into ASRA…

In my industry, it means the difference between the producer in Quebec getting 60 dollars a year per ewe in their pocket to raise the sheep which is two-thirds of the cost of production as opposed to absolutely nothing in the rest of Canada.

Increasing Public Awareness about Nova Scotia Farming and the BSE Crisis

In consideration of the overall effects of BSE on farm families in Nova Scotia, we asked participants what they thought the non-farming public should know about the state of farming and the BSE crisis. Major themes to emerge included wanting the non-farming public to know and learn about the economic realities of farming and the financial status of most farmers in Nova Scotia. Participants wanted the public to understand the small proportion of retail costs that farmers actually receive, the expenses involved in farming, and the amount of debt that is incurred in order to farm. As one participant noted, *"We don't own the farm. The Farm Loan Board owns the farm"*.

There was also a concern that the public did not receive accurate or timely information about the state of farming or specific crises, such as BSE. Participants thought that this contributed to misconceptions and a lack of knowledge about or interest in food production and local food sources:

People, okay where is the crisis in farming? Who would know that there is a crisis in farming? Who would know that a farmer has a hard time? There's no empty shelves in the grocery stores. The consumer, who is everyone, even us, I mean there's no problem getting food to eat and there's no problem with affordability so who knows that there's a problem? And for the most part, who cares?

As a result, participants stressed the importance of educating the non-farming public on the process of food production and the state of Nova Scotia agriculture in general:

We need to educate the consumer to buy local and that needs to be linked back to the value chains that exist in our various commodities to strengthen those value chains and again to focus on what the consumers in our identified market regions want. That at the

end of the day is the ultimate defense in my opinion…Right now our value chains are broken. They're non-existent, dysfunctional. The processing plants are closing down and marketing is being consolidated. The primary producer is being pushed way back off the sidelines to the point of irrelevancy.

Participants further noted the need for regional policies, cooperatives, and new industry models as well as the use of retail levies – small mark-ups – to improve the state of farming following BSE so as to avert or better manage future crises. Two participants discussed these needs and the state of farming pre and post BSE:

I think that, you know BSE wouldn't have been as big an issue if the industry had been in decent shape prior to that so…what we're saying is that the industry can survive if farmers can make a decent return on their investment. … the industry has to transition to a new model that is compatible with the realities of the industry today and that takes resources…so I mean and we started to do some work here two or three years ago. Discovered that, you could add three cents at the retail level to all the pork sold in Nova Scotia and that would stabilize the industry. You could add a cent to every pound of apples that are sold in Nova Scotia at the retail level and move that back to the farmers… It's a levy.

…there's been a huge loss of equity in our farms and so the result of that, there's a real lack of ability to reinvent ourselves or to change to the new market realities and in the end being able to respond to what the consumer is demanding so there's a need there for government to either replace that equity or create some ability for farmers to be able to effect change to be able to help them reinvent themselves because the bleeding will continue as long as we're stuck in a commodity model…

This view that the public and government require more education and awareness about the realities of farming and the concerns of commodity farming in Nova Scotia was strongly endorsed by participants. In addition, farmers regularly stressed the need to support the 'buy local' campaigns and to look at ways to ensure Canada's food security and sovereignty. These were presented as strategies to mitigate the effects of BSE as well as the deterioration of the Nova Scotia agricultural sector.

CONCLUSION

The purpose of this study was to better understand the effects of BSE on the socioeconomic and health status of Nova Scotia farm families and communities. From this research we learned that farmers, their families and communities recognized BSE as a crisis and they felt that the policies and programs implemented before, during and after the BSE crisis have not adequately attended to the needs of Nova Scotia farmers or Nova Scotia agriculture in general. Many participants felt that BSE was just the tipping point for an already unstable agricultural industry in Nova Scotia. These participants reported that the closing of meat packing and processing plants and the lack of policies and programs suitable for the unique farming circumstances in the Maritime provinces were contributing factors to the instability of the industry. Furthermore, participants noted that the programs implemented to assist farmers during and after BSE were slow, unclear, failed to consider that BSE affected more than beef farmers, and ultimately left farmers and the provincial agricultural industry in a precarious position – both financially and in terms of the future of farming.

Negative physical and mental outcomes were reported by the participants. They linked their poor health – and for some the inability to lead healthy lives – to the stress, financial strain, and worry associated with economic precariousness. They felt that farming involved so much time and effort it was impossible to take time for leisure activities, exercise, or social interaction and engagements. Participants consequently reported feeling depressed, having relationship strain, physical illnesses, and a sense of being stuck. The effects of BSE meant having to adapt to higher debt loads, modifying finances, changes and increases in their farming and family responsibilities and obligations, working off-farm, further diversifying or changing the commodities they produced, investing in organic farming, and in some cases leaving farming altogether. The effects of BSE in Nova Scotia spread through farming families and their communities altering the landscape, the amount of services available, employment rates, relationships between family and community members, the future outlook of farming in Nova Scotia and the overall health of farming communities. The individuals we spoke with were strongly committed to the agricultural industry and farming as a way of life, but they also recognized the need for change, specifically, increased support and improved policies, practices

and programs for the prevention and management of farming crises, renewed investment in rebuilding Nova Scotia agriculture post BSE, and the management of Canadian agriculture in general.

RECOMMENDATIONS

Drawing on the findings of this research – the knowledge and experiences shared by participants – we have developed a list of recommendations to address the precarious state of agriculture in Nova Scotia, and in Canada more generally, to improve risk management in the agricultural industry, and to enhance the stability and security of Canada's food supply.

8. Build stronger relationships between farmers and decision-makers by re-establishing regional government representatives who work directly with farmers in order to improve understanding of regional farming needs and to create regional policies.

9. Provide education for the non-farming public – through events, school curricula, etc. – on the process of food production and the realities of farming, both the distinction features of regional agricultural systems and the differences that exist across the country.

10. Create space and increase support for new models of agriculture, including organic farming, new co-operatives, food levies, and diversification.

11. Re-implement local, federally inspected and standardized meat packing and processing plants in Nova Scotia and the Maritime provinces in general.

12. Produce accessible information about agricultural programs, policies, and processes and support farmers applying for services.

13. Improve planning for agricultural crises and ensure fair and equitable programs for farmers in diverse contexts.

14. Increase support for buying Canadian grown and processed foods to advance food security and sovereignty.

REFERENCES

Amaratunga, C., Thurston, W.E., Crowe, S., Sindhwani, M., and Farber, A. (2007). How 'Mad Cow' disease affects farm families and communities across Canada. *The Network (Publication of the Canadian Women's Health Network), 10 (1),* 21-22. Available online: http://www.cwhn.ca/en/node/39388

Bloom, S. (2005). The good, the bad, the mad cow. *Journal of Clinical Investigation*, 115 (3), 482.

Cook, T.M., Brook, R.K., Sindhwani, M. and Thurston, W.E. (2011). A pilot study of the impact of bovine spongiform encephalopathy on the future of rural youth and Canadian farming. *Journal of Toxicology and Environmental Health*, *74 (2):* 248-260/

Le Roy, D.G. and Nii Arbenser, L. (2007). An Evaluation of Economic Models to Provide Policy Advice in Response to the BSE Crisis in Canada. *Canadian Journal of Agricultural Economics, 55, 551–564.*

Mitra, D., Amaratunga, C., Sutherns, R., Pletsch, V., Corneil, W., Crowe, S., and Krewski, D. (2009). The psychosocial and socioeconomic consequences of Bovine Spongiform Encephalopathy (BSE): A community impact study. *Journal of Toxicology and Environmental Health, Part A, 72 (17)*: 80-103.

O'Neill, K. (2005). How Two Cows Make a Crisis: U.S.-Canada Trade Relations and Mad Cow Disease. *American Review of Canadian Studies,* (Summer), 295-319.

Schmitz, A. Canadian Agricultural Programs and Policy in Transition. (2008). *Canadian Journal of Agricultural Economics, 56, 371-391.*