BORDERS IN GLOBALIZATION
Shifting Figurative, Functional and Operational Borders: The Multiple Worlds of Agri-Food and Border Regimes

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Introduction

Alberta’s cross-border relations are further complicated by three fundamental realities. The dispersed character of the province’s export markets, trade and travel corridors are reinforced by basic physical realities of space, population dispersal, and the geographic barrier of the Rocky Mountains. Indeed, fewer than 10 percent of Albertans live within an hour’s drive of the U.S. border, separated culturally, politically, and economically by a mountainous wall to the west and vast distances to the north and east.

A key theme of this special issue swirls around the idea that Alberta’s border lands are “bifurcated;” on the one hand, province-wide priorities are set by a mix of key regional and national economic actors, collectively distilled through policy paradigms set by both federal and provincial authorities. On the other hand, the widely dispersed populations of Alberta’s borderlands have created a series of regional and sub-regional interactions that at once engage federal and provincial policy, but are also frequently driven by diverse local and sub-regional interests. The tensions inherent in the bifurcated nature of Alberta’s borderlands are readily apparent in agriculture. Mass market pressures for scale, consolidation, and market access coexist with countervailing sub-sector and regional pressures in transportation and crop and livestock specialization.

Decades of postwar global integration, punctuated in particular by both regional market integration (notably the NAFTA), and the harmonization and integration of Canada’s domestic political economy have served to poke important holes in Alberta’s bifurcated borders. As the pressures of increasingly globalized processes are bearing down on economic and political systems around the world, they are facilitating the widespread relocation of authority centres away from traditional forms of state-based government.

It is a shift in governance structures that is far more diffuse and more hierarchical than in the past. In some instances, global economic governance, for example, has pooled in international institutions such as the WTO or regional arrangements like the NAFTA. In others, economic governance has become far more localized, often reliant on informal “networks” of actors with functional know-how. For agriculture in particular, shifting governance may entail new actors and priorities; for example, trade-offs between market regulation and increased food safety or environmental sustainability.

Agriculture in Alberta has hardly been immune from these broad trends in the relocation of governance. Indeed, as one of Alberta’s most important economic sectors, agriculture is perhaps best understood as the proverbial canary in the mineshaft signaling structural change. Alberta’s borders have had many different roles in shaping modern agriculture; alternately as barrier to the outside world, as filter for policy regimes, or as symbols of agriculture’s challenges.
Alberta agriculture is shaped by three broad conceptualizations of borders in which a number of distinct policy regimes have unfolded. As the analysis that follows will demonstrate, the majority of Alberta’s agricultural sector is increasingly anchored in a market-liberal policy paradigm, tying it to regional and global markets that transcend Alberta’s varied borders. As depicted in Figure 1, that connectivity, particularly in the context of the commodities boom after 2003, suggests Alberta has been the beneficiary of that connectivity. Yet, that same connectivity brings with it new challenges and vulnerability to trends outside the control of Alberta producers.

[INSERT TABLE I HERE]

Part I of this paper frames the argument by conceptualizing Alberta’s border regimes and their interaction with different policy paradigms that have governed agriculture within. Part II then focuses on the evolution of a number of key policy changes to Alberta’s major crops (wheat, barley, canola, and so-called pulse crops) in recent decades. Each of these changes, coupled with major transformations to both the business of agriculture and to associated transportation sector, have radically transformed the way Alberta agriculture sees itself in the context of the province’s relative geographic, political, and cultural isolation. Part III examines the ways in which a slightly different set of policy changes in livestock husbandry (cattle and hogs), but also shaped by larger pressures of transportation bottlenecks and the pressures of value-added processing, have similarly dragged the livestock subsector into a policy regime that increasingly transcends borders. Part IV will conclude with a brief look at the relatively protected supply management subsectors of dairy, poultry, and eggs. While not a major component of Alberta’s agricultural production, it is, for now, an outlier in Alberta agriculture far more heavily connected to and constructed by Alberta’s bifurcated borders

Part I: Conceptualizing Borders and Policy in Agriculture

Three broad conceptualizations of borders are employed in the examination of Alberta’s agriculture and agri-food sector in this paper; territorial, functional, and paradigmatic. Territorial borders are the political jurisdictional boundaries that encapsulate geographic spaces and are recognized as lines on a map. These boundaries divide jurisdictions and serve to give them the outline of their geographic character. More than simply lines on maps, Alberta’s territorial borders have different political and regulatory content dependent on the regulatory requirements for agricultural products to cross those lines.

For example, Canada’s border with the United States along the 49th parallel is a territorial border and export gateway for Alberta agriculture very different in political and regulatory terms than that separating Alberta from British Columbia, and different still from those characterized by the vast distances to market represented by those boundaries in Alberta’s north and east.
The significance of territorial borders for this analysis relates to the how agriculture and agri-food subsectors interact with territorial borders, in terms of how they are organized and flow both within and across them, and the extent to which market access is conditional for cross-border flows of particular commodities and products. While Alberta’s agricultural subsectors have all of their primary production process within provincial territorial borders in common, there is much variation regarding the transportation, processing, and consumption patterns thereafter. Firstly, in some subsectors the entire production-consumption chain is encapsulated within Alberta. Secondly, others are mostly integrated within the continental space of North America, and thus heavily reliant on relatively unimpeded flows across the US border. Thirdly, some are integrated on a global scale, and involve shipment over vast distances and across multiple territorial borders, before even reaching the processing and consumption stages. Market access is crucial for the latter two scenarios outlined above. Sudden closures (or unpredictability) of territorial borders due to product quality issues and compliance with technical standards, which may vary across national and sub-national jurisdictions, have had profound impacts on subsectors that have experienced them. These events have served to reshape industry structures and trade patterns, and instigate policy reforms designed to improve product perception and quality.

Functional borders give expression to the decision-making authorities in a given policy area. They are shaped by the Constitution and the evolution of federal-provincial, inter-provincial, and international relations. For instance, in Canada agriculture is a shared jurisdiction in accordance with Section 95 of the Constitution. Thus, the provinces also possess the legal latitude to implement their own programs and regulations in the areas of stabilization, credit, research, and production incentives, with the caveat that federal measures take precedence in cases where there is overlap. By contrast, commodity marketing belongs to the federal government, while the provinces possess jurisdiction over agricultural production. Indeed, there is considerable overlap between the two orders of government in the area of agriculture policy, which often makes policy development in agriculture highly complex.

Functional borders also encapsulate processes of governance and policy-making. Policy networks are the subset of policy community actors actually involved in the policy development and decision making process. Moreover, they refer to the character of the relationships between public and private actors that arise in around significant policy issues (Skogstad 2008: 36-37). Skogstad argues that policy network in agriculture has become more pluralist over time (2008: 37). Whereas producer organizations were once fewer in number and more unified ideologically, they enjoyed exclusive relations with government actors in the policy development process. These are ‘closed’ policy networks, which are relatively resistant to dramatic and sudden policy change. However, over time producer organizations fragmented and multiplied, and crucially, became divided along ideological lines. In addition, organizations representing other segments of the production-consumption chain gained admittance into decision making processes. These ‘pluralist’ networks
refer to a context where multiple organizations compete for the favour of government actors in policy development. Pluralist networks are much more susceptible to dramatic and sudden policy change, because government actors are more free to pursue a reform agenda (Skogstad 2008: 39). Alliances among actors that span the production-consumption chain have demonstrated the potential to become particularly influential in today’s pluralist networks.

In Alberta the policy network in the crops sector is pluralist in character. The provincial commodity commissions¹, regional commodity organizations², Alberta Ministry of Agriculture, and the formerly governing Alberta Progressive Conservative Party formed core elements of a broader regional/national coalition³ that pursued market liberal policy reforms. The coalition advocating for preservation of the state assistance model included the Alberta Wheat Pool (AWP), Alberta New Democratic Party, and regional and national allies including the Saskatchewan Wheat Pool, Manitoba Wheat Pool, National Farmers Union (NFU), Canadian Wheat Board (CWB), and federal New Democratic Party. Other organizations (general provincial and federal producer organizations, and the Liberal Party) have joined one side or the other, or sat out the political debates altogether, depending on the issue and circumstances. The agricultural policy community expanded beginning in the 1980s to include organizations representing other elements of the production-consumption chain including food processors, food retailers, and consumers.

The policy network in the livestock sector is less pluralistic than the crops sector. The vast majority of livestock producers support market liberal principles. Similar to the crops sector, the producer commodity organizations (Alberta Beef Producers, Alberta Cattle Feeder Association, and Alberta Pork) adhere to market liberal principles, while the National Farmers Union adheres to the state assistance model. Both coalitions have embraced elements of the multifunctionality model, discussed below, in order to justify their policy measures.

The term paradigmatic border could possibly be used interchangeably with the more widely recognized ‘policy paradigm.’ However, in this instance we are choosing this term to describe the unfolding of policy regimes that have, at the same time, altered the way we conceptualize the meaning of Alberta’s borders. Policy paradigms constitute idea-based frameworks that inform decisions and policy making by governments (Skogstad 2008: 7-16). These frameworks serve to modify the cleavages within society, through the prescription of policy measures that are meshed together to present an overarching logic or single coherent framework. When policy paradigms become embedded in policy networks, they become the

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1 Alberta Grain Commission (AGC), Alberta Cattle Commission (ABC), Alberta Canola Commission (ACC).
2 Western Canadian Wheat Growers Association (WCWGA) and Western Barley Growers Association (WBGA).
3 Federal and provincial commodity organizations and centre-right provincial political parties.
common sense among policy makers and serve as the governing paradigm (Skogstad 2008: 10). Governing paradigms can endure through adjustments to existing policy measures. However, occasionally paradigm change occurs when the governing paradigm becomes destabilized by crisis type circumstances that undermine long-held core assumptions (Skogstad 2008: 11-16). Three distinct forms of policy paradigm have shaped the importance of borders in agriculture and agri-food subsectors in Alberta and are depicted in Table I.

[INSERT TABLE I HERE]

First, the state assistance paradigm holds that farmers are uniquely disadvantaged vis-à-vis corporate interests as described above, however they are also understood to be uniquely vulnerable to natural calamities including pests, disease, and extreme weather events (e.g. hail, flooding, drought) (Skogstad 2008: 9-10). Moreover, farmers are conceived as upholders of noble, traditional values (i.e. hard work, industrious, nuclear family structure), and some versions of this paradigm recognize farmers’ role in preservers of rural landscapes and guarantors of national food security. The key fissure is between farmers and corporate interests, and it is the role of government to smooth out the class conflict through protective policy measures (e.g. subsidies, regulations, tariffs). The state assistance paradigm served as the governing paradigm in the post-World War II period until the early 1980s.

Secondly, the market liberal paradigm holds that farmers are no different from any other businessperson and should be left alone by government as much as possible, in order to allow them to function freely in the marketplace by basing decisions on market forces (i.e. price signals) to strive for efficient and profitable operations (Skogstad 2008: 19-22). From this perspective, the market is an efficient mechanism for allocating scarce resources, and government intervention tends to generate more problems that it can possibly solve. The underlying social cleavage is between government and the marketplace. Since the 1970s, the market liberal paradigm has been the rival to the state assistance paradigm, and has greatly influenced the policy reforms that have been under way since the 1980s. While it is generally accepted that the market liberal paradigm has been highly influential and even dominant, there is disagreement regarding whether it has actually become the governing paradigm in agriculture (Skogstad 2008: 253-54).

Thirdly, the multifunctionality paradigm holds that farmers provide social and environmental benefits to society that are not recognized by the market, such as land stewardship, preservation of landscapes, rural employment and food security (Skogstad 2012, 23). Therefore, government policy should be designed to reward farmers for the full range of benefits that their activities bring to society. Government protections include various types of regulations, tariffs and subsidies, specifically designed to ensure that the social and environmental benefits are perpetuated. Examples include payments for taking sensitive land out of production and environmentally sound production practices. To what extent have “animal welfare” policies come to fit within this paradigm? The primary cleavage is
between farmers and the environment. Elements of the multifunctional paradigm have been adopted in most agriculture and agri-food subsectors.

Part II: Crops

The crops sector border regime has been reshaped by market liberal policy change, with elements of the state assistance paradigm remaining (i.e. stabilization and disaster assistance direct payment programs) and multifunctionality paradigm (i.e. environmental protection direct payment programs) included. As depicted in Figure 2, Alberta farm receipts from crops are dominated by wheat and oilseed production. Indeed, wheat and canola sectors are integrated into the international marketplace, but are highly vulnerable to shipping bottlenecks, not the least of which has been rail transportation. Moreover, wheat and oilseeds annually generate the largest share of Alberta’s overall export revenue—more than $4 billion of the $5.5 billion all of Alberta’s export revenue (see Figure 3).

[INSERT FIGURES 2 AND 3 HERE]

The barley sector is integrated into the continental market and has become particularly important as a feed input for livestock. Specialty crops (i.e. potatoes and sugar beets) comprise a small portion of the Alberta crops sector, and are integrated locally as an input in French fry, potato chip, and sugar production. To be sure, the crops sector is highly diverse in terms of the reach of the subsector production-consumption chains and associated issues.

Wheat

Wheat has been a dominant crop in Alberta from the beginning. The crop made up 50 percent of all crop sales from the early 1970s until the mid-1980s, but declined to around 35 percent by the mid-2010s (Statistics Canada, November 2016). Wheat acreage has averaged 6.4 million acres since 1921, peaking at 7.9 million in 1921 and recording 6.7 million in 2011 (Statistics Canada, December 2016). Finally, wheat has made up over 40 percent of all primary commodity exports in recent years (Alberta Government, 2014) and, although the U.S. is the sub-sector’s largest market, is also comparatively diversified (see Figure 4).

[INSERT FIGURE 4 HERE]

The major issues have stemmed from the wheat sector’s heavy reliance on overseas export markets: rail transportation, grain handling and marketing, efficiency and competitiveness, and finally chronically low and/or variable prices.

The policy network in the wheat sector has become less pluralist among producer organizations but more pluralist among the production chain since the early 1980s. The state assistance coalition was made up of the Alberta Wheat Pool (AWP), Canadian Wheat Board (CWB), and National Farmers Union (NFU), while the market
liberal coalition consisted of the Alberta Grain Commission (AGC), Alberta Wheat Commission (AWC), and Western Canadian Wheat Growers Association (WCWGA). The provincial general farm organizations, the Unifarm, Wildrose Agricultural Producers (WRAP) and now Alberta Federation of Agriculture, have served as centrist voices. The market liberal coalition has become more dominant over time, with the disappearance of the AWP and CWB. The presence of representatives from throughout the production chain - plant breeders, grain handling facilities, ethanol processors, and even chambers of commerce - in the policy development process, has meant that producer organizations are no longer the only voice being heard in wheat subsector (Skogstad 2008: 39). Thus, a new dynamic in policy development is reaching consensus across the production-consumption chain.

Policy reforms since the early 1980s have reshaped the wheat sector to mostly reflect the market liberal model. A major turning point was the reform of grain transportation subsidies, which were designed to maintain the East-West orientation of the wheat subsector in order ship it to overseas markets. The Crow's Nest Pass Agreement was established in 1897, to subsidize the rail transport of grain from the Prairies to export terminals in Thunder Bay, Churchill, Vancouver, and Prince Rupert (Fowke 1946: 244). However, criticisms that the Agreement was actually an impediment to diversification because it encouraged farmers to enhance the scale of their cultivation, coupled with pressure from the railways, led more Alberta stakeholders into the coalition of interests arguing for reform.

After a protracted political battle, the federal government implemented the Western Grain Transportation Act (WGTA) in 1985. Under the WGTA an annual payment known as the Crow Benefit by the federal government to the railways (Skogstad 1987: 147-148). The WGTA used distance-based freight rates and the freight rates were linked to grain prices, and specialty crops and specialty crop products were included in the statutory freight rates. The WGTA attracted the similar criticisms to the Crow Rate, and was eventually terminated in 1995 (Doan et al 2006: 2-3). Grain transportation policy reform also resulted in the abandonment of branch lines by the railways (Wipf 2013: 33). This cut off the lifeblood to the country elevators, which destabilized the wheat pools. As a result, all three pools undertook major restructuring. The AWP merged with the Manitoba Pool Elevators (MPE), to form the grain company known as Agricore in 1998. The disappearance of the AWP weakened the state assistance coalition in Alberta’s wheat subsector.

The post railway transportation subsidy era, saw several issues with railway service issues case bottlenecks for wheat shipments and freight rate costing issues cause significant economic duress for producers. The Estey review (1998) and Kroeger commission launched in the late 1990s resulted in caps on revenue the railways

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\(^4\) Distance-based freight rates meant that all delivery points with the same hauling distance to port had the same maximum rate per tonne, regardless of whether it was on a low-cost mainline or high-cost branch line.
could earn from shipment of regulated grain, expansion of CWB tendering for grain shipments, funding for grain roads as compensation for branch line abandonment, and a permanent Grain Monitor to track system performance (Monteiro and Robertson 2014). When problems re-emerged in the late 2000s-early 2010s, the federal government implemented the Maximum Revenue Entitlement (MRE)\(^5\), the Fair Rail for Grain Farmers Act, a Canadian Transportation Act review, the Fair Rail Freight Service Act, and the introduction of Transportation 2030 strategic plan, which will include reciprocal penalties (Government of Canada 2016).

The end of East-West transportation subsidies combined with the establishment of the Canada-US Free Trade Agreement (CUSTA) in 1989 and North American Free Trade Agreement (NAFTA) in 1993, made the US a more attractive option for wheat farmers (Wipf 2013: 130). This new dynamic put pressure on the CWB’s single desk system, which required producers to participate in an administrative process to sell their wheat on their own in the US. The political conflict between the market liberal and state assistance coalitions over the CWB’s single desk, continued throughout the remainder of the 1990s and 2000s. The US created further conflict for the CWB by shutting down imports of Canadian wheat, which were overturned two years later after Canada launched successful trade challenges. The tide turned on the CWB when the Conservative party won its majority government in Ottawa terminated in August 2013. The CWB ceased to exist altogether by August of 2015. The CWB had been the focal point of a mandatory system of orderly marketing, designed to sell high protein wheat varieties into premium markets. The CWB reform was intended, in part, to promote more entrepreneurship among wheat farmers and local value added enterprises.

In 2008 the kernel visual distinguishability (KVD) system was ended by the federal Conservative government. KVD had allowed producers and grain handlers alike to readily identify each wheat class in accordance with its visual characteristics. The end of KVD permitted plant breeders to develop new wheat classes without regard for visual appearance. At the same time, a new catch-all Canadian Western General Purpose (CWGP) class was introduced, which was designed to include wheat with different end-use characteristics. Most notably, new wheat varieties with low protein and high starch content have been introduced, which are ideal for local livestock and ethanol production chains.

The reform effort also included changes to the system of quality assurance centred in the Canadian Grain Commission (CGC) in 2009. Changes to the Canada Grain Act have resulted in several reforms to the CGC’s functions. First, the system of mandatory inward inspection designed to check for grain quality and safety, and to ensure grades and weights are accurate and fair, was privatized. Private companies can be hired to conduct this function on a voluntary basis. Second, the security bond system for licensed elevators was replaced with an insurance based system to cover

\(^5\) Limits the amount of revenue that the railways can earn from shipping Prairie grain.
grain company defaults to producers who deliver to them. Finally, user fees were increased in accordance with usage of CGC services, which are aimed at having the industry pay 90 percent of the CGC’s costs.

The introduction of the Agricultural Growth Act in 2015, revised nine federal acts including the Plant Breeders Rights Act (PBR). PBR was revised to place it in accordance with the international seed convention known as UPOV ‘91, which grants plant breeders increased intellectual property protection, in order to encourage new investment in the development of seed with improved genetics, productive potential, and characteristics. The change is designed to ensure that Canadian grain can compete effectively for market share against large competitors such as the US, Australia, and Russia.

The border regime for wheat includes a figurative border that is shaped by the market liberal paradigm with elements of the state assistance paradigm, the territorial border is international and diverse, and the functional border is shaped by measures designed to generate diversification and effective rail transportation, to ensure competitiveness for market access and capture. Another original Alberta grain, has been more local and continental in the character of its market integration.

Barley

Barley has historically declined in importance relative to other crops grown in Alberta, losing market share to canola, pulses, and specialty crops. In the early 1970s barley made up almost 25% of all farm crop sales, but just 6 percent by 2013-15. Barley production peaked at 6.5 million acres in 1981, but declined to 3.6 million acres in 2011. Almost 80 percent of barley grown in Alberta, is used for livestock feed. Moreover, barley has made up just 3 percent of all raw commodity exports and malt barley made up 5 percent of all agri-food exports in the 2010-14 period. Half of all malt barley exported from Canada is grown in Alberta. Malt barley is exported to the US, Japan, South Africa and South Korea. The barley subsector had always been more regionally and regionally oriented than wheat. Barley has served as a major input (i.e. feed stock) in livestock production in the Prairie region. The most significant issue facing the barley sector has been the health of the livestock sector. In recent years, high demand for beef products and microbrewery beer has in turn generated high demand and higher prices for barley producers.

The barley policy network has historically been less pluralist among producer groups, than the wheat network. The state assistance coalition was the same as with wheat: AWP, NFU and CWB. The market liberal coalition included the AGC, Alberta Barley Commission, and Western Barley Growers Association (WBGA). The policy network had become heavily tilted to the market liberal side, after the AWP and CWB had disappeared by the mid-2010s. As with wheat, the policy network now involves other members of the production chain, including grain handlers and processors.
Barley for human consumption fell under the CWB’s single desk. After the establishment of the CUFTA, the Mulroney PC government attempted to remove barley from the CWB’s single desk in August 1993, through a regulation change. A continental barley market (CBM) was established for a 40 day period before the Prairie wheat pools launched an injunction. The legal action ultimately overturned the move, because the change had to be done through amendment to the CWB Act. During that period a record amount of barley left Alberta for the US market. Once the CBM was shut down, the flow of barley was reduced and Alberta farmers alleged that they received 50 percent less, per bushel, for their barley. However, the pro-single desk sided contended that the price of barley plummeted in this period. The event served to embolden the market liberal coalition in its pursuit of ending the CWB’s single desk.

The Alberta government introduced feed grain subsidies (which included barley) in the mid-1980s to offset the effects of the Crow Benefit. The subsidies resulted in significant growth of the cattle and beef processing subsectors within the province. The barley sector production-consumption chain is integrated into the larger North American cattle sector. The remainder is turned into malt for beer production, which is sold both domestically and into the United States. Malt barley production is concentrated in Southern Alberta, and the US is a major market for the value-added product.

The border regime for the barley subsector has important distinctions from the wheat subsector. The figurative border of the barley subsector is shaped mostly by the market liberal paradigm, while the territorial border of the production-consumption chain is mostly integrated within continental North America; in part, the impact of the figurative border on barley hinges on product end-use and product specification for either mass market or specialty brewers.

Canola

Canola has become a major crop in Alberta agriculture. As depicted in Figure 5, since 2000 canola has assumed a growing share of Alberta’s overall crop production. In the 1970s, canola made up just 10 percent of farm sales. Today, it is close to 45 percent of all crop sales.

**[INSERT FIGURE 5 HERE]**

Canola acreage has skyrocketed from 740 thousand acres in 1976, to over 6 million acres in 2011. The crop has contributed almost 35 percent of all raw commodity exports. Canola/mustard oil (crude and refined) and oilseed cake/meal made up

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over 25 percent of all agri-food exports in the 2010-14 period. In recent years the top markets for Alberta’s canola have been China, Japan, Mexico, and Pakistan.

Market access has been the canola subsector’s biggest challenge. The advent of, and controversy surrounding, genetically modified (GM) seed technology has created barriers in markets where decision makers and consumers are not yet comfortable with it. Concerns regarding potential adverse human health and environmental impacts, have created barriers for canola export market growth. While episodes of border closures have continued, more and more countries are reducing their barriers to canola imports. The other major issue facing the canola sector has been rail transportation bottlenecks. Grain, oilseeds, and pulse producers have achieved some success in having the federal government implement policy reforms.

The canola policy network is also titled heavily to the market liberal side among producer organizations. The main state assistance producer organization is the NFU, while the Alberta Canola Producers Commission (ACPC) is the main market liberal producer organization. The canola sector is highly integrated across the production-processing chain at the national and provincial levels. The ACPC is a member of the larger Canadian Canola Growers Association on the production side and the Canola Council of Canada on the processing side. These organizations work closely together to articulate a common market liberal oriented view in policy debates as demonstrated by their collaboration through the Canadian Agri-Food Trade Alliance (CAFTA) in recent trade negotiations.

Canola experienced rapid grown in the Prairie agriculture sector. It has been grown in Alberta since the 1990s, and became a dominant crop within the decade. Canola was a main beneficiary when railway transportation subsidies were terminated and producers began looking for options for diversification. Over 90 percent of all canola grown in the Prairie region is Roundup Ready canola, which is genetically modified (GM) to be resistant to glyphosate herbicide. GM canola is sold abroad in a diverse set of foreign markets including China (40 percent), Japan, Mexico, and Pakistan, where it is processed for cooking oil, biodiesel and livestock meal. Canola is also sold locally to crushing facilities located in Camrose, Lethbridge and twelve other communities in Western Canada. Canola crushing plants purchase local canola, and process it into oil and meal before selling it in domestic and export markets. Genetically modified canola has run into several market access problems. The European Union has only recently opened its market to GM canola for biodiesel production and for meal for the dairy sector. Canada is also involved in negotiations over amounts of GM residue that can be allowed (low level presence) in shipping containers of non-GM products. Finally, China recently imposed penalties on shipments of Canadian canola, citing excessive “dockage” (an industry term for materials other than grain in shipments).

The border regime for canola is similar to the wheat subsector. The figurative border is shaped mostly by the market liberal paradigm with elements of state
assistance; the territorial border is international; and the figurative border is shaped by transportation policy and measures designed to improve market access.

**Pulse and Speciality Crops**

Alberta producers have been growing more pulse crops than ever before. The pulse crop category includes dried peas, edible beans, lentils and chickpeas. Pulse crops in Alberta have increased from just over 15,000 acres in 1976 to almost 765,000 acres in 2011. This category of crops made up well under 1 percent of all Alberta farm crop receipts until the early 1990s, when they moved up to just over 3 percent where they have remained ever since. Pulse exports are sent to a wide range of destinations, which include the Middle East, Asia, Russia, Europe, and the United States. The pulse policy network in Alberta is market liberal leaning and includes the provincial producer organization, Alberta Pulse Growers Commission (APGC), and two organizations representing the entire production chain, Pulse Canada (PC) and the Canadian Special Crops Association. The NFU weighs in on pulse sector issues from the state assistance perspective. The significant issues facing the pulse sector include rail transportation, competition for acres within Alberta, and competition for market access abroad.

The potato and sugar beet subsectors form a small proportion of Alberta’s total crop sector, but are important in the Southern region of the province. This geographic location offers ideal growing conditions: sunshine, low humidity, and cool nights. Irrigation is another key component to the primary production process. Potatoes have increased in acreage in Alberta, from 28,000 acres in 1921 to 53,000 in 2011. Processed potatoes made up just over 6 percent of Alberta’s agri-food exports in the 2010-14 period. Alberta is the lead seed potato exporter in Canada, and along with Prince Edward Island and New Brunswick form just over 75% of Canada’s seed potato exports. The largest export markets are the US, Asia, and Mexico. Canada is the fifth largest seed potato grower in the world. Seed potatoes in Alberta are grown primarily for export to markets located in the US and Mexico and more recently Thailand. Albert’s potato industry contributes over $1 billion to the provincial economy.

The policy network in the potato subsector is highly integrated throughout the production change. The Potato Growers of Alberta (PGA) represent producers and the Alberta Potato Industry Association (APIA) represents the other players in the production chain. Process potatoes make up the large majority of the potato crop, and are sent to nearby processing facilities: French fry facilities owned by McCain, Lamb-Western, and Maple Leaf; and, potato chip plants including the Old Dutch and

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Frito Lay plants. Each processor contracts with individual producers. The production contract is the central mechanism in these producer-processor relationships. The biggest issues facing the potato sector include the increasing incidence of crop disease (i.e. potato blight) and waning consumer demand due health concerns.

The sugar beet subsector in Alberta is by far Canada’s largest. Since 1980, sugar beet acres planted has averaged over 30 thousand acres, with tonnage harvested averaging just over 500 thousand in the early 1980s and reaching over 700 thousand since the late 1990s. Sugar beets also benefit from Southern Alberta’s unique growing conditions. The landlocked location inside the natural Rocky Mountains provides the warm days and cool nights that serve as the ideal growing condition for the encouragement of high sugar concentration. Sugar beets are a water sensitive crop, which means that irrigation is essential. This crop is Canada’s only home grown source of the sweetener. The entire 2012 crop was grown from GMO seed.

The sugar beet policy network is ‘closed,’ consisting of the Alberta Sugar Beet Growers (ASBG) and the Lantic Inc. processing plant located in Taber. This closed network is bound by a production contract between the sugar beet marketing board that collectively represents the sugar beet producers and the Lantic Inc. processing plant, which is the only sugar beet processing plant in Canada. The latest agreement was signed in May 2015, and will operate for a period of four years. The production contract functions within a system of supply management, which involves matching supply with demand.

Key issues facing the sugar beet sector include the state of the contractual relationship between producers and the Lantic Inc. processing plant, and the ability to expand trade with the US and other markets. The U.S. market is perennially limited by high sugar tariffs and export quotas that heavily restrict direct Canadian exports to that market, although sales to export-oriented Canadian food manufacturers do indirectly facilitate some U.S. market access.

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The border regimes for the pulse and sugar beet sectors are similar, while the pulse border regime more closely resembles the canola subsector. The sugar beet figurative border is shaped by the state assistance paradigm, while the potato and pulse borders are shaped by the market liberal model. All three are characterized by highly integrated policy networks with involvement from throughout the production chain. The territorial border on the primary production side for potatoes and sugar beets is shaped primarily by the local integration of the production chain, but is shaped by the global export markets for pulse. The territorial border for the potato processed side is global, but national for sugar beets. Finally, the functional border is shaped by the supply management system and market access for sugar beets, research for crop disease prevention and market share competition for potatoes, and transportation and market share competition for pulse.

Part III: Livestock

The border regimes found in most of the livestock sector (cattle and hogs) are predominantly market liberal, with elements of state assistance and multifunctionality paradigm. The production-consumption chain of the livestock sector is mostly contained within the continental North American market. Of course, some production is shipped to a range of overseas markets, but the bulk of trade involves the Canada-US border. The shorter transportation routes for live animals, and animal-related processed products are carried by semi-tractor trailers. There are fewer bottlenecks in the trucking system, due to the multiplicity of roads and entry points into the US. However, there is greater dependency on the free flow of goods across the Canada-US border. Border closures have been the response to problems regarding livestock sector’s most significant vulnerability: animal health and food safety. Animal health problems have resulted from diseases spread through animal feet, contact with infected wild or domesticated environment. The dairy, poultry, and egg sectors comprise an anomalous segment of the livestock sector, with a border regime shaped by the state assistance supply management system. Although the continued political viability of supply management (more below) appears to be in doubt, it nonetheless serves to stretch the range of border regime types found in Alberta agriculture and agri-food.

Cattle

Alberta’s cattle sector is the largest in Canada, and a critical part of the province’s overall agricultural production—after wheat, the most valuable sub-sector by farm receipts (see Figure 5 and 6).

[INSERT FIGURE 6 HERE]

Yet, while the cattle sub-sector is still heavily dependent on U.S. market access for export earnings, it is also a changing export environment (see Figure 7) with other
countries becoming important markets in their own right. Importantly, as depicted in Figure 7, export earnings to non-U.S. markets have grown more rapidly than those to the U.S.

**[INSERT FIGURE 7 HERE]**

Cattle/calves made up almost 70 percent of all farm livestock sales in 1973-75, and increased to almost 80 percent in 2013-15. Overall, cattle/calves have made up an average of 40 percent of all raw commodity farm sales since the early 1970s. Live cattle made up over 11 percent of all raw commodity exports, while beef and veal exports made up just over 30 percent of all agri-food exports. Roughly 70 percent of Alberta’s beef exports have gone to the US since 2010, with Hong Kong and Mexico making up almost 10 percent, and Japan almost 5 percent.

The policy network in the cattle sector is also tilted toward the market liberal side. The market liberal coalition has been comprised of the Alberta Cattle Commission (ACC), Alberta Cattle and Calf Producers Association (ACPA), and Alberta Beef Producers (ABP), and the Canadian Cattlemen’s Association. The state assistance organization is the NFU. The main issues for the cattle sector are animal health and market access—both brought into sharp relief by the so-called BSE Crisis of 2003-05 in which bovine spongiform encephalopathy (Mad Cow Disease) was found in an Alberta herd. That period resulted in a dramatic drop in demand due to the closure of global markets to Canadian beef exports, and those to the U.S. in particular.

In the aftermath of the BSE crisis, export markets for Alberta beef products have diversified significantly. Rising demand from the growing middle class in Asia have helped to bolster cattle and beef prices and diversify markets (see Figure 7). The cattle industry and federal and provincial governments have implemented elements of the multifunctionality paradigm - programs and regulations regarding animal health, food safety, and environmental sustainability – in order to achieve social license with consumers.

Alberta’s cattle subsector is mostly integrated within larger North American cattle industry. The Alberta PC government believed that the development of the province’s livestock sector faced a serious impediment as a result of artificially high grain prices due to transportation prices and the CWB. Therefore, it introduced subsidies designed to lower feed grain prices and promote development of the beef processing subsector. The result was significant growth in Alberta’s cattle numbers, and development of cattle processing facilities.\(^\text{12}\) For instance, 40% of Canada’s cattle herd is located in Alberta\(^\text{13}\), or instance, 69% of Canada’s fed cattle production


occurs in Alberta. And two-thirds of Canada's cattle slaughter capacity is located in South-Central Alberta.

The establishment of the Canada-US Free Trade Agreement (CUFTA) in 1989 and North American Free Trade Agreement (NAFTA) in 1993, resulted in large increases in the movement of cattle and processed beef products across the Canada-US border throughout the 1990s and early 2000s. For example, live cattle from Alberta were shipped to the US for fattening at feedlots and processing into beef products. Some of the beef products are shipped back for sale in Canada. Alberta also exports processed beef products into the US. Over this period, the Canadian cattle and beef sector became integrated into the larger North American cattle and beef sector. Put another way, the vast majority of Canada's cattle and beef sector was contained within continental North America.

The extent of dependence on the US market that had developed by 2003, and served to shift to cause a shift in the territorial integration pattern of the cattle sector from the continental to the global marketplace. In late May 2003 a single cow on a farm in Northern Alberta was infected with bovine spongiform encephalopathy (BSE), followed by a second cow infected with BSE from Canada discovered in Washington State. The US immediately closed the border to all imports of Canadian cattle and beef products; in all, some forty countries also closed their borders to Canadian cattle and beef. Although the US border was partially reopened in July 2005 and almost completely reopened to cattle and beef products in November 2006, Alberta has yet to see a return of pre-2003 trade volumes.

The US market also became more challenging for the Alberta cattle and beef sector, because of the Country of Original Labeling law (COOL) that the US government introduced in 2002, but did not become fully implemented until 2009. COOL was designed to provide consumers with information regarding where the fresh beef, pork and lamb products originated. COOL raised costs and [cause consumer discrimination] required U.S. processes to establish separate processing streams for Alberta cattle producers and processors. In response, the Canadian government launched four separate WTO trade challenges (May 18, 2015; October 20, 2014; June 29, 2012, and November 18, 2011), alleging that COOL unfairly violates the trade obligations of the United States toward Canadian importers. Canadian cattle and beef regained importers regained full access to the US market, after the US Congress repealed the law in December 2015.14

In the aftermath of BSE and COOL, the Canadian cattle subsector began to recognize the newly emerging values among consumers regarding food safety, animal welfare, and environmental sustainability. The industry realized that it needed to adopt elements of the multifunctionality paradigm in order to build trust with consumers. Therefore, the cattle industry adopted the term ‘social license,’ in reference to its

relationship with consumers. The term had been employed by the mining and oil sectors since the mid-1990s, in an attempt to overcome negative public perceptions for the purposes of building support for projects such as pipelines. The Canadian Federation of Agriculture (CFA) defines social license as the “ongoing level of acceptance, approval and trust of consumers regarding how food is produced.” Social license is not only a method for gaining domestic public acceptance, but crucially, public acceptance in foreign markets.

In order to institutionalize multifunctionality principles, the Alberta government established the Alberta Livestock and Meat Strategy 2008-2013, with the aim of making Alberta known as a producer of high quality, differentiated products. Also, the federal government implemented the Safe Food for Canadians Act in 2012 paralleling major elements of the U.S. Food Safety Modernization Act of 2011. The Canadian Act was designed to ensure stronger food safety rules, more effective inspection, commitment to service and more information transparency for consumers. Another federal initiative was the Canadian Food Inspection Agency’s (CFIA) multi-year review, aimed at improving and modernizing regulatory frameworks through greater consistency and reduced complexity. Moreover, in July 2016 the federal government announced a $6.4 million investment in Canada Beef Inc., an organization funded by producers responsible for international beef and veal market development in Asia, Europe, Latin America, and North America. Finally, the Canadian cattle sector held its first Canadian Beef Industry Conference in August 2016, where the topic was prominent in the aftermath of Earl’s ‘Certified Humane’ controversy. The CFIA negotiated mutual recognition agreements with the U.S. Food and Drug Administration (FDA) for certain processed foods in 2015. However, although U.S. Department of Agriculture (USDA) inspectors have processes to certify Canadian meat processing facilities exporting to the United States, USDA has not been overly receptive to similar mutual recognition arrangements.

The border regime for the cattle subsector is characterized by a figurative border shaped mostly by the market liberal model, with stronger elements of multifunctionality included in recent years. The territorial border is mostly shaped by the subsector’s integration into the continental North American market. Finally,

15 [Link](http://search.proquest.com.login.ezproxy.library.ualberta.ca/canadiannews/docview/1811047637/34A2A4E2D601409FPQ/3?accountid=14474)

16 [Link](http://www.cfa-fca.ca/node/2262)


18 [Link](http://search.proquest.com.login.ezproxy.library.ualberta.ca/canadiannews/docview/1806006848/3E66CB775A63464EPQ/9?accountid=14474)
the functional border is shaped by measures designed to ensure market access and increase consumer demand both in domestic and export markets.

Hogs

Hogs have made up 17 percent of all farm livestock sales in 1973-75, and dropped to almost 8 percent in 2013-15 (see Figure 3 and Figure 5). Almost all live hog exports are sent to the US for processing. Pork exports have made up just over 10 percent of all agri-food exports in the 2010-14 period. The hog sector has undergone significant restructuring over time. The province of Alberta ended single desk selling of hogs through the Alberta Pork Producers Development Corporation (APPDC) in 1996. Producers are now able to sell their hogs directly to the meat packers. The hog sector underwent significant restructuring again in the 2006-11 period. The COOL law which became effective in 2009-09 US and the H1N1 (aka ‘Swine’ flu) outbreak in 2009 also resulted in border closures to Alberta hogs. As a result, the number of hog farms decreased by over 45 percent and number of hogs decreased by 32 percent in Alberta. Today Alberta pork exports are destined mainly for Japan, US, China, Mexico, and Russia. The policy network for the hog subsector is comprised of the main producer organization, Alberta Pork and the Canada Pork Council. The Alberta Hog Exchange (AHE) is a non-profit organization that some farmers belong to, which assists with the selling of their hogs.

The devastation of animal health related issues, has forced the industry to be extra vigilant. For example, there have been multiple outbreaks of Porcine Epidemic Diarrhea (PED) since 2014 in PEI, Quebec, Ontario, and Manitoba. Alberta used funding available in the Growing Forward II federal-provincial agreement, to develop a multifunctionality food safety program. The $1.35 million program designed to improve the Pork industry’s biosecurity measures was implemented in 2014.19 The project involved the training of 28 veterinarians to perform on-farm audits designed to identify areas where PED is capable of spreading, 400 onfarm bio-security assessments, 300 farm-service provider (e.g. transport companies) assessments, and education. The effectiveness of the program was demonstrated by the discovery of PED in Alberta for the first time on August 2nd, 2016, on a livestock trailer returning to Canada from Wisconsin.20

The border regime for the hog sector includes a figurative border shaped by the market liberal paradigm. The territorial border for live hogs is continental, but for processed pork products it is international. The functional border is shaped by measures focussed on food safety and market access.

19 http://www.alberta.ca/release.cfm?xID=36267CAB5AF10-A49C-7E9F-05F3133CE0DC768C
Part IV: Supply Management

The dairy, poultry, egg sectors comprise a relatively small segment of Alberta’s agriculture sector, and are also small relative to those in provinces like Ontario and Quebec. Thanks to supply management, Alberta poultry and egg producers have enjoyed stable producers while dairy farmers have seen comparatively rapid year-on-year growth (see Figure 8).

[Dairy has made up between 5-8 percent of all farm sales since the early 1980s, while poultry and eggs have made up between 3-5 percent. The policy networks for these subsectors are highly integrated across the production chain, through the supply management (SM) system. Supply management is anchored on three core pillars: 1) production controls, 2) administered pricing, and 3) border restrictions. Each province obtains a portion of the national allocation of production, and the provincial marketing boards then allocate production to individual producers. At the core of the policy network in each subsector are Alberta Milk (AM), Alberta Chicken Producers (ABC), Alberta Hatching Egg Producers, and the Egg Farmers of Alberta (EFA). The board of each organization allocates the provincial production share. The end product is then sold to local processors and retailers. These sectors have also embraced elements of multifunctionality, promoting the local character of the product, food safety, and animal welfare.

The most significant issue facing the dairy, poultry, and egg subsector, is the continued political viability of the supply management system. There are long-standing fears in sub-sectors protected by supply management that market liberalization, driven primarily by Ottawa’s pursuit of trade agreements like the Comprehensive Economic and Trade Agreement (CETA) with Europe, will undermine the supply management system. Among consumer groups, the end of supply management would herald additional competition, and perhaps efficiency among Canada’s domestic producers. Indeed, under the CETA, higher import levels for some European dairy products are the likely result. There have also been concerns raised by producers about the future of supply management as a result of the Trans Pacific Partnership (TPP), although the recent election of Donald Trump has calmed those fears for the time being.

At bottom, there have been some market liberal adjustments since the 1980s (e.g. dairy subsidy termination), but the core principles of supply management remain intact—for now.

The border regime for the dairy, poultry, and egg sectors is a significant outlier relative to the subsectors discussed above. The figurative border is shaped by the state assistance paradigm, but is under significant pressure as a result of Ottawa’s pursuit of reciprocal market access through trade agreements. The territorial border for these subsectors is mostly provincial. The functional border is shaped by
the system of supply management, and the preservation of this system is the most important issue facing these subsectors.

Conclusion

Alberta’s agriculture sector is characterized by significant diversity amongst its commodity subsectors. The examination of the subsector border regimes has revealed that a highly complex mix of factors has evolved to shape each, since a programme of market liberal policy reforms began in the 1980s. The market liberal paradigm is predominant in terms of its support within the policy community, and its influence on policy development. Key state assistance organizations and policy measures have disappeared. Remnants of the state assistance model can be found in the safety net subsidy programs that remain, and the system of supply management that makes the dairy, poultry, and egg sectors anomalous relative to the rest of the agriculture sector. There is significant difference in the territorial distances that span the production-consumption integration of the different subsectors: wheat and canola are integrated internationally, cattle and barley are integrated continentally, and dairy, poultry, and eggs are integrated locally. These dynamics shape the dominant issues and policy measures in each subsector. Border closures, railway transportation bottlenecks, and animal diseases have made market access, railway regulations and food safety policy measures major areas of focus.

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### Table I: Borders and Regimes by Commodity

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- Listed in order of influence

**Figure 1:** *Alberta, Total Value of Farm Receipts by Commodity Type, Annual Dollars (x1000)*

**Figure 2:** *Alberta, Percentage Share by Commodity of Total Value of Farm Receipts*
Figure 3: Alberta, Total Value of Exports By Commodity, Annual Dollars (x 1000), 2010-2014
Figure 4: Alberta, Total Value of Wheat Exports by Destination Country, Annual Dollars (x 1000), 2010-2014

Figure 5: Total Value of Farm Receipts by Major Commodity, Annual Dollars (x 1000) 1971-2015

Figure 6: Alberta, Total Value of Beef Exports by Destination, Annual Dollars (x 1000), 2010-2014
Figure 7: Alberta, Percentage Share by Destination Country of Total Value of Beef Exports, 2010-2014

Figure 8: Alberta, Total Value of Farm Receipts by Supply Management Commodity Type, Annual Dollars (x 1000)