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Pulling up Roots: Border-crossing and Migrancy on Southern Alberta's Irrigation Frontier

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ONE OF THE MOST ICONIC images of early twentieth-century prairie childhood is the Rogers' Syrup pail, repurposed as a lunch bucket and toted by many rural children on their daily excursions to and from school. Rogers Sugar played a major role in satisfying the region's sweet tooth through the Depression and beyond. Today, following its merger with Montreal-based Lantic Sugar, the company continues to supply the prairies with many of its sugar products. Lantic's Taber, Alberta-based sugar beet processing plant has managed to survive in the fiercely competitive global sugar industry due in part to the blessings of geography: its beet sugar serves markets that imported cane sugars cannot easily reach without incurring significant transportation costs. Geography also supplies another ingredient vital to the production of sugar beets: water. The need for a plentiful and reliable supply of this resource leads the story of the sugar beet into a dense tangle of history, geography, culture, and politics that criss-crosses the Canada-US border, thereby confounding tidy delineations of nature and nation.

The southern Alberta region where most of Canada's sugar beets are grown has long been a site of hydraulic anxiety. In the mid-nineteenth century, when geographic expeditions led by John Palliser and Henry Youle Hind made their way through the region that is now southern Alberta, both men concluded it was too dry for agricultural settlement.[1] Less than a century later, however, satellite views show significant parts of the region to be a patchwork of green, signs of immense human determination to overcome arid conditions through technological means. In particular, the ability to

[1] Doug Owram, *The Promise of Eden: The Canadian Expansionist Movement and the Idea of the West 1856–1900* (Toronto: U of Toronto Press, 1992), 67.

make an apparent desert blossom has resulted from the apportioning of waters from two waterways that cross the 49th parallel—the St. Mary and Milk Rivers—via massive irrigation schemes begun in the late nineteenth century. Historically, the terms of Canada-US water sharing in this cross-border region have been governed by a 1921 Order of the International Boundary Waters Treaty, but in 2003 the state of Montana submitted a formal request to the International Joint Commission to review the 1921 Order.[2] The matter remains under review, and as climate change heats up the region and demands for irrigation increase, some researchers predict that international conflict over these waters is likely to increase.[3] This does not bode well for Alberta's sugar beet industry, which is tremendously reliant on irrigation.

In what follows, I will consider how the literature of sugar beet work might bring us into contact with this place's history and the paradoxes that make it a site of rootedness and mobility, aridity and fecundity, and sweet and sour encounters with the nation-state. By looking at a series of texts by well-known Canadian writers whose works are marked by time spent in southern Alberta, we can begin to see how this place has long been embedded in and produced by cross-border networks of people, technology, policy, and ecology, many of which existed well before the NAFTA era. Although the sugar beet has never managed to become much more than a bit player on the stage of Canadian agriculture, when examined from an eco-cultural perspective it serves as a valuable metaphor for exploring a series of transnational flows—of geography, capital, technology, and human and nonhuman life—that will need to be better understood if future environmental challenges are to be met equitably and sustainably.

As an agricultural field crop, the sugar beet has two prominent defining features. First, for most of its history the sugar beet has been an extraordinarily labour-intensive fieldcrop. Before scientists developed monogerm beet seed in the 1960s, each seed ball sown established multiple seedlings that required extensive thinning by hand and careful weeding several times throughout the growing season. As one beet company official put it, "every

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[2] R. Halliday and G. Faveri, "The St. Mary and Milk Rivers: The 1921 Order Revisited," *Canadian Water Resources Journal* 32.1 (2007): 76.

[3] Stewart B. Rood, "Comment on 'The St. Mary and Milk Rivers: The 1921 Order Revisited' by R. Halliday and G. Faveri, *Canadian Water Resources Journal* 32.1: 75–92," *Canadian Water Resources Journal* 32.4 (2007): 332; Natural Resources Canada (NRCAN), "From Impacts to Adaptation: Canada in a Changing Climate 2007: Chapter 9.4, Continental Effects (North America)," http://adaptation.nrcan.gc.ca/assess/2007/ch9/4_e.php (accessed July 14, 2009).

[…] plant must be kneeled to,"[4] a demand that might reasonably lead observers to wonder who is cultivating whom in this relationship.[5] The second defining feature of sugar beet cultivation is, as was previously mentioned, its demand for a plentiful supply of water; without the guarantee of the predictable flows provided by irrigation, the investment required to plant and harvest this crop—each plant of which is composed of approximately 70 per cent water—could scarcely be justified.

It is with water that our story of transnational flows begins, for it was not Canadians, but *Americans* who provided most of the labour and technical ingenuity needed to harness the flow of mountain waters for human use in southern Alberta. The Americans involved were Mormons, a group that came from Utah and had extensive experience with irrigation in the dry American West, and that in the late 1880s was seeking reprieve from persecution under the 1882 Edmunds Act, an anti-polygamy initiative that made plural marriage a federal felony in the United States. The Mormon wish to set up a northern colony fit well with the Canadian government's desire to establish a firm agricultural base along its southern border regions in order to discourage American thoughts of annexation. In the 1890s, Canadian government officials, in conjunction with private railway interests, met with Mormons under the leadership of Charles Ora Card and struck a deal by which the latter group would construct an irrigation project along the St. Mary River in exchange for land scrip and cash.[6] The resulting canal diverted water from the St. Mary River to Lethbridge, thereby facilitating the agricultural settlement of the Northwest Coal and Navigation Company's 20,000-acre land grant from the Canadian federal government. At the same time, this arrangement also served the Mormons' larger political interests, for, as Peter Morris points out, "the church's cooperative work with the Canadian government toward developing irrigated agriculture in southern Alberta gave it a significant foreign ally whose support Mormon leaders found helpful in dealing with the

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[4] Jim Norris, *North for the Harvest: Mexican Workers, Growers, and the Sugar Beet Industry* (St. Paul: Minnesota Historical Society, 2009), 24.

[5] Michael Pollan makes a good case for thinking about humans less as unilateral agents who manipulate the plant world to meet our own desires, than as partners in co-evolutionary relationships whereby plants also use us to further their own genetic propagation. See *The Botany of Desire: A Plant's-Eye View of the World* (New York: Random House, 2001), xiii–xxv.

[6] Alex Johnston, *Lethbridge: From Coal Town to Commercial Centre: A Business History*, Occasional Paper No. 31 (Lethbridge, AB: Lethbridge Historical Society, 1997), 15–16; Cardston and District Historical Society, *Chief Mountain Country: A History of Cardston and District* (Calgary: Friesen Printers, 1978), 151.

US government, with whom their relationship continued to be tenuous."[7] Raymond, Alberta became the site of the first large irrigation project in the region, and home to its first sugar factory, funded by Utah industrialist Jesse Knight and constructed with the aid of American technical expertise. From very early days, then, the securing of the southern Alberta frontier for Canadian corporate and government interest relied not only on US water, but also on US government policy and American citizens' technological and social investment. The story of Canadian irrigation history is thus profoundly interwoven with the history and politics of the US West, and on either side of the border it is a story based at least as much on political calculation as economic necessity.[8]

These early developments would go on to establish a long-term pattern whereby the sugar beet industry and Canadian federal policy worked hand-in-hand to secure both nature and geopolitical borders for capitalist accumulation. Arguably the most well-known Canadian literary example of this convergence of interests appears in Joy Kogawa's 1981 novel *Obasan*, in which interned Japanese Canadians are dispatched to southern Alberta to work in the sugar beet fields to satisfy both the industry's need for inexpensive labour during wartime and the federal government's desire to "secure" the West Coast against Japanese military threat. Kogawa's protagonist Naomi Nakane, her brother Stephen, and her Uncle and Obasan live out the end of the Second World War and several years following in a place the narrator describes as "the edge of the world": the Lethbridge district of southern Alberta.[9] They sleep, cook, and eat in a poorly insulated shack by night and work row upon row of beets under the hot sun by day. When she recounts her time spent in the beet fields to her Aunt Emily in Toronto, Naomi's descriptions of ecological management at the micro-level serve as metaphors for the macro-level management of a population deemed unruly and unnatural:

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[7] Peter Morris, "Charles Ora Card and Mormon Settlement on the Northwestern Plains Borderlands," in *The Borderlands of the American and Canadian Wests: Essays on Regional History of the Forty-ninth Parallel*, ed. Sterling Evans (Lincoln: U of Nebraska Press, 2006), 177.

[8] As Lawrence B. Lee points out, Canadian irrigation history was not developed out of the inevitable or natural spread of American farming practices into a similar environmental frontier; rather, it was the result of consciously promoted activity; see "The Canadian-American Irrigation Frontier," *Agricultural History* 40 (October 1966): 272.

[9] Joy Kogawa, *Obasan* (Toronto: Penguin, 1983), 240. Further page references will appear in parentheses within the text.

> It's hard, Aunt Emily, with my hoe, the blade getting dull and mud-caked as I slash out the Canada thistle, dandelions, crab grass, and other nameless non-beet plants, then on my knees, pulling out the extra beets from the cluster, leaving just one to mature, then three hand spans to the next plant, whack whack, and down on my knees again, pull, flick flick, and on to the end of the long long row and the next and the next and it will never be done thinning and weeding and weeding and weeding. It's so hard and so hot that my tear glands burn out. (216)

Kogawa's breathless text offers readers a taste of the relentless monotony of trying to force natural multiplicity into homogeneous form. In contrast to the neat sugary roots she is forced to tend as a child, Naomi grows up to claim a very different kind of cultural and ecological belonging for herself and her fellow internees in the soil of Canada, thus affirming a weedy identity that stubbornly grows in those places the powerful have overlooked:

> We come from the country that plucks its people out like weeds and flings them into the roadside. We grow in ditches and sloughs, untended and spindly. We erupt in valleys and mountainsides, in small towns and back alleys, sprouting upside-down on the prairies, our hair wild as spiders legs, our feet rooted nowhere. We grow where we are not seen, we flourish where we are not heard, the thick undergrowth of an unlikely planting. (248)

For Naomi, narrating her experience becomes a way of resisting a dominant story wherein both nature and humans must be secured for the efficient accrual of profit. Further, by affiliating herself and her people with weeds, Naomi also asserts the value of forms of growth and attachment to Canadian landscape that do not necessarily result from rootedness in the traditional sense. Many weeds, for example, are effective precisely because they are able to propagate themselves via some of the very practices designed to eradicate them: when bindweed is cut with a hoe, for instance, its roots break easily, resulting in the development of even more offshoots than existed previously. Instead of uprooting the pesky weed, the hoe becomes a tool of human-aided cloning.[10] Thus, while Kogawa's description of Japanese Canadians as "the thick undergrowth of an unlikely planting" initially seems

[10] On this point see Michael Pollan, "Weeds Are Us," in *Nature Writing: The Tradition in English*, ed. Robert Finch and John Elder (New York: W.W. Norton, 2002), 1083.

to present readers with a paradox (for who would intend to plant a weed?), it is also informed by the ecological insight that plants classified as weeds generally tend to be especially well-adapted to places *created*—whether consciously or not—by humans. Weeds then can be understood as products not of the wild, but of the very civilization that later rejects them as alien.

Although Japanese Canadian detainees are the most widely known group to have worked in Alberta's sugar beet fields during the war and immediate post-war years, they were by no means the industry's only source of labour. When the interned Japanese Canadians were released from the beet fields in 1945, the labour niche they left behind was filled by a series of other newcomers, including a large group of refugees whose homes (mostly in Eastern and Central Europe) had been ravaged by the war and its aftermath.[11] Meanwhile, some of those who had begun work in the sugar beet industry during the Depression after escaping upheaval in their homelands (Russians, Czechs, Poles, and German Mennonites, for example) proceeded to subcontract more recent arrivals from their own social groups to tend irrigated field crops including sugar beets.

An example of the post-war trends in the beet industry can be found in the experience of Rudy Wiebe, whose family moved in 1947 from their struggling northern Saskatchewan bush farm to Coaldale, where he enrolled in school one grade ahead of Joy Kogawa. In his 2006 memoir *Of This Earth*, Wiebe describes how in order to make a living during their early years in the district, his family joined recent Russian Mennonite immigrants in the beet fields. He recalls that sugar beet work was deemed socially appropriate for a kid whose worn-out overalls quickly earned him the nickname of "Barnyard" (along with "bohunk" and "schmo") in the town school, and his first summer in the region was spent hoeing and thinning a portion of the 30,000 acres of sugar beets grown in the Lethbridge district. The latter task, Wiebe notes, was particularly punishing, for "only on your knees with your bare fingers could you properly single them down" into regularly spaced individual plants.[12] While such work was challenging for a boy in his early

[11] For example, see Sylvia Brown's account of German expellees (sometimes referred to under the larger category of "Displaced Persons" or "DPs") who were first brought to the Lethbridge area to provide labour on local beet farms in 1948, in "Voices from the Borderlands: The Problem of 'Home' in the Oral Histories of German Expellees in Canada," in *Refractions of Germany in Canadian Literature and Culture*, ed. Heinz Antor *et al*. (Berlin: Walter de Gruyter, 2003), 39–40.
[12] Rudy Wiebe, *Of This Earth: A Mennonite Boyhood in the Boreal Forest* (Toronto: Knopf, 2006), 380. Further page references will appear in parentheses within the text.

teens, he recalls that it exacted a more severe physical toll on his mother: "I whined but never wept, though I know my mother did: the pain in her misshapen bunioned feet, her bent back" (381). In Wiebe's account the most memorable thing about sugar beet labour is its ability to reduce the human to *only* a body, a cog in a machine designed to satisfy the sweet tooths of those able to afford this luxury good: "Bend down into long acres of sugar beets, you gradually became a distant bump, nameless under the scorching sun" (380). The human body and the landscape are thus fused by a joint imperative: to produce as much beet sugar per acre at as low a cost as possible. Despite the allure of its product, the cost of production remained a major concern for the Canadian sugar beet industry through the mid-twentieth century; to be competitive on the world market the industry's costs had to equal or better that of cane sugar, a fact that had considerable material implications for those men, women, and children out in the fields.[13]

By the 1950s, Canadian Mennonite families like Wiebe's had established themselves economically and moved on from this type of work, and once again the beet industry found itself starving for labour. In these years Mennonites from Mexico—many of whom were Canadian citizens but who had left Canada as a result of school disputes on the prairies in the 1920s—sought to return to Canada, driven by restrictions on new land purchases in Mexico, severe drought, and church tensions.[14] Their attempts to obtain work in the beet industry were hindered, however, because the federal government had already set a new labour scheme in motion. In the post-war years, the Indian Affairs Branch, in co-operation with the Federal-Provincial Farm Labour Committee, recruited status First Nations people to work in the southern Alberta beet industry. In Louise Halfe's poem "Sugar Beat," we hear the voice of a worker who has been transported by chartered bus up to 1000 kilometers from northern Alberta or Saskatchewan to work for six to eight weeks before returning home.[15] The poem's title puns upon the rhythms of field work, the wear-and-tear it inflicts upon the body, and the "neighborhood" in which such a spell of duty is carried out.

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[13] On this point see Elizabeth Abbott, *Sugar: A Bittersweet History* (Toronto: Penguin Canada, 2008), 302.

[14] T.D. Regehr, *Mennonites in Canada, 1939–1970: A People Transformed* (Toronto: U of Toronto Press, 1996), 135.

[15] Halfe's poem appears in *Bear Bones and Feathers* (Regina: Coteau, 1994). Page references refer to this edition.

Halfe's poem opens with a series of place-names laid out in a downward slope across the page from left to right, mimicking both Southern Alberta geography and the physical structure of the irrigation canals that nurture its patches of green. The names of the towns (Lethbridge / Taber / Raymond / Coaldale [56]) may differ from one another, but in the monotonous experience of the Aboriginal field worker, "Day all da same. / Busting my ass / hoeing down dem weeds / 'tween sugar beets" (56). As the poem's speaker works in the fields, s/he complains about the poor pay given for such back-breaking labour: "Eight quarters a hour / for a friggin' sun burn. / Me durns dar black" (56). As the Aboriginal worker toils under sun that turns his or her skin "dar black," one sees the gradual erasure of his or her material difference from the cane worker in the tropics whose labour power is also caught up in the same competitive industry. The line between worker and slave is thus shown by Halfe to be fine one, as the gap separating Canadian labour practices from those of earlier colonial practices shrinks under the hot sun and wind of southern Alberta. Readers of Halfe's poem will also note the repeating pattern of poor housing conditions and the use of child labour established in Kogawa's novel; while the Indian Affairs Branch was mandated to look out for the well-being of First Nations people, their relative working conditions typically fell well below acceptable standards.[16]

What Halfe's poem makes less explicit, however, is the presence of another factor underwriting the procurement of Aboriginal labour: as Ron Laliberte points out, "the most effective tactic the Canadian state used to induce Aboriginal people to migrate to southern Alberta was to terminate social assistance benefits on northern reserves and in Métis communities during the summer when the need for hand labour in the sugar beet fields was the greatest."[17] This suggests that speaker's labour in Halfe's poem may have been procured more by the stick of government policy than the carrot of a good labour opportunity. As the poem's speaker finally sits down after payday to "Eat bobcorn / and watch / Kemo sabe / Lone Ranger," we are presented with the irony of stories that present the North American West as a mythic place of self-reliance, individual enterprise, and freedom from institutional control. What irrigation history makes clear, as Donald Worster so convincingly demonstrated in his 1985 study *Rivers of Empire*, is that

[16] Ron Laliberte, "The 'Grab-a-Hoe' Indians: The Canadian State and the Procurement of Aboriginal Labour for the Southern Alberta Sugar Beet Industry," *Prairie Forum* 31.2 (Fall 2006): 313.
[17] "The 'Grab-a-Hoe' Indians," 311.

water control and elaborate forms of social control have always been powerfully interconnected.[18] Worster notes that particularly in the North American West, canals have historically ended up engineering much more than the flow of water: "People here have been organized and induced to run, as the water in the canal does, in a straight line toward maximum yield, maximum profit."[19]As a key product sustained by the hydraulic system, the sugar beet serves as a useful index of the Canadian government's hierarchy of interests along the southern Alberta border. At the same time, the story of sugar beets and irrigation also complicates standard narratives of Canadian agricultural settlement as working along a dominant east-to-west axis. While the CPR did bring many settlers west to farm the dry lowlands of southern Alberta, reading this region through the lens of sugar beet history alerts us to the extent to which it is also a product of flows of technological, knowledge, and labour flows running from south to north (Mormons), west to east (Japanese Canadians), and north to south (First Nations). And more broadly, reading representations of prairie agriculture within a hemispheric context affords a nuanced understanding of capital and its mechanisms, illustrating how such mechanisms can connect and homogenize economies and cultures while also fostering uneven development.[20]

Although one might conclude that the southern Alberta irrigation frontier was built systematically on the exploitation of one marginalized group after another, hearing the stories of Kogawa, Halfe, and Wiebe also reminds us that the actual experiences of the actors involved were often more complex than a strictly linear framework suggests. Members of the Plains Cree, for instance, had been working in the sugar beet fields of southern Alberta since at least the early 1900s, but, during the Depression, such workers' seasonal or part-time employment opportunities were steadily eroded as the industry began to favour new European immigrants who had no reserves to retreat to when the hard work, long hours, and low pay became intolerable.[21] After the Second World War, however, Aboriginal labour once again became attractive as other labour pools evaporated.

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[18] Donald Worseter, *Rivers of Empire: Water, Aridity, and the Growth of the American West* (New York: Oxford U Press, 1985).

[19] *Rivers of Empire*, 6–7.

[20] I take this point from Hsuan L. Hsu's "Literature and Regional Production," *American Literary History* 17.1 (2005): 47–48.

[21] Abbott, *Sugar: A Bittersweet History*, 308. After enduring several years of wage-cutting and poor accommodations, Depression-era sugar beet workers eventually formed a union in the off-season of 1934 and went on strike in both 1935 and 1936. This resulted in slight wage increases, but most

Similarly, although the Japanese Canadian presence in southern Alberta is often associated with the Second World War, Kogawa's novel makes clear that some families of Japanese descent had been present in the Lethbridge region "from the time of the coal mines and the construction of the railroad and the establishment of the North West Mounted Police in Fort McLeod."[22] As David Iwassa points out in his study of Japanese-Mormon interaction in Southern Alberta, Japanese entrepreneurs sought opportunities to take up sugar beet farming in the Raymond District and solicited advice from Mormons in Utah as early as 1908, and many Japanese Canadians later went on to become sugar beet growers themselves, taking up key positions in the industry. Further, although economics and racism were undoubtedly the dominant factors that brought the "evacuated" Japanese Canadians to the sugar beet fields of southern Alberta, Iwassa also suggests that the Mormons' own experiences of forced displacement only a generation earlier, along with their experience of living alongside and even intermarrying with Japanese Canadians prior to the war, may have made them more willing to accept the internees into their communities than were citizens in other communities experiencing similarly acute labour shortages.[23] Wiebe, too, expresses ambivalence about living in the region in the years following the Second World War, noting that although his family was economically marginalized relative to many of Coaldale's more settled residents, the town also afforded him cultural experiences that would prove extremely valuable to his long-term development as a writer. These included the opportunity for daily interaction with peers from twenty-two different nationalities (who spoke at least twenty other languages) at the Coaldale Consolidated School, and access to two libraries that nurtured his later efforts to span this immense physical space with his own words.[24]

While the experience of First Nations workers in the sugar beet industry was often influenced by government paternalism and coercion,

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of the union's gains were eroded during the Second World War, when the beet-growers' association and the Rogers Sugar Company lobbied successfully to bring in Japanese Canadian workers. See Warren Caragata, *Alberta Labour: A Heritage Untold* (Toronto: James Lorimer, 1979), 119–20.

[22] *Obasan*, 222.

[23] David B. Iwassa, "The Mormons and Their Japanese Neighbours," *Alberta History* 53 (Winter 2005): 20. Further, Iwassa reads the relatively low rates of repatriation to Japan by Alberta Japanese (as compared to the rates for Japanese Canadians in British Columbia) as a possible sign that these people had more hope for a good future in Canada alongside their Mormon neighbours than did their counterparts in British Columbia (19).

[24] *Of This Earth*, 384–86.

especially in the post-war years, once Native workers acquired experience in the industry many returned each year on their own to work in the irrigation districts after the government-sponsored recruitment program came to a halt.[25] This is not to suggest that the work in any way became less physically demanding, nor does it compensate for the fact that wages and working conditions in many cases remained poor, but it suggests that Aboriginal peoples did come to exercise some agency over their own labour power. Halfe's poem thus invites us to consider the longstanding presence of Native people in the history of Canadian wage labour, and points to their ability to persevere amidst the trials of travel, substandard accommodations, and poor wages.

Detailed information about the current state of seasonal agricultural workers in Alberta is difficult to come by, but in comparison with Ontario, which receives 90 per cent of Caribbean and Mexican seasonal workers and temporary foreign workers from elsewhere, the number of such workers employed in Alberta remains small.[26] However, as Josephine Smart points out, the presence of such workers in rural Alberta communities may be known but not felt because of a combination of factors including language barriers, long working hours, prior experiences of discrimination, and rural remoteness.[27] Further, like all other waged agricultural workers in Alberta, seasonal agricultural workers are excluded from the province's statutory framework governing employment relations. This means that farm and ranch employees are not subject to minimum wage provisions, or to rules governing overtime, vacation pay, rest periods, child labour, health and safety standards, or workers' compensation. Workers in this category are also exempted from legislation that regulates unionization and collective bargaining.[28] Even where mechanisms for dealing with dispute resolution

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[25] Ron Laliberté and Vic Satzewich, "Native Migrant Labour in the Southern Alberta Sugar-beet Industry: Coercion and Paternalism in the Recruitment of Labour," *The Canadian Review of Sociology and Anthropology* 36.1 (1999): 8.

[26] As an example, in 2002 Alberta hosted 195 Mexican migrant workers under the Seasonal Agricultural Workers Program. Alberta labour researcher Bob Barnetson points out that although there is no data available concerning the current composition of Alberta's waged agricultural workforce, anecdotal evidence suggests identifiable subgroups include aboriginal, non-aboriginal, and Mexican Mennonite workers with Canadian citizenship, as well as Mexican and Caribbean seasonal workers and temporary foreign workers from elsewhere ("The Regulatory Exclusion of Agricultural Workers in Alberta," *Just Labour: A Canadian Journal of Work and Society* 14 (Autumn 2009): 65.

[27] Josephine Smart, "Borrowed Men on Borrowed Time: Globalization, Labour Migration and Local Economies in Alberta," *Canadian Journal of Regional Science* 20.1–2 (1997): 151–52.

[28] Barneston, "The Regulatory Exclusion," 53–54.

do exist, their highly legalistic frameworks and individualized outcomes mean that few workers benefit from using them.[29] Workers who already find themselves on the fringes are thus even further marginalized by government policies specifically designed to limit their inclusion in regulatory frameworks meant to ensure equity. Critics suggest that overall trends showing increasing flows of seasonal migrant agricultural workers to Canada indicates the strategic use of global human resources by Canadian businesses in a climate of rising global economic competition and persistent economic inequality between countries and classes.[30] Further, the way migrant workers tend to be treated in comparison with other entities flowing across the border—including water and genetic technologies—highlights the way in which border control practices enforce the nation state as a space of differential inclusion that caters to particular interests. As Nandita Sharma points out, such practices "are less about restricting access to the territory of the national state than about differentiating those within it while obfuscating the source of the discrimination faced by workers named as foreigners."[31] The differential status of belonging accorded to various cultural and natural actors within the same geographical boundaries highlights the fact that, although the nation state may outwardly promote a discourse of multiculturalism, its policies often favour capital accumulation over genuine social *or* biological diversity.

While Kogawa's, Wiebe's, and Halfe's stories of sugar beet work collectively point to the need to critically question how the concept of "multiplicity" has been applied to *culture* in Canada, I would suggest that these texts prompt reflection about how ideas of multiplicity and diversity might be more rigorously applied to our ideas of *nature* as well. Gesturing beyond modernist conceptions of "mononaturalism" and "multiculturalism," these texts draw attention to the ways in which nature and society form complex, relational collectivities that cannot be reduced to one category or the other.[32] We cannot say that the sugar beet, for instance, belongs solely within the domain of a pre-existing "nature," for its cultivation is as much a product of elaborate forms of geotechnical and social engineering as it is an outgrowth

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[29] "The Regulatory Exclusion," 56.

[30] See, for instance, Smart, "Borrowed Men," 158.

[31] Nandita Sharma, *Home Economics: Nationalism and the Making of "Migrant Workers" in Canada* (Toronto: U of Toronto Press, 2006), 145.

[32] For more on the inadequacies of both mononaturalism and multiculturalism as frameworks for understanding politico-ecological problems, see Bruno Latour, *The Politics of Nature: How To Bring the Sciences into Democracy* (Boston: Harvard U Press, 2003).

of river waters, soils, and climate; at the same time, the literary treatments of sugar beet work outlined above blur easy distinctions between botanical and human forms of agency. Further, these literary accounts remind us of the human consequences of attempts to reduce multinatural collectivities to structures designed to separate insiders from outsiders—whether natural allies from enemy aliens, local streams from foreign glaciers, or domesticated plants from "wild" weeds. Canadian sugar beet stories are neither unconditionally sweet, nor exclusively national; when we pull at the stems of these accounts, we find the cultural history of the beet industry attached to geographies, technologies, and histories that stretch well beyond provincial and national borders.

While my discussion of the intracontinental flows leading to the production of one fieldcrop illustrates the extent to which things like labour forces and flows of water can be (and have been) extensively engineered, I want to conclude by briefly considering two emerging components within the technonatural assemblages of Alberta sugar beet production that may end up resisting attempts human attempts to control them. As Steve Hinchliffe explains, attempts to "secure" nature for our own use are always underwritten by two related, yet often overlooked principles: first, attempts to order provide conditions for disorder; and second, attempts to order are themselves already complex and heterogeneous practices that relate to many other practices.[33] We see both of these principles at work in the evolving story of irrigation agriculture in southern Alberta against the backdrop of climate change, for even as water demands in the region continue to rise, the overall annual flows of both the St. Mary and Milk Rivers are declining as a result of diminishing snowpacks and glaciers in the Rocky Mountains. To get an idea of the changes afoot, consider the following statistics: in 1850 Glacier National Park in Montana had 150 glaciers; in 2005 it had 27; by 2050 it is expected to have none.[34] These unnerving numbers suggest that in the coming years, some new stories of cross-border co-operation will have to be written to reckon with the scale of the projected changes wrought by global warming.

The recent arrival of a second technonatural phenomenon across the Canada-US border—genetically-modified sugar beets—also brings new layers of complexity to existing relationships among nature, agriculture,

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[33] Steve Hinchliffe, *Geographies of Nature: Societies, Environments, Ecologies* (London: Sage, 2007), 122–23.

[34] NRCAN, "From Impacts to Adaptation."

and politics in the region. In 2009 Round-Up Ready beets were planted in Alberta for the first time following Lantic Sugar's controversial decision to accept GM beets in their sugar products.[35] Despite the potential risks associated with granting a single corporate entity such a large measure of influence in the Canadian sugar beet industry, farmers have largely welcomed the flow of this new technology across the border because it is reported to reduce the number of herbicides and applications required to keep weeds under control, and is expected to eliminate nearly all of the hand-weeding formerly necessary to support the growth of the uncompetitive beet plant.[36] According to a September 2009 report in the *Alberta Farmer*, Round-Up Ready beets were forecast as the "Cinderella crop" of the 2009 harvest.[37] However, a recent court challenge in the US may keep the GM-beet crop out of American soil in 2010, as organic farmers and food safety advocates have charged that the USDA approved Round-Up Ready beets without adequate assessment of potential environmental impacts such as genetic contamination and herbicide resistance.[38] What was initially a welcome cross-border migrant for the Canadian industry may therefore yet prove a liability for the industry if US courts rule that the migration of pollen from GM beets to conventional crops presents an undue threat to the livelihood of beet growers using non-GM varieties. Hence, even as Canadian farmers attempt to reduce the number of variables affecting their ability to produce a successful crop, the promise of simplicity embodied in a technonatural fix brings with it a host of unforeseen new complexities. From genetic patents, to water, to workers, then, the challenges ahead are as dauntingly complex as the stories behind them. Literature, I would argue, offers one important means of reminding us of these complexities—indeed, the fact that the stories growing out of one sugary root *are* so tangled is perhaps precisely why we should pay more attention to them.

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[35] Roundup Ready sugar beets were widely grown for the first time in the United States in 2008. For more on the introduction of GM-beet technology to Canada from an environmental perspective, see Cindy Green, "Canadian Sugar Company Chooses Genetically Modified Sugar Beet," Canadian Biotech Action Network, www.thegreenpages.ca/portal/bc/2009/04/canadian_sugar_company_chooses.html (accessed October 14, 2009).

[36] For more on the impacts of the 2008 launch of Roundup Ready beets in the United States, see Christy L. Sprague, "Roundup Ready Sugarbeet: An Industry Changing Trait," *North Central Weed Science Society Proceedings* 63 (2008): 94.

[37] Helen McMenamin, "Harvest turning out 'not too bad' across south," *Alberta Farmer* 6.20 (28 September 2009): 11.

[38] Mitchell Hartman, "Bitter Fight Developing Over Sugar Beets," *Marketplace,* November 19, 2009, http://marketplace.publicradio.org/display/web/2009/11/19/pm-beets/.