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CANADIAN BSE CONTINUES TO DISRUPT THE SUPPLY CHAIN FOR BEEF

*Ellen Kline**

I. INTRODUCTION

IN late August 2006, Canadian officials confirmed the eighth case of Bovine Spongiform Encephalopathy (BSE), known as Mad Cow Disease, in Canada.¹ While the North American Free Trade Agreement (NAFTA) allows free trade in cattle and beef products between Canada, Mexico, and the United States, initial cases of Canadian BSE in 2003 closed the NAFTA border for beef and cattle trade.² This act brought devastating effects to Canadian producers.³ Canada needed a complex set of regulatory measures to deal with BSE and restore trade.⁴ The latest BSE case questions the effectiveness of trade regulations, how BSE regulations impact trade, and what Canada should do to improve NAFTA productivity in beef and cattle.

II. IMPLICATIONS OF NAFTA ON CANADIAN CATTLE TRADING

In 1994, NAFTA removed quotas and tariffs for cattle and beef products.⁵ NAFTA, like other international trade agreements, attempts to reduce the level of risk that arises from these trade barriers so governments can engage in international commerce.⁶ Under NAFTA, governments have voluntarily agreed to limit trade barriers, such as tariffs, by granting preferential trade status to cattle and beef products produced within NAFTA countries, while penalizing goods from the non-NAFTA

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1. Tamsin Carlisle, *Canada Mad-Cow Case Prompts An Inquiry Into Feed Safeguards*, WALL ST. J., Aug. 28, 2006, at A8.

2. ALEXANDER MOENS, MAD COW: A CASE STUDY IN CANADIAN-AMERICAN RELATIONS 19-20, 23 (Fraser Institute Digital Publication 2006), <http://www.fraserinstitute.ca/shared/readmore.asp?snav=pb&id=831>.

3. *Id.* at 48.

4. *Id.* at 23-24.

5. *Id.* at 19.

6. LAURA J. LOPPACHER ET AL., THE BSE CRISIS IN CANADA: A TRADE PERSPECTIVE ON SANITARY BARRIERS at 10 (Estey Centre for Law and Economics in International Trade 2004), http://www.esteycentre.ca/BSE_Crisis_in_Canada.pdf.

members.⁷

Canada utilized NAFTA to build its export market in cattle and beef products.⁸ Cattle exports from Canada to the United States increased “from .5 million [per] head in 1988 to over 1.5 million [per head] in 2002.”⁹ Additionally, beef exports increased “from 200,000 metric tons to over 1 million.”¹⁰ During this time, the industry became so successful that “[b]eef became the second largest foreign exchange earner in the Canadian agriculture sector after grain.”¹¹

The agrifood markets, which include beef and cattle in Canada, Mexico, and the United States, are “tightly integrated.”¹² Because of this integration and in order to meet consumer demands, NAFTA countries depend on food products flowing smoothly across their borders.¹³

III. MAD COW DISEASE CONTINUES TO STRIKE CANADA

A. WHAT IS BSE?

Bovine Spongiform Encephalopathy (BSE) or Mad Cow Disease is a “progressive, fatal disease of the nervous system” that can affect a variety of animals including cows, sheep, deer, elk, cats, mink, and humans.¹⁴ Scientists have not found the causative agent of BSE, nor have they determined why some animals have short, two-year incubation periods while others have incubation periods as long as eight years.¹⁵

The United Kingdom identified the disease in 1986, and an epidemic peaked there in 1993 when 1,000 new BSE cases were reported each week.¹⁶ Scientists believe the disease originated from cows that ate rendered sheep parts with a transmissible spongiform encephalopathy called scrapie.¹⁷ Today, most scientists believe contaminated feed spreads the disease.¹⁸

While clinical signs such as “nervous or aggressive behavior, abnormal posture, lack of coordination or difficulty in rising from a lying position,

7. *Id.*; DANNY G. LEROY ET AL., DISRUPTION IN THE SUPPLY CHAIN FOR BEEF AND PORK: WHAT HAS HAPPENED AND WHAT WAS NAFTA DOING 6 (North American Agrifood Market Integration Consortium (NAAMIC) 2005), <http://www.farmfoundation.org/naamic/sanantonio/leroy.pdf>.

8. MOENS, *supra* note 2, at 2; Press Release, Fraser Institute, US Not Protectionist on Mad Cow, Canada to Benefit from Industry Changes (Mar. 30, 2006) (<http://www.fraserinstitute.ca/shared/readmore.asp?snav=nr&id=719>).

9. MOENS, *supra* note 2, at 2.

10. *Id.*

11. *Id.* at 20.

12. DAVID SPARLING & JULIE A. CASWELL, A NAFTA APPROACH TO ANIMAL HEALTH AND BIOSECURITY: PIPE DREAM OR POSSIBILITY 109 (NAAMIC 2005), <http://naamic.tamu.edu/sanantonio/sparling.pdf>.

13. *Id.*

14. Canadian Food Inspection Agency, Bovine Spongiform Encephalopathy (BSE), <http://www.inspection.gc.ca/english/anim/heasan/disemala/bseesb/bseesbfse.shtml> (last visited Feb. 11, 2007) [hereinafter BSE].

15. LOPPACHER, *supra* note 6, at 4.

16. *Id.*

17. *Id.*; BSE, *supra* note 14.

18. LOPPACHER, *supra* note 6, at 4.

decreased milk production, and weight loss” may appear in animals four to five years after exposure to the disease and last from two to six months before the animal dies, there is no test to diagnose BSE in live animals.¹⁹ A microscopic brain examination after death is the only way to confirm diagnosis of BSE.²⁰ Additionally, scientists believe humans can contract variant Creutzfeldt-Jakob disease (vCJD) by eating BSE-contaminated meat.²¹ The symptoms and diagnosis of vCJD resemble BSE even though there is no scientific evidence linking BSE to vCJD.²² Like BSE, there is no test, no vaccine, and no cure available for humans with vCJD.²³

B. HISTORY OF BSE IN CANADA

Canada made BSE a reportable disease in 1990.²⁴ On May 20, 2003, the Canadian Food Inspection Agency (CFIA) reported that Canada had its first indigenous case of BSE, likely caused by contaminated feed eaten by an eight-year-old Black Angus beef cow.²⁵ Unlike earlier cases of BSE, the cow from Wanham, Alberta was born and raised in Canada.²⁶ Producing for NAFTA and domestic markets for so long left North American producers unprepared when these markets closed due to BSE.²⁷ Over the years, Canadian producers became dependent on foreign market access, especially the United States, and found themselves unable to afford long embargoes on their perishable beef and cattle exports.²⁸

C. CANADA’S LATEST BSE CASES

Two additional cases of Canadian BSE arose in the summer of 2006.²⁹ On July 13, Canadian officials diagnosed a fifty-month-old dairy cow born after the country imposed feed restrictions in 1997; in late August, officials confirmed this was Canada’s eighth case of BSE.³⁰ Additionally, on August 23, Canada confirmed another case of BSE from a cow in Alberta that was between eight and ten years old.³¹ The age of this cow indicates it could have contracted the disease before Canada’s feed ban in 1997;

19. BSE, *supra* note 14.

20. *Id.*

21. LOPPACHER, *supra* note 6, at 5.

22. *Id.*

23. *Id.*

24. BSE, *supra* note 14.

25. MOENS, *supra* note 2, at 23.

26. LEROY, NAFTA, *supra* note 7, at 2.

27. DANNY G. LEROY ET AL., DISRUPTION IN THE SUPPLY CHAIN FOR BEEF AND CATTLE: AN EVALUATION OF POSSIBLE POLICY RESPONSES 59 (NAAMIC 2005), <http://naamic.tamu.edu/sanantonio/leroy.pdf>.

28. *Id.*

29. Greg Quinn, *Canada Food Agency Confirms 8th Case of Mad Cow (Update 1)*, BLOOMBERG.COM, Aug. 23, 2006, <http://www.bloomberg.com/apps/news?pid=newsarchive&sid=afUDtD7cGs1M>.

30. *Id.*

31. *Id.*

nevertheless, it was Canada's fifth case of BSE in 2006 alone.³²

The case of the younger Canadian cow illustrates "the difficulties of enforcing feed bans to curb the spread of the disease."³³ The fifty-month-old cow was the youngest diagnosed with BSE in Canada.³⁴ While most other cases involved older cattle that contracted the disease before the implementation of feed restrictions in Canada, cases in March 1998, January 2006, and July 2006 involved cattle born after the feed ban.³⁵

An investigation by the CFIA found banned ingredients used at a feed supplier and shipped to the animal's farm were the likely cause of the disease.³⁶ Additionally, the CFIA report explained, "[h]ad the animal succumbed to BSE and not to an unrelated disease," mastitis of the udder, "it may have been some time before BSE symptoms would have been noted."³⁷ Some experts argue BSE could infect a cow long before the onset of symptoms.³⁸ But the CFIA "downplayed that possibility" saying the variance of BSE detection "is not significantly different from that of previous cases and indicates exposure to only a very low dose of BSE infectivity."³⁹

IV. EFFECTS OF BSE IN CANADA: DISRUPTION OF TRADE AND BORDER CLOSINGS

The Canadian cattle industry suffered severe monetary losses during the 2003 BSE crisis.⁴⁰ Mexico and the United States, some of Canada's largest consumers, were just two of thirty-four countries that closed their borders to Canadian live cattle and beef products.⁴¹ The extended duration of these border closures raises questions about the effectiveness of international trade agreements, such as NAFTA, which involve managing human and animal health issues.⁴² Many critics also question NAFTA's effectiveness when one diseased cow results in the lengthy closure of thirty-four markets.⁴³ Conversely, while the sudden border closure devastated Canada's cattle industry, it took time to reduce the risk of spreading the disease and to establish regulations to remove specified risk

32. *Timeline of BSE in Canada and the U.S.*, CBC NEWS ONLINE, Aug. 24, 2006, <http://www.cbc.ca/news/background/madcow/timeline.html>.

33. Carlisle, *supra* note 1, at A8.

34. *Id.*

35. *Id.*; CHARLES E. HANRAHAN & GEOFFREY S. BECKER, CONGRESSIONAL RESEARCH SERVICE, MAD COW DISEASE AND U.S. BEEF TRADE 4, CRS Rep. No. RS21709 (2006), available at <http://www.nationalaglawcenter.org/assets/crs/RS21709.pdf>.

36. *CBS News, Alberta cow likely got BSE from infected feed: CFIA*, CBC NEWS, Aug. 25, 2006, <http://www.cbc.ca/canada/edmonton/story/2006/08/25/bse-feed.html>.

37. *Canadian BSE Case May Indicate Testing Regimes Are Missing Infections*, CATTLENETWORK TODAY, Aug. 31, 2006, <http://www.cattlenetwork.com/content.asp?contentid=64684>.

38. *Id.*

39. *Id.*

40. MOENS, *supra* note 2, at 3.

41. *Id.* at 23; LOPPACHER, *supra* note 6, at 3.

42. LOPPACHER, *supra* note 6, at 3.

43. *Id.*

materials (SRMs) from feedlots.⁴⁴

Trade was disrupted dramatically. Canadian slaughter plants refused new cattle, the government stopped beef shipments, the United States returned live animals to Canada, packing plants reduced activities and employees, and cattle truckers and ranchers lost work.⁴⁵ Total farm losses for cattle from 2003 to 2005 reached Canadian \$6 to \$7 billion.⁴⁶ Because exports stopped immediately, 48 percent of production returned to the Canadian market, causing prices to plunge at the farm level.⁴⁷ Prior to the 2003 BSE crises, "approximately 120,000 live cattle per month crossed the border into the United States."⁴⁸ After the border closings, there were approximately 350,000 backlogged cattle which needed to be culled.⁴⁹

NAFTA market integration, border closings, and months without full restoration of trade exacerbated the economic impact of BSE.⁵⁰ Producers, companies, and countries failed to comprehend "the risks generated from market integration in the absence of regulatory integration."⁵¹ Additionally, losing export markets led to a surplus of cattle in Canada.⁵²

The degree to which NAFTA helped integrate the cattle market in North America ultimately came back to hurt Canadian producers.⁵³ The BSE crisis in Canada "demonstrates the devastating effects of this shortcoming on producers of a perishable product who are reliant on export markets."⁵⁴ Unfortunately, governments have been unable to negotiate international trade agreements to prevent similar border closures.⁵⁵

V. THE IMPACT OF REGULATORY MEASURES ON TRADE

Today, complex systems of animal health management in individual NAFTA countries strive to integrate federal, state or provincial, and private activities.⁵⁶ Canada has taken regulatory measures to protect food supplies and animals from BSE.⁵⁷

Even before the first indigenous case of BSE in 2003, Canada had a number of regulations in place. In 1990, Canada made BSE a reportable

44. MOENS, *supra* note 2, at 48.

45. LEROY, NAFTA, *supra* note 7, at 12.

46. MOENS, *supra* note 2, at 48.

47. SPARLING, *supra* note 12, at 126.

48. United States Department of Agriculture, Foreign Agricultural Service [FAS], *One Confirmed Case of BSE in Canada Causes Major Disruption in Trade*, <http://www.fas.usda.gov/dlp2/circular/2003/03-10LP/BSE.html> (last visited Feb. 11, 2007).

49. SPARLING, *supra* note 12, at 114.

50. *Id.*

51. *Id.*

52. KEITH COLLINS, U.S. DEP'T OF AGRIC. (USDA) FACTSHEET, ECONOMIC CONSEQUENCES OF BSE FOR THE NORTH AMERICAN CATTLE AND BEEF INDUSTRIES, (USDA June 9, 2005), <http://www.usda.gov/documents/factsheetKeithCollins.pdf>.

53. LEROY, POSSIBLE POLICY, *supra* note 27, at 59.

54. *Id.* at 59-60.

55. *Id.* at 59.

56. SPARLING, *supra* note 12, at 117.

57. BSE, *supra* note 14.

disease, meaning, “any suspect case of BSE must be reported to a federal veterinarian.”⁵⁸ In 1992, Canada created a surveillance program to test the brains of high-risk cattle for BSE.⁵⁹ Canada’s feed ban in 1997 prohibited feeding “rendered protein products from ruminant animals (cattle, sheep, goats, bison, elk or deer) to other ruminants.”⁶⁰ Before these stricter feed regulations in 1997, both Canada and the United States fed cattle a diet containing these remains as a protein boost.⁶¹ In December of 2000, the CFIA suspended all animal products from other countries that had BSE.⁶² The following year, Canada created an identification program that traced cattle from their original herd to slaughter.⁶³

In 2003, Canada began requiring the removal of specified risk materials (SRMs) from cattle slaughtered for human consumption.⁶⁴ SRMs are tissues in the brain and spinal cord of BSE-infected cattle that may transmit the disease.⁶⁵ But, cattle younger than thirty months do not have SRMs removed because it is unlikely that this meat would be unsafe to consume.⁶⁶ Also from 2003 onwards, to prevent pieces of cranial tissue or brain matter from contaminating meat like in stunning (when a metal object penetrates the brain at high speed), the CFIA only allows electrical or non-invasive techniques for killing and butchering cattle.⁶⁷ Most recently, on June 26, 2006, the CFIA banned SRMs in pet foods, livestock feed, and fertilizer in an effort to accelerate the abolition of mad cow disease.⁶⁸

The U.S. Department of Agriculture (USDA) quickly labeled Canada as the only country in the world with reportable BSE whose beef would still be allowed in the United States.⁶⁹ Many argue this pro-free trade action saved the Canadian beef industry after the BSE crisis of 2003.⁷⁰ The USDA allowed “boneless beef cuts from animals under the age of 30 months [old] . . . back into the United States as early as September 2003.”⁷¹ Additionally, live cattle imports from Canada into the United States resumed on July 18, 2005 after the USDA lifted a twenty-six-month ban on cattle imports.⁷² Since the United States partially re-opened the border, seven more BSE cases have been found in Canada; however, they have not had the same devastating effects on trade as the initial crisis in

58. *Id.*

59. *Id.*

60. *Id.*

61. Carlisle, *supra* note 1, at A8.

62. BSE, *supra* note 14.

63. *Id.*

64. *Id.*; MOENS, *supra* note 2, at 23.

65. BSE, *supra* note 14.

66. MOENS, *supra* note 2, at 23-24.

67. *Id.* at 24.

68. *Timeline of BSE in Canada and the U.S.*, *supra* note 32.

69. MOENS, *supra* note 2, at 49.

70. *Id.* at 48-49.

71. *Id.* at 49.

72. *Timeline of BSE in Canada and the U.S.*, *supra* note 32.

2003.⁷³ Under the USDA's guidelines, "Canada could have some 13 cases of BSE per year in its cattle over 24 months of age and still be able to ship across the border."⁷⁴ Meanwhile, Canada inspects more than 40,000 animals per year, and many experts forecast that with higher inspection levels, more BSE cases could appear in Canada within a shorter time frame.⁷⁵

The BSE crisis of 2003 allowed the United States and Canada to restructure their cattle and beef trading relationship.⁷⁶ "The U.S. government did not break trade law during the recent mad cow crisis, but applied international rules creatively," which quickly restored trade in beef products.⁷⁷ After the border closures, the Canadian meatpacking industry actually increased its capacity 20 percent in 2004 and 5 percent in 2005.⁷⁸

Despite the improvements in the Canadian cattle industry, resuming trade after border closures caused by BSE created an enormous problem for NAFTA.⁷⁹ Even with Canada's 2001 identification program, experts argue that one challenge for BSE case management is North America's inadequate cattle tracing systems.⁸⁰ In addition, while NAFTA partners were the first to re-open their borders to Canada in 2003, when the USDA proposed resuming live cattle trade across the Canadian-U.S. border in March 2005, legal actions by opponents in the U.S. cattle industry delayed the re-opening.⁸¹ These challenges indicate that trade resumption has become an economic and political issue more than an animal and human health issue.⁸²

VI. HOW CAN CANADA IMPROVE NAFTA PRODUCTIVITY IN BEEF AND CATTLE?

The most recent cases of BSE in Canada raise the questions of whether the 1997 feed ban was effective, whether the industry needs better methods to deal with border closures and re-openings, and whether a NAFTA approach to animal health could help the industry.

First, several cows born after the 1997 Canadian feed ban tested positive for BSE.⁸³ These post-feed ban cases illustrate that the Canadian feed problem has persisted. But, experts are uncertain if a total recall of

73. U.S. Not Protectionist on Mad Cow, *supra* note 8.

74. MOENS, *supra* note 2, at 49.

75. *Id.* at 50.

76. *Id.* at 49.

77. U.S. Not Protectionist on Mad Cow, *supra* note 8.

78. MOENS, *supra* note 2, at 3.

79. SPARLING, *supra* note 12, at 126.

80. *Id.*

81. *Id.*; See Ranchers Cattlemen Action Legal Fund United Stockgrowers of Am. v. U.S. Dep't of Agric., No. 05-35264, 2005 U.S. App. LEXIS 17360, at *3 (9th Cir. July 13, 2005) (reversing an injunction prohibiting the USDA from permitting the resumption of Canadian cattle trade with the United States).

82. SPARLING, *supra* note 12, at 126.

83. MOENS, *supra* note 2, at 49.

feed prior to 1997 or stricter compliance standards would have eliminated this problem.⁸⁴ There is also uncertainty about how strictly Canada adhered to or enforced the feed ban.⁸⁵ Experts suggest that to improve productivity, Canada must exceed American compliance rates for feed mills.⁸⁶

In 2003, Canadian cattle suppliers experienced the devastation of depending on export markets for a perishable good.⁸⁷ In addition to improved feed mill compliance, the BSE crisis in 2003 underscored the need for more integration and improved procedures to handle future border closures.⁸⁸ While the Office International des Epizooties (OIE), the world organization for animal health that sets the standards for trade in animals and animal products, "has a protocol to close borders immediately on discovery of BSE or other serious diseases," neither the OIE, NAFTA, nor the World Trade Organization have similar measures to reopen borders and lift trade restrictions when the embargoed country can provide information to other countries for risk assessment.⁸⁹

Canada should also apply its efforts to develop a stronger NAFTA relationship to work with other countries on trade integration and harmonization strategies.⁹⁰ Canada should limit its focus to building stronger relationships with other NAFTA countries including the United States and Mexico.⁹¹ These countries should address harmonizing risk assessments and prevention techniques in the North American market.⁹²

Even though Canada, Mexico, and the United States began exploring options to integrate beef and cattle trade in March 2005, efforts to create stronger international relations with other countries in handling BSE have shown little progress, possibly due to weak rules and political precaution.⁹³ But, individual national approaches no longer protect animal or human health and are incapable of minimizing trade impacts of diseases like BSE to the trade system.⁹⁴ When individual countries lack completely developed animal health systems, it becomes difficult to develop integrated systems between them.⁹⁵ To the contrary, countries tend to shy away from sharing control with other counties on critical issues involving biosecurity and human and animal health.⁹⁶ Therefore, negotiations among a few NAFTA countries seem like the best place to start

84. *Id.*

85. *Id.* at 50.

86. *Id.*

87. LEROY, POSSIBLE POLICY, *supra* note 27, at 76; LEROY, NAFTA *supra* note 7, at 22.

88. LEROY, POSSIBLE POLICY, *supra* note 27, at 59.

89. *Id.* at 76; LEROY, NAFTA, *supra* note 7, at 22-23; LOPPACHER, *supra* note 6, at 19.

90. MOENS, *supra* note 2, at 4.

91. *Id.* at 51.

92. *Id.*

93. *Id.*; LOPPACHER, *supra* note 6, at 20.

94. SPARLING, *supra* note 12, at 110.

95. *Id.* at 131.

96. *Id.* at 118.

integrating trade and animal health procedures.⁹⁷

The bottom line is that “[i]nfectious diseases do not respect national borders,” and increased trade and travel prevents borders from serving as effective disease barriers.⁹⁸ Therefore, countries should strive to implement a NAFTA approach to animal health management that involves coordinated trade policies, market integration, and strategies for “[p]revention[,] [i]nitial response to outbreaks and cases of animal disease[,] and [t]rade resumption after disruption.”⁹⁹ NAFTA countries can coordinate policy, agree to regulatory programs, and harmonize their standards and enforcement mechanisms by making them identical.¹⁰⁰ Because countries such as the United States and Mexico are signatories to NAFTA and have free access to the Canadian beef market, these measures will likely prove most beneficial for Canada.¹⁰¹

VII. CONCLUSION

While Canada implemented trade regulations to manage BSE and restore trade, recent cases of BSE found in cattle born after the 1997 feed ban continue to raise questions about the effectiveness of international trade agreements. Because of the elusive nature of BSE, young cattle infected with the disease increase the risk of contaminated beef entering the food chain. In the event of another trade crisis, Canada must have methods to deal not only with border closures, but also with prompt border re-openings and trade resumption. Finally, Canada should integrate trade strategies with NAFTA countries such as the United States and Mexico to prevent similar crises.

97. LOPPACHER, *supra* note 6, at 21.

98. SPARLING, *supra* note 12, at 112-13.

99. *Id.* at 116.

100. *Id.* at 118.

101. US Not Protectionist on Mad Cow, *supra* note 8.

Updates

