

Occupational Health and Safety on Family Farms in Alberta

Study Report



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Acronyms

COR	Certificate of Recognition
ERS	External Responsibility System
ES	Employment Standards
IRS	Internal Responsibility System
OHS	Occupational Health and Safety
PPE	Personal protective equipment
SECOR	Small Employer Certificate of Recognition
TFWP	Temporary Foreign Worker Program
WCB	Workers Compensation Board

Terminology

This report uses the language of Alberta farm and ranch legislation and Statistics Canada to characterize farms, recognizing that there are limitations to these labels and categories.

“**Family farms**” represent the bulk of farms in Alberta. This umbrella term refers broadly to farms that are family-owned and –operated. The term ‘family farm’ is broad and includes farms of different sizes (by acreage, presence and number of employees, income, etc.). Family farms can further be broken-down into the following categories:

<p>“Family-only farms” do not depend on any external, non-family hired labour. Within this category, there are farms that pay salaries to family members (farms with family employees), in contrast to farms with no family employees.</p>	<p>“Small farms”: The Alberta government defines small farms, for the purposes of OHS, WCB and ES legislation labour and WCB requirements, as farms with “5 or fewer waged, non-family, long-term employees. On the day that the 6th employee has been employed for 6 months, the farm stops being a small farm” (1).</p>	<p>“Large farms”: Using the default definition of ‘small farm’, large farms are farms with 6 or more waged, non-family, long-term employees (1).</p>
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‘**Exempt farms**’ is a term used in the study to denote farms that are not required to follow most OHS, WCB or ES requirements. In 2020, exempt farms included both **family-only farms** and **small farms**.

Summary

Why we conducted this research

Alberta farm safety requirements have changed in recent years, but debates about how government workplace health and safety rules should apply to family farms are not unique to Alberta. Most Canadian provinces do not require farms without hired labour to follow workplace health and safety rules (OHS, WCB). In 2015, the Alberta government passed the *Enhanced Protection for Farm and Ranch Workers Act*, extending WCB insurance coverage, OHS, and some Employment Standards (ES) legislation to Alberta *waged, non-family* farm and ranch employees. New 2020 legislation changed coverage for farm employees again; farms with five or fewer full-time employees are not currently required to comply with OHS and ES, or provide WCB or private insurance coverage. The study focused on Alberta's farm and ranch health and safety rules because there was a unique opportunity to understand what these changes to farm safety rules have meant for the farm population, most of which is centered around family farming.

How we conducted the research

This independent study took place in 2018-2019, involving an in-depth qualitative health research approach. There were 37 interview participants in total for this study, namely, farm operators, their family members, farm employees, safety and industry organizations, worker advocates, and government regulators. We explored diverse perspectives about how to prevent injury on family farms in order to inform farm OHS policies. It is important to note that the purpose of the study was *not* to measure or assess farm-level safety practices, OHS compliance, or rates of farm injury/illness.

What we found

Attitudes towards health and safety are changing on family farms: There has been a shift away from relying on previous experience and “common-sense” for safety. Participants in this study (farm operators, family members, and workers) viewed unsafe work as unacceptable. A number of factors have led to these changes, including generational changes; exposure to the OHS system through off-farm employment; and farm safety initiatives and associations in Alberta such as AgSafe, government farm safety grants, and farm safety education programs (i.e., Farm Safety Center).

Dissonance between what participants said and what they did: While participants from family farms placed a high value on farm safety, farm-level safety practices and behaviours varied. Younger adults within farm families (i.e., people in their 30's) were often in favour of adopting farm ‘formal’ OHS standards such as hazard identification, specific safety protocols (emergency plans, PPE, etc.), and using personal protective equipment. There was also a mismatch between employee and employer perspectives on OHS: Employers saw farm operations as largely ‘safe’, whereas employees reported hazardous conditions, injuries and illness and did not normalize these patterns.

Views on OHS exemptions for family farms and small farms are not monochromatic: There was support for ‘special rules’ (i.e. partial inclusion) for small and family-only farms under OHS, WCB, ES legislation. However, participants took varied perspectives on what shape these rules should take. Most participants indicated that ‘blanket exemptions’ for farms and ranches were misaligned with developing and improving farm OHS. Farm employee participants—even those who had incurred injuries and illness from working on small farms—defended special rules for small farms, often from their vantage-point as small farm operators.

Long hours of work and overtime: Fatigue and overwork were risk factors in agriculture for both family-only operations and farm employees. Working long hours can lead to accidents, chronic injuries/illness, and disability. In particular, farm employees reported incurring chronic injuries from overwork that farm employers and their family members did not. Employment Standards legislation aims to provide a basic ‘floor’ of work standards, including rules on breaks, hours of work, and premium pay for overtime hours. There is an underexplored connection between injury prevention and hours of work in agriculture, which merits greater attention.

Employee health, safety, and farming opportunities: Farm employees in the study were from family farming backgrounds and several were operating their own small farms in addition to full-time farm employment. While farm operators, family members, and farm employees faced a number of similar hazards, non-family farm employees discussed how they often lacked control over farm safety practices, farm decision-making, and were economically dependent on their jobs. They were more likely to report serious and repeated injuries. The cumulative impact of the injuries and illness for some employees led to detrimental health outcomes in the long-term that could jeopardize their ability to transition to being farm operators.

Why the study is significant

Previous research on Alberta farm and safety has identified statistical patterns of farm injury, illness and fatality. This qualitative study is unique in its use of qualitative health methods to understand a wide range of perspectives—including operators, family members, employees, industry, safety, and regulators—during a critical period of recent changes to Alberta farm OHS rules. By exploring a variety of perspectives on farm safety regulation, the study identified: (i) a number of dissonances between perceptions about safety values and actual safety practices; (ii) generational changes in attitudes towards safety and health within farm families; and (iii) how power imbalances between family members and between employers and employees shaped farm risks. While it was common for some family farm members to ‘normalize’ risky work and injury, younger farmers and farm employees were less likely to accept farm conditions where there was a lack of safety protocols and practices. Leveraging injury prevention leadership and supporting representation among young farmers and farm employees could help advance farm safety program and policy development.

Key Messages

- Participants in this study placed a high value on safety and health in agricultural operations, for family members, farm visitors and employees; however, farm safety values did not translate into farm health and safety practices.
- There were a diverse perspectives between farms on what was ‘appropriate’ in terms of farm OHS rules, just as there were diverse perspectives between family members within a farm operation in terms of their views and opinions on OHS rules.
- In this study, farm employees were less likely to report that their workplaces were ‘safe’: they experienced unique health and safety vulnerabilities as farm employees and several had incurred serious work-related farm injuries and illness.
- Participants largely agreed that some OHS and injury insurance standards should be required for Alberta farms, regardless of farm size or farm composition; however, ES were more divisive among participants, particularly among employers and industry. Items covered under ES such as hours of work impacted workplace health and safety outcomes for farm workers.

Key Points for Specific Audiences

Decision-makers and safety practitioners

- There is a high rate of off-farm employment within farm families in Alberta. Exposure to the OHS system in off-farm worksites is common. Family farm members with off-farm experience bring formal knowledge about injury prevention and hazard mitigation practices to their family farms, helping to ‘translate’ these practices to small family operations. In the absence of legislated farm safety requirements in Alberta for family farms or farms with five or less full-time employees, leveraging leadership among those with these competencies could help advance farm safety program and policy development.
- Family farm members expressed that health and safety on their farm was highly valued. This ethic of care extended to immediate and extended family members, neighbours, farm employees, and visitors. In particular, participants explained that they would not jeopardize their children or family members’ safety, or their employees’ safety. Building a culture of farm safety around this ethic of care in the farm population could be fruitful, as it emphasizes existing ethics and values (rather than a lack or absence of ethics).

Industry and safety practitioners

- The current Alberta legislation (OHS, ES, and Labour Relations) continues to foster precarious conditions for agricultural employees, including high health and safety risks in agricultural workplaces. Most agricultural employees are no longer covered by statutory OHS, ES or Labour Relations. Industry and safety professionals do not recognize the unique vulnerabilities that farm employees face, including lack of impartial representation and support and basic workplace and social protections.
- Relationship dynamics and communication are important to workplace health and safety within family farm operations, whereas OHS legislation focuses on rights (the right to know, the right to

refuse dangerous work, and the right to participate in health and safety). As with employment relationships, family dynamics may be positive or negative, which can hinder or enable hazard identification and injury prevention. It is often assumed that family relationships are premised on healthy communication; however, in reality, this is not always the case.

1 Introduction

In 2015, the Alberta government passed the *Enhanced Protection for Farm and Ranch Workers Act*, extending Workers' Compensation Board (WCB) insurance coverage, Occupational Health and Safety (OHS), and some Employment Standards (ES) legislation to Alberta farms and ranches. The Labour Relations Code was also modified to include farm and ranch employees, including the right of association and unionization. This legislation had been under development for several years; however, the proposed 2015 legislation coincided with a 2015 farm incident in Alberta involving the fatalities of three young children. Eventually, the government modified the proposed requirements and clarified that the laws only applied to farms with non-family, waged employees, following strong opposition from the farm sector. As a result, family-only farms in Alberta agriculture are not covered by any workplace health and safety standards. Previously, Alberta farm and ranch employees had been exempt from basic safety and injury compensation protections and Employment Standards. Consequently, these requirements marked a significant advance for farm and ranch employees in Alberta.

This independent study took place in 2018 and 2019, involving an analysis of views from family farms on OHS requirements.¹ The study involved an in-depth qualitative health research approach, identifying and analyzing multiple viewpoints on the health and safety system in family farming. There were 37 interview participants in total for this study, namely, farm operators, their family members, farm employees, safety and industry organizations, worker advocates, and government regulators. We explored perspectives about how to prevent injury on family farms in order to inform policy and practice. We also undertook a policy scan to assess and compare how other governments have regulated health and safety on family farms (2,3). Descriptive analysis of Statistics Canada data on Alberta agriculture was also undertaken to provide context for the qualitative analysis (4). It is important to note that the purpose of the study was *not* to measure or assess farm-level safety practices, OHS compliance, or rates of farm injury/illness.

During the course of the study, legislation for farms and ranches (OHS, WC, ES and labour relations) changed again when the new United Conservative Party (UCP) government in Alberta passed the *Farm Freedom and Safety Act* in 2019. New requirements came into force in 2020 (1,5,6). Under the new rules, 'small farms' with five or fewer full-time non-family employees (employed for six continuous months or over) would not be required to carry insurance (private or WC), OHS standards, or any ES requirements. Farms with six or more full-time, long-term employees have to carry some form of insurance (private or WC). The new laws also struck down the labour relations rights of all farm employees. The definition of 'farms' under the ES Act was expanded to include mushroom farms, sod farms, nurseries, and greenhouses. Together, these rules mean that a significant number of farms and farm employees are no longer covered under basic workplace health and safety and employment standards. The COVID-19 pandemic also occurred after our research activities. This changing context is important and, where possible, we have attempted to provide analysis that acknowledges these realities. However, our data collection took place prior to new 2020 rules and COVID-19, which should be taken into consideration.

2 Background Literature

2.1 Profile of farms and farm employment in Alberta

Alberta has a significant agricultural industry, with 21% of Canada’s farms, according to the 2016 Census of Agriculture (7). While the overall number of farms in Alberta (40,638 in 2016) is declining (7), the average size (in acres) and average incomes of farms has grown considerably (4). In terms of what farms produce, the most common farms in Alberta are oilseed and grain farms, and cattle and horse farms, including feedlots. Since 2011, there has been a 32% rise in cattle ranches (7). Operator demographics are predominantly male (around 70% in 2016) and older, with 45% of operators aged 45 years or older (8).

In terms of employment, there were approximately 52,100 people working in primary agriculture in 2017, representing 2.3% of Alberta’s workforce. This figure refers to employees, self-employed, and unpaid family labour (9). Of these, the majority were self-employed (36,200 or 70%) (9). According to Immigration, Refugees and Citizenship Canada (IRCC) data, there were 9,800 Temporary Foreign Worker Program (TFW) permit holders in Alberta agriculture in 2019. This data refers to TFW permit holders under the Seasonal Agricultural Worker Program (SAWP), the Agricultural Stream of the TFWP and other agricultural workers in the TFWP (10).

In 2016, most Alberta farms (76%) were economically marginal operations who reported no hired labour, neither family employees nor non-family employees (4). Average incomes on Alberta farms with no hired labour were \$35,500/year in 2016, having risen from \$9,000 annual income/year in 2006. In contrast, farms with both non-family and family employees were the most lucrative farming operations in Alberta in 2016, with average incomes of approximately \$280,000; these farms represented 7% of Alberta farms in 2016 but earned 37% of overall Alberta farm income (4). Farms with exclusively non-family hired labour accounted for 6% of Alberta farms and produced 15% of the collective Alberta farm income (4).

Table 1: Alberta farm employment profiles in 2016. Source: 2016 Statistics Canada Census of Agriculture (4).

Farm Employment Profile	Farms with no hired labour	Farms with family employees (exclusively)	Farms with non-family employees (exclusively)	Farms with both family employees and non-family employees
Total Alberta farms = 40,638				
Farms - Number (%)	31,073 (76.5)	4,505 (11.1)	2,427 (6.0)	2,633 (6.5)
Average income per farm*	\$35,500	\$112,000	\$172,000	\$280,000
Average size (acres)	834	1813	2931	3438
* Calculated as gross income minus operating expenses.				

There is a high reliance upon off-farm employment among unincorporated Alberta farms. According to research focused on the period between 2001 and 2013 (11), 79% of unincorporated farm households in Alberta relied primarily on off-farm employment for income as a strategy to manage risk amidst financial volatility.ⁱⁱ This is a higher rate than the national level; in 2016, approximately half of Canadian farms (unincorporated farms) relied on off-farm income (12). The rate of off-farm employment in Alberta has increased by 40.1% between 1991 and 2016 (13) and young farmer households are the most dependent on off-farm labour (12). Contact with the OHS system in workplaces off-farm is thus highly likely.

2.2 Research on farm safety and health

Research shows that agriculture is a dangerous industry for workers, operators, and their family members (14–16). Fatalities in Canadian agriculture are caused by machine run-overs, rollovers, being pinned, caught and entangled; drownings; falls; grain and soil asphyxiation; and toxic exposures. Long-term illness and health concerns associated with agricultural work include lung and skin disease and musculoskeletal disorders (5). According to the AgInjury News databaseⁱⁱⁱ, there were news reports on 20 farm injury and fatality incidents in Alberta between 2016 and Apr 2020 (17). The majority of the incidents involved male victims and machinery or vehicles. There is a gap in monitoring and data collection on agricultural injuries, illness and fatalities. In part, this is due to low scope of WCB coverage in agriculture (18,19). In Alberta, there was an increase in available data on farm injury and illness became available as of 2017, due to new WCB requirements for non-family farm employees.

Many farm operations blend a business with a home. Safety hazards exist for operators, family members and visitors. Research on serious injuries and fatalities among rural Alberta children compared to non-rural children demonstrated that rural children are 73% more likely to face severe injury or death (this figure excludes First Nations children in rural areas), focusing on the period from 1999 and 2010 (20). Research on Alberta farm injuries between 1990 and 2009 showed that farm operators incurred half of farm injuries, and that most injuries involved work activities (21). In Canada-wide data on farm fatalities between 1990 and 2008, 14% of agricultural fatalities involved children, and 81% of these child victims were male. Injuries and fatalities among youth and children on farms tends to be associated with use of agricultural machines and the amount of work (hours of work) (22). Unlike other sectors of the workforce, child and youth agricultural work, even of hazardous tasks (operation of heavy machinery) is permitted if the person is working for family (14,15).

Family, gender and age dynamics influence attitudes towards risk and risk-taking behaviour in agriculture. Men and boys are more likely to be seriously injured than women and girls (22,23). As the average age of operators has increased, there are notable risks to older operators (24). Women's work on farms remains important but their roles in the industry are often subordinate to men in terms of property and resource ownership, while they have primary caregiving roles in addition to physical farm tasks and off-farm employment (25). Their work roles and the risks they face are often more invisible and chronic in nature, relative to occupational risks faced by men (26,27). Parents have to weigh a number of factors in incorporating children in farm work; the risk of *not* involving children in farm activities may appear more serious than health and safety risks (28).

2.3 The gap in injury prevention and insurance programs in agriculture

There is a widespread gap in industrial hygiene and OHS programs in agriculture in many jurisdictions in Canada and beyond (2,3,29,30). There are also low levels of trust in OHS science and research within farm sector (31,32). Even in jurisdictions like Saskatchewan where family farms are required to comply with standards under the provincial OHS Act, there is no enforcement (33). In a context where most safety conditions on farms are subject to voluntary adoption, research by the Saskatchewan Farm Injury Cohort Study Team found that most farm safety decisions “start and end with the owners of farms” (33).

Alberta has lagged behind other provinces in terms of implementing injury prevention and WC programs on farms, as most provinces require farms with non-family employees to follow OHS and mandatory WC (2,34). There is also a gap in workplace and political representation for farm employees (35), including workers’ right to participate in workplace health and safety. In terms of minimum wage and work conditions, it is also important to recognize that farm employees benefit from little to no ES protections in Alberta (note: in many other jurisdictions, there is only partial work and wage standards for agricultural workers) (36).

Child safety in agriculture is an area of policy concern recognized by a broad base of industry stakeholders in Alberta. Technical working groups charged with developing recommendations on implementing new 2017 farm OHS legislation identified the North American Guidelines for Children’s Agricultural Tasks (NAGCAT) as an opportunity to improve farm safety in Alberta (37). These guidelines are voluntary and designed to support parents in determining appropriate tasks for children 7-16 who live and work on farms in North America. However, the efficacy of education-based safety interventions are unclear and do not address many of risks that lead to farm injuries/fatality incidents (38,39).

3 Study Approach and Methods

We used a qualitative research approach to explore how Alberta family farms perceived OHS risks and regulation (40). Qualitative approaches are useful to address context-specific problems and complex issues. Because many farms are not covered by WCB insurance, there are only limited quantitative data on farm injuries and illness (18,19) in Alberta. In the field of OHS, qualitative research can support stakeholder engagement by ensuring findings are relevant to stakeholders by linking research to stakeholder contexts and experiences (41). We approach OHS policy through an interpretive lens, which means that we conceptualize policies as having varied and complex meanings for different stakeholders. There are often tensions between policy goals and outcomes, which we conceptualize as opportunities for deeper understanding and analysis. This approach can help address how policy is framed, and how policy interventions and implementations issues arise (42).

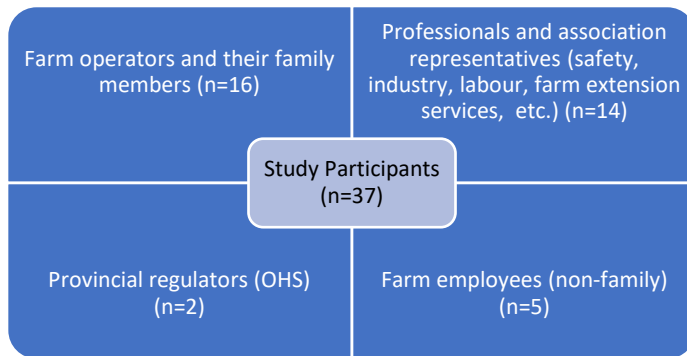
This report focuses on in-depth qualitative research interviews with farmers, family members, waged farm employees, farm association representatives, safety organizations, labour organizations, and regulators. In this section, we describe our approach related to qualitative interviews. Several study advisors, drawn from key stakeholder roles in Alberta, also contributed to this study, including farm safety, farmer, and labour groups. While the conclusions from the study are the researchers', the advisors provided input and feedback on the study at key points: the sample, recruitment, interview questions, and framing of findings.

3.1 Participant Recruitment and Qualitative Data Collection

There were four key groups we interviewed for this research in order to cover a wide range of perspectives (see Fig. 1). We invited farm operators and family members to participate in the study through farm industry, commodity and safety organizations. We also used snowball recruiting (referrals). Six farm households participated in interviews, with a total of 16 participants in this category. We purposively sampled professionals and association-level representatives from relevant organizations, including: farm and commodity associations, safety organizations, labour and worker representatives, agricultural extension services, and fire services. We contacted organizations directly to invite senior representatives to participate. There were a total of 14 participants at this level (see Fig. 2). We invited senior OHS regulators with the Government of Alberta to participate, through direct contact. There were two regulator interviews. Finally, we used social media and posts through agricultural societies to invite farm employees to participate. Five farm employees participated in interviews. A \$20 gift card was provided as participant remuneration to farm employee participants.

In total, there were 37 participants.

Figure 1: Key groups of study participants



Interviews with farm households all took place in-person. In most cases, interviews took place on farms. For three out of six farm households, interviews took place with several family members, whereas others were with one individual family member. These interviews were, on average, one hour in length. Interviews with association representatives and regulators took place in the participant’s office or by phone, and were also an average of one hour long. Interviews with farm employees were all held by phone (subject to the comfort/permission of the participant) and were slightly longer on average at 1.5 hours. None of the farm operator participants employed the farm employees we interviewed. Recruitment for these interviews occurred through separate channels.

Interview questions for farm households addressed the context and conditions of work within household and with other workers in the operation; perceived health and safety risks among different household members; decision-making, management and mitigation of risks; attitudes towards regulation; and how they envisaged fair and appropriate regulation. Interview questions for organizations included: organization perspectives on OHS risk among family farm members and farm operators; attitudes and recommendations about current conditions for OHS and opportunities and pathways for regulation. Interview questions for regulators included: perspectives on OHS risk for household workers; solutions and options for policy; and reactions to the study’s initial findings.

It is important to note that the sample did not include migrant or Temporary Foreign Workers (TFW) farm employees^{iv}, farm operators/family members from Hutterite communities, or First Nations/Metis farm/agriculture operations, all of which are important considerations in Alberta agriculture. Including these groups in the study sample would have required longer-term research timeframes and distinct research design approaches, which were beyond the scope of this 18-month study. Research that addresses the farm safety needs of these specific Alberta communities are potential areas for future research.

3.2 Sample Description

Farm Households: The six farm households in the study were located in Alberta’s key agricultural regions. The only region not covered by the study sample was the Grande Prairie region. The farms were involved in major areas of agricultural production (dairy, cattle, grain, etc.). Of the six farm households we interviewed, all identified as “family farms” who relied primarily on their own family labour,

supplemented by full-time and part-time non-family labour (see Fig. 3). At the time of the study, only one of these farms relied solely and exclusively on family labour.

Figure 2: Characteristics of farms in the study sample

Regions	Produce	Who works on the farm
Central-East Alberta	Wheat	Family only
South Calgary region	Canola	Family plus seasonal volunteers
Southeast Alberta	Barley	Family plus 1 FT employee
	Cereal crops	Family plus 2 FT and 1 PT employees
	Dairy	Family plus 4 FT and 4 PT employees
	Poultry	Family plus 5 FT and 15 seasonal employees
	Grains	
	Corn	
	Cattle	
	Potatoes	
	Beets	

The composition of family farms in the sample was heterogeneous. Family ‘work units’ were composed of various family members (age and gender mix). All families were Caucasian; two families had immigrated from Western Europe (first generation immigrants). Immediate family members were more likely to be involved in daily farm operations, while extended family stepped in to support seasonal operations like planting or harvesting. Many adult family members we interviewed had off-farm employment experience, such as in trades. All participants placed explicit emphasis on the importance of safety and reported that overall, they believed farms were safe work environments for all involved.

Gender	Age
Female = 7	Under 10 = 1
Male = 9	10-19 = 4
	20-29 = none
	30-39 = 4
	40-49 = 2
	50-59 = 1
	60-69 = 4

Figure 3: Select demographics for farm household participants

The farm households in the study sample identified as “family farms”, however, the majority of these households relied on full-time and/or part-time/seasonal labour to operate, in addition to family labour. Two of the six farms had no employees at the time of the research, but had relied on non-family labour in the past. This means that at the time of our study, most farms in the sample were required to follow new OHS and mandatory WCB rules for farm employees. None of the farm households in the sample relied on migrant workers or workers in the TFW Program.

Farm employees: Farm employees (not employed by the farm households who participated in the study) in the study sample were mainly located in central Alberta (place of work and residence). Farm

employees were invited to participate in the study if they had work experience on “family farms”. There was a range of farm employment experiences among the participants; many had experiences working for both “large farms” and “small” farms (i.e., farms with less than 6 full-time continuous employees). All of them relied on full-time employment on a farm and had additional, previous experiences as farm employees on a variety of farm operations in different roles. Nearly all (4 out of 5) had been raised on farms, and 3 out of 5 also ran their own small farm operations, normally with a close family member (spouse or adult sibling). However, their own operations were relatively marginal; they aspired to grow their operations in the future, and eventually transition to making a living from their own operations.

Figure 4: Demographic characteristics of farm employees in study sample

Age	Sex	Farm Operation/Industry (as current or and previous employee)	Other current and previous farming roles
20-29 = 1	3 male	Poultry (office manager)	Farm operator (all livestock) = 3
30-39 = 2	2 female	Dairy ('milker')	Raised on family farm = 4
40-49 = 1		Feedlot (driver, mill operator, processor, rider)	
50-59 = 1		Grain (general farm labour) Horse ranch (barn hand, trainer) Pasture/grazing (rider) Hog (general farm labour)	

In contrast to farm household members, employees in the sample were more likely to report negative experiences in farm employment with unsafe and/or unhealthy farm work environments, and with injuries or health conditions resulting from work.

3.3 Analysis of Qualitative Interviews

Interviews were recorded with the participant’s permission. A professional transcriber created a verbatim transcript. Transcripts were thematically analyzed (coded) using labels related to study questions: health and safety risks; work tasks; injuries; insurance; etc. Nvivo (qualitative data analysis software) was used to conduct in-depth analysis of the research data. These codes were applied to the entire dataset to synthesize findings and analyze key themes and patterns (43).

3.4 Research Ethics

Research ethics approval was obtained from the University of Waterloo’s Office of Research Ethics and the University of Alberta’s Research Ethics Board. The research team obtained informed consent of participants, and all participant information was treated as strictly confidential. Identifying information was removed from transcripts (names, places of work/residence, etc.). Pseudonyms are used throughout this report and anonymous quotations will be used in all study presentations and publications. The study data is stored securely and only the study team and the transcriber have access to the data.

FINDINGS

4 Who works on family farms?

4.1 Children and youth involvement in farm work activities

Involving children and youth in family farm operations is a preference for families, to engage kids and develop their skills. Farm work among children was also a necessity, when parents relied on their children's work to run farm operations.

... absolutely we relied on them [the kids]. We relied on them very heavily through that period of time. [referring to previous livestock operations that required more hands-on labour] (Walter, farm household)

I think there's a desire to involve your children and youth, ... with our kids, when you have teenagers and that age, and they have nothing to do, generally, more trouble is found than if they're kept busy. And I think there's all kinds of skills and work ethic involved that you, you know, gradually build that up, as they're able, and I think you're more likely to be a contributing member of society if your work mindset doesn't begin at 21. (Janet, safety professional with farming background)

Several participants who grew up on family farms described how the tasks assigned to farm children and the culture of farm safety have changed since they were children. Some recalled this work experience with fondness, including the 'freedom' they had as children (lack of monitoring, etc.) Others discussed their work as children and the lack of farm safety they experienced.

... by the time I was probably 8-years-old I was farm labour because dad had cattle, and I was the oldest out of my family ... We square-baled, and the bales, they'd come out of the back of a small square baler, but they were supposed to sit right on the side, and then you use the bale wagon to pick 'em up. He had an old car hood, and towed that around with the truck. It was a lot of fun. It's like, how do you suck a kid into farming? Pretend it's a sleigh ride in August, right. So you're riding along in this thing, and your job was to, as soon as he stopped, jump off and flip these bales up, and then get back on and -, and yeah, it wouldn't meet any safety standards in this day and age... (Darrell, farmer).

[recalling work as a child:] When I was taking a five gallon jug of chlorine, and I wanted to pour it into a one gallon jug, and I did all of that, as a 13-year-old kid, and I was very purposefully holding this one, and this one was now full, so I dropped it down, and it shot straight into this eye. So, to this day, I have issues. (Vince, commodity association)

Participants spoke about how they are more restrictive today than in the past about the type of tasks they assign their own children and at what age. Children remain involved in a number of farm activities

including using farm equipment and working with livestock. However, these activities varied from farm to farm, and between children within households. For example, Darrel's children (now young adults) had very limited involvement in the family's cattle and grain operation, due to his wife's preference. In contrast, Sophie's children (ages 8-14) were heavily involved in both 'direct' farm activities like operating tractors and combines, as well as domestic 'support' activities like cooking and cleaning for the farm crew during planting and harvesting. The roles assigned to Sophie's children were gender-specific: her girls cooked for family and crew, whereas the boys operated tractors. She also pays the older children a wage for their work.

Well, just last year, I started driving on the tractors. Like, I could always drive on the tractors, but, like, starting really now, I guess, I really started driving on the bigger ones, and actually doing whole fields by myself, ... Like, it's a good sense of accomplishment when you finish a field. (Sophie's son (farm family), age 14)

Some participants also relied on youth workers who were not family members. In the dairy sector, it is common to hire young employees outside the family as milkers, as they can perform work before and after school hours.

4.2 Non-family employees on farms

The majority of the farms in the study sample relied on family members for year-round work, particularly in grain and oilseed operations, which have lower labour requirements. However, most supplemented family labour with non-family labour on a full-time and part-time basis. Dairy and potato operations had higher labour demands. Four out of six farms relied on one or more full-time employees. One of the six relied on 5 full-time employees and 15 seasonal employees, in addition to family labour. In southeast Alberta, farm operators often recruit employees from the Low German-speaking community. Farm households reported that they often sought employees who had a farming background. They had to provide good employment conditions to workers in order to retain them, and they would not assign work to employees that they would not be comfortable performing themselves. Farm operators explained that they normally worked alongside employees.

Alberta, for a long time, has had quite low unemployment, so the only way that people could keep farm workers working on their farm was to treat them well, and so the relationship between farm workers and their employees, often has been, I would say, better than the relationships in a lot of other employment situations. In most cases, they're working together, so there's not very many farms where the farmer is here and all the people are out doing the work. Usually, when there's work going on, the farmer is working with them, so they're more like partners than employer and employee, in a lot of cases. (Frank, commodity association)

... you never make them [employees] do jobs you don't want to do yourself... Like, that's not right. (Sophie, farmer)

5 How family farm members understand OHS

5.1 Health and safety values

Family farm members expressed that health and safety on their farm was highly valued. This ethic of care extended to immediate and extended family members, neighbours, farm employees, and visitors. In particular, participants explained that they would not jeopardize their children or family members' safety, or their employees' safety.

...the most aggressive, protective person is a mother with their own children... nobody in their right mind is going to put their children or their wife or their spouse or any family member or their workers in harms way. Do accidents happen? Yes, we work in a dangerous environment, but ... somebody shouldn't be telling us...that we have to take care of our own. We do it anyhow. (Ian, commodity association)

Our workers have to be able to refuse unsafe work, which they have always been able to do at my place. They've been never been forced to go up to a grain bin while there's lightning or whatnot. We told them that... (Lucas, farm household)

5.2 Avoiding risks can be challenging

One of the key risk factors for family farms is the sheer diversity of hazards present –livestock, equipment/machinery, etc.— which vary from farm to farm. This can make it difficult to identify hazards, but even where participants knew there was a danger, it could be difficult to address, avoid, or alleviate the risk. Farm operations faced a number of **pressures** that contributed to risky and dangerous work. Family members may push themselves physically and emotionally due to seasonal, economic and weather factors, in order to 'get the work done'. These pressures are difficult to reconcile with safety: there can be the idea that risks are difficult and costly to avoid, and there is also the idea that a certain level of risk in the sector is 'normal' due to farming pressures. One participant explained how, in some circumstances, these pressures are downloaded onto younger family members, especially where it was not economically feasible to hire external 'replacement' labour if the family could not cope with the work internally.

If you want to get everything done that we have to do, and, I guess, maybe the pricing and just the way the farming industry has evolved, it kinda pressures us into having to do that 'cause the prices aren't there. We can't do half the acres, safely, and make the money. So, in order to make the money to cover everything and do the stuff, you have to get it done in a shorter window, in order to fit in that whatever amount of money you're trying to make. (Adam, young farmer)

That's a part of it is working long hours. Cutting corners is a big thing. Working under pressure and stress and fatigue, and not working at your best health. Like, I can count many times where my dad and even sometimes my siblings and I - where we're required to go to work, even when we want to be sick in bed, and that's oftentimes when things don't go right because you're not at your best. You just want to be done.

You're distracted, you're ill for whatever reason, but you don't have anybody else to do the job. ... it's just, well, 'we have to do this job'. We could hire a professional to come in and do it. For example, removing trees and tree stumps from a field. You could pay big bucks to have a company with a high hoe come in and rip it all out, and burn it and haul it away or whatever, or you use the resources that you have and you can just use a tractor and a tow cable or chain, and try to rip them out, and yeah, it's not the safest, and that's how one of our neighbours died, but it's that's all we've got.
(Kyle, farm safety professional with a farming background)

...there's a good level of abuse, I'd say, in farming, where are kids are pushed to work, right, 'cause again, that same guy - 'I work all the time; I'm stressed all the time'. I don't value my family time, and I put that pressure on my kid then. So then, a twelve-year-old kid is put into that kind of a pressure situation where they feel obligated to work, then it basically creates that guy again, that just never stops working. ... Again, that's the happy medium where, you know, like, where, on the other hand, there's a sixteen-year-old kid helping on the farm, and he's happy to do it, but there's the two sides of it ...that's different from the kid that's getting forced to sit in the combine until midnight or one, and then get up for school at seven or eight, and then he's not - again, his schooling is - everything's affected... (Adam, young farmer)

Fatigue and overwork, as the quotations above suggest, were common risk factors, reported several family farm members. These risks became more acute in relation to farming pressures (discussed above).

Sharing worksites with children and caregiving challenges was also noted by women participants. Even where children were not actively working on farm operations, they lived in close proximity to the work site. Parents had to juggle the caregiving tasks of monitoring children amidst their other duties. We found that women were more likely to discuss caregiving challenges in relation to safety and their broader work roles. One participant, Monica, spoke about how she juggled “four jobs”, even nursing her children as she drove farm equipment. Overall, children’s safety can be difficult to manage during intensive work periods and direct responsibility for children’s safety may fall more heavily on women, adding to their work burdens.

“When they [the children] were little and just stuck in the [tractor] cab with me or, like, breastfeeding or things like that, that wasn't so bad cause they were immobile. ... But with the [livestock] and stuff, everyone was out there pitching things, and running in pens and things like that, and it was a matter of necessity. Like, 'don't be there' [speaking to children], and safety was probably overlooked more than it is now, by a long shot. Because it's ... of course, lack of time, if you're split between four jobs and stuff, so emotional and physical drain I think are the major factors in any kind of safety protocols, and even though that's no excuse ...” (Monica, farmer)

Overall, these experiences indicate that many participants could identify workplace risks, but lacked resources (time, money, etc.) to address and reduce hazards.

5.3 Informal experience and common-sense to identify hazards and prevent injury

In describing how they addressed farm health and safety, some participants felt that experience or 'common-sense' was part of their approach. Experience included working on the farm as a young person alongside family, and is closely linked to common-sense. Common-sense in farm safety can be loosely defined as knowledge gained through informal experience and observation, or 'practical wisdom'. Most participants did not believe that common-sense was sufficient for safety in and of itself, and some identified how these approaches contributed to unsafe practices. Unfortunately, some reported that actual incidents (real injuries or serious 'near-misses') occurred before they took safety more seriously. This can be particularly challenging with young children.

So, sometimes, I think it's, unfortunately, maybe just a little bit of a mentality of you gotta actually learn to do by doing, and you get the experience, and once you get it, you'll never forget, right?" (Darrel, farmer and agricultural extension officer)

We've had a few incidents on this farm, and, thankfully, I don't think we've had a bad one lately because I think dad had a couple of wake-up calls, yeah. That was like, okay, we gotta smarten up here. Like, it's not worth losing a life, learning a lesson. (Brenda, farmer)

Or they think they have the protection of common sense when it's like, 'Okay, that was because somebody did something wrong that didn't have common sense, but I have common sense!' [critique of common sense] (Ivy, farmer)

5.4 Workplace dynamics can help or hinder farm risk management

Participants discussed how family dynamics entered into safety practices on their farms. Family dynamics could facilitate managing risks and changing behaviour, or they could act as a barrier. The following examples explore these dynamics.

- Ralph ran a small operation with his adult sister, where they did not have any employees. One night, working in the dark moving hay bales, Ralph almost dropped a bale on his sister. They decided almost immediately that they would only work at night with reflective vests. In contrast, in his work as a full-time farm employee (not for family), he had similar concerns about lack of visibility at the work site (operating machinery, trucks). However, addressing the issue was challenging: there was poor communication in the workplace, both with fellow workers and his employer, who he felt was often neglectful of workplace OHS.

So, like, at home, especially in the winter, we all have reflective jackets that we wear doing chores and that. Because there was a close call where I dropped the bale, like when we're feeding, a lot of times I'll just pick up and drop the bale. At home, ... and I went to release it, and I didn't see my sister, to start with, and then I kinda second guessed, and I kinda saw her at the last minute, and held onto the bale, but it was quite close for comfort. So now we just wear our reflective jackets and that, and it's that little bit extra that helps you see everybody and know where they are. ...

Whereas, at work, you know, ... there's not that, 'okay, I talked to you ten minutes or fifteen minutes ago'. It was – at work it's more like, yeah, we all met in the morning, but now it's 2:00 in the afternoon, and I haven't seen you since then, so, so I guess there's just more communication in there [at 'home', with sister].

- Ivy, who ran a farm with her family, talked about how she felt OHS issues were addressed more respectfully in her off-farm work (in the trades), compared to working on-farm with her dad. While discussing work tasks she felt were unsafe, she said her dad would get angry if she raised fears about specific tasks that she did not like doing because they were unsafe.

Everybody I've worked for, like in the other smaller businesses, even if it wasn't directly ag[riculture] related, you know, they cared more about my safety than anything, so if I were to call and be like, 'I dumped the quad', they wouldn't be like, 'Well, are the chemicals everywhere?!' [speaking harshly] They'd be like, 'Are you okay?!' {laughs}. ... I know dad's figured out that there is some stuff that I just do not want to do [on the farm], ... I say it every year, and then dad gets annoyed. He's getting better, ... but, like, he would get, like, so irritated, and, like, if he's already mad about something else, and you're like 'I don't want to do this!', and he just, like, blows up. (Ivy, farmer)

These contrasting experiences indicate that people's work relationships (other workers, family, employers) influence their capacity to identify and reduce farm risks, rather than the size or type of relationship (farm vs. non-farm, family vs. non-family, number of employees). In both instances discussed above, participants were able to reduce risks and implement behaviour change more successfully where communication was respectful and effective. For Ralph, family relationships were healthy compared to relationship with his employer, whereas for Ivy, it was the opposite.

5.5 Farm households used experience from off-farm employment to identify farm hazards

A high proportion of farm households in Alberta rely on off-farm employment (11). Five out of six of the farm households in the study sample had current or previous experience working off-farm, especially among younger adults in the farm household who had experience in various trades. In a context where no farm OHS training is formally required, those with experience in trades used experiences with OHS requirements from non-farm worksites to identify farm hazards on family operations. One farm household assigned a young adult in the family who had off-farm trades experience the role as farm 'safety officer'. Some participants reported conducting practices like daily safety meetings and field-level hazard assessments even though these are not required on family-only farms.

I went to school to be a [profession redacted], and moved away for several years; worked in the mining industry where it's very safety oriented, and then to come back to be like, 'Dad, do you think that ladder maybe should be secured to the side of the grain bin before we climb up there?', you know, things like that... (Nicole, farmer)

... so I had to go up the side of the bin, and if I probably wasn't in industry, I wouldn't have thought that I'd need fall protection, but it's been pounded in my head. I've been to so many safety meetings, and rules that say - you're four feet off the ground, you need to be tied off. And like, even now, I look at it, and I go 'I'm not going up there without being tied off'. Like, that's my mindset around here, and I'll spend an extra twenty minutes to go find a pair of safety glasses, where my dad, he never was in that full industry - like, filling out safety cards. So he doesn't look for safety glasses, and he doesn't do all those little things to just prevent things, where that's just in my brain. (Adam, farmer)

6 Safety risks and concerns specific to non-family farm employees

Farm employees reported facing many of the same farm hazards that operators and their family members did. These included working with livestock (animal behaviour and biohazards), having to work alone (isolation). However, farm employee participants reported more negative workplace experiences and a greater number of injuries and health problems that were farm-work related, in comparison with operators and family members (whose experiences were discussed in section 5 above). Non-family farm employees discussed how workplace hazards were exacerbated (or produced) because they often lacked control over farm safety practices, farm decision-making, and were economically dependent on their jobs.

6.1 Injuries and illness

Employees reported serious physical injuries and health conditions that they had incurred at farming workplaces. Several participants had suffered serious repeated injuries in different workplaces, including trips and falls that resulted in time away from work and permanent damage to limbs (knee injuries, etc.)

... there were lots [of injuries]...I broke my wrist; I dislocated my shoulder; I broke a few ribs; several concussions; dislocated my hip; buggered up my knee. Um.....yeah, those are some of the highlights. (Mike, Farm employee)

Another participant developed a lung condition from working in confined granary space: Previously, Mary worked for an older farm operator who asked her to clean grain silos without protective equipment. She was not aware that exposure to moldy dust can lead to a chronic lung condition known as ‘farmer’s lung’ (common among farmers and farm workers exposed to dust). This exposure permanently affected her breathing. She reported that this specific job had otherwise been a positive experience; the exposure and resulting condition was the result of lack of awareness of risks.

Well, for the grain farmer, we did work some long hours, but for the most part he was actually a pretty good guy. The only thing with him might have been, you know, I ended up working in dusty, moldy granaries with inadequate respiration gear for that, so I paid the price with farmer’s lung from mold [i/a]. (Mary, Farm employee)

Ralph, who is in his thirties, had also developed a chronic injury to his hips. He has chronic pain and will eventually require hip surgery.

So, over time, my hip has got arthritis in it pretty bad – the right one worse than the left. The left one they did an arthroscopy, and it’s helped a lot. The right one, it hasn’t, and so I’ve had two surgeries on the right and one on the left, and eventually it’ll mean a replacement.... Even though you get out and you try and move around every load, like, it still takes its toll, and then by the end of the day, you’re so stiff and sore and that, and you have to go, is it really worth it? So, eventually, in that not

distant of a future, I think it'll be the end of my career there, that it'll be just too much. (Ralph, Farm employee)

Overall, employee participants were discouraged about work conditions and the toll it had on their health. Unlike family members, who reported risks and injuries but largely felt that farms were 'safe', employees did not normalize these hazardous conditions.

6.2 Bullying and harassment

Another workplace hazard that farm employees reported was bullying and harassment in their workplaces. These barriers heightened the challenge of addressing hazards in the workplace, as employees feared reprisals for speaking up, or they were ignored and dismissed when they raised concerns. They could even be 'degraded' or 'disciplined' for raising health and safety issues.

Lots of times, the environment seems to have sped up some of the accidents, you know. (Ralph, Farm employee)

When it comes to disciplining, it's a public display, and there's – you know, they degrade you by swearing and the whole nine yards. (Mary, Farm employee)

6.3 Long work hours

Several participants spoke about working long hours, up to 12-14 hour days, as all farms and ranches, regardless of size, are exempt from overtime pay premiums (1,36). At times these long hours were seasonal, but not in all cases. What is notable is how long work hours can impact health. For example, Ralph attributes both his hip injuries to long hours spent driving. He has not received WCB compensation for these injuries, despite having WCB coverage at his workplace. The nature of the injuries was chronic; once he realized the severity of the injuries, he did not know whether he could successfully file a claim, and his employer dissuaded him from filing a WCB claim.

...they say that, actually, on the right [hip], that if you manipulate the leg, where the cartilage is completely gone and the worse damage is, is the exact position of operating an [pedal] accelerator for extended periods of time. It's from pushing down on that gas pedal, over and over... Then on one of the follow-up visits [to the doctor] I outright asked the surgeon ... and he's like, 'it's a direct result of your work.' (Ralph, Farm employee)

... horse farms, training stables, breeding stables, it ain't no eight hour a day job ... I can tell you that. ... Probably six in the morning until six at night. ... And it's not seasonal. It's not like you're working twelve or fourteen hour days for a couple of months or a couple of weeks. This is year-round, so that can have, in my view ... like, it can have health impacts. (Yvonne, Farm employee)

In the summer, you might be done [work] and all that stuff by noon, and then during fall run, there were days where I would start at seven, and I wouldn't be done 'til 3:00

*the next morning, so go get four hours of sleep, and then I get right back at it again.
(Mike, Farm employee)*

... so there is a lot of times that I've worked from 4 in the morning 'til 6 at night, so I'd put in, you know, 14 hour days at the dairy farm. (Yuri, farm employee)

6.4 Lack of control, representation, and economic insecurity

Farm employees discussed how they had little control over safety protocols/procedures, or whether equipment or property were maintained. For example, Mike worked on a farm with a faulty grinder. Whereas he could take time to make some repairs himself (to fences, etc.), larger equipment required his employer to intervene. While he repeatedly requested that the grinder be fixed, it was not repaired. He tolerated these conditions because he felt like he did not have another choice, and continues to have to operate the grinder. Employees had to weigh risks to their employment status (i.e., losing their job) against immediate safety risks (i.e., refusing unsafe tasks).

At the dairy farm, ... the fact that you're always working alone was always that side of it because they were so much more a family farm orientated, rather than ... having a couple of employees. So, looking back on it, at 16-17 [years old], I worked on my own, pretty regularly, for 2 ½ - 3 hours, right, at a time, so if something terrible would have happened, there was no real protocols on, you know, ... (Yuri, Farm employee)

There was one set of grinders on the top, and ... that was the coarse grinder on top, and then the fine grinder on the bottom, and the fine grinder would also get plugged. And there was no good maintenance hatch that you could open up and get in, so you had reach in between the top grinder and the bottom grinder. There's about an eight inch space – and reach in as far as you could, and pull all this material that was plugging up the grinder, and constantly getting poked and pricked by shards of bone or blades on the grinder or all sorts of stuff. (Mike, Farm employee)

The employee participants were for the most part unhappy in their current work and aspired to leave their jobs to run their own farms. They were paid relatively low wages (albeit still above minimum wage). This financial insecurity made it difficult to leave their jobs. Time off due to injuries was also a financial strain, particularly when they did not receive wage replacements. High living costs and lack of job options in rural areas contributed to making workers feel 'stuck' in their jobs, and tolerant of dangerous conditions.

...like we did grow up on a family farm, and that was sold, and then we moved up here ... to expand, basically. But in the meantime, dad passed away, so then we basically had to start over on our own, so then it's a relatively young operation, I guess you'd say, so there's just not that financial security without these other [sources of] income coming in, I guess, basically. So, it was planned to be a short-term thing – you know, five years you work– but somehow it doesn't quite all work out that way {laughs}. (Ralph, Farm employee)

Another participant took on extra 'outside' horse training work to add to his wages, in addition to his main full-time work. While he needed the extra wages, riding untrained horses while performing his primary job was especially hazardous.

... because the pay was lousy, all of us had to take in customer horses for training. So, we're in these high stress environments with lots that can go wrong at pretty much every turn, and then we're riding these horses that are unpredictable, as well... Some of it was because you'd be riding through a pen, and all of a sudden your horse gets bogged down or stuck in the mud, and starts flailing around, and something goes wrong that way. Lots of it was because we were riding green horses and they'd get spooked... (Mike, Farm hand)

In this regard, employees had the least 'leeway' (or capacity) to influence behaviour change and farm safety practices.

8 OHS Requirements for Family Farms

This section explores Alberta OHS laws in relation to the farm sector, and in particular, how the injury prevention and WC system applies to family farms. The focus is on the OHS Act and Code as well as WC. At the time of the study, these provisions only covered farm workplaces with non-family employees. The legislation does not apply to farm operations where there are only family members or non-waged workers (neighbour, intern).

There was a widespread view among participants that Hutterite operations were exempt from OHS and WCB rules. However, no specific provision to this effect exists (or has existed). Hutterite operations with both agriculture and non-agricultural work facilities (i.e., a mechanic shop) *are subject* to non-agricultural OHS, WCB and ES (i.e., youth employment rules). Whereas a serious injury in a mechanic shop could instigate an OHS investigation, the same incident in a poultry barn would not.

The farm sector and the government had been in discussion since the mid-2000s on appropriate channels to bring farms and ranches under OHS and WCB rules. According to a farm commodity representative, both industry and government were in consensus that the lack of formal safety and insurance rules in the sector was an “untenable situation” (Frank, commodity association, p8). In part, farm OHS was imperative from a “social license” perspective.^v A study commissioned by the Alberta government showed that while many farms had private insurance or voluntary WCB coverage, a substantial proportion of farms (around 40%) were under-insured or uninsured. Large farms were more likely to carry private insurance and smaller and medium sized farms were more likely to carry WCB or not carry insurance (44).^{vi} During this time, various farm worker advocacy organizations and researchers had called for adequate rights and social protections for farm workers as well (45).

The legislation passed in 2016 was perceived by the sector as too far-reaching, as OHS, WCB and Employment Standards and Labour Relations legislation were passed simultaneously. This created a strong reaction from the industry, despite the fact that the industry had called for many elements contained in the legislation.

So, the two things we talked about, as an industry, with the government at the time, was we said we also agree that, first of all, the exclusions of farms and ranches, in some ways, can be justified because it is different work than other employment ... Different conditions, different hours, different work, different locations. However, even as an industry, we said, one of the issues that we see with the current exclusion is there is no investigation of a fatality or serious incident if it occurs on a farm or a ranch, other than the police will see if there was criminal activity. And if there's no criminal activity, they walk away, and that's the end of the investigation, and we said, as an industry, we can't defend that from a social licence perspective. We can't defend the fact that someone gets killed on a farm or ranch and nobody investigates it. The other thing is, we felt as an industry, we don't think it's right for employees, if they get hurt, to have to sue their employer to get insurance coverage, so we believe

that it's fair to have employers be required to carry insurance, but we didn't think it should be exclusively WCB. (Frank, commodity association)

8.1 OHS and WCB rules at a glance

Figure 5: Alberta OHS and WCB rules at a glance

Rules prior to 2016 – no farm or ranch coverage

- All farms and ranches were exempt from the Alberta OHS Act, regulation and OHS Code, mandatory workers' compensation (WC), Employment Standards (ES), and the Labour Relations Act.

Rules from 2016-2019 cover non-family employees

- Farm and ranch employees (waged, non-family employees) were brought under the following laws and its requirements. Any non-wage and/or family workers were not covered by the legislation.
 - **OHS Act, regulation, and OHS Code.** Technical guidelines were developed specifically for the farm sector (OHS Code).
 - Mandatory **Workers' Compensation** Board coverage.
 - **Employment Standards.** However, overtime pay and breaks during shifts do not apply to farms and ranches.
 - **Labour Relations Act.**

Rules as of 2020 partially cover non-family employees

- Farm and ranch employees (waged, non-family employees) on **farms with less than six employees** (defined as full-time and continuously employed for more than six months) are not covered under the following rules:
 - Any **Employment Standards.**
 - The definition of 'farms' expands to include mushroom farms, sod farms, nurseries, and greenhouses for ES purposes. However, cannabis greenhouses are not considered farms for ES purposes.
 - Any **workplace insurance** requirement.
- Farms with six or more employees have the choice of provider for **workplace insurance**, either WCB or private insurance.
- All farms must comply with the broad requirements of the **OHS Act** but **not the OHS Code.**
- All farms and ranches are exempt from the:
 - **Labour Relations Act**
 - Specific **Employment Standards** rules: overtime pay and breaks during shifts do not apply to any farm or ranch.

8.2 Experiences with 2016 OHS requirements

Many farm households said they had to learn to adopt OHS requirements, especially where they had no prior experience with OHS rules. Family members with experience in non-farm workplaces helped translate the requirements to the farm context. Organizations like AgSafe and a farm safety grant program by the Alberta government have supported this learning process.

Many participants from family farms expressed that they had originally felt some trepidation about having to comply with OHS rules. The paperwork was onerous for many, because safety practices have to be documented. Some participants felt the requirements became more manageable and part of their routines. Others, however, felt they had always operated safely and that the additional requirements were simply extra work. Practices that were mandatory for waged, non-family employees sometimes instigated new safety practices for family members. Those with off-farm employment experience found OHS requirements more straightforward.

... we have so much equipment, and for every single one, you have to make a separate sheet, and really, for occupational health and safety, if we - if we ever have an accident - we have to have that record, and that's a big challenge for us, yeah.
(Sophie, farmer)

... it's same with an industry. Like, it was exhaustive trying to put that together, but that was the rule and that's what had to happen. If you wanted to get on these oil field sites, you had to have your SECORvii level of training, and you had to have your SECOR safety in place, and so that you had to have all those rules and those books and those FLHAs. (Adam, farmer)

... it is extra work ... but there's technology now. Like, you can get a hazard assessment tool that you made on your phone, and so you just email it to everyone, and they have to wait for the tractor or the combine to warm up, anyway. Like, you might as well do the walk-around [hazard checks] while you're waiting for it to warm up {laughs}, you know, instead of sitting there. Like, if it makes people more aware, I don't think it's a bad thing. Like, just thinking about it more. Like, I dunno, my dad has never thought about working alone, and what he'd do, if he's down in one of the cattle pastures where there's no cell phone reception, and he falls into the creek or he twists his ankle, what's he gonna do? {laughs} Whereas, if he, like, phoned somebody and says 'Oh, I'm going into somewhere where there's no cell reception. If you don't hear from me in a couple of hours, come looking', right?... Since I went out and worked and then came back, and was like, 'This is what I've seen out there, and maybe we should apply it here', you know, but it's just 'cause nobody's ever thought about it. (Nicole, farmer)

8.3 The exemption of unwaged and family workers from farm OHS and WCB requirements

Participants had polarized views on the exemption of unwaged and family workers from farm OHS and WCB requirements. As mentioned earlier, the exemption is for family and/or non-waged workers like 'casual labour' (neighbours and volunteers).

Those in favour of the exemption felt that applying injury prevention and compensation rules to family farms was unnecessary because they felt that family farms are largely safe. Some expressed that a certain level of risk (and injury/illness) is normal on farms. Others said it was because farms were different from non-farm operations, precisely because they were family businesses. Many of these participants were not aware that the majority of farm injuries and fatalities occur among family farm members (16,21). Learning about these realities sometimes prompted participants to change their views during interviews, or express a new sense of ambivalence about their views on how to address OHS on family farms.

I think it was a great move by the government at the time is to put that in there. I think - as I've said before, I mean, I'm not going to put my grandson, knowingly, at risk. ... I mean, the family's always exempt under the family exemption, but the exemption allows us to bring in people on the weekend just to help us. They want to be involved in a grain harvest, you know. We're not going outside of their zones of operation [i.e., not putting them at risk]. ... We make sure we don't push 'em ... so, [I'm in favour of] the family exemption, and ... [the] exemption for - what do you call it? - casual labour. (Walter, farmer)

Participants who were not in favour of the exemption said the law left the health and safety needs of family farms unaddressed. For these participants, the exposures to risk are the same regardless of whether the farm is family-only or not.

I just think that the risks are the same for - pretty much the same for a family worker or an employee worker on a farm, so why would the legislation be any different? I think the risks are there. We want to protect the families; we want to protect the workers. They are businesses - all farms are a business, so we should be protecting everybody that's impacted by the operation of that business. (Vivian, farm safety professional)

The exemption can mean having 'freedom' and leeway to operate how they want to (i.e., cutting corners). But there is a downside to this freedom, as families thought that this gap left them without a safety net if an injury/illness or fatality occurred. Others participants felt ambivalent about their exclusion from WCB/insurance. Within families, there were differing stances on this issue.

In a way, I dunno, I don't mind being exempt. I feel like I'm more free and clear to maybe do things I shouldn't be doing, but at the same time, it's like, if one of us were to get hurt badly enough, - you know, we're gonna be off work for the next year or something, I kinda can't help but wonder. I don't doubt that the farm and my parents

would help us out and that. Like, I definitely know that would happen, but I'm just like, should that be how it is, or should we be paying into something that'll take care of it for us? **Ivy:** Yeah, 'cause what if the farm has a bad year and can't help us, just like last year? **Brenda:** Yeah, so that is kind of a point that I kinda waffle back and forth on. (Brenda and Ivy, farmers)

Mandatory investigations: One of the most significant gaps of the exemption, as reported by participants, was a requirement that mandatory investigations of serious incidents or fatalities on farms only occur if the victim is a non-family employee. When the victim is an operator, family member, or casual labour (neighbours, interns), the incident would not be investigated. Some participants erroneously thought that OHS investigations of serious farm incidents or farm fatalities would occur regardless of the whether the victim was family or wage/non-wage. Many held the view that there was a need for investigations, though they felt sensitivity was very important.

... we said, 'we believe that accidents and fatalities should be investigated'. We're very fearful, as an industry, of a 600 page occupational health and safety code that we know no farms and ranches can meet. ... [But] they excluded, ironically, ... the groups of people who represent 92% of fatalities (Frank, commodity association)

I think it should be investigated no matter what. Yes, it might be just as simple as the kid ran out and got ran over. There's never any intent, -- ... don't get me wrong - any fatalities or serious things that happen with farm accidents, there's a hell of pile of remorse. If it's a business, well then you're at an arm's length because your corporation is here, and your CEO is dealing with all of this, even though it's probably it ends up being the same thing and the same way. A family farm, now you've got this bit of privacy deal. It's like, when is it appropriate to come in? Yet, I think, from a safety standpoint, it would be pretty valuable to get information, if you're wanting to improve the system, you gotta find out what you need to fix. (Darrel, farmer and agricultural extension officer)

Employee perspectives on rules for family-only and 'small' farms: Several employee participants were from family farm backgrounds. They also ran their own small, family-only operations. When asked about what WCB rules should apply to family farms, many said that 'special rules' or exemptions were appropriate or said they were unsure what was fair.

Overall, participants said that following OHS Act requirements was a fair expectation (a very 'high level'/basic requirement), regardless of farm size or composition (6). While some participants felt that following OHS Code guidelines (6) was overly onerous, others perceived that identifying and mitigating specific hazards was beneficial for their operations, despite challenges. There was confusion about how the IRS and ERS functioned. Many participants initially associated the OHS system with external investigation and enforcement mechanisms, which created apprehension about OHS regulation. Yet many participants felt that there should be investigations into serious incidents and fatalities regardless of the size or type of farm, in order to understand farm risks more comprehensively and inform injury prevention efforts. OHS rights (i.e., the right to refuse dangerous work, etc.) are at times incongruous

with the realities of family relationships. A child or teenager, for example, may not be able to refuse tasks assigned by a parent. Similar power imbalances that inhibit exercising OHS rights may be present across a range of family relationships (i.e., between spouses, etc.). Raising OHS concerns in these situations may be challenging.

8.4 Injury compensation insurance on family farms

Insurance against injury and illness is an important facet of the OHS system in Canada. WC is a no-fault, cause-based insurance scheme that replaces wages for people who face an illness or injury that occur from occupational activities. It also covers related costs such as rehabilitation, and provides a process and supports for the individual to return to work. Prior to 2016, farms in Alberta were not required to hold WC coverage, unlike most other employers and industry sectors. This changed in 2016 and farms with non-family employees were required to purchase WC. In 2020, the rules again changed and only farms with six or more employees were required to have workplace insurance, however, they could choose the insurance provider (5). As early as 2007, farm sector representatives (commodity associations, etc.) and government had identified the issue of under- and uninsured farms in Alberta (Interview with Frank, commodity association).

The following scenarios describe insurance and WC coverage among participants, comparing coverage before and after 2016 WCB farm requirements.

- Insurance decisions among **farms with non-family employees**

Scenario A Optional WCB for non-family employees prior to 2016. No insurance coverage for family members. After 2016, when WCB became mandatory for non-family employees, they acquired WCB coverage for their non-family employees (as per requirement). They continued to operate without insurance for family members due to the cost burdens outweighing the perceived risk of catastrophic injury to family members .

- While participants from this household explicitly placed a high value of their safety, family members were not insured under any plan, both before and after 2016.

Scenario B As in Scenario A, this household had optional WCB for non-family employees prior to 2016 but no insurance coverage for family members. After 2016, when WCB became mandatory for non-family employees, they acquired WCB coverage for their non-family employees (as per requirement). At this point, they decided to acquire private insurance for themselves as well, however, even though it was not required.

- Starting in 2016, the WCB requirement for non-family employees seems to have ‘nudged’ this family to acquire optional insurance coverage for themselves. There seemed to be a ‘spill-over’ effect where they realized that wanted insurance for themselves.

Scenario C Prior to 2016, non-family employees and family members had private insurance coverage. Post 2016, as per rules, operators acquired WCB coverage for non-family employees, but these employees lost private insurance coverage. On one farm, only full-time permanent employees retained private insurance in addition to WCB.

- The family retained its coverage through private insurance, while the new WCB rules effectively represented a loss of coverage for non-family employees.

- Insurance decisions among **farms without non-family employees**

Scenario D The family farm had no insurance prior to 2016. After 2016, they decided to purchase private insurance.

- As in Scenario B, this farm felt that insurance after 2016 was important, even though they weren’t required to have it.

Scenario E The family farm has always had private insurance.

There was a strong emphasis on having insurance for non-family employees among most of the study participants (though not all). Indeed, WC or private insurance was normally in place prior to any requirement to cover non-family employees. One participant specifically included ‘casual labour’ under WCB coverage (i.e., neighbours who lend a hand).^{viii} However, these same farms did not purchase

optional insurance for themselves. It was common for farm households to weigh the cost of insurance against the perceived risks of health or safety occurrences.

When it was voluntary, we had Worker's Compensation on our employees because we just felt: do I want my kids and my grandkid here, going out and working in an industry where there's no protection? ... but just for the hired boys. We haven't got anything for ourselves. We don't have any coverage of any kind [for family] ... We pay compensation on all our hired help... plus I can add in X number of dollars for casual labour... even if they're not waged. So, when a family friend comes out for the weekend, he is covered by Worker's Compensation. ... It's maybe another hundred dollars, but who wouldn't do that for a friend? (Walter, farmer)

I don't know very many that have had employees that didn't have some kind of coverage for their workers. ... people that are important in their lives, too. They don't want someone's family to be ruined, you know. Like, that's just the culture. They don't ever want someone to get hurt on their farm, first of all, and then, second of all, they don't ever want to be put in the position where there's a family that isn't covered because they we hurt or died on their farm (Nicole, farmer)

WCB and no-fault coverage: Participants did not place a great deal of value on the fact that WCB was no-fault insurance. They thought it was highly unlikely that they would be sued.

WCB provides data on farm injury and illness: WCB data has helped farm safety organization understand what sectors are more prone to particular kinds of injuries, and direct communication and safety activities around that data. Private insurance reduces ability to collect, track and monitor safety and health issues on farms. (Tina, farm safety org). WCB data informs regulators about sectors about OHS compliance strengths and weaknesses.

Choice of insurance provider and under-/uninsured farms: As of 2020, insurance for workers on farms with five or less full-time employees is optional. This ability to opt out could lead to a higher number of uninsured farm employees and may be detrimental to employee health and safety. 'Larger' farms (with six or more full-time employees) can now choose their insurance provider (private or WCB coverage) for employees. While most participants felt that insurance should be required on farms (all farms regardless of number of employees), they felt that farmers should have a choice of insurance providers. However, safety professionals and regulators expressed a concern about the loss of farm injury/illness data collected through WCB. This is because collecting and consolidating data across multiple insurance providers would not be feasible.

Farmers and family members placed a high value on their family's safety and wellbeing. Yet not all chose to insure themselves. This disconnect was more evident among family-only farms, because there were no requirements for family, while there were for employees.

Overall, WCB coverage has a number of advantages and disadvantages for exempt farms (small and family farms). WCB is the most cost-effective insurance option compared to private insurance, especially

for economically marginal farm operations, and farm operators to opt-in to WCB coverage for unpaid labour (family members or casual ‘help’) (46). Yet WCB does not cover non-work injuries/illnesses. Private insurance is more comprehensive and covers all injuries, but is much more cost-prohibitive.

8.5 Farm employee perspectives on representation and support

In many instances, farm employees had to advocate for themselves in the workplace. With supportive employers, this led to changed safety practices. In other cases, advocating for oneself in the workplace was not sufficient to improve safety.

Several farm employee participants had varied levels of knowledge about how the OHS system worked, and lacked support when they had problems. When faced with serious workplace risks that they could not resolve within the workplace, they turned to unusual places for help, including the SPCA or other animal welfare organizations, rather than safety or worker representatives.

Injury compensation and insurance coverage among employee participants: All of the farm employee participants in this study had some form of injury compensation, either WCB or private insurance. Prior to 2016, two out of the three employee participants said that they did not have any insurance coverage. One participant recalls that in a previous farm position she elected to carry (and pay for) her own coverage. Three of the five participants had received WCB compensation after farm work related injuries or illness. Some participants said their employer/manager had dissuaded or prevented them from making claims after an injury, or had distorted the information in the claim. It could be difficult to accommodate workers in the return-to-work process as there is very limited ‘light duty’ tasks on farms.

Work was very against it [filing a claim related to hip arthritis]– ‘Oh, no, no, no, they won’t cover it’, ... and then work wasn’t really cooperating on that note, so then I just kind dropped it and whatever. (Ralph, farm employee)

8.6 Employment Standards and injury prevention

Alongside new OHS and WCB requirements, farms with non-family employees were also subject to Employment Standards rules in 2016. The aim of Employment Standards is to provide minimum wage and working standards, and cover basic conditions like minimum wages, hours of work, overtime rules and overtime pay, vacation pay, and breaks. Prior to 2016, farms were entirely exempt from ES requirements, and there was significant resistance from the farm sector to ES legislation. As is common in other provinces, there are ‘special rules’ for agriculture that exempt farms from specific ES rules, like overtime pay and youth employment limits (36). The agricultural industry has argued that ES requirements do not accommodate the pressures and operational demands of farming, such as harvesting and planting periods, which require long hours of work. Operators spoke about how they supported the Alberta ES overtime pay exemption for agriculture. One participant, who worked as a farm employee in Western Europe prior to starting a farm operation in Canada, spoke about how he benefited from holiday pay as a farm employee (outside of Canada). As an operator, he felt paying overtime and holiday pay would be too financially onerous.

I thought that was great because I was making \$40-50 an hour 'cause I got paid 200%, right, which is really good for the employee, but not very good for the employer, and now, of course, being on the employer side, you know, ... it's my opinion that I don't think it's fair that, when we deal with the seasonal nature of our job, that we gotta pay overtime wages, you know, during seeding and harvest time.
(Lucas, farmer)

As described in sec. 6.2, family farm members face health and safety risks from overwork and fatigue, due to the operational and financial pressures of running a farm. None of the farmer/family member participants, however, drew any links between the OHS risks of overwork/fatigue and their work standards. Farm employee participants also reported that they worked long hours, on both year-round and seasonal bases (depending on the job). In some instances, they suffered chronic health impacts (such as hip arthritis) and serious injuries because of long hours of work.

9 Discussion

The study contributes to a deeper understanding of family farm OHS attitudes and experiences. There is very little qualitative research about OHS on Alberta family farms (27,45); this project represents the first study of its kind to use qualitative health methods and engage with a range of perspectives in the sector during a critical, recent period of change in Alberta. Our study addressed family farm OHS from a variety of vantage points—operators, family members, and employees. An additional layer of participants in Alberta from industry, safety, labour, and regulator communities also provided in-depth input on the study. A group of advisors from key stakeholder groups (safety, industry, OHS regulation, and labour), provided input on participant sampling and recruitment strategies, as well as final results.

9.1 Limitations

There are limitations to the study. First, and as discussed earlier, the study sample of farms did not include a number of groups/communities in Alberta agriculture: Hutterite farms; migrant and TFW farm employees; and First Nations and Metis farms and farm employees. Like most qualitative research, this study should not be considered statistically representative of family farm or farm employee safety experiences in Alberta. The results are intended to help explore family farm OHS perceptions, experiences, and practices in relation to regulatory requirements and exemptions. Those who opted to participate and identified as a ‘family farm’ had a vested interest in safety, and sought to represent themselves in a positive light. The full range of perspectives and practices in the farming community is only partially reflected in this study. Most of the farm employee participants shared negative experiences with farm safety. All of the qualitative data in this study was self-reported.

9.2 Knowledge translation audiences and products

Audiences for knowledge mobilization include the following:

- **Policy, regulators** – OHS, ES, WCB, Agriculture and Forestry
- **Safety practitioners and educators** – the Alberta Farm Safety Center; AgSafe Alberta; the Canadian Agricultural Safety Association; the Alberta Workers’ Health Center
- **Farm and agriculture industry** – commodity associations (various); Alberta Federation of Agriculture; the National Farmers Union-Alberta
- **Worker advocates and unions** – the United Food and Commercial Workers; Farmworkers Union of Alberta; Migrant Worker Alliance for Change
- **Academic and scientific communities** – Canadian Association of Work and Health Research; Alberta Centre for Sustainable Rural Communities; Canadian Association of Food Studies

Several types of knowledge translation **products** have been or could be developed from the study findings:

- Study reports including a short report for study participants, and infographics for social media dissemination. A descriptive statistical analysis to contextualize qualitative findings is under preparation (4)
- Presentations and webinars

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- Peer-reviewed academic articles in preparation and possible book manuscript on family farms, safety, and work is underway.
 - Study website where study outputs are shared online: www.familyfarmsandwork.ca

10 Conclusion

10.1 Applicability of results

The findings align with previous research showing that farm populations in Prairie provinces face a diversity of farm hazards and risk management challenges at the farm-level, all in a sector where there has been limited workplace safety regulation and standards are largely voluntary (15,16,28). The contribution of the study is to show that many of those who make up the ‘family farm population’ strongly value and seek to contribute to a culture of health and safety in agriculture. These values do not necessarily translate into safety practices due to lack of knowledge, resistance, and barriers to mitigating risks, as research on Saskatchewan farm safety has shown (33). There was also a disconnect between the views of operators and their family members who thought that farms were largely ‘safe’, and the experiences of farm employees who reported routinely encountering risky forms of work, difficulty resolving hazards at work, and multiple instances where they were injured or ill.

The overall findings provide insight into the *politics* of farm safety and farm labour regulation among farming populations, which in turn influences how farm populations perceive formal farm safety rules, and how regulations are designed and implemented. As several key informants explained, groups lacking basic workplace health and safety standards are those who resist measures that stand to rectify these gaps. While the overall negative reaction of the Alberta farm population to 2016 farm OHS, WCB and ES legislation would suggest opposition to legislation was uniform, the study findings suggest instead that there are diverse attitudes towards formal farm OHS requirements, both within and between family farm households, and at the industry level (between different commodity and agriculture associations). One of the implications of this diversity is that there is a unique opportunity to leverage under-represented voices within the farm sector in safety promotion and injury prevention programs, namely, young farmers (i.e., young adults who aspire to farm or co-operate farms) and farm employees.

Farm owners-operators often make key decisions about farm safety at an operation-level. The study findings revealed how various family members and farm employees negotiated safety decisions and practices in relation to power imbalances within families, and relationships between employers and employees. Family dynamics at times helped resolve safety concerns quickly (i.e., decisions to start using PPE after a ‘close call’) but could also hinder problem solving (i.e., where more junior family members were assigned risky work, or felt that their safety concerns were not valued). The findings indicated that there are unique vulnerabilities within families, i.e., family members may have challenges refusing unsafe work.

Farm risks are qualitatively different for employees compared to family members. Most agricultural employment can be characterized as “precarious”: limited social benefits and statutory protections; job insecurity (temporary, part-time, seasonal jobs), low wages, and high risks of injury/illness (47,48). Employees had less discretion to modify their work tasks (i.e., control over their work) (49) and were unlikely to benefit from the farm financial rewards (i.e. farm profits). They also tolerated risks because they feared reprisals for raising safety concerns (i.e., losing their job). Unlike operators and their family

members, employees did not ‘normalize’ risky conditions, though they sometimes felt they had no choice but to accept these conditions. In the study interviews with industry and family farm, few participants acknowledged how employees, farm operators, and family members occupied different social positions, and how these different positions were likely to affect farm health and safety. The current Alberta OHS and WCB legislation does not cover employees on farms with five or less full-time employees, meaning that most employees are not covered by basic statutory workplace protections. The findings suggest that management culture and workplace relationships, rather the size or type of farm operation (i.e., family vs. non-family, number of employees), enabled and/or constrained farm OHS practices and behaviour change. The literature on small (non-farm) business OHS has similarly found that small businesses are not necessarily safer or harmonious workplaces cultures (50,51).

The majority of Alberta farms, 76% of farms in 2016, did not report any hired labour (neither family employees nor non-family employees). These farms are entirely exempt from OHS, insurance and ES requirements. They are economically marginal farms (average farm incomes of \$35,500 in 2016, barely above the CRA’s small business tax-exempt threshold) (4). Many of these operations depend on off-farm employment. As such, time and resources for on-farm tasks is limited and risk management may be particularly difficult. More research on potential injury prevention programs for economically marginal farms (that juggle multiple on and off-farm obligations) would be more appropriate than ‘blanket exemptions’ from OHS. Current exemptions leave the OHS needs of these farms unaddressed.

In contrast to farms that do not report any hired labour, farms with both non-family and family employees had the highest average farm incomes in Alberta, though they represented a small proportion of family farms. It is thus much more likely to expect that farms with employees – whether these employees are family or non-family – possess the financial and logistical resources to comply with formal injury prevention strategies and purchase injury insurance, regardless of the type (family, non-family), number of employees present, or whether employees are full- or part-time. These operations are also more likely to be able to afford overtime pay for employees, which would help compensate employees for the health strains of long hours of farm work.

Future research on OHS risks from long/complex hours of work and scheduling in agriculture among farm employees in Canada may be developed. Research on farms with no hired labour that are economically marginal would be valuable. These make up the vast majority of farms in Alberta and are highly reliant on off-farm employment.

While the study was completed prior to the COVID-19 crisis, it important to discuss how major COVID-19 outbreaks in agriculture facilities (i.e., Alberta meat processors, vegetable/fruit producers in Ontario and BC) are symptomatic of longer-standing, unaddressed health and safety gaps in farm workplaces. Despite their ‘essential’ role, agricultural workers lack basic OHS and ES coverage (i.e., the right to refuse unsafe work; paid sick days). These workplace health emergencies have also been alarming because farmers, their families and employees are integral to the food supply chain and the strain to agricultural production caused by a lack of consideration for workplace health and safety in agriculture is more evident. Fortunately, there may now be greater public awareness as to the importance of agricultural

workplace health and safety to protect the farm population while also maintaining a robust food supply chain.

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Endnotes

ⁱ One of the priority areas of the 2018 Government of Alberta OHS Futures Research Funding Program was the agricultural industry, in relation to the new legislation and the need to understand its impacts.

ⁱⁱ Rates of off-farm employment for this period in each Prairie province were 79% in Alberta, 74% in Manitoba and 70% in Saskatchewan, according to Komirenko and Furtas' study (11).

ⁱⁱⁱ The AgInjury News database is published by the National Farm Medicine Center, using news reports on farm injuries to compile and map injury occurrences. In April 2020, AgInjury News started publishing farm injury data on Canada from 2016 onward.

^{iv} This study did not include migrants in the sample of farm employees. For a rationale on this sampling approach, please see sec. 4.1, above. Research on Alberta migrant farm worker and OHS would be valuable. Research about migrant farmworker health and safety in Ontario, BC and elsewhere in Canada has shown that migrants face specific health and safety risks. Most agricultural migrants enter Canada under temporary work permits with designated employers. Due to lack of employment mobility and their economic circumstances, migrants may be disproportionately exposed to unsafe and unhealthy work conditions in agriculture, and may be more likely to tolerate these conditions. Migrant farm workers face numerous challenges within the OHS system. They may be unable to exercise their OHS rights (i.e., there can be high barriers to refusing unsafe work if workers can be fired without recourse). There are barriers to reporting workplace injuries and navigate the WC system (52). Workers who get sick or injured may be repatriated and replaced by new workers, and thus fail to receive rightful compensation and treatment for their condition (53). Within the timeframe of our study (2018-2019), migrant farm workers in Alberta were largely covered by basic OHS and mandatory WC requirements as of 2016. New 2020 rules, however, mean that migrant farm workers hired on "small farms" in Alberta would not be covered by ES, OHS or WCB requirements, unless federal and sending country authorities required them.

^v A social license is defined as community and public approval of an industry, project, or company.

^{vi} One industry participant discussed this study, however, the study is not publicly available for review.

^{vii} SECOR refers to Small Employer Certificate of Recognition in Alberta. Both COR (Certificate of Recognition) and SECOR are part of the Alberta government's Partnership in Injury Prevention (PIR) program, where certified operators/firms can qualify for WCB premium discounts. The idea is this helps recognizes employers who have a safer workplace.

^{viii} It is possible to cover unpaid workers under WCB insurance. Volunteer firefighters in Alberta have WCB coverage in this way. For a minimum premium, any worker (even children) may be covered through the WCB. (46)