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LABOR ON VERMONT DAIRY FARMS: A PRODUCER PERSPECTIVE

A Thesis Presented

by

Emily C. Irwin

to

The Faculty of the Graduate College

of

The University of Vermont

In Partial Fulfillment of the Requirements
for the Degree of Master of Science
Specializing in Community Development and Applied Economics

October, 2018

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Abstract

To compete with larger, more efficient dairy farms, build resilience against increasingly volatile milk prices, and increase farm income, farms in traditional dairy states such as New York, Wisconsin, and Vermont, have been forced to expand their herds and increase production. Many dairy farmers do not have formal training in human resources management, and find the transition to a larger, non-family workforce to be challenging. In addition, farmers who have transitioned to a primarily Latinx workforce also face considerable cultural and language barriers. The quality of human resource management can have a significant impact on a farm business, and evidence suggests that intentional human resource management can result in healthier cows, higher profits, and lower employee turnover (Billikopf & Gonzalez, 2012; Erskine, Martinez, & Contreras, 2015; Stup, 2006).

This thesis explores two essential components of human resource management on dairy farms: the employer-employee relationship, and the components of a competitive wage and non-wage benefit package. Both articles rely upon thirty surveys conducted in Addison County, Vermont, from December 2017 to January 2018. In the first article, using the qualitative data collected in the survey, I apply the concept of precarious employment to the employer-employee relationship on dairy farms in Addison County. Although I discover some evidence of precarity, I also find examples of worker control over working conditions, specifically regarding worker recruitment, termination, wage rates, and hours.

In the second article, I use the quantitative data we collected regarding wages, and the estimates provided by farmers for the value of the non-wage benefits offered to employees, to outline the structure of a typical compensation package for Addison County dairy employees. I find that more than half of employers provide Latinx employees with housing, utilities, internet, satellite TV, a bonus, transportation, farm products, and vacation time. In terms of non-wage benefits offered to U.S. workers, more than half of employers provide housing, utilities, a bonus, farm products, sick time, and vacation time. I also find that including the producer-estimated value of the typical non-wage benefits offered to employees, the median total hourly compensation for Latinx workers is \$12.62. American dairy workers in Addison County earn a median total hourly compensation with a range of \$21.32 to \$24.02.

I end with a discussion of the practical and theoretical implications of our research. I also include a few recommendations for future research.

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Chapter 1: Introduction

In the last century, the U.S. dairy industry has undergone dramatic structural changes. With the post-World War II introduction of electricity, tractors, power equipment, and artificial insemination, American dairy farming shifted from a way of life to a business. The total number of farms and cows has decreased dramatically since the 1950s, while the number of cows per farm has increased. The state of Vermont reflects national trends. In 1965, there were more than 6000 dairy farms in the state; today, there are 778 dairy farms in Vermont (Parsons, 2011; Vermont Agency of Agriculture Food and Markets, November 2 2017).

To compete with larger, more efficient dairy farms, build resilience against increasingly volatile milk prices, and increase farm income, smaller farms in the traditional dairy states of the Midwest and East have pursued a strategy of increased production. For most farmers, this means increasing the size of their herd and shifting to a three-times-per-day milking schedule. Both strategies require more workers, and family members are often not able to fill the demand. Limited farm budgets and the need for more income may motivate family members to obtain off-farm jobs. Additionally, farm family size is declining, and spouses and farm children are increasingly seeking off-farm careers, trends that further increase the demand for hired labor (J. Harrison, Lloyd, & O'Kane, February 2009).

As a dairy farm expands and hires more labor, the farmer must spend more time managing employees, and less time performing essential tasks on the farm (Hagevoort, 2013). Bewley et al (2001) found that although farmers who expanded their operations

reported increased production, improved profitability, and enhanced quality of life, they found the transition to human resource management be challenging. In addition, farmers who have transitioned to a primarily Latinx workforce also face considerable cultural and language barriers when trying to build an effective employer-employee relationship. More than one-third of U.S. dairies hire immigrant employees, slightly more than one half of employees (51.2%) working on all U.S. dairy farms are immigrants, and approximately 79% of U.S. milk is produced on farms employing immigrant workers (Adcock, 2015). Estimates by the Vermont Agency of Agriculture in 2007 indicate that Latinx migrant workers were involved in at least 50% of the milk produced in the state (L. Waterman, personal communication, August 2010).

The quality of human resource management can have a significant impact on a farm business, and evidence suggests that intentional human resource management can result in healthier cows, higher profits, and lower employee turnover (Billikopf & Gonzalez, 2012; Erskine et al., 2015; Stup, 2006). Academic researchers can help dairy producers by identifying effective employment practices, and by disseminating objective information regarding the components of a competitive wage and benefit package for dairy employees.

1.1 Research Questions

In this thesis, I explore the dimensions of the employer-employee relationship in the Vermont dairy industry. Specifically, this thesis is guided by two overarching research questions:

RQ1: Based on producer descriptions of employment practices, do Latinx dairy employees in Addison County, Vermont experience precarity?

RQ2: What are the wages, non-wage benefits, and in-kind benefits provided by Addison County dairy farmers to their employees?

2b. What is the approximate annual and hourly value of those benefits to the worker?

2c. How do these wages and benefits compare to other studies of dairy employees, to similar occupations in Vermont, and to the Vermont livable wage?

In Chapter 2, I review the literature related to the labor in the dairy industry, precarious employment, and wages and benefits offered to agricultural workers. In Chapter 3, I use qualitative data from thirty surveys to study precarity in the dairy industry, and explore how employment practices may contribute to the presence of precarious employment. In Chapter 4, using quantitative data from the same thirty surveys, I present detailed information on the wages, non-wage benefits, and in-kind benefits offered to both U.S. and Latinx dairy employees in Addison County, Vermont. In Chapter 5, I close with a discussion of overall conclusions and recommendations.

Chapter 2: Comprehensive Literature Review

2.1 Background

2.1.1 Changes in the U.S. dairy industry.

In the last century, the U.S. dairy industry has undergone dramatic structural changes. Although the changes mirror trends in the U.S. agricultural industry, factors unique to the dairy industry also played a role. Increasingly volatile milk prices, decreasing demand for traditional dairy products such as full-fat milk, and consolidation in milk manufacturing and processing have pushed farmers to “get big or get out” (Dobson & Christ, 2000). In 1940, there were 21 million cows on 4.6 million dairy farms; in 1980, there were only 334,000 farms with just under 11 million cows. By 2012, there were approximately 53,000 licensed dairies, and farms with more than 500 cows accounted for 63% of the milk supply, up from 39% in 2002 (von Keyserlingk et al., 2013). Today, farmers can produce more milk with less resources and fewer cows. U.S. dairy production has also been moving steadily westward. In the 1990s, milk production expanded rapidly in the western states, and in 1993, California surpassed Wisconsin to become the leading milk producing state. Large-scale, efficient, industrialized dairy farms with specialized labor continue to dominate the western dairy industry (Dobson & Christ, 2000).

To some extent, the state of Vermont reflects national trends. In 1965, there were more than 6000 dairy farms in the state; today, there are 778 dairy farms (Parsons, 2011; Vermont Agency of Agriculture Food and Markets, November 2 2017). The average herd size in Vermont has increased from 40 cows per farm in 1970, to 60 cows per farm

in 1990, to 164 cows per farm by the end of 2017 (Parsons, 2011; Vermont Agency of Agriculture Food and Markets, November 2 2017). In addition to increasing volatility in global milk and feed prices, Vermont dairy farmers must now comply with recently drafted state regulations that aim to reduce the amount of phosphorus pollution in Lake Champlain. Though Vermont dairy farms and associated sectors provide 6,000 – 7,000 Vermont jobs, and the culture and aesthetic of dairy farming is still overwhelmingly important to Vermont residents, a relatively small proportion of the total state population works directly in farming of any kind (Vermont Dairy Promotion Council, 2016). In fact, according to U.S. Census figures, only 2.6% of the state population is employed in, “agriculture, forestry, fishing and hunting, and mining” (U.S. Census Bureau, 2016). This disconnect between the Vermont dairy industry and much of Vermont’s population has led to tension between farmers and neighbors, particularly regarding land use and water pollution (Bodette, 22 June 2016; Smith, Parsons, Van Dis, & Matiru, 2008).

2.1.2 Latinx labor on dairy farms.

As dairy farms expand, they require more labor, and family members are often not able to fill the demand. Limited farm budgets and the need for more income may motivate family members to obtain off-farm jobs. Additionally, farm family size is declining, and spouses and farm children are increasingly seeking off-farm careers, trends that further increase the demand for hired labor (J. Harrison et al., February 2009). Anecdotally and in several surveys, dairy farm operators assert that they are unable to find enough appropriate U.S. workers, and that when they do, most native workers are unwilling to accept the long hours and relatively low wages typical of agricultural work

(Craven, 16 April 2017; J. Harrison et al., February 2009; T.R. Maloney, Eiholzer, & Ryan, December 2016). As of 2015, more than one-third of dairies hire immigrant employees, slightly more than one-half of employees (51.2%) working on dairy farms are immigrants, and approximately 79% of U.S. milk is produced on farms employing immigrant workers (Adcock, 2015).

The practice of hiring immigrant workers on Midwestern and Eastern dairy farms is relatively recent. Surveys conducted in New York and Wisconsin suggest that dairy farms in those states did not begin hiring significant numbers of immigrant workers (most of whom are from Mexico) until the mid-90s and early 2000s (Maloney 1999; Harrison 2009). A research report by Dr. Thomas Maloney of Cornell written in 1999 indicates that while New York's fruit and vegetable industries had been hiring Latinx workers for over forty years, the practice of hiring Latinx workers on dairy farms in New York was relatively new; most dairy employers with Latinx workers had employed them for five years or less (Thomas R Maloney, 1999). Results from a follow-up report in 2005 indicated that 72% of farmers surveyed had hired their first Latinx employee since 2000, only 7% of employees surveyed indicated that they had been with their employer for more than four years, and 44% of employees said their tenure with the farm had been less than one year (Thomas R. Maloney & Grusenmeyer, February 2005). According to the most recent survey conducted by Dr. Maloney and his colleagues, for seven out of ten farms surveyed (69.4%), Latinx workers make up between 50-100% of their total workforce (T.R. Maloney et al., December 2016).

Although less research has been conducted in Vermont, we do have some details regarding the Latinx dairy workforce. Estimates by the Vermont Agency of Agriculture in 2007 indicate that Latinx migrant workers were involved in at least 50% of the milk produced in the state. A 2005 Vermont Farm Bureau study of 239 farms found that 30% of all full-time employees were from Mexico (Chappelle & Baker, August 15 2010), and other surveys report that a significant fraction of those are from rural states in southern Mexico, including Chiapas, Guerrero, and Veracruz (Daniel Baker & Chappelle, 2012). Estimates of the total migrant farmworker population vary significantly, and depend on the date of the estimate, the method used to calculate the estimate, and the data source. In 2009, the Vermont Migrant Education program estimated a total migrant worker population of 1,500, (Shea, 2009), while the Vermont Agency of Agriculture typically describes the state's population of migrant workers as between 2,000 and 3,000 (Chappelle & Baker, August 15 2010). Research on migrant dairy workers in Vermont has largely centered around the health needs and barriers to accessing healthcare for migrant workers, and a program that taught occupational Spanish to Vermont dairy farmers to improve communication between employers and employees (Daniel Baker & Chappelle, 2012; Dan Baker & Chappelle, June 2012; Chappelle & Baker, August 15 2010).

Regardless of the region, farmers are typically pleased with the work ethic of their Latinx labor force, but worry about the long-term sustainability of hiring immigrant labor. Most of the Latinx dairy labor force is not legally authorized to work in the United States. Dairy farmers require hired labor year-round, so the seasonal H-2A agricultural

work visa program is not a viable option. This leaves dairy farmers with few legal alternatives (Bent, Spring 2011). Hiring Latinx workers also presents significant language and cultural barriers for dairy employers. Coupled with a general lack of human resource skills on the part of dairy farmers, the largely unauthorized status of the dairy workforce is perhaps one of the greatest immediate threats to the sustainability of the dairy industry (von Keyserlingk et al., 2013). Given these challenges, the employment relationship between dairy employers and Latinx workers is an important area to explore in greater detail. In the following section, I will outline the concept of precarious employment, and explore its possible use as a lens through which to examine employment relationships in the Vermont dairy industry.

2.2 Precarious Employment

2.2.1 What is precarious employment?

The theory of precarious employment is a useful framework to study the employment relationship between dairy employers and Latinx workers in Vermont. The concept of precarious employment is relatively recent, though the discussion about precarious work (and other closely related terms such as contingent and nonstandard) draws heavily from Doeringer and Piore's (1971) classic discussion of dual labor market theory (Hudson, 2007). Doeringer and Piore conceived of a primary labor market and a secondary labor market. Jobs in the primary labor market are characterized by high wages, good working conditions, employment stability, opportunity for advancement, and equity. Jobs in the secondary labor market are characterized by low wages, inadequate benefits, poor working conditions, high turnover, little opportunity for

advancement, and unpredictable management (Doeringer & Piore, 1971). Despite the implied strict division of job characteristics, Doeringer and Piore, and other theorists after them, recognized that most jobs fall somewhere in between the primary and secondary labor markets. Dual labor market theory directly informed early conceptions of what precarious employment looks like (Hudson, 2007).

Guy Standing's definition of precarity, outlined in his provocative book, *The Precariat* (Standing, 2014), is perhaps the most restrictive. It is also the only definition to categorize those who experience precarious employment as a class unto itself, "the precariat." Members of the precariat lack, to varying degrees, the seven main forms of labor security: labor market security (adequate income earning opportunities); employment security (protection against arbitrary dismissal); job security (the ability to retain a "niche" in employment, and opportunities to access upward mobility); work security (protection against poor and unsafe working conditions); skill reproduction security (opportunity to gain and use acquired skills); income security (assurance of an adequate stable income); and representation security (having a collective voice in the labor market) (Mosoetsa, Stillerman, & Tilly, 2016; Standing, 2014).

Another definition, initially put forth by Gary Rodgers (1989) and relied upon by several subsequent scholars, defines precarious work on a continuum described by four criteria or indicators of precarious employment: 1) degree of certainty of continuing employment; work is more insecure when the risk of job loss is high, or the job has a short time horizon; 2) degree of control over the work; work is more insecure the less control the worker has over wages, working conditions, or the pace of work; 3) degree of

regulatory protection; the extent to which workers are protected (by law, collective organizations, or customary practice) against arbitrary working conditions; and finally 4) income security (Mosoetsa et al., 2016; Rodgers, 1989). Rodgers was one of the first scholars to study the various dimensions of precarious work, and to define precarious employment as any combination or level of the four criteria (Cranford, Vosko, & Zukewich, Fall 2003). A final definition of precarious employment, employed primarily by Arne Kalleberg (2009), narrows the focus to a single, expansive criterion: precarious employment is “employment that is uncertain, unpredictable, and risky from the point of view of the worker” (Kalleberg, 2009). In practice, most scholars leave the definition of precarious work implicit, and choose a definition that is conceptually preferable and fits with the variables and data available (Mosoetsa et al., 2016).

2.2.2 Precarious employment and the “standard employment relationship.”

Precarious work is often defined in contrast to the “standard employment relationship.” The standard employment relationship is most commonly defined as employment in which the employee has one employer, works full-time year-round on the employer’s premises, enjoys benefits and entitlements, and expects to be employed indefinitely (Cranford et al., Fall 2003). Simply defining precarious employment in contrast to standard employment can obscure some important considerations. Several scholars argue that precarious employment is not a new phenomenon, and in fact was the norm for most of recorded human history (Kalleberg, 2009; Mosoetsa et al., 2016; Quinlan, 2012). The recent era of social protections, exemplified by New Deal era legislation in the United States, is the historical exception. “Standard employment” was

only standard during a particular time (the post-war Fordist era), for specific people (not historically marginalized groups), and in specific places (the Global North). Defining precarious employment in contrast to standard employment can be problematic because it obscures the long history of precarious employment, and prevents us from studying precarious employment in its proper historical and geographical context (Mosoetsa et al., 2016).

However, others argue that although some form of precarious employment may have been the norm in the past, this current era of precarious employment is different, and deserves special scrutiny (Kalleberg, 2009; Quinlan, 2012; Standing, 2014). There is no historical equivalent to present-day economic phenomena such as franchising and global supply chains. While precarious work did exist in the past, industrialization introduced precarious work and its consequences on a scale not previously experienced (Quinlan, 2012). In addition, before the New Deal era labor protections, there were strong ideologies (i.e. Marxism) that envisioned a world without market domination. Now, we must confront precarious employment in an “ideological vacuum,” with no real idea of what mechanisms foster precarity, nor any notion of how to deal with it (Kalleberg, 2009, p. 5).

2.2.3 Immigrants and precarious work.

Many scholars argue that precarity has always existed for migrant workers, regardless of historical moment or geographical location. In his introduction to a special issue of *Critical Sociology* examining precarity, Carl-Ulrik Schierup (2016) labeled migrants as the, “... quintessential incarnation” of precarity (Schierup & Jørgensen, 2016,

p. 948). Schierup and others argue that in some sense, the work of migrant labor has always been precarious, and the precarious working conditions of migrants, including informality, vulnerability, low wages, and lack of union rights, are now spreading to the rest of the workforce (Schierup & Jørgensen, 2016).

Indeed, there is a growing body of work that indicates that noncitizens and migrant workers are uniquely susceptible to precarious employment. Scholars have documented the intersection between precarious migrant status and precarious employment in a variety of sectors, including agriculture (Goldring & Landolt, 2011; Hondagneu-Sotelo, 2001; Hudson, 2007; Preibisch & Otero, 2014). Beyond describing the intersection of precarious migrant status and precarious employment, a few scholars have used precarious migrant or noncitizen status as a *source* of precarious employment outcomes (Boese, Campbell, Roberts, & Tham, 2013; Goldring & Landolt, 2011). In her article based on interviews with temporary nurses in Australia, Boese (2013) finds that rather than specific working conditions or employer mistreatment, feelings of precariousness among migrant nurses in Australia stem directly from the immigration process. There is also evidence that migrant status upon entry (secure versus insecure) has a long-term effect on employment outcomes. Goldring (2014; 2011) finds that precariousness in early work has a lasting and negative effects on current work, and that this effect is not reversed with more time, nor with a shift from insecure to secure legal status.

Several scholars implicate immigration regulations and enforcement directly, and argue that the state plays a significant role in “fashioning” and maintaining precarious

workers by creating an insecure environment in which migrant workers feel forced to accept jobs with poor pay and working conditions (Anderson, 2010; Fudge, Fall 2012; Rodriguez, 2004; Schierup & Jørgensen, 2016). The vulnerability of unauthorized immigrant workers is not an economic condition, but rather a political condition created by the federal government policies surrounding legal protection and work authorization (Rodriguez, 2004; Schierup & Jørgensen, 2016).

2.2.4 Indicators of precarious employment.

Given the range of definitions and contributing factors, there are several challenges associated with operationalizing the concept of precarious employment. While scholars often rely on the form of employment – i.e. part-time, temporary, contract, etc. – as an important indicator of the possible presence of precarious employment, most also incorporate other indicators of precarious work (Cranford et al., Fall 2003; Goldring & Landolt, 2011; Olsthoorn, 2014). Vosko (2009) describes this more common approach among scholars who seek to develop precarious work as a research instrument as “multi-dimensional.” In this approach, precarious work is defined in terms of a deficit in several dimensions of labor security. A multi-dimensional approach allows precarious work to be present to various degrees within any job, regardless of the form of employment (Vosko et al., 2009).

Still, there is considerable debate regarding the appropriate level of analysis. Precarity can be defined in relation to formal job characteristics and employment rights (i.e. the extent to which the rights of the employee to safe working conditions, a living wage, and the right to bargain collectively are formally protected by the law), or to

precarity generated by an informal lack of security in practice. Though both levels of analysis include objective job characteristics – such as wages and non-wage benefits – subjective job characteristics, or employee feelings of insecurity, can also contribute to precarious employment. Regardless of the level of analysis, income security - or the ability of an employee to earn an adequate, stable income - is an important characteristic to consider in any study of precarious employment. The level of wages and non-wage benefits can be an important indicator of the presence of precarious employment. Wages and benefits provided to agricultural workers have a unique history in the United States. In the next section, I will discuss compensation for agricultural workers in the U.S. more broadly, and report on research conducted thus far that documents wages and non-wage benefits offered to dairy workers in the United States.

2.3 Agricultural Compensation

There are several factors influencing the wages and non-wage benefits offered to agricultural workers in the U.S. that are important to explore. First, I will outline the doctrine of agricultural exceptionalism and the related U.S. and state laws governing agricultural wages. Then, I will summarize recent evidence of wage disparities based on nativity and race.

2.3.1 Agricultural exceptionalism.

The living and working conditions of farmworkers in the nineteenth century were not appreciably different from those of industrial workers. Employees in both sectors faced long hours, dangerous working conditions, and low wages. The Progressive Era, culminating in the federal labor legislation of the New Deal period, brought significant

changes to the industrial workplace (Schell, 2002). The National Labor Relations Act, passed in 1935, gave industrial workers the right to collectively bargain for their wages without fear of reprisal from their employers. The Fair Labor Standards Act of 1938 set minimum wages, required overtime wages, restricted child labor, and mandated recordkeeping for some employers. However, agricultural employers are exempt from several of the requirements laid out in these two landmark pieces of legislation. As the living standards of industrial workers improved dramatically, earnings of agricultural workers remained stagnant (Schell, 2002).

During this period, the doctrine of “agricultural exceptionalism” began to take shape. In most agricultural states, farm interests have historically had a disproportionate voice in state legislatures. Particularly before 1962, when the U.S. Supreme Court ruled in *Baker v. Carr* that state legislative districts must be drawn based upon population, legislators from rural districts had extraordinary political power. The primary argument of agricultural interests at the state level was that higher production costs in the form of higher wages and increased protections for farmworkers would put farmers at a competitive disadvantage compared to other states. Agricultural interests were also disproportionately represented at the federal level. Additionally, before 1960, most of the farmworkers in the rural south were African American, so any legislation on behalf of farmworkers tended to be viewed as undermining the delicate and racially charged social order of the mid-20th century south (Schell, 2002).

Today, agricultural lobbying groups, including the American Farm Bureau, continue to argue against granting farmworkers the right to collectively bargain. They

maintain that farmworkers should not be allowed to strike when perishable commodities are involved, potentially limiting the ability of the farmer to harvest her crop (Schell, 2002). The doctrine of agricultural exceptionalism continues to act as the foundation of agricultural labor laws. In the next section, I will outline the basic protections offered to agricultural workers at the federal and state (Vermont) level.

2.3.2 U.S. and Vermont laws affecting farmworkers.

Initially, farmworkers were entirely excluded from the minimum wage for industrial workers established by the Fair Labor Standards Act in 1938. In 1966, farmworkers were included in the law's minimum wage provisions, although at a lower rate than other workers. By 1970, farmworkers at large farms were guaranteed the federal minimum wage. However, if an agricultural employer does not use more than 500 "man-days" (any day during which an employee performs at least one hour of agricultural work, roughly equivalent to seven full-time employees) during any calendar quarter in the previous year, minimum wage requirements do not apply. This requirement typically excludes workers at smaller farms (Schell, 2002). Some states are changing wage requirements for agricultural workers. Farm employers of a certain size in New York must now follow a minimum hourly wage schedule; by the end of 2018, many New York dairy farm employers must pay a minimum of \$11.10 per hour, rising to \$12.50 per hour by the end of 2020 (New York Department of Labor, 2016).

Agricultural employers are also not required to pay overtime after forty hours of work. Immediate family members of the farm employer, as well as agricultural workers in operations that have had ten or fewer employees within the last twelve months, are also

excluded from the Occupational Health and Safety Act of 1970 (The National Agricultural Law Center, 2017).

The Fair Labor Standards Act outlines the minimum standards that apply to employers; some state and local laws may provide more protection. Ten states (Oregon, California, Arizona, Nebraska, Kansas, Wisconsin, Louisiana, New Jersey, Massachusetts, and Hawaii) provide some assurance for farm workers to organize (Maixner, 23 November 2016). The New York Civil Liberties Union, on behalf of the Workers' Center of Central New York and the Worker Justice Center of New York, filed an appeal in June of 2018 a case that would extend the right to organize without fear of retaliation to farmworkers in New York (Fuentes, June 19 2018). In New York, an 80-year-old state law excludes farmworkers from engaging in collective action. The plaintiffs argue that this law violates New York's Constitution, which allows all other workers in New York to organize (Maslin Nir, 19 July 2017). Workers compensation is also left up to the states; the most recent National Agricultural Workers' Survey (an employment-based, random-sample survey of U.S. crop workers administered by the U.S. Department of Labor) reported that 51% of workers expected to receive workers' compensation if they were injured at work or became ill as a result of their work (Hernandez, Gabbard, & Carroll, December 2016).

Vermont labor laws offer little in the way of extra protections for farmworkers. Though Vermont minimum wage, overtime, and collective bargaining laws do not apply to agricultural workers, agricultural employers are beholden to Vermont laws regulating housing, workers' compensation and safety, and payment of wages. Vermont has its own

parental and family leave act that may cover some workers not covered under the federal Family Medical Leave Act (Green Mountain Dairy Farmers et al., 2015).

Farmworkers also do not have much protection from federal or state law in terms of health and safety. Although statutes exist to protect farmworker health and safety, and local code enforcement and public health departments technically have jurisdiction over farmworker housing, in practice, OSHA (the federal Occupational Safety and Health Administration) has limited oversight of farms that employ fewer than eleven non-family workers, and housing inspections are not conducted on a routine basis (Fox, Fuentes, Valdez, Purser, & Sexsmith, 2017). The Vermont Department of Labor conducts annual inspections of the accommodations of farmworkers in the state with the H2-A program, but local officials are rarely involved in other farmworker housing disputes. Exceptions are often publicized in the media; a 2013 article in *Seven Days* chronicled the story of particularly deplorable dairy farmworker housing in Salisbury that attracted the attention of local zoning officials and took almost two years to resolve (Flagg, 10 July 2013).

The doctrine of agricultural exceptionalism and minimal federal and state labor protections certainly play a role in the wages and non-wage benefits offered to dairy workers in Vermont. However, because 33% of workers in the agriculture industry are immigrants and a significant proportion of the Vermont dairy workforce is Latinx, another important factor to consider is documented wage disparities based on worker nationality and immigrant status (Desilver, March 16 2017). In the next section, I briefly outline the census figures and scholarly literature regarding this topic.

2.3.3 Wages, race, and immigrant status.

The majority of the Latinx workers on Vermont dairy farms are from Mexico (Daniel Baker & Chappelle, 2012). Census figures demonstrate that Mexican immigrants have particularly low earnings compared to immigrants of other nationalities; in 2015, median personal annual income for full-time, year-round workers born in Mexico was \$26,900, compared to \$35,000 for those born in the Caribbean, \$38,000 for those born in South America, and \$53,000 for those born in South and East Asia (Lopez & Radford, May 3 2017). Part of the wage gap between Mexican-born immigrants and white workers can be explained by educational attainment. About 38% of Mexican-born immigrants over the age of 25 have less than a 9th grade education (Lopez & Radford, May 3 2017).

Scholars have also demonstrated a significant wage disparity between documented and undocumented workers. Using two panels of longitudinal data (1996-1999 and 2001-2003), Matthew Hall and colleagues provided evidence of the wage benefits for Mexican immigrants of having legal authorization to reside in the U.S. The wage premium of “being legal” for Mexican immigrants is approximately 17% for men and 9% for women. Although much of the legal status wage premium can be attributed to differences in labor market experience, educational attainment, and age upon arrival in the United States, even when these factors are considered, male documented workers maintain a significant wage advantage compared to their undocumented counterparts. Hall also demonstrated that the returns to human capital are very low for both male and

female Mexican undocumented workers, in comparison to returns enjoyed by documented Mexican immigrants (Hall, Greenman, & Farkas, 2010).

Massey (April 2012) partially attributes the gap in wages for Latinx immigrants (documented or undocumented) to the rise of the “Latinx threat narrative” between 1965 and 2000. Before 1965, there were no federal numerical limits placed on immigrants from the Western Hemisphere. Very few Latinx immigrants entered the U.S. illegally. As a result of the dissolution of the Bracero Program in 1965, and a 1976 quota system that only allowed 20,000 immigrants from each country in the Western Hemisphere to enter to the U.S. annually, undocumented migration from Mexico increased dramatically. Among Mexicans arriving in the U.S. from 1955 to 1965, only 1% were undocumented, but among those arriving from 1985 to 1995, 55% were undocumented. Though anti-immigrant sentiment is an unfortunate trope in American history, the dramatic rise in undocumented Latinx migration facilitated discrimination against Latinx immigrants. It was easy to portray Latinx immigrants as lawbreakers, criminals, or terrorists when so many of them resided in the country illegally. Additionally, immigration enforcement also intensified in the 1990s, and rose exponentially after 2001, forcing Latinxs even further underground (Massey, April 2012). Because of the portrayal of Latinxs in the media and the perception of Latinx immigrants in public debate, Latinx workers, authorized and unauthorized, found themselves in a vulnerable labor market position.

The “Latinx threat narrative,” combined with the fact that undocumented workers are ineligible for many governmental assistance programs, creates an unstable and hostile social environment for undocumented Latinx immigrants. As a result, undocumented

immigrants (and even documented workers, for fear of having their legal status revoked) may accept the first job they are offered, and remain in a job out of fear despite poor pay and working conditions (Hall et al., 2010; Saucedo, 2006). Employers, too, may keep undocumented immigrants in low wage, more “hidden” jobs to manage their own fears about immigration enforcement. In her study examining occupational segregation in the dairy industry, Jill Harrison and her research team found that dairy employers hired Latinx workers for milking positions partially because in the barn, workers are physically hidden from immigration enforcement. Dairy employers also mentioned that because the workers they hired were undocumented, they did not want to invest in more specific training because they were concerned about losing their investment if a worker was deported (J. L. Harrison & Lloyd, 2013).

Scholars have also invoked the concept of a “dual frame of reference” to explain wage disparities between Latinx workers and white workers (Gray, 2014; Holmes, 2007). Employers of Latinx workers may justify lower wages, inadequate benefits, and poor working conditions by referencing the lower wages and poor conditions in a worker’s country of origin. In turn, Latinx workers, especially those who are undocumented and may only plan to work in the U.S. for a short period of time, may also invoke this dual frame of reference, rationalizing lower pay by comparing it to what they might receive in their country of origin (Gray, 2014; Holmes, 2013).

The previous few sections have described the primary factors related to compensation of agricultural workers in the U.S., including the doctrine of agricultural exceptionalism, federal and Vermont state laws affecting agricultural worker

compensation, and evidence of wage disparities based on race and immigrant status. In the next few sections, I will look more specifically at research documenting the actual wages and benefits offered to dairy workers in the U.S.

2.4 Wages and Benefits of U.S. Dairy Workers

2.4.1 Wages and types of non-wage benefits.

There is limited research on the wages and types of benefits offered to dairy workers in the U.S. A national survey conducted in 2015 by researchers at Texas A&M AgriLife Research (under a contract for the National Milk Producers Federation) asked dairy farmers across the U.S. to report their average wages, the types of non-wage benefits, and an overall value for the non-wage benefits offered to farm employees (Adcock, 2015). The average hourly wage reported by all respondents ($n = 815$) was \$11.54, and the average hourly wage reported by employers with immigrant employees ($n = 671$) was \$11.69. The average annual reported annual benefit package was worth \$10,444, while the average annual reported benefit package for only respondents with immigrant employees was \$11,222. Though hourly wages in the dairy industry are similar to those found in other agricultural occupations, they are lower than wages in industries such as ranching or landscaping. However, when the value of non-wage benefits is considered, dairy employees appear to be more highly compensated than those in other agricultural occupations (Adcock, 2015). Almost 87% of survey respondents reported offering some type of non-wage benefit. The most commonly offered benefits included paid vacation (64%) and housing (54.5%). Dairy employers also offered

incentive pay, insurance, vehicle use, and food staples. Employers with immigrant employees offered more non-wage benefits than employers in general (Adcock, 2015).

In traditional dairy states such as Wisconsin and Michigan, both qualitative and quantitative analyses have shed some light on the average wage rate and types of benefits offered to dairy workers, though several of these reports are somewhat dated (Barnett, Blazek, Wagner, & Vanderlin, November 2013; Blazek, Barnett, Wagner, & Vanderlin, November 2013; Knudson, 2013; Muger & Bitsch, 2005). A total of 220 dairy producers in Wisconsin completed a 2013 survey conducted by the University of Wisconsin-Extension FARM Team. The survey, which did not distinguish between native and immigrant workers, found that starting wage varied based on experience and job category. Averaged over all job categories (which included milker, cow pusher, feeder, calf care, herdsman, field work, and other), the starting compensation was \$9.36 per hour for an inexperienced worker, and \$11.44 per hour for an experienced worker (Barnett et al., November 2013). Of the Wisconsin dairy farmers surveyed, 73% offered some form of non-monetary compensation to their employees. The most popular benefit was housing (27%); 68% of those farmers who indicated that they employ non-family immigrants and provided housing offered free or reduced rent to their employees (Barnett et al., November 2013). On dairy farms in Michigan in 2013, new and unskilled workers are most often offered bonuses (just over 45% of farms) and housing (just over 35% of farms) (Knudson, 2013). The survey conducted in Michigan also found no relationship between size of farm and types of benefits offered; a different study of data from Wisconsin came to a similar conclusion (J. L. Harrison & Getz, 2015; Knudson, 2013).

A more recent study done by the University of Idaho McClure Center for Public Policy Research reports a higher average wage rate and varied opinions on the frequency of non-wage benefits (Salant, Wulfhorst, Cruz, & Dearien, March 16, 2017). The project was focused on community-level impacts of the dairy industry in Idaho's Magic Valley. Three members of the research team conducted 48 semi-structured interviews with "key informants," nine of whom participated directly in the dairy industry as dairy producers, workers, or dairy processors. According to the data collected, the general livestock labor wage rate estimated by the Bureau of Labor Statistics and used by the University of Idaho dairy budget, \$13.82 per hour, fit within the range of estimates made by the key informants interviewed. Respondents also had different opinions on whether dairy employers regularly offered non-wage benefits to their employees. Those in the western part of the state, where the concentration of cows and workers is the highest, tended to say that benefits other than the required health insurance were rare, while those on the eastern side of the valley said that non-wage benefits were an important component of recruiting and retaining workers (Salant et al., March 16, 2017).

A survey of dairy employers in Vermont conducted in 2010 shed some light on average wages and types of benefits offered to dairy workers in the state at that time. The median average hourly wage for U.S. workers was \$10.00 (n = 52), while the median average hourly wage for Latinx workers was \$8.00 (n = 32). The most frequently offered non-wage benefits for Latinx workers (n = 40) were housing (100% of employers offered this benefit), utilities (100%), satellite TV (85%), and farm products (75%). In terms of U.S. workers (n = 67), the most frequently offered benefits were farm products (67%),

housing (51%), utilities (39%), and bonuses for milk or production (39%) (Daniel Baker, 2010).

2.4.2 Valuing non-wage benefits.

Although there are studies that outline the types of non-wage benefits offered to dairy employers, there are few studies that attempt to value those non-wage benefits. Barring the national study conducted by researchers at Texas A&M AgriLife Research, I have only encountered one other survey that tried to assign a value to each benefit offered to agricultural employees – a survey administered by Iowa State University (Edwards, Chamra, & Johanns, March 2012).

In 2011, the research team from Iowa State University Extension interviewed agricultural employers, each of whom was asked to provide information for three “representative” employees. Survey results include information about 251 farm workers involved in the production of a variety of farm commodities, including crop, beef, swine, dairy, and general livestock. The average cash wage paid to all employees was \$33,320 per year (before deductions for taxes); this represented 85% of total compensation. The average cash wage paid per hour was \$12.96; with the added value of bonuses and fringe benefits, the average total compensation was \$15.05 per hour (Edwards et al., March 2012). The most commonly received benefits include meals (49%), farm produce to consume (38%), insurance (35%), and recreation/vacation time (32%). Factors affecting compensation included gross sales, duties of the employee, education, supervision, and experience. The 16% of employees who were not born in the U.S. earned significantly less than U.S.-born employees, averaging \$12.78 of total compensation per hour.

However, foreign-born employees had only 8.4 years of farm employment experience, while U.S.-born employees had 13.1 years; additionally, 44% of foreign-born employees did not finish high school (Edwards et al., March 2012).

Similarly, I have only come across one survey of agricultural employers that used the percentage of total compensation made up of wages and salary calculated by the Iowa survey (85.6%) to assign an estimated value to the total compensation of dairy employees. University of Wisconsin Extension researchers conducted a survey of 220 Wisconsin dairy producers in early 2013 (Barnett et al., November 2013). Based on the proportion of total compensation comprised of wages and salary calculated by the Iowa State survey (85.6%), the Wisconsin research team concluded that using the average employee starting wage of \$10.40, the total compensation per hour for Wisconsin dairy employees was \$12.15 (Barnett et al., November 2013).

2.5 Conclusion

Understanding the cost and components of a competitive wage and benefit package is important in any industry, but as labor costs continue to rise, it is particularly important in the dairy industry (Karszes, May 2017). In addition to rising labor costs, Vermont dairy farmers are facing countless other challenges. Consistently low milk prices, high input prices, and the rollout of stricter state water quality regulations and conservation requirements have taken their toll on Vermont dairies. Because many dairy employers hire mostly unauthorized Latinx workers to milk their cows, dairy farmers in Vermont have also found themselves involved in a national immigration conversation

that has dramatically intensified over the last year. In the past year alone, 61 Vermont cow dairies have gone out of business (Heintz, April 11 2018).

Effective human resource management is a critical component of a successful farm business. This thesis will explore two related components of human resource management: the employment relationship, which includes overall working conditions, worker job security, and incentives and opportunities for job advancement; and wages and non-wage benefits provided for Vermont dairy employees. It is my hope that with a better understanding of the employment practices that foster a secure work environment, and more specific details regarding the cost of a competitive wage and non-wage benefit package, Vermont dairy employers, technical service providers, and Vermont legislators will be able to use the information presented here to work together to improve the dairy labor situation.

Chapter 3: Precarious Employment in the Vermont Dairy Industry

3.1 Abstract

A good farmer-manager-worker relationship is the foundation of human resource management and the key to an efficient and successful farm enterprise. Scholars exploring the sociology of labor have more recently taken the employment relationship for granted, and have instead focused on topics related to specific work structures, such as occupations, industries, or workplaces; explored how certain workers end up in certain jobs; and examined economic status and outcomes of work (Kalleberg, 2009). The notion of precarious employment - defined here as work that is uncertain, unpredictable, and risky from the point of view of the worker (Kalleberg, 2009) - considers the organization of work and employment relations broadly, rather than focusing on specific occupations or individual employee characteristics. The model of precarious employment has not been rigorously applied to agriculture, and literature examining agricultural labor has largely ignored discussions of precarious labor (Schewe & White, 2017). In this article, I explore precarious employment in the Vermont dairy industry using thirty surveys of dairy producers farming in Addison County, Vermont. I discover some evidence of precarity, especially in terms of protection from termination of employment, incentives to learn new skills, and opportunities for job advancement. However, I also find examples of worker control over working conditions, specifically regarding worker recruitment, wage rates, and hours. I end with theoretical implications, as well as practical implications for Vermont dairy producers.

3.2 Introduction

The practice of hiring immigrant workers on Midwestern and Eastern dairy farms is relatively recent. Surveys conducted in New York and Wisconsin suggest that dairy farms in those states did not begin hiring significant numbers of immigrant workers (most of whom are from Mexico) until the mid-90s and early 2000s (Maloney 1999; Harrison 2009). Anecdotal evidence suggests that dairy employers in Vermont began hiring Latinx employees in the early 2000s, and estimates by the Vermont Agency of Agriculture indicate that by 2007, Latinx workers were involved in at least 50% of the milk produced in the state (L. Waterman, personal communication, August 2010). Many Vermont dairy producers are reliant upon Latinx labor for the success of their operations (Daniel Baker & Chappelle, 2012; Craven, 16 April 2017)

Hiring Latinx workers is not without challenges for Vermont dairy employers. In addition to cultural and language barriers, several studies have indicated that human resource management is a significant challenge for dairy farmers, regardless of worker origin (Bitsch, Muger, Harsh, & Kassa, 2006; Blazek et al., November 2013; Erskine et al., 2015; Thomas R Maloney & Bills, 2011). Many dairy managers are not trained in human resources, and according to a survey conducted in Wisconsin in 2013, most farmers do not engage in practices fundamental to human resource management, such as regular performance reviews, providing an employee handbook, or writing standard operating procedures (Blazek et al., November 2013; Erskine et al., 2015). The quality of human resource management can have a significant impact on the farm business. Evidence suggests that effective human resource management can result in healthier

cows and higher profits (Erskine et al., 2015; Stup, 2006). In addition, effective human resource management can help employers retain workers (Billikopf & Gonzalez, 2012).

A good farmer-manager-worker relationship is the foundation of human resource management and the key to an efficient and successful farm enterprise (Dudley, November 2017). Scholars exploring the sociology of labor have more recently taken the employment relationship for granted, and have instead focused on topics related to specific work structures, such as occupations, industries, or workplaces; explored how certain workers end up in certain jobs; and examined economic status and outcomes of work (Kalleberg, 2009). Literature examining agricultural labor is no exception. Scholars have demonstrated the employer role in organizing work and workers in unequal ways, and several studies suggest that agricultural employers favor or discriminate against workers based on social structures such as race and gender, rather than individual characteristics (Gray, 2014; J. L. Harrison & Lloyd, 2013; Schewe & White, 2017). The conceptual model of precarious employment, on the other hand, considers the organization of work and employment relations more broadly, rather than focusing on specific occupations or individual employee characteristics (Kalleberg, 2009). The model of precarious employment has not been rigorously applied to agriculture, and literature examining agricultural labor has largely ignored discussions of precarious labor (Schewe & White, 2017).

There are several definitions of precarity or precarious work, and scholars have also identified several indicators of precarity. For the purposes of this article, I will define precarious employment as employment that is uncertain, unpredictable, and risky

from the point of view of the worker (Kalleberg, 2009). Drawing upon thirty surveys of dairy producers in Addison County, Vermont, I will explore the presence of precarity for Latinx dairy employees in Vermont. Specifically, I will use the following indicators to detect precarity: the level of worker control over working conditions (specifically hiring) (high, medium, low); protection from termination of employment (yes, no); worker control over wages, and worker control over hours (high, medium, low); the incentive to learn new skills (yes, no); and opportunities for advancement (available, not available) (Mosoetsa et al., 2016; Rodgers, 1989). This work is guided by the following research question:

RQ1: Based on producer descriptions of employment practices, do Latinx dairy employees in Addison County, Vermont experience precarity?

In the next section, I begin with a brief history of the concept of precarious employment, and outline how it has been defined by various scholars. Then, I discuss various indicators of precarious employment, as well as the definition and indicators of socially responsible employment. Next, I explore the intersection between immigrants and precarious work. Finally, I will outline the definition of precarious employment and the indicators of precarity that I will use for my analysis.

3.3 Literature Review

3.3.1 What is precarious employment?

The most commonly used definition of precarious employment, initially put forth by Gary Rodgers (1989) and relied upon by several subsequent scholars, describes precarious work on a continuum defined by four criteria: 1) degree of certainty of

continuing employment; work is more insecure when the risk of job loss is high, or the job has a short time horizon; 2) degree of control over the work; work is more insecure the less control the worker has over wages, working conditions, or the pace of work; 3) degree of regulatory protection; to what extent are workers protected (by law, collective organizations, customary practice) against arbitrary working conditions; and finally 4) income security (Mosoetsa et al., 2016; Rodgers, 1989). Rodgers was one of the first scholars to study the various dimensions of precarious work, and to define precarious employment as any combination or level of the four criteria (Cranford et al., Fall 2003).

Guy Standing's definition of precarity, outlined in his provocative book, *The Precariat* (Standing, 2014), is perhaps the most restrictive. It is also the only definition to categorize those who experience precarious employment as a class unto itself, "the precariat." Members of the precariat lack, to varying degrees, the seven main forms of labor security: labor market security (adequate income earning opportunities); employment security (protection against arbitrary dismissal); job security (the ability to retain a "niche" in employment, and opportunities to access upward mobility); work security (protection against poor and unsafe working conditions); skill reproduction security (opportunity to gain and use acquired skills); income security (assurance of an adequate stable income); and representation security (having a collective voice in the labor market) (Mosoetsa et al., 2016; Standing, 2014).

A final definition of precarious employment, employed primarily by Arne Kalleberg (2009), narrows the focus to a single, expansive criterion: precarious employment is "employment that is uncertain, unpredictable, and risky from the point of

view of the worker” (Kalleberg, 2009). In practice, most scholars leave the definition of precarious work implicit, and choose a definition that is conceptually preferable and fits with the variables and data available (Mosoetsa et al., 2016).

3.3.2 Indicators of precarity.

While scholars often rely on the form of employment - typically temporary work or nonstandard employment, in contrast to a permanent, open-ended contract - as an important indicator of the possible presence of precarious employment, most also incorporate other indicators of precarious work (Cranford et al., Fall 2003; Goldring & Landolt, 2011; Olsthoorn, 2014). Using the more common, multi-dimensional approach, precarious work is identified in terms of a deficit in several dimensions of labor security. Though there is no consensus on the specific list of appropriate indicators, there is considerable overlap. This multi-dimensional approach allows precarity to be present to different degrees within any job. Admittedly, taking a multi-dimensional approach to precarity makes operationalizing the concept difficult. In a qualitative approach, a researcher might explore the precarity of a particular job using a specific set of indicators as a guide (Boese et al., 2013; Porthé et al., 2010; Rodgers, 1989; Vosko et al., 2009). In a quantitative approach, scholars typically layer several more quantifiable indicators of precarious work, including the contract time (short-term versus long term), union status, firm size, wage rate, terms of employment (day laborer, seasonal work, hired through temp agency, part-time, unpaid family worker), predictability of schedule and control over terms of work, and benefits (Cranford et al., Fall 2003; Goldring & Landolt, 2011).

Other indicators of precarity include limited duration contracts (fixed-term, short-term, temporary, seasonal); triangular or disguised employment relationships (subcontracting, agency contracts); low wages; the limited ability of workers to exercise their rights at work; inadequate protection from termination of employment; a physically unsafe work environment; and lack of access to social benefits and protections typically associated with full-time standard employment (International Labour Organization, 2012; Kroon & Paauwe, 2014).

3.3.3 Definition and indicators of socially responsible employment.

Socially responsible employment, rooted in ethical employee rights, stands in contrast to precarious employment (Kroon & Paauwe, 2014). Socially responsible HRM (human resource management) puts into practice ethical considerations of employee management. Under the most commonly used definition of socially responsible employment, employees have three primary rights: the right to freedom, well-being, and equality (Greenwood, 2002; Rowan, 2000). The right to freedom refers to negative freedom (i.e. the right not to be physically restrained), and positive freedom, or the availability of options to articulate and pursue one's goals (Rowan, 2000). The right to freedom also addresses the right of workers to a sufficient income and job security. Indicators of socially responsible employment that are related to an employee's right to freedom include full-time, year-round, and/or permanent contracts; legal minimum wage and legal overtime payment; and monetary incentives (Kroon & Paauwe, 2014).

The right to well-being speaks to the right of employees to pursue their own interests and goals, including the freedom of association and collective bargaining. The

employee right to well-being also highlights the importance of a safe working environment, both physically and emotionally (Kroon & Paauwe, 2014; Rowan, 2000). Indicators of socially responsible employment that are related to an employee's right to well-being include regular employment meetings, job autonomy, performance reviews, job training, career development support, and an emphasis on a physically and socially safe work environment (Kroon & Paauwe, 2014). Finally, the right to equality, implicit in the discussion of the first two employee rights, requires that all employees have the rights of freedom and well-being equally (Rowan, 2000). Written employment policies and established employment benefit schemes are indicators of socially responsible employment that are related to an employee's right to equality (Kroon & Paauwe, 2014).

3.3.4 Immigrants and precarious employment.

There is a growing body of work that indicates that noncitizens and migrant workers are uniquely susceptible to precarious employment. Scholars have documented the intersection between precarious migrant status and precarious employment in a variety of sectors, including agriculture (Goldring & Landolt, 2011; Hondagneu-Sotelo, 2001; Hudson, 2007; Preibisch & Otero, 2014). There is also evidence that migrant status upon entry (secure versus insecure) has a long-term effect on employment outcomes. Goldring (2014; 2011) finds that precariousness in early work has a lasting and negative effects on current work, and that this effect is not reversed with more time, nor with a shift from insecure to secure legal status. Beyond describing the intersection of precarious migrant status and precarious employment, a few scholars have used precarious migrant or noncitizen status as a *source* of feelings of precarity, rather than

just a condition that makes one uniquely susceptible to precarity (Boese et al., 2013; Goldring & Landolt, 2011). In her article based on interviews with temporary nurses in Australia, Boese (2013) finds that rather than specific working conditions or employer mistreatment, feelings of precariousness among migrant nurses in Australia stem directly from the actual immigration process.

Several scholars implicate immigration regulations and enforcement directly, and argue that the state plays a significant role in “fashioning” and maintaining precarious workers by creating an insecure environment in which migrant workers feel forced to accept jobs with poor pay and working conditions (Anderson, 2010; Fudge, Fall 2012; Rodriguez, 2004; Schierup & Jørgensen, 2016). The vulnerability of unauthorized immigrant workers is not an economic condition, but rather a political condition created by the federal government policies surrounding legal protection and work authorization (Rodriguez, 2004; Schierup & Jørgensen, 2016). Carl-Ulrik Schierup (2016) labeled migrants as the, “... quintessential incarnation of precarity.” Schierup and others argue that the work of migrant labor has always been precarious, and the indicators of precarity that characterize the work of migrant labor, including informality, vulnerability, low wages, and lack of union rights, are now spreading to the rest of the workforce (Schierup & Jørgensen, 2016). Precarity has always existed; rather than a new class of the workforce (the “precarariat” that Standing (2014) suggests), precarity is simply spreading to an increasing range of social sectors (Jørgensen, 2015; Schierup & Jørgensen, 2016).

3.3.5 Conclusion.

There are several definitions of precarity, and several different indicators or combinations of indicators have been used to detect the presence of precarity in a specific job. In addition, researchers have explored the conditions that might lead to increased susceptibility to precarity, including, most importantly for our discussion, migrant status. For this analysis, I will use Kalleberg's (2009) conception of precarity, which defines precarious employment as employment that is uncertain, unpredictable, and risky from the point of view of the worker. Drawing upon thirty surveys of dairy producers in Addison County, Vermont, and based on this definition of precarity, I will explore the presence of precarity for Latinx dairy employees in Vermont. Specifically, I will use the following indicators to detect precarity: the level of worker control over working conditions (specifically hiring) (high, medium, low); protection from termination of employment (yes, no); worker control over wages, and worker control over hours (high, medium, low); the incentive to learn new skills (yes, no); and opportunities for advancement (available, not available) (Mosoetsa et al., 2016; Rodgers, 1989). This work is guided by the following research question:

RQ1: Based on producer descriptions of employment practices, do Latinx dairy employees in Addison County, Vermont experience precarity?

A deeper understanding of the employment conditions of Latinx dairy employees in Vermont is important for several reasons. Precarious employment has far-reaching consequences for both workers and the surrounding community. The presence of precarious work contributes to greater economic inequality, insecurity, and instability. The impact of this uncertainty is felt at the individual level, in the form of negative

outcomes for individual health and stress (Preibisch & Otero, 2014; Standing, 2014). The uncertainty caused by precarious employment can also be felt at the community level. As individual stress increases, and individuals and families feel as though they can no longer support themselves sufficiently, this can contribute to a lack of social engagement, trust, and social capital (Kalleberg, 2009; Standing, 2014).

Examining precarity for Latinx employees is also important for the future of the Vermont dairy industry. Many dairy producers in Vermont are reliant upon Latinx labor for the success of their operations. The results of this study will help dairy farmers and service providers identify strategies to improve the relationship between dairy producers and Latinx employees beyond increasing wages and improving benefits, including codifying employee recruitment practices, defining and effectively communicating job responsibilities, and making their workers feel invested in the business.

3.4 Methods

3.4.1 Participants.

This study uses data collected from a survey administered to thirty dairy farm owners or managers in Addison County, Vermont. Participants were selected for the survey from a comprehensive database maintained by the P.I. and other members of the research team, updated through Spring of 2017. The database includes, to the best of the research team's knowledge, most of the dairy farms operating in Vermont. The accuracy of the database was corroborated by comparing the number of dairy farms listed in each county to a document released by the Vermont Agency of Agriculture, Food, and Markets titled, "Vermont Dairy Data Summary," last updated on November 2, 2017

(Vermont Agency of Agriculture Food and Markets, November 2 2017). All dairy farms that outsource labor were extracted from the database, resulting in a list of 200 farms. Next, farms were sorted by county, each farm was assigned a random number, and farms were sorted from low to high. The number of farms to be surveyed in each county was determined by a total sample size of 100.

Farms that outsource labor tend to be larger dairy farms, so counties with larger dairy farms may be overrepresented in the study (U.S. Department of Agriculture Economic Research Service, 2018). In 2016, there were 124 dairy farms located in Addison County, and 131 dairy farms located in Orleans County; however, in 2016 Addison County dairy farms accounted for 24.2% of all dairy cows in Vermont, while dairy farms in Orleans County represented 15.7% of all dairy cows in Vermont (Vermont Dairy Promotion Council, 2016). Because Orleans County farms tend to be smaller than Addison County farms, less farms in Orleans County are likely to outsource labor. So, in our sample, 1/3 of the farms we interviewed are in Addison County, while 10% of the farms we will interview will be in Orleans County. Although the research project will eventually encompass every county in Vermont, the first phase of the research focused on Addison County. This article is based on the data collected in Addison County.

Due to the sensitive nature of the research topic, any information that could identify participants, such as gender or structure of the business, is not reported here. In addition, in the written analysis of the data, all participants are identified by gender neutral pronouns (they/theirs) to further protect the confidentiality of participants. All

thirty participants in Addison county were owners or co-owners of the dairy operation. Herd size ranged from less than 50 cows to over 1300 cows.

Table 1

Participant Operation Demographics

| | % of dairy farms surveyed in Addison County (n = 30) | % of dairy farms in Vermont |
|----------------------|--|-----------------------------|
| Less than 50 cows | 3.3% (1) | ND |
| SFO (50 – 199 cows) | 26.7% (8) | 82% |
| MFO (200 – 699 cows) | 43.3% (13) | 15.1% |
| LFO (700 + cows) | 26.7% (8) | 2.8% |
| Total | 100% (30) | 99% |

(Vermont Dairy Promotion Council, 2016)

Again, because larger farms are more likely to outsource labor than smaller farms, our size distribution in Addison County is weighted heavily towards MFOs and LFOs.

3.4.2 Data collection.

For the first phase of the study in Addison County, dairy farms that outsource labor were sent in sets of ten to a research specialist. The research specialist is highly experienced and well-known in Vermont dairy circles, and was hired specifically by the research team to facilitate access to dairy farmers given the sensitive nature of the research topic and the wealth of demands on farmers’ time. Based on each list of ten farms and the geographic location of the farm within the county (for convenience of interviewing), the research specialist set up three to four surveys to be conducted in person by one to two members of the research team. Data in Addison County was collected over a series of several days of surveying from December 2017 to January 2018.

The structure and content of the survey was based on a 2010 survey conducted by a few members of the research team. For this project, the survey was further refined and was reviewed and approved by the Institutional Review Board at the University of Vermont in the Fall of 2016. Dairy employers were asked to evaluate their U.S. workers (defined as U.S. citizens) and Latinx workers (defined as anyone from Mexico, Central, or South America, non-citizen) separately on a variety of topics. Questions ranged from basic (how many full-time Latinx workers do you employ?) to more in-depth (what are some challenges related to retaining U.S. workers?). Surveys lasted 30 to 90 minutes, and interviews were audio recorded with the consent of the participant. Surveys conducted in Addison County were coded according to the order in which the participant was interviewed, and the first letter of the county in which the participant was located. For example, the code for the fifth producer we surveyed in Addison County is 5A. The research team created a password-protected database linking the farm code to the farm identifying information. All surveys and audio recordings are only identified by farm code. The quotations in the following analysis are not identified by farm code, but rather by an anonymous label based on the order in which the quotation appears. For example, the first quotation that appears in the analysis is attributed to “dairy farmer 1.”

Quantitative and some qualitative data were entered into SPSS to facilitate analysis. Interviews were not transcribed verbatim in their entirety. Only data that was not reflected in the quantitative portions of the survey was transcribed verbatim. For example, the question, “What is your total herd size,” and the participant answer, “700” was not transcribed because this data is reflected in the SPSS database. For this article, I

primarily relied on the qualitative data collected in the survey. This data consisted of answers to specific open-ended questions, but also encompassed anecdotes, comments, and responses to follow-up questions asked by surveyors.

3.4.3 Data analysis.

Quantitative data was analyzed in SPSS using simple descriptive statistics. Qualitative data was uploaded into HyperRESEARCH 4.0.0. The qualitative data was analyzed using a theoretical thematic analysis, a technique used for identifying, describing, analyzing, and reporting themes and patterns within qualitative data. A theoretical thematic analysis, versus an inductive thematic analysis, codes for a specific research question, rather than allowing the research question to evolve through the coding process (Braun & Clarke, 2006). Data was coded and re-coded several times, guided by the definition of precarious employment as work that is uncertain, unpredictable, and risky from the point of view of the worker (Kalleberg, 2009). Appropriate indicators of precarity for Latinx dairy employees emerged from the coding process. Codes included recruitment practices (“my guys recruit,” justification of network recruitment, success of network recruitment), and practices related to retaining Latinx workers (conflict between Latinx workers, Latinx workers will move for higher wages, turnover because of problems between Latinx workers). There were also several codes that spoke to other dimensions of dairy labor, such as an apparent shortage of U.S. workers willing to milk, the pressures of the dairy industry, and a perceived change in the quality of Latinx workers. Please see Appendix B for a full list of codes.

Our survey was not designed to detect precarious employment. However, the responses we received did allow us to analyze the level of precarity for Latinx dairy employees using few specific indicators. Specifically, the indicators of precarity that offered us the most insight into the level of precarity for Latinx dairy employees in Vermont were the level of worker control over working conditions (specifically hiring) (high, medium, low); protection from termination of employment (yes, no); worker control over wages, and worker control over hours (high, medium, low); the incentive to learn new skills (yes, no); and opportunities for advancement (available, not available) (Mosoetsa et al., 2016; Rodgers, 1989).

3.5 Analysis

3.5.1 Worker control over working conditions.

Worker control over working conditions is an important indicator of precarity. The more control a worker feels they have over working conditions, the less precarious, or insecure, their job may seem. Dairy employers in Vermont offer their workers a relatively high degree of control over the hiring process for new Latinx workers. This control over the hiring process could be an indicator of less precarious working conditions.

Most dairy employers we interviewed hired new Latinx workers through contacts provided by their current workers. As one producer stated simply, "... usually my guys recruit" (dairy farmer 1). The strategy of network recruitment employed by Vermont dairy producers seems to offer some power to a producer's current Latinx workers. If a Latinx worker wants to have a family member or close friend live and work with them,

they seem to have a degree of influence over their employer's hiring decisions. Several producers even admitted that they ceded full control of the hiring process to their Latinx workforce. Explained one producer, "They're, they're basically calling up a friend on a different farm and I have nothing to do with that, they just show up" (dairy farmer 2). Another employer described letting a Latinx worker go due to excessive drinking that interfered with his performance at work. The producer continued, "We had a guy milking in the parlor that night we didn't even know" (dairy farmer 3). Though the degree to which producers allowed their Latinx workforce to control the hiring process varied, almost every producer with whom we spoke tried to hire new Latinx workers through referrals of current workers.

Some producers pointed to the success of recruiting through current Latinx workers as an indicator of effective Latinx labor management. One producer explained that if a worker wants to leave their farm, "...they bring somebody else in. Either they bring somebody else in, or one of the guys that's here...[recruits someone they know]" (dairy farmer 4). In response, I commented that the practice of allowing current workers to recruit new workers seemed relatively common, and they replied, "Yep, yeah. If the farm is a desired farm... Yeah, if it's not, then they, they may not leave but they sure as hell ain't gonna have their friend come work here" (dairy farmer 4). Another producer using a similar recruitment strategy clarified, "...obviously, they like working here, because they're willing, like I said bring their brothers and cousins and stuff" (dairy farmer 5). The recruitment process commonly used by dairy producers seems to serve as a way for Latinx workers to screen potential employers; their brother or cousin may not

recruit them to work on a farm unless they were relatively happy with the working conditions and pay.

The high level of apparent control over the hiring process given to Latinx workers may indicate less precarity, and offer workers more security. When dairy employers cede control of the hiring process to their Latinx workers, those workers are largely able to choose their co-workers, and the endorsement of a farm by friends or family members allows Latinx workers to screen potential employers.

3.5.2 Protection from termination of employment.

Employer recruitment practices are inextricably linked to the fact that Latinx dairy workers typically live together in employer-provided housing. Presumably because of the challenges related to retaining Latinx workers who live and work together, a few dairy employers implied that their Latinx workers wield significant influence in worker termination decisions. While this control over termination decisions may offer security to and reduce feelings of precarity for some workers, this practice may also increase precarity for other workers. Overall, it seems that Latinx dairy workers do not have protection from termination of employment, indicating the presence of precarity.

When new workers arrive, some employers reported that current Latinx employees “screen” new employees. One producer admitted, “Because the guys I have, they all know it. New guy comes in, their job is to pre-screen ‘em. And if they don’t like him, they ain’t stayin’. It’s not worth my time” (dairy farmer 8). Another producer explained,

...and these guys [their current Latinx workers] are good, like they'll tell you this guy's no good... and you know we, we will have to do the firing... you know, but they'll tell ya. Or they say, you know, let's find another guy. But. Yeah. Right, whatever you say... we trust them. So... I don't know if we're naïve or, being smart about it... (dairy farmer 2).

Many dairy employers seem to leave the fate of a new worker at least partially up to their current workers.

Over the course of our interviews, we also heard several stories of what employers perceived as “power struggles” between current Latinx workers. In these scenarios, from the producer's perspective, a few Latinx workers would attempt to force out a current Latinx worker to make way for a friend or relative to take his place. For example, according to one producer,

... everybody's getting along good, everybody's working together good, and somebody's got a family member that wants a job. And then it's like, all the sudden, it, when there was three guys, it was like two against one. And then I've had it before where you can keep one guy, and let two go, but that's just total chaos trying to get all the chores done. So you get rid of one guy... like I had a scenario where I had three really good workers, two of them all the sudden didn't like the third guy, and it was either he goes or we go. And the, the guy I had to let go was the best one of the three. So then, you know, you start all over (dairy farmer 7).

In this situation, an employer felt compelled to let one of their Latinx workers go because of the demands of their two other Latinx workers. A few other producers reported similar scenarios, although most of them implied that the ostracized Latinx worker quit on his own after being snubbed by his co-workers. One employer reported in response to a question about whether they saw any tension or conflict among their workers,

Tension, oh. Well that's... the number one cause of, of leaving I think. It's worker tension. It's this, my friend isn't in the house, and I want my friend to live, I want my friend to work on this farm, so we, we boycott the other guy and chase him off, I mean that's basically what happens (dairy farmer 9).

Throughout our conversations with employers, it was clear that they recognized the influence their Latinx workers had over their co-workers and over employer termination decisions.

Our results indicate that although Latinx workers often have a high level of control over the hiring process for new Latinx workers, it is possible for a Latinx worker to lose their job not because of job performance, but because their co-workers don't like them or want to give their job to someone else. While some Latinx dairy workers may experience less precarity because of their control over hiring decisions, many Latinx dairy workers may experience more precarity due to limited protection from the risk of job loss.

3.5.3 Worker control over wages.

Informally, one of the questions that we tried to ask every producer is how their relationship with their Latinx workforce has changed since they began hiring Latinx

employees to milk cows. Regardless of the specific anecdote or observation offered, many responses included a common theme: the current group of Latinx workers is willing to ask for raises, and some producers feel compelled to increase wages to retain Latinx workers. In addition, employers observed that Latinx workers would leave the farm if they were not offered at least 50 hours of work per week. These observations indicate that Latinx workers have a medium level of control over wages, and a high level of control over hours, both of which may indicate less precarity.

Most producers we interviewed (83%, n = 30) offer their workers an opportunity for a wage or salary increase. Many employers described a relatively formal process, such as adding \$0.25 per hour to a worker's wages after they have been with the employer for three to six months. Several producers also told us that their Latinx workers were not shy about asking for raises. One producer explained, "Latinos are great about this, they ask for raises when they think they need or want one" (dairy farmer 5). In addition to asking for raises, according to the employers we interviewed, it is also relatively common for Latinx workers to leave their current farm if they believe they can make more money on a different farm. Typically, this observation about Latinx workers was followed by a comment speculating that often, Latinx dairy workers don't think through the financial implications of a move, or the changes they might encounter in working conditions or hours at a new farm. According to one producer, Latinx workers hear that someone can get them a better job, making more money, and then, "...they realize that they're making like \$50 more a week, but they're working, like, 12-14 hour

shifts. So, usually, usually when that happens it takes about three weeks, and you get half the ones that left will come back” (dairy farmer 10). Another producer told us,

We had a guy here he was excellent, this was quite a few years ago, and, oh he went to, he went to Wisconsin, right? Great guy, he went to Wisconsin, and he wasn't out there very long he called [another American manager on the farm] and he was like, hey I want to come back. I get more money but they had to pay rent, they had to do... so he made less money! (dairy farmer 11).

Regardless of the financial soundness of their decisions, it was clear to us from our interviews that for the most part, Latinx employees felt free to change employers if they felt they were being subject to unfair wages.

Although some producers complained that workers would leave their farm for as little as \$0.05 more an hour, the perceived frequency with which workers move has compelled several producers to recognize that offering a competitive wage and benefit package is important to retain both U.S. workers and Latinx workers. “Competition from other farms” was frequently cited by producers as a challenge in retaining Latinx workers. One producer admitted that his primary challenge retaining Latinx workers was the same as his primary challenge retaining American workers: paying competitively. Latinx workers seem to have a medium level of control over wages, indicating less precarity; although they can leave if they feel as though an employer is not paying them enough, Latinx workers don't seem to have the power to compel employers to offer higher wages.

3.5.4 Worker control over hours.

We also heard several comments from producers regarding the number of hours their Latinx workers wanted to work. According to our survey, the median hours of work per week for Latinx workers is 65 hours (n = 26), while the median hours of work per week for U.S. workers is 60 hours (n = 25). Although we were not able to speak to the workers themselves, according to several employers, their Latinx workers were unsatisfied with less than a certain number of hours. In response to the question of how many hours per week their Latinx employees work on average, a producer explained,

My top, um, guy actually works five and a half days a week, and so he's probably working about 60 hours. And then the other two are probably at 65. And if I drop lower than that, they're not happy campers (dairy farmer 2).

In response to the same question, another employer replied that on average, their Latinx employees work 50 hours per week. A member of the research team asked if their Latinx employees were ok with 50 hours, and the employer responded, "They usually want more time" (dairy farmer 1). In fact, producers have been told by their workers that the opportunity for consistent, 60-65-hour work weeks is part of the draw for Latinx workers moving to Vermont from other states and industries. Another producer told us an anecdote about one of his employees who moved to another state to work in construction and be with his girlfriend, but then moved back to Vermont after only a year. They explained,

I think the reason they like dairy is because there's work every day. In construction, there's not always work. It's, you know, and then plus not that

many hours all the time. You know, they don't work 14 hours. They work 8 hour days (dairy farmer 12).

The opportunity for consistent, fifty to sixty-hour work weeks does not deter Latinx workers from moving to Vermont to work in the dairy industry, but instead seems to be an attractive feature of the job.

The incidence of overtime work is a commonly used indicator for the presence of precarious employment (Schewe & White, 2017). Comments offered by producers regarding hours – specifically that Latinx workers don't always want time off and that they require a certain number of hours (usually more than a standard 40-hour work week) – indicate that overtime hours may not always be an appropriate indicator of precarious employment in the Vermont dairy industry. In many cases, Latinx employees appear to be choosing to work overtime. Latinx workers seem to have a high level of control over their hours, indicating less precarity.

3.5.5 Incentive to learn new skills.

Overall, there does not appear to be a significant incentive for Latinx workers to learn new skills, and there seems to be limited opportunities available for advancement from their entry-level positions as milkers. The absence of these indicators of socially responsible employment suggests an increased level of precarity.

Although there may be other reasons that Latinx workers are not motivated to learn new skills, we found a potential relationship between employer recruitment practices and incentives for Latinx workers to seek out advanced training. Employer recruitment practices are inextricably linked to the fact that Latinx dairy workers

typically live together in employer-provided housing. Regardless of the type or size of the housing, most producers we interviewed recounted stories of worker conflict exacerbated by Latinx workers working and living together. This phenomenon was typically described to us as the “politics of the house,” and was often the perceived cause of turnover among Latinx employees. When asked what usually causes turnover among Latinx workers on their farm, one employer reported that they don’t really have a lot of turnover, and the turnover they do have, “...is usually... because they have a problem in their house, amongst each other. And that’s what I see” (dairy farmer 6). So, to avoid turnover caused by the “politics of the house,” dairy producers focus primarily on hiring a new Latinx worker that will be compatible with their current Latinx workers. Although prior experience in dairy is helpful, many producers prioritize minimizing conflict between Latinx workers rather than skill. Another employer explained, “It’s, it’s easier to find somebody that has no experience that they can get along with and train and work in the system than it is to find somebody with all these qualifications that they can’t get along with” (dairy farmer 7). For this producer, worker satisfaction with new co-workers was the most important factor to consider when hiring new Latinx workers.

The hiring practices of network recruitment and prioritizing worker compatibility over skill could contribute to precarity for Latinx dairy workers. If a producer concentrates on worker compatibility rather than skill, hiring practices may seem more focused on personal characteristics that are not necessarily related to job performance, such as personality and living habits. The ability to get along with co-workers is certainly an important consideration; however, if job skills are not given some weight in

hiring decisions, then workers presumably do not have as much of an incentive to learn new skills, an indicator of socially responsible employment (Kroon & Paauwe, 2014).

3.5.6 Opportunities for advancement.

The final indicator we used to detect the presence of precarity for Latinx dairy employees is whether there are opportunities available for advancement. We found that opportunities for advancement were not readily available to Latinx employees, and found that producers identified communication challenges as a significant barrier to offering advanced training.

The results of our survey indicate that while none of the producers we interviewed in Addison County consider the language barrier on their farm to be a “significant problem,” almost 70% of participants consider the language barrier on their farm to be a “moderate problem,” and just over 30% of participants consider the language barrier on their farm to be “not a problem” (n = 26). On a scale from 1 to 10, where 1 means “No Spanish” and 10 means “Fluent,” the mean self-ranking of participants was 3.8 (n = 25), and just under 30% of the Latinx workers of participants were categorized as having either “Conversational English” or being “fluent in English” (n = 139 workers on 26 farms). Most producers communicate with their Latinx employees using a professional translator (80.8%, n = 26). When asked to list challenges related to retaining Latinx workers on their farm, several producers mentioned the language barrier. Participants touched on several specific employment challenges related to the language barrier, including difficulty explaining job responsibilities, teaching new skills, and evaluating performance.

One of the most common observations offered by participants regarding the language barrier was that they felt as though Latinx workers would say that they understood a direction or a new piece of information, but it later appeared that they did not understand. As one producer explained, “A lot of times they just nod their head yes when they don’t understand, they won’t tell you that they don’t understand, I’ve found” (dairy farmer 6). Producers also found it difficult to communicate daily responsibilities or teach new skills to Latinx workers. In response to a question about challenges related to retaining Latinx workers, one participant said, “Um, communication, trying to, you know, really communicate what, what needs to get done, and what their responsibilities are” (dairy farmer 7). In addition to communicating daily responsibilities, some producers also found it difficult to teach Latinx workers new skills. One producer described the consequences of a shortage of U.S. workers interested in dairy work this way:

Just, sometimes, and more tricky things that needed to happen on the farm, like, more sensitive things, you don’t necessarily trust the language barrier. So, you end up either doing it yourself... or, try to take time how to figure out how to teach, you know... driving (dairy farmer 3).

For this employer, it often seems easier to add to their personal workload rather than figure out how to teach a more nuanced skill to their Latinx workers. One participant also had difficulty accurately evaluating the performance of a Latinx worker due to the language barrier. They admitted,

I think, we had a guy walk around and we go, that guy's got a bad attitude, and you just look at him, and you know, he had a blank look on his face, and, and, then when we finally could speak to him, and the blank look disappeared, and he kind of warmed up, and it was total different than what you thought (dairy farmer 13).

Because of the language barrier, this employer incorrectly evaluated an employee's attitude at work. As soon as the employer's son learned Spanish, they were better able to evaluate the attitude and performance of their Latinx worker.

The language barrier between dairy employers and Latinx workers and producer reliance on professional translators for communication could present significant challenges in terms of implementing a socially responsible employment system. If employers feel unable to accurately communicate daily responsibilities, then it is unlikely that Latinx workers will have the opportunity to learn new skills or take on more responsibility.

3.6 Discussion

This study used several indicators to detect the presence of precarity for Latinx dairy employees in Addison County, Vermont. Indicators included the level of worker control over working conditions (specifically hiring) (high, medium, low); protection from termination of employment (yes, no); worker control over wages, and worker control over hours (high, medium, low); the incentive to learn new skills (yes, no); and opportunities for advancement (available, not available). Table 2 offers a summary of our results.

Table 2

Indicators of precarity

| Indicator | Result | Precarious? |
|---|---------------|--------------------|
| Degree of worker control over working conditions (hiring) | High | No |
| Degree of protection from termination of employment | No | Yes |
| Degree of worker control over wages | Medium | No |
| Degree of worker control over hours | High | No |
| Incentive to learn new skills | Not available | Yes |
| Opportunities for advancement | Not available | Yes |

Some of our indicators suggest precarity for Latinx dairy employees in Addison County, while some of our indicators suggest that workers may not always experience precarity. These findings expand and complicate the literature on precarious employment. In addition, our results have practical implications for dairy producers in terms of effective management of Latinx employees.

3.6.1 Theoretical implications.

Our findings add to the literature regarding immigrants and precarious employment. Several scholars have linked precarious employment to precarious migrant status, and have argued that undocumented immigrants feel forced by their precarious migrant status to accept jobs with less favorable working conditions or pay, and are therefore more susceptible to precarious employment conditions (Anderson, 2010; Fudge, Fall 2012; Rodriguez, 2004; Schierup & Jørgensen, 2016). While there is certainly evidence of the existence of precarious employment practices in the Vermont dairy industry, we did not get the impression from dairy employees that Latinx workers always felt forced to accept precarious employment conditions, particularly regarding wages.

There are several plausible reasons that Latinx workers might feel as though they can change employers freely and have some power in the labor market. The work of Migrant Justice, a worker advocacy group based in Vermont, has increased awareness among Latinx workers of their legal rights. In addition, wage pressure from New York may also influence the labor market power of Latinx workers. Farm employers of a certain size in New York must now follow a minimum hourly wage schedule; by the end of 2018, many New York dairy farm employers must pay a minimum of \$11.10 per hour, rising to \$12.50 per hour by the end of 2020 (New York Department of Labor, 2016). With rising wages just over the border, employers may feel obligated to increase pay to compete with employers in New York. Finally, in 2013, Vermont passed a law creating drivers' privilege cards that could be issued to applicants whose status does not make them eligible for a regular license (The Pew Charitable Trusts, August 2015). This law effectively granted migrant farm workers the right to drive, and according to several of the producers we interviewed, played a significant role in increasing the mobility of Latinx dairy workers. Regardless of the source of worker empowerment, our findings suggest the need to further explore the intersection between precarious employment and immigrant populations in the Vermont context.

Finally, our findings corroborate the argument of Olsthoorn (2014), who argues for the notion of precarious employment as “threatening insecurity.” Instead of determining the presence of precarious employment by analyzing job characteristics, one can adequately detect the presence of precarious employment only by studying the entire employment relationship and the labor ecosystem surrounding that relationship. That is,

even though a job might appear, based on a list of characteristics, to be precarious, the employee may not feel as though the job is precarious. For example, a job with a low wage and part-time hours may not feel precarious to an employee with a supplemental income and other responsibilities (Olsthoorn, 2014). The incidence of overtime work is a commonly used indicator of precarious employment (International Labour Organization, 2012; Schewe & White, 2017). However, according to Vermont producers, Latinx dairy workers are demanding to work overtime, and are not satisfied with only forty hours of work per week. In this context, the incidence of overtime work for Latinx dairy workers may not be an accurate indicator of the presence of precarious employment.

3.6.2 Practical implications.

Our study offers several practical implications for Vermont dairy producers. Although the practice of network recruitment arguably reduces conflict between Latinx dairy workers, ceding control of the hiring and termination process to current Latinx workers may make Latinx workers feel more precarious. Employers should take worker compatibility into consideration when evaluating employees. However, standards of evaluation should be written down and communicated by the employer, and made clear to the employee. In addition, regardless of referrals, employers should commit to checking references in the process of hiring a worker for an open position. Although this is certainly not always the case, many Latinx workers have been employed on other Vermont dairy farms, and producers could feasibly take a few moments to call a previous employer to check up on an applicant or a new employee brought in by other employees. A quick reference check to a previous employer would illustrate to workers that although

they can suggest potential hires to their employer, new workers will be subject to the same standards as current workers.

Employer emphasis on network recruitment and compatibility with current Latinx workers may also discourage workers from seeking new skills or opportunities for increased responsibility. The practice of network recruitment could indicate to Latinx workers that the skills they acquire in the job do not necessarily make them more attractive as a worker to current or future employers. Even though Latinx workers tend to work on Vermont dairy farms for only a few years, it is still worth teaching workers why they are doing what they are doing, creating a sense of buy-in, and making workers feel part of a larger team. It is also important to identify individual employees' strengths and goals, and reward workers for higher knowledge and skills. An employee that feels as though the employer values their work may be more likely to stay on the farm for a longer period, thus reducing the incidence of costly turnover (Dudley, November 2017).

3.7 Limitations

From a methodological standpoint, our survey was not originally designed to detect precarious or socially responsible employment practices; although some questions spoke to these topics, future surveys of workers and employers may wish to ask questions more specific to the definition of precarious employment. In addition, most scholarly work on precarious employment is based on the experiences of employees. Our examination of precarious employment practices was based on the perceptions of employers. We relied on their descriptions of worker involvement in the hiring and termination process, as well as their impressions of why workers moved to different

employers. The distinctive form of precarious employment in the Vermont dairy industry should continue to be explored from the point of view of dairy workers in Vermont, rounding out our somewhat one-sided depiction of the employment relationship.

Additionally, it would be worth exploring the employment relationship in other agricultural sectors in Vermont, particularly on those farms that employ H2-A workers. The H2-A program currently does not grant work permits to year-round workers, such as is required on dairy farms. A guest worker program that would accommodate dairy employees is often suggested as at least a partial solution to the labor challenges faced by Vermont dairy employers. However, workers in H2-A programs (as well as in guest worker programs in other parts of the world) are also subject to abuse, and official legal status does not necessarily indicate the absence of precarious employment (Farmworker Justice, 2012; Goldring & Joly, 2014; Preibisch & Otero, 2014). Very little research has been conducted regarding the relationship between employers and employees on Vermont farms that employ H2-A workers.

3.8 Conclusion

An effective farmer-manager-employee relationship is the key to a successful farm enterprise. The concept of precarious employment can be a helpful framework through which to examine the relationship between Vermont dairy employers and Latinx workers. Our study suggests that Latinx dairy workers may experience precarity as a result of producer employment practices, specifically related to low protection from termination of employment, limited opportunities for job advancement, and no obvious incentives to learn new skills. However, some of our results, specifically related to

worker control over hiring, wages, and hours, indicate that some Latinx dairy workers may not experience precarity as a result of producer employment practices. Hopefully, this study will help expand the conversation about fair employment in the Vermont dairy industry to consider multiple sources of worker precarity beyond wages and hours, including the lack of standardized employment procedures on the part of employers.

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Chapter 4: Wages and Non-Wage Benefits in the Vermont Dairy Industry

4.1 Abstract

The quality of human resource management can have a significant impact on a farm business, and evidence suggests that intentional human resource management on dairy farms can result in healthier cows, higher profits, and lower employee turnover (Billikopf & Gonzalez, 2012; Erskine et al., 2015; Stup, 2006). Wages and benefits are an important component of human resource management. Relying upon thirty surveys, this article will report on the wages, the types of non-wage and in-kind benefits, and the estimated value of the non-wage and in-kind benefits offered to Vermont dairy farmworkers, both U.S. and Latinx, in Addison County, Vermont. We find that more than half of employers provide Latinx employees with housing, utilities, internet, satellite TV, transportation (all examples of in-kind benefits), as well as farm products, vacation time, and a bonus (all examples of non-wage benefits). In terms of non-wage and in-kind benefits offered to U.S. workers, more than half of employers provide housing, utilities, a bonus, farm products, sick time, and vacation time. The median average hourly wage for Latinx workers, \$10.55, is low in comparison to the median average hourly wage for other comparable occupations in Vermont. If the producer-estimated value of the typical non-wage benefits offered to Latinx employees is included, the median total compensation for Latinx workers, \$12.62, is below the applicable Vermont livable wage, \$12.98. American dairy workers in Vermont, on the other hand, earn a median total compensation of \$21.32 to \$24.02, which compares favorably to the median hourly wage in Vermont for similar occupations, and far exceeds the average Vermont livable wage of

\$13.03. I conclude with an outline of the challenges involved in gathering accurate information regarding the value of non-wage benefits, and methodological considerations for future research.

4.2 Introduction

Changes in the dairy industry have forced Vermont dairy employers to expand their herds, make significant structural changes to their business (i.e. invest in value-added production or transition to organic production), or exit the dairy industry (Dobson & Christ, 2000). One of the most significant challenges to dairy herd expansion is that farmers must transition to spending a larger fraction of their time managing employees (Hagevoort, 2013). Many dairy managers are not trained in human resources, and according to a survey conducted in Wisconsin in 2013, many farmers do not engage in practices fundamental to human resource management, such as regular performance reviews, providing an employee handbook, or creating standard operating procedures (Blazek et al., November 2013; Erskine et al., 2015).

The quality of human resource management can have a significant impact on the farm business. Evidence suggests that intentional human resource management can result in healthier cows, higher profits, and lower employee turnover (Billikopf & Gonzalez, 2012; Erskine et al., 2015; Stup, 2006). Wages and benefits are an important component of human resource management. A 2012 study of California dairy workers found that the reason most often given for employees leaving a previous dairy job was compensation and benefits (Billikopf & Gonzalez, 2012).

This article will report on the wages, non-wage benefits, and in-kind benefits offered to Vermont dairy farmworkers, both American and Latinx, in Addison County, Vermont. Here, wages are defined strictly as the number of hours worked times the hourly rate; non-wage benefits are income-bearing benefits that have a monetary value

(bonus); and in-kind benefits are benefits that do not involve money or are not measured in monetary terms (i.e. housing, utilities, farm products, transportation, health insurance).

Specifically, this article asks:

RQ1: What are the wages, non-wage benefits, and in-kind benefits provided by Addison County dairy farmers to their employees?

RQ2: What is the approximate annual and hourly value of those non-wage and in-kind benefits to the worker?

RQ3: How do these wages, non-wage benefits, and in-kind benefits compare to other similar occupations in Vermont, and to the Vermont livable wage?

This information was collected as part of a larger survey administered to thirty dairy producers in December 2017 and January 2018 in Addison County, Vermont.

Overall, I find that considering the value of the non-wage and in-kind benefits offered to both U.S. and Latinx employees, the wages and benefits offered to dairy employees in Vermont are close to or above the wages and benefits found by other dairy surveys, reported by comparable occupations in Vermont, and the Vermont livable wage. The information reported here will be used in several ways. More accurate information regarding the cost of a competitive wage and benefit package will help Vermont dairy producers compete for high quality labor in an era of rising labor costs and stagnant milk prices. In addition, technical service providers, dairy support professionals, and policy makers will also benefit from more complete information concerning the human resource practices of the state's dairy producers.

4.3 Background

Much of the research focusing on dairy farmworkers in the northeast has been conducted by Dr. Thomas Maloney of Cornell University Extension in New York. Dr. Maloney's first report about the management of Latinx workers on New York dairy farms was published in 1999; at that time, the twenty survey participants represented most of the dairies in New York that employed Latinx workers (Thomas R Maloney, 1999). Most recently, Maloney and his colleagues published the results of a survey of Latinx dairy workers and their employers conducted during the Summer of 2016 (T.R. Maloney et al., December 2016). The survey asked Latinx dairy workers questions about reasons for coming to their current farm, farm duties, compensation, benefits, job satisfaction, and plans for the future. Maloney also collected information from farmers regarding employee wages and benefits. According to the farmers interviewed (n = 36), the average starting wage for a milker was \$9.34 an hour, while the highest average hourly pay for milkers was \$11.05. Approximately 80% of the 36 employers surveyed offer free housing to their Latinx workers. In addition, four out of five employers surveyed offer cable/TV, Internet, garden space, transportation, and a bonus/incentive program (T.R. Maloney et al., December 2016).

A survey of dairy employers in Vermont conducted in 2010 shed some light on average wages and types of benefits offered to dairy workers in the state. The median hourly wage for U.S. workers in 2010 was \$10.00 (n = 52), while the median hourly wage for Latinx workers was \$8.00 (n = 32). The most frequently offered in-kind benefits for Latinx workers were housing (offered by 100% of 40 employers

interviewed), utilities (100%), satellite TV (85%), and farm products (75%). In terms of U.S. workers, the most frequently offered in-kind benefits were farm products (offered by 67% of 67 employers), housing (51%), utilities (39%); in addition, 39% of producers offered bonuses for milk or production (a non-wage benefit) (Daniel Baker, 2010).

In addition to collecting information on the type of non-wage benefits offered to employees, a few researchers have tried to value the non-wage benefits offered to farmworkers. On a national scale, a survey conducted in 2015 by researchers at Texas A&M AgriLife Research (under a contract for the National Milk Producers Federation) asked dairy farmers across the U.S. to report their average wages, the types of non-wage benefits, and an overall value for the non-wage benefits offered to farm employees (Adcock, 2015). The average reported annual benefit package was worth \$10,444, while the average reported annual benefit package for only respondents with immigrant employees was \$11,222. Almost 87% of survey respondents reported offering some type of non-wage or in-kind benefit. The most commonly offered in-kind benefits included paid vacation (64%) and housing (54.5%). Dairy employers also offered incentive pay, insurance, vehicle use, and food staples. Employers with immigrant employees offered more non-wage and in-kind benefits than employers in general (Adcock, 2015).

A 2011 Iowa survey of employers on large-scale Iowa farms (including farms engaged in crop production, beef, swine, dairy, and general livestock) that employed one or more persons full-time in 2011 asked producers to provide an estimated value of each benefit offered to each of three “representative” employees (chosen by the employer) (Edwards et al., March 2012). According to the results of the survey, cash wages account

for 85% of total compensation of farmworkers, in-kind benefits make up 11%, and bonuses (non-wage benefit) comprise 4% of total compensation (Edwards et al., March 2012). A University of Wisconsin study, published in 2013, applied the results of the Iowa study to arrive at a value for total compensation per hour for dairy employees of \$12.15 (Barnett et al., November 2013).

There is a new program in Vermont that assigns a value to the non-wage and in-kind benefits provided by dairy employers for “qualifying workers” (“workers who perform milking or milking-related tasks, or “...any other manual labor directly related to care of animals or milk production”): the Milk With Dignity program (Milk with Dignity Standards Council, 2017). Milk With Dignity was adopted by Ben & Jerry’s as a result of the advocacy work of Migrant Justice, a Vermont-based dairy farmworker advocacy group. The program offers a premium to farmers who agree to follow the Milk With Dignity Code of Conduct. The Code of Conduct sets standards for wages, health and safety, housing, schedule and rest, non-retaliation, and non-discrimination. Among other requirements, the Code offers an incentive and sets a schedule for farmers to increase wages for qualifying workers. According to the Code,

“Any QW [qualifying worker] who is not provided MD Code-compliant [Milk With Dignity Code of Conduct-compliant] housing but not employer-sponsored health insurance and earns a net wage, after any health insurance or housing-related deductions, of less than \$1.50/hr below the BLW [Baseline Livable Wage] for a “Single Person with Shared Housing” in the “Basic Needs Budget Wages,”

as determined annually by the Vermont Legislative Joint Fiscal Office (\$11.48/hr as of November 1, 2017)” (Milk with Dignity Standards Council, 2017).

The Milk With Dignity program values the non-wage and in-kind benefits that dairy employers provide for their qualifying workers at \$1.50 per hour.

The Vermont Basic Needs Budget, reference in excerpt from the Milk With Dignity Code of Conduct above, is a market-based analysis that accounts for estimated monthly living expenses in Vermont. The budget, based on family size and urban or rural location, includes costs such as food, housing, transportation, child care, clothing and household expenses, telecommunications charges, health and dental care, renter’s insurance, life insurance, and savings. The Vermont Livable Wage is defined as the hourly wage required for a full-time worker to pay for one-half of the basic needs budget for a two-person household with no children, access to employer-sponsored health insurance, and averaged over urban and rural areas. The 2016 Vermont Livable Wage is \$13.03 per earner per hour (Vermont Legislative Joint Fiscal Office, February 1 2017). The Vermont Livable Wage for a single person living in shared housing in a rural area is \$12.98, and \$14.46 for a single person living in shared housing in an urban area (Vermont Legislative Joint Fiscal Office, February 1 2017).

Vermont dairy employers, technical service providers, and policymakers do not have current, complete, and accurate information regarding the wages and benefits offered to dairy employees in Vermont. In addition, it is unclear how the authors of the Milk With Dignity Code of Conduct arrived at the value of \$1.50/hr for the non-wage and in-kind benefits provided for dairy employees. This article will describe the average

wages, non-wage benefits, and in-kind benefits provided to dairy employees in Addison County, Vermont, and will estimate a value for the non-wage and in-kind benefits offered by dairy employers. The information reported here will help Vermont dairy employers understand the value of a competitive wage and benefit package, and will provide policymakers and the public with objective information regarding the wages and benefits offered to dairy employees.

4.4 Methods

This report uses data collected from a survey administered to thirty dairy farm owners or managers in Addison County, Vermont. The surveys conducted in Addison County represent the first phase of a larger study designed to collect information from dairy farm operators across Vermont on a variety of topics. Participants for this phase of the study were randomly selected from a list of Addison County dairy farms that outsource labor. This list is housed within a statewide database of dairy farms maintained by the P.I. and other members of the research team (updated through Spring of 2017).

Due to the sensitive nature of the research topic, any information that could identify participants, such as gender or structure of the business, is not reported here.

Table 3

Participant Operation Demographics

| | % of dairy farms surveyed in Addison County (n = 30) | % of dairy farms in Vermont |
|----------------------|--|-----------------------------|
| Less than 50 cows | 3.3% (1) | ND |
| SFO (50 – 199 cows) | 26.7% (8) | 82% |
| MFO (200 – 699 cows) | 43.3% (13) | 15.1% |
| LFO (700 + cows) | 26.7% (8) | 2.8% |
| Total | 100% (30) | 99% |

(Vermont Dairy Promotion Council, 2016)

The herd size of participant operations ranged from less than 50 cows to over 1300 cows. Farms that outsource labor tend to be larger dairy farms, so large dairy farms may overrepresented in this study (U.S. Department of Agriculture Economic Research Service, 2018). Participants reported wage and benefit information that covers 211 full-time workers they collectively employ: 73 full-time U.S. workers (35%) and 138 full-time Latinx workers (65%).

The survey was based on a 2010 survey of a similar nature, was refined by the research team, and approved by the University of Vermont Institutional Review Board in the Fall of 2017. Data was collected with the help of a research specialist that is highly experienced and well-known in Vermont dairy circles. The research specialist was hired specifically by the research team to facilitate access to dairy farmers given the sensitive nature of the research topic and the plethora of demands on farmers' time. Data in Addison County was collected over a series of several days of surveying from December 2017 to January 2018.

The survey gathered both quantitative and qualitative data concerning the current state of dairy labor in Vermont. Dairy employers were asked to evaluate their U.S. workers (defined as U.S. citizens) and Latinx workers (defined as anyone from Mexico, Central, or South America, non-citizen) separately on a variety of topics. Questions ranged from basic (how many full-time Latinx workers do you employ?) to more in-depth (what are some challenges related to retaining U.S. workers?). The research team also collected information from producers about primary and secondary job

responsibilities of hired employees. A significant portion of the survey focused on the wages and benefits offered to both U.S. workers and Latinx workers. Researchers also collected information on the producer's estimated value of the non-wage and in-kind benefits offered to dairy employees.¹ The survey asked a total of 36 questions, many of them with additional sub-questions. Surveys lasted 30 to 90 minutes, and interviews were audio recorded with the consent of the participant.

Quantitative and some qualitative data was entered into SPSS to facilitate analysis. As the results are presented here, not all responses add up to thirty; a few producers do not currently employ Latinx workers, and a few producers do not currently employ American workers. In some cases, producers did not provide an estimate for a non-wage or in-kind benefit either because they did not know, they had never considered a value, or because they paid for a benefit (such as utilities for worker housing) together with the utilities for the business operation, and they were unable to separate out the cost for employees. Finally, a few producers chose not to answer certain questions.

In this article, I will focus on reporting the results of questions that directly relate to wages, non-wage benefits, and in-kind benefits. I will also include the results of questions that provide the necessary context to interpret wage and benefit information (such as hours worked per week, length of tenure, and primary job responsibilities).

¹ The estimated value of each in-kind benefit represents the value of the benefit to the employer; that is, an average annual value for housing represents what the employer believes he would receive if he were to rent an employee dwelling on the open market. The average annual value for housing does not represent what the employer believes an employee would have to pay if they were to rent something on their own.

4.5 Results

First, I will report information regarding hours worked per week, length of tenure, and primary job responsibilities. These results will help provide some context for the wage and benefit information that will be reported in subsequent sections. In the second half of this section, I will outline the average wages, the non-wage benefits, the in-kind benefits, the estimated annual value of each in-kind benefit, and the estimated hourly value of each in-kind benefit for both U.S. and Latinx dairy employees. Appendix B contains detailed information regarding the methods used for estimating the value of each in-kind benefit.

4.5.1 Hours.

Table 4, shown below, reports on the minimum, maximum, and median hours worked per week for both Latinx employees and U.S. employees in Addison County.

Table 4

Hours worked per week

| | Minimum hours per week | Maximum hours per week | Median hours per week |
|----------------------------|------------------------|------------------------|-----------------------|
| U.S. workers (n = 24) | 40 | 72.5 | 60 |
| Latinx workers (n = 26) | 41.5 | 82 | 65 |

The maximum number of hours worked by Latinx employees (82 hours per week, n = 26) is higher than the maximum number of hours worked by U.S. employees (72.5 hours per week, n = 24). Likewise, the median number of hours worked per week by Latinx

employees is 65 (n = 26), while U.S. employees clock in at a median of 60 hours per week (n = 24).

4.5.2 Length of tenure.

To capture employee turnover, we asked employers how long a typical U.S. employee had remained employed on their farm, and how long a typical Latinx employee had remained employed on their farm.

Table 5

Average length of tenure (years)

| | Minimum | Maximum | Median |
|----------------------------|---------|---------|--------|
| U.S. workers (n = 25) | 1 | 20.5 | 5 |
| Latinx workers (n = 23) | 0.5 | 7.5 | 3 |

U.S. employees tend to have a longer average length of tenure than Latinx employees. It is worth noting that the maximum length of tenure for U.S. employees – 20.5 years (n = 25) – is much higher than the maximum length of tenure for Latinx employees – 7.5 years (n = 23). It is not unusual for a dairy employer in Addison County to have one or two long-term U.S. employees, while the Latinx employees seem to turn over more frequently.

4.5.3 Primary job responsibilities.

Figure 1 outlines the primary job responsibilities of the full-time U.S. and Latinx workers collectively employed by the producers we interviewed.

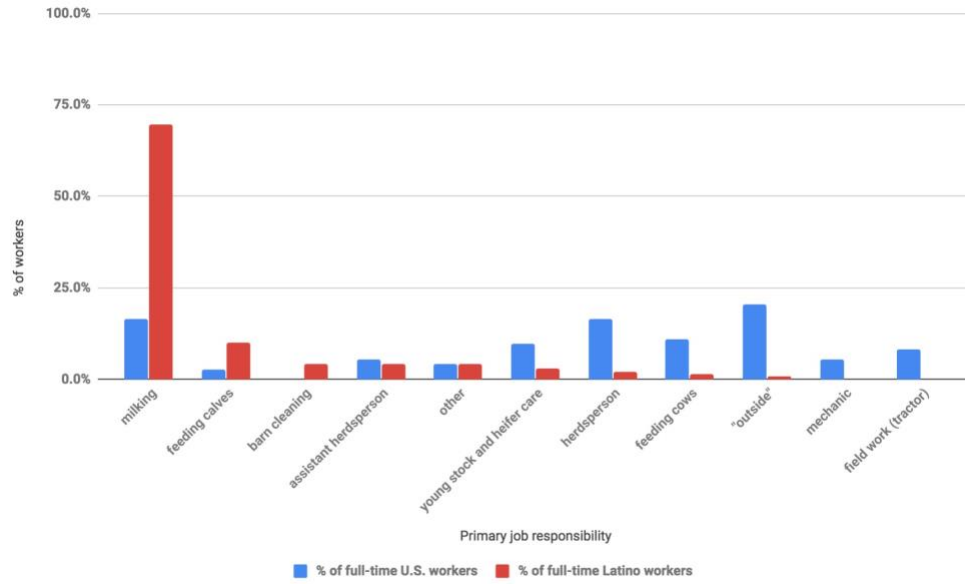


Figure 1. Primary job responsibilities of full-time U.S. and Latinx dairy workers.

Most Latinx employees (n = 138) are milkers (69.6%), while the primary responsibilities of U.S. employees (n = 73) vary widely. Only 16.4% of U.S. employees milk; 20.5% are considered “outside” workers², 16.4% of U.S. employees are herdspeople, 11% feed cows, and 9.6% of U.S. employees primarily engage in young stock and heifer care. Although milking certainly requires skill, it is considered an entry-level job in a dairy operation.

² “Outside” is a term used commonly by producers to describe employees who work exclusively outside the barn, typically do not milk, and instead perform a variety of tasks throughout the day, including field work, mechanic work, maintenance, and general labor.

4.5.4 Compensation.

The mean wage and salary, median wage and salary, and range of wages and salaries paid to both U.S. and Latinx full-time employees are reported in Table 6.

Table 6

Hourly wages and weekly salaries for U.S. and Latinx employees

| | U.S. employees | | | Latinx employees | | |
|--------------------------------------|----------------|---------------|----------------|------------------|---------------|------------------|
| | <u>Mean</u> | <u>Median</u> | <u>Range</u> | <u>Mean</u> | <u>Median</u> | <u>Range</u> |
| Average hourly wage (n = 12, 17) | \$16.42 | \$16.25 | \$14 - \$21 | \$11.28 | \$10.55 | \$9.50 - \$15.50 |
| Highest hourly wage (n = 12, 17) | \$18.54 | \$17.75 | \$14 - \$30 | \$12.54 | \$12 | \$9.75 - \$19 |
| Lowest hourly wage (n = 12, 17) | \$13.29 | \$13 | \$11 - \$17.50 | \$10.07 | \$10 | \$9 - \$12 |
| Average weekly salary (n = 17, 9) | \$831.90 | \$800 | \$495 - \$1200 | \$675.83 | \$673.08 | \$500 - \$860.83 |
| Highest weekly salary (n = 17, 9) | \$923.72 | \$877.50 | \$495 - \$1500 | \$709.69 | \$711.54 | \$500 - \$872.50 |
| Lowest weekly salary (n = 17, 9) | \$735.24 | \$692.31 | \$400 - \$1200 | \$637.16 | \$600 | \$500 - \$837.50 |

Wages and salaries for U.S. employees are consistently higher than wages and salaries paid to Latinx employees. Most Latinx employees are paid hourly. The median average hourly wage for Latinx employees is \$10.55, while the median average hourly wage for U.S. employees is \$16.25. Most U.S. workers, on the other hand, are paid salary. The

median average weekly salary for Latinx employees is \$673.08, and the median average weekly salary for U.S. employees is \$800.

4.5.5 Non-wage and in-kind benefits.

Producers were asked to provide information on the non-wage and in-kind benefits that they offered to their U.S. and Latinx full-time employees. Participants were given four options for each benefit: “does not offer,” “employee pays,” “cost is shared,” and “employer pays.”³ If a producer selected, “cost is shared,” that usually indicated that the producer and the employee split the cost of the benefit. In the Addison County surveys, “cost is shared” only applied to benefits offered to U.S. workers, and typically referred to a health care plan, retirement plan, or in some cases, to a housing stipend that a producer offered to a U.S. employee to help defray the cost of acquiring housing off the farm.

Even if the producer only offered the non-wage or in-kind benefit to one out of several U.S. or Latinx employees, the producer was still recorded as offering that specific benefit. For example, even if an employer only offered housing to one out of three U.S. employees (relatively common), that producer was still recorded as offering the in-kind benefit of housing to his U.S. employees. Because we also recorded the number of U.S. employees offered housing at each farm, this discrepancy was accounted for in the process of estimating the hourly value of non-wage and in-kind benefits for U.S.

³ The category “employee pays” was included in the survey to mimic a survey conducted in New York by Dr. Maloney and his colleagues in 2016 (T.R. Maloney et al., December 2016). However, the difference between “does not offer” and “employee pays” is not always clear. If “employee pays” was selected by survey administrators, it was combined with “does not offer” for the final analysis.

employees. However, because it was very rare for a producer to offer only some of his Latinx employees a specific benefit, this discrepancy was not accounted for in the process of estimating the hourly value of non-wage and in-kind benefits for Latinx employees.

A few of the in-kind benefits merit further explanation. In the case of U.S. employees, if an employee is offered the “use of farm vehicle for non-work use,” that usually means that the employer either bought the employee’s vehicle from the employee upon hiring, or the employer provides the employee with a farm vehicle. Regardless of how the employee acquired the vehicle, if they receive this benefit, the employer typically pays for all vehicle expenses, and allows the employee to use the vehicle at will (i.e. for work and non-work uses). In the case of Latinx employees, “use of farm vehicle for non-work use” usually means that Latinx employees are granted the use of a farm vehicle to drive back and forth from their housing to the milking parlor, and in rare cases, to use for travel off the farm. Very few employers (4.3%, n = 23) offer their U.S. employees “transportation” (i.e. transportation to locations off the farm), but most producers (61.5%, n = 26) offer their Latinx employees “transportation.” “Transportation” for Latinx employees typically consists of a weekly or biweekly shopping trip so that Latinx employees can purchase groceries and other supplies, and wire money home. Several producers also reported that they offer transportation to their Latinx employees for recreation, such as soccer games, visiting friends, or attending social events. A few producers provided transportation for Latinx employees for health clinic visits or for emergency health needs.

The non-wage and in-kind benefits offered to U.S. employees are summarized in Figure 2. The most commonly offered in-kind benefits for U.S. employees are vacation time (95% of employers offer this benefit, n = 23); sick time (70%); farm products, such as beef or milk (69.6%); housing (56.5%); and utilities (52.2%).

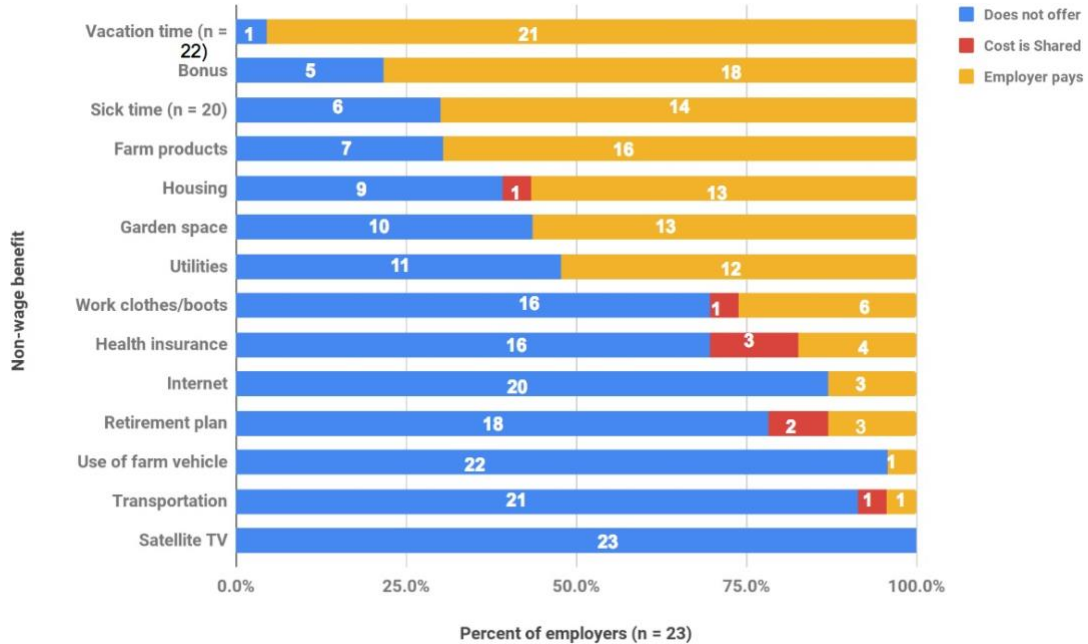


Figure 2. Non-wage benefits provided to U.S. employees by employers (n = 23). Non-wage benefits offered to U.S. employees by percent of employers who do not offer a given benefit, share the cost of a given benefit with the employee, or pay the entire cost of a given benefit.

Latinx employees are also offered non-wage and in-kind benefits, often at higher rates than U.S. employees. The non-wage benefits offered to Latinx employees are summarized in Figure 3. The most commonly offered in-kind benefits for Latinx employees are housing (100%); utilities (100%); garden space (84%); satellite TV (80.8%), and internet (73.1%).

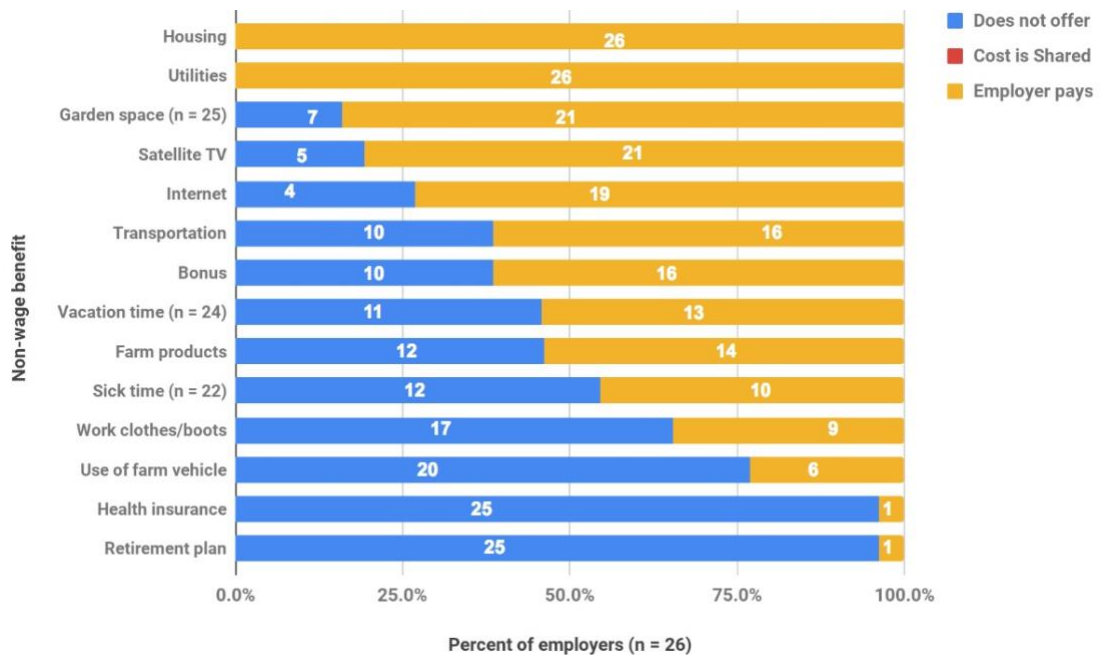


Figure 3. Non-wage benefits provided to Latinx employees by employers (n = 26). Non-wage benefits offered to Latinx employees by percent of employers who do not offer a given benefit, share the cost of a given benefit with the employee, or pay the entire cost of a given benefit.

4.5.6 Estimated value of non-monetary compensation.

The survey also asked employers to estimate a value for each non-wage or in-kind benefit offered to both U.S. and Latinx employees. Except for one employer who has calculated the actual annual and hourly value of each benefit offered to each employee (benefits often varied by employee, especially with U.S. employees), the estimates offered by participants are approximate. In addition, the research team was not able to verify the validity of these estimates, nor were we able to confirm the quality of employee housing. Still, the estimated values provided here are an excellent point of departure for future research.

Table 7 and Table 8 report the estimated annual value per worker of a specific benefit, and the estimated hourly value per worker of a specific benefit. Please see Appendix B for a detailed discussion of the methods used to calculate an estimated annual value per worker for each benefit. The estimated hourly value per worker was calculated assuming an average U.S. employee worked 60 hours per week, 51 weeks per year, while an average Latinx employee worked 65 hours per week, 51 weeks per year (see Table 4). The sample size varies for each benefit. Some producers could accurately estimate a value, while others either declined to estimate, or were not able to provide an estimated value for a particular benefit.

For U.S. employees, the estimated median annual value per worker for the benefit of housing, the most valuable in-kind benefit, was calculated using estimation. According to our data, 53.4% of U.S. workers (39 workers) are not offered housing by their employers, while 46.6% of U.S. workers (34 workers) are offered housing by their employers. To arrive at an average estimated median annual value per worker, I took 46.6% of \$12,000 (the median annual value per U.S. worker offered housing), which results in an estimated median annual value per worker of \$5,589.04. Similarly, assuming that a U.S. worker would not be offered utilities or internet if they were not offered housing, I performed a similar procedure with those estimated values.

Table 7

Estimated annual and hourly value of non-wage and in-kind benefits for U.S. employees

| | Estimated median annual value per worker | Estimated hourly value per worker^a |
|----------------|--|--|
| Housing | \$12,000 ^b \$5,589.04 ^c | \$3.92 ^b \$1.82 ^c |

| | | |
|--|---|--|
| | (n = 13) | |
| Utilities | \$3,000 ^b \$1,397.26 ^c (n = 10) | \$0.98 ^b \$0.46 ^c |
| Internet | \$420 ^b \$195.62 ^c (n = 3) | \$0.14 ^b \$0.06 ^c |
| Satellite TV | \$0 | \$0 |
| Use of farm vehicle for non-work use | \$499.20 (n = 1) | \$0.16 |
| Bonus | \$650.00 (n = 17) | \$0.21 |
| Health insurance | \$3,900 (n = 6) | \$1.27 |
| Retirement plan | \$1,750 (n = 2) | \$0.57 |
| Transportation | \$866.67 (n = 1) | \$0.28 |
| Farm products | \$543.75 (n = 14) | \$0.18 |
| Work clothes/boots | \$200 (n = 6) | \$0.06 |
| Garden space | No estimated value | No estimated value |
| Additional value (including all benefits listed here) | \$23,829.62 ^b \$15,591.54 ^c | \$7.77 ^b \$5.07 ^c |

^aAssuming 3,060 hours of work per year (median hours worked per week of 60, assuming 51 weeks of work per year)

^bper worker offered housing

^caveraged over all U.S. workers

Table 8

Estimated annual and hourly value of non-wage and in-kind benefits for Latinx employees

| | Estimated median annual value per worker | Estimated hourly value per worker* |
|---|---|---|
| Housing | \$3,600.00 (n = 25) | \$1.09 |
| Utilities | \$1,050.00 (n = 23) | \$0.32 |
| Internet | \$320.00 (n = 16) | \$0.10 |
| Satellite TV | \$312.00 (n = 19) | \$0.09 |
| Use of farm vehicle for non-work use | \$234.38 | \$0.07 |

| | | |
|---|----------------------|--------------------|
| | (n = 4) | |
| Bonus | \$606.25 (n = 14) | \$0.18 |
| Health insurance | No estimated value | No estimated value |
| Retirement plan | No estimated value | No estimated value |
| Transportation | \$693.33 (n = 15) | \$0.21 |
| Farm products | \$250.00 (n = 10) | \$0.08 |
| Work clothes/boots | \$175.00 (n = 9) | \$0.05 |
| Garden space (n = 25) | No estimated value | No estimated value |
| Maximum additional value (including all benefits listed here) | \$7,240.96 | \$2.19 |
| Conservative additional value (including benefits offered by over half of employers interviewed: housing, utilities, internet, TV, bonus, transportation, farm products) | \$6,831.58 | \$2.07 |

*Assuming 3,315 hours of work per year (median hours worked per week of 65, assuming 51 weeks of work per year)

Table 7 and Table 8 illustrate that dairy employers in Addison County offer significant non-wage and in-kind benefits to both U.S. and Latinx employees, although the value of those benefits varies. The estimated annual value of housing for U.S. employees (\$12,000) is significantly higher than the estimated annual value of housing for Latinx employees (\$3,600). U.S. employees typically live in on-farm housing with their families, while most Latinx employees live in on-farm housing with other Latinx employees.

It is worth mentioning that some producers provide several other non-wage and in-kind benefits to their employees that were either difficult to value, or not present across enough employers to include an estimated value. Miscellaneous non-wage and in-

kind benefits for U.S. employees include paid overtime (which is not required for agricultural workers in Vermont); gas for personal vehicles; lawn mowing, plowing, and garbage collection (for those living in employer-provided housing); and Christmas gifts. Miscellaneous benefits for Latinx employees include lawn mowing, plowing, garbage collection, pest control, plane tickets home, and short-term loans. Some producers also told us that they wire money for workers, although several participants admitted that they used to do this, but have since stopped because they got flagged by the money transfer service.

4.6 Discussion

The results of our survey offer several interesting insights into the wages and benefits offered to Vermont dairy employees. First, I will compare our results to results found in other studies of dairy employees. Next, I will put the results in context, and compare the proportion of total compensation made up of non-wage benefits in Addison County to data collected from a different survey conducted in Iowa in 2011. Finally, I will compare the wages reported here to the average wages for other comparable occupations in Vermont, and then to the Vermont Living Wage. Overall, I find that considering the value of the non-wage and in-kind benefits offered to both U.S. and Latinx employees, the wages and benefits offered to dairy employees in Vermont are close to or above the wages and benefits found by other dairy surveys, reported by comparable occupations in Vermont, and the Vermont livable wage.

4.6.1 Non-wage and in-kind benefits in Vermont compared to other studies

Table 9

Summary of surveys of wages, non-wage benefits, and in-kind benefits offered to dairy employees

| Year | Location | Average hourly wage | Types of benefits offered | Annual value of benefits offered |
|-------------|--|---|---|--|
| 2018 | Addison County, Vermont | \$16.25/hr (U.S.) \$10.55/hr (Latinx) | U.S. - vacation time (95% of employers offer this benefit, n = 23); sick time (70%); farm products, such as beef or milk (69.6%); housing (56.5%); and utilities (52.2%) Latinx - housing (100% of employers offer this benefit, n = 26); utilities (100%); garden space (84%); satellite TV (80.8%), and internet (73.1%) | \$15,591.54 (U.S.) \$6,831.58 (Latinx) |
| 2017 | Idaho's Magic Valley | \$13.82/hr | In some parts of the state, benefits were rare; in other parts, non-wage and in-kind benefits are important component of recruiting and retaining workers | No value given |
| 2016 | New York | \$9.34/hr (average starting wage for milkers) \$11.05 (highest average hourly pay for milkers) | 80% of employers surveyed offer free housing; four out of five employers surveyed offer cable/TV, Internet, garden space, transportation, and a bonus/incentive program | No value given |
| 2015 | National survey, Texas A&M AgriLife Research | \$11.54/hr (n = 815) \$11.69/hr (n = 671, only employers with immigrant employees) | Most commonly offered benefits for all workers included paid vacation (64%) and housing (54.5%); dairy employers also offered incentive pay, insurance, vehicle use, and food staples | \$10,444 (all respondents) \$11,222 (only respondents with immigrant employees) |

Because each study was conducted in a slightly different way, and none of the studies listed here asked explicitly for average wages based on whether the worker is U.S. or Latinx, direct comparison is challenging. However, the results of our survey do fit with data found in other surveys.

4.6.1 Non-wage and in-kind benefits as a percent of total compensation.

According to our results, a conservative estimate of the average hourly value of the benefits offered to Latinx workers is \$2.07. Using the median average hourly wage for Latinx workers, \$10.55, the median value of total compensation for Latinx workers is \$12.62. Non-wage and in-kind benefits comprise approximately 16% of total compensation for Latinx employees. This percentage is somewhat comparable to the percentage of total compensation made up of in-kind benefits (15%) found by the 2011 Iowa study (Edwards et al., March 2012). Similarly, according to our results, the average hourly value of the benefits offered to U.S. employees ranges from \$5.07 to \$7.77. The median average hourly wage for U.S. workers is \$16.25, so the median value of total hourly compensation for U.S. workers ranges from \$21.32 to \$24.02. Non-wage and in-kind benefits comprise approximately 23.8% to 32.3% of total compensation for U.S. employees. This percentage is quite a bit higher than the percentage found by the 2011 Iowa study (Edwards et al., March 2012).

4.6.2 Wages in occupational context.

It is also useful to compare the data we collected with average wages in other analogous occupations (shown here by U.S. Department of Labor, Bureau of Labor Statistics major occupational groups).

Table 10

Mean & median wages in Vermont (May 2017)

| | Vermont median hourly wage (2017) | Vermont mean hourly wage (2017) |
|---|--|--|
| Farming, Fishing, and Forestry | \$15.11 | \$16.14 |
| Building/ground cleaning & maintenance | \$13.74 | \$14.97 |

| | | |
|---|---------|---------|
| Construction and extraction | \$20.12 | \$21.80 |
| Food preparation and serving | \$12.52 | \$14.20 |
| Production | \$16.90 | \$18.96 |
| Transportation and material moving | \$16.64 | \$17.99 |

(United States Department of Labor Bureau of Labor Statistics, 2017)

Within the “Farming, Fishing, and Forestry” major group, there is an occupation called, “Farmworkers, Farm, Ranch, and Aquacultural Animals,” which would include dairy workers. The median hourly wage for those workers is \$12.88. In comparison to the Vermont median hourly wage reported in 2017 for “Farming, Fishing, and Forestry” overall as well as for the “Farmworkers, etc.” category, the median average hourly wage we reported for Latinx workers (\$10.55) is lower, while the median average hourly wage we reported for U.S. workers (\$16.25) is higher. However, when the value of the non-wage benefits included in a typical dairy compensation package are considered, the median hourly compensation for both Latinx and U.S. workers is comparable to the hourly wages reported in other similar occupations in Vermont.

4.6.3 The Vermont Basic Needs Budget

The median average hourly wage we reported for U.S. workers, \$16.25, surpasses the Vermont Livable wage of \$13.03. The median average hourly wage we reported for Latinx workers, \$10.55, does not meet the Vermont Livable wage standard for a single person living in shared housing in a rural area with access to employer-sponsored health insurance, \$12.98. However, most dairy employers provide their Latinx employees with several non-wage benefits. If you add the value of the typical non-wage benefits provided to Latinx employees (housing, utilities, internet, TV, bonus, transportation, and farm products) to the median average hourly wage of \$10.55, the value of total hourly

compensation for a Latinx dairy worker in Addison County is \$12.62, which approaches the Vermont Livable Wage for a single person living in shared housing in a rural area, \$12.98. However, there are a few factors to consider regarding this comparison. Dairy workers do not typically have access to employer-sponsored health insurance (only 3.8% of participants offered health insurance to Latinx workers, and 20.4% of participants offered health insurance to U.S. workers), and anecdotally, many Latinx dairy workers in Vermont are supporting family members at home with their wages.

4.7 Limitations and Future Research

Gathering representative data regarding wages and benefits offered to dairy employees is challenging for several reasons. First, collecting information about the Latinx workforce requires trust. Thomas Maloney, who has been surveying dairy employers and employees in New York for almost two decades, acknowledges within the first few paragraphs of his 2016 report that, "... a high level of trust is required to conduct a survey of this nature" (T.R. Maloney et al., December 2016, p. 9). Due to the sensitive nature of the subject, the farm employers surveyed by Maloney and his team have been long-term collaborators with Cornell Cooperative Extension, and tend to have larger farms. As a result, the size distribution of surveyed farms is considerably different from the New York dairy sector as a whole (T.R. Maloney et al., December 2016). It is likely that most of the Latinx dairy labor force in New York is not authorized to work in the U.S., and many dairy farmers are concerned about the effect of immigration enforcement on their Latinx workforce, particularly given recent federal rhetoric. Similarly, our sample size was also affected by the sensitive subject matter. Because we

knew that it might be difficult to get producers to agree to participate in the survey, we hired a research specialist who is very familiar with the Vermont dairy community. Although we did our best to ensure that the sample was as random as possible, it is possible that producers who knew the research specialist were more apt to agree to participate. Finally, our sample only includes dairy farms located in Addison County. Labor conditions, wages, and non-wage benefits likely vary between counties.

Second, I only encountered two producers who had calculated the value of each non-wage benefit offered to each employee; the other producers with whom I spoke offered only estimates. We were also not able to confirm the validity of a producer's estimate. For example, we were not able to examine utility bills, nor assess the quality of employee housing. Producers should be encouraged to assess the value of the non-wage benefits they offer to their employees. Future research and technical service providers could potentially work together to help producers go through the process of valuing their non-wage benefits.

Finally, our methods for valuing the non-wage benefits provided by employers was as accurate as possible, but still imperfect. For example, even if housing were only offered to two out of four U.S. workers, that employer was still recorded as offering the benefit of housing to U.S. workers, even though it wasn't offered to all U.S. workers. Similarly, we did not match employee tenure and farm experience with wage rates and non-wage benefits. An alternative method might have been to ask producers to indicate the value of each benefit offered to each employee. An Iowa study that tried to value benefits offered to agricultural workers asked farmers to choose three "representative"

employees, and list the wages and the value of each benefit offered to each representative employee (Edwards et al., March 2012). Profiling specific workers may be more exact, but in the Iowa study, producers could choose any “representative” workers they wished, potentially introducing bias. In the case of our survey, outlining the benefits offered to each worker would have been tedious and time consuming, especially for the employers who had more than a dozen employees.

In addition, the methods we used to value the benefits offered to employees was also somewhat flawed. For example, some producers were not able to give us an exact number for the pounds of beef offered to each employee. Often, a farmer would only indicate that they processed “about two” cows per year. Although we found an estimate for the pounds of beef in a culled dairy cow, this number can vary wildly. Future research should keep these methodological challenges in mind, and potentially alter the way information is collected and reported to better represent the rate and value of non-wage benefits in the Vermont dairy industry.

4.8 Conclusion

To effectively attract and retain employees, it is important for employers to have some idea of the cost and components of a competitive wage and non-wage benefit package. This study adds to the somewhat limited information available to Vermont dairy producers on this subject. It is also important for the public to have more accurate information regarding the wages and benefits offered to dairy farm employees, and to understand how those wages and benefits compare to similar occupations, and to the Vermont livable wage. Worker advocacy groups direct public attention to cases of

deplorable farmworker housing. Some dairy employees live in poor housing, and those conditions should be exposed. However, many farmworkers do not live in deplorable housing, and in fact many are offered several other non-wage benefits in addition to on-farm housing. More accurate information regarding the wages and non-wage benefits offered to dairy employees can also help correct a potentially negative public perception of dairy employers.

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Chapter 5: Conclusion

5.1 Discussion and Research Contributions

Both articles of this thesis contribute to the literature regarding the relationship between agricultural employers and employees. In addition, the conclusions of this thesis offer important practical implications for the employment practices of Vermont dairy producers.

Our findings add to the literature regarding immigrants and precarious employment. Several scholars have linked precarious employment to precarious migrant status, and have argued that undocumented immigrants feel forced by their precarious migrant status to accept jobs with less favorable working conditions or pay, and are therefore more susceptible to precarious employment conditions (Anderson, 2010; Fudge, Fall 2012; Rodriguez, 2004; Schierup & Jørgensen, 2016). While there is certainly evidence of the existence of precarious employment practices in the Vermont dairy industry, we did not get the impression from dairy employers that Latinx workers always felt forced to accept precarious employment conditions, particularly regarding wages. There are several plausible reasons that Latinx workers might feel as though they can change employers freely and have some power in the labor market, including increased awareness among Latinx workers of their legal rights, wage pressure from dairy employers in New York state, and the increased mobility of dairy workers in Vermont facilitated by the Drivers' Privilege Card (New York Department of Labor, 2016; The Pew Charitable Trusts, August 2015). Overall, our findings complicate the notion that precarious employment can be detected by simply verifying the presence of specific

employment practices, such as the incidence of overtime work. Rather, our findings corroborate the argument of Olsthoorn (2014), who argues for the notion of precarious employment as “threatening insecurity.” Instead of determining the presence of precarious employment by analyzing job characteristics, one can adequately detect the presence of precarious employment only by studying the entire employment relationship and the labor ecosystem surrounding that relationship. That is, even though a job might appear, based on a list of characteristics, to be precarious, the employee may not feel as though the job is precarious (Olsthoorn, 2014).

Regarding specific employment practices, our work adds to the limited information available to Vermont dairy farmers concerning the cost and components of a competitive wage and benefit package. Although we were limited by time and the availability of accurate information, particularly in terms of specific values for each non-wage benefit, it is still helpful for employers to know that while all the dairy employers we interviewed in Addison County provide housing for their Latinx workers, not all producers drive their workers to the grocery store every week, or provide them with farm products free of charge. Additionally, it is also helpful for dairy producers to know how their wages compare to other wages in the area.

Our work has several practical implications for dairy farmers in Vermont. Although the two articles in this thesis approach the issue from different angles, both explore the relationship between employee and employer in the Vermont dairy industry. From both articles, a key theme emerged: the importance of communication between farmers, and between farmers and Latinx workers.

The importance of communication begins when a farmer hires a new Latinx worker. Several farmers I spoke with allow their Latinx workers to recruit friends and family to work on the farm, and spend little time vetting new hires. It is important to demonstrate to workers that even though worker compatibility is considered, previous experience and behavior at work still matter. When workers feel as though their contributions to the farm are important, and the dairy-specific skills they acquire matter, they are more likely to be dedicated to their job and remain on the farm for a longer period. Checking references is a key component of the hiring process in any industry, and dairy farmers can make more of an effort to call previous employers to check in on a potential hire. Checking references for largely unauthorized Latinx workers will not always be easy, and sometimes may be impossible. However, many producers told me that they had been hiring Latinx workers for ten years or more, and several indicated that their Latinx workers had previous experience in the dairy industry, many in Vermont. I also got the sense that producers felt like there were “bad apples,” or bad employees, that benefitted from spotty reference checks and floated from farm to farm wreaking havoc. The movement of these employees might be more limited with a few quick phone calls.

Clear communication is also important in the process of training a new worker. A few farmers expressed that they felt as though their Latinx workers did not know and did not appreciate the value of the benefits the farmer provided. A few producers also spoke of the difficulty of defining specific roles for their Latinx workers, yet also communicating to those workers that sometimes, they would need to be flexible in those roles and complete other tasks. Establishing a fair value for the non-wage benefits

provided for workers, making sure workers understand those non-wage benefits, and creating written job descriptions (in English and Spanish) are strategies that can help producers communicate with new hires.

Finally, clear and consistent communication is important throughout the time a worker remains on the farm. A few farmers we interviewed have monthly meetings with their Latinx workers and a translator. One farmer we interviewed has weekly meetings with their Latinx workers and a translator. Each week, this farmer would talk about work-related issues and updates, but they would also use the meeting to break up any worker tension. As I illustrated in Chapter 3, several employers blamed worker tension for turnover among Latinx workers. Indeed, the producer who had weekly meetings told us that when they skipped a meeting, they noticed that tension between their workers worsened. Regular meetings can also be a forum to teach workers new skills, give them a picture of the business as a whole, and generally create worker investment in the success of the business.

5.2 Limitations and future research

Our research process was limited in both size and scope. Most scholarly work on precarious employment is based on the experiences of employees. To explore precarious work in the Vermont dairy industry, we relied on employers' descriptions of worker involvement in the hiring and termination process, as well as their impressions of why workers moved to different employers. The distinctive form of precarious employment in the Vermont dairy industry should continue to be explored from the point of view of dairy workers in Vermont, rounding out our somewhat one-sided depiction of the

employment relationship. From the perspective of workers, how could employers change their practices to reduce worker insecurity? Do Latinx workers want more training? Are Latinx workers interested in job advancement? Or do they just want to milk cows for a few years, be treated well by employers, make money, send it home to their families, and return to their country of origin? What is the source of worker insecurity? Is it employer actions, housing, being away from home, or the stress of living close to an international border as an unauthorized immigrant? Research regarding the source of worker stress would help employers understand how they might be able to change their employment practices to reduce worker stress.

In terms of the wages and non-wage benefits offered to dairy employees, we encountered some methodological challenges. We were not able to independently verify the information provided to us by producers. We were also not able to verify the quality of the housing offered to employees. In addition, the method we used to indicate the rate at which a specific benefit was offered was imperfect. For example, even if housing were only offered to two out of four U.S. workers, that employer was still recorded as offering the benefit of housing to U.S. workers, even though it wasn't offered to all U.S. workers. Similarly, we did not match employee tenure and farm experience with wage rates and non-wage benefits. An alternative method might have been to ask producers to indicate the value of each benefit offered to each employee. An Iowa study that tried to value benefits offered to agricultural workers asked farmers to choose three "representative" employees, and list the value of each benefit offered to each employee (Edwards et al., March 2012). Profiling specific workers may be more exact, but in the Iowa study,

producers could choose any “representative” workers they wished, potentially introducing bias. In addition, outlining the benefits offered to each worker would have been tedious and time consuming, particularly for the employers who had more than a dozen employees.

Finally, the methods we used to value the benefits offered to employees was also somewhat flawed. For example, some producers were not able to give us an exact number for the pounds of beef offered to each employee. Often, a farmer would only indicate that they slaughtered “about two” down cows per year. Although we found an estimate for the pounds of beef in a culled dairy cow, this number can vary wildly. Future research should keep these methodological challenges in mind, and potentially alter the way information is collected and reported in order to better represent the rate and value of non-wage benefits in the Vermont dairy industry.

The relationship between farmers and worker advocacy groups came up relatively frequently in our conversations with producers. The overall impression we received from farmers is that they felt, at best, wary of worker advocacy groups and of the newly created Milk With Dignity program in Vermont. Several farmworker advocacy groups in the U.S., including Migrant Justice in Vermont, have won important victories (Greenhouse, April 24, 2014; Masterson, October 3, 2017). Future research should seek to understand the relationship between employers and advocacy groups, and explore effective strategies to implement worker rights programs.

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Appendix A: Farmer Survey

Vermont Agricultural Employer Survey
Dept. Community Development & Applied Economics
University of Vermont
Verbal Consent Statement

My name is (*Interviewer Name*). I am a researcher from the University of Vermont Department of Community Development and Applied Economics. The purpose of this research is to assess changes in Vermont dairy farmers' opinions on the availability and quality of farm labor, and to identify what policy changes could improve the dairy labor situation. This research is funded by a USDA Hatch grant.

This survey will ask about your opinions and experiences with domestic labor (US citizens), Latinx labor (Mexico, Central and South America), and other non-Latinx foreign labor, if applicable.

All information collected is confidential and will not be shared with any person or organization outside the UVM research team. Names and other personally identifiable information will be collected for verification only and will not be released. Survey data will be coded during the analysis phase of the study to further protect the confidentiality of participants, and the farm code spreadsheet will be kept in Dr. Baker's locked office. Reporting of data will be in aggregate form and will not identify individual respondents' information. The risk involved in this interview is minimal. Do you have any questions about confidentiality or use of this data?

You will not be compensated for participating in this survey, and your participation is voluntary. You may skip any question you are unsure of or do not feel comfortable answering. You may withdraw at any time. The survey itself will take approximately 30-45 minutes. If you are willing, we would also like to audio record your answers to the survey. We will only audio record the farm code; no other identifying information will be recorded. All audio recordings will be kept in the researcher's locked office. After transcription, all audio recordings will be destroyed. Transcripts will only be identifiable by farm code.

For more information about the survey, or to obtain results, you can contact Dr. Dan Baker at the University of Vermont at 656-0040 or daniel.baker@uvm.edu.
(*Note to interviewer: hand farmer Dr. Baker's business card and IRB information sheet*)

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Contact Dan Baker, University of Vermont – 802-656-0040, daniel.baker@uvm.edu

Do you understand the statement I have just read you? ___ Yes ___ No

Are you willing to be interviewed? ___ Yes ___ No

Is it ok if we audio record this interview? _____ Yes _____ No

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Definition of Terms

Before we begin, I am going to provide you with the definitions for types of agricultural laborers who are commonly employed in Vermont agriculture.

U.S. worker – any U.S. citizen employed in agriculture. This individual can be from Vermont or anywhere in the United States.

Latinx worker – any worker who is a native Spanish or indigenous language speaker, was born in Mexico, Central, or South America, and is not a U.S. citizen.

Other foreign worker – any non-Latinx foreign-born individual working in agriculture. A typical example is a Jamaican national hired for a fruit picking season.

Some questions will ask about all three types of workers. You should provide responses for only those questions which pertain to your farm and which you feel comfortable answering.

Do you have any questions about these definitions?

(Note to interviewer: Only ask about “other foreign workers” during survey administration if employer hires other foreign workers, as reported in Q8)

(Note to interviewer: Record any unsolicited comments about citizenship and/or questions about the definitions of worker groups)

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Survey ID _____

Farm Code: _____

Farm Location (County):

Interviewer: _____

Date: _____

Person Interviewed: ___ Owner
 ___ Manager

Other: _____

I. Farm Data

The first section of the survey will collect basic information about your farm's characteristics.

1. Total herd size _____

(Note to interviewer: please specify that "total herd" includes milking, heifers, and dry cows, NOT calves; many farmers will provide a number for young stock, please note when applicable)

2. Total cows currently milking _____

(Note to interviewer: please specify that "total cows currently milking" does not include dry cows)

3. What was your total herd size five years ago?

(Note to interviewer: please specify that "total herd" includes milking, heifers, and dry cows, NOT calves; many farmers will provide a number for young stock, please note when applicable)

4. Is your farm certified organic? ___ Yes ___ No ___ In 3-year transition

5. Milking system used:

___ Parlor

___ Non-Parlor

___ Other (Specify): _____

I. Employment Data

The next section deals with employment on your farm – specifically how many people you employ, your hiring practices, and specific challenges associated with employment.

- 6. Do you currently hire full time employees? ___ Yes ___ No ___ Don't Know
- 7. Do you currently hire part-time employees? ___ Yes ___ No ___ Don't Know
- 8. Please approximate how many workers are currently employed on your farm
(*INTERVIEWER: RECORD CURRENT EMPLOYEES BY MALE/FEMALE*).

| | U.S. Workers (non-family) | | Family (paid and non-paid) | | Latinx Workers | | Other Foreign Workers | | Don't Know |
|-------------------------------|---------------------------|---|----------------------------|---|----------------|---|-----------------------|---|------------|
| | M | F | M | F | M | F | M | F | |
| Number of Full-Time Employees | | | | | | | | | |
| Number of Part-Time Employees | | | | | | | | | |

(Note to interviewer: please ask specifically about part-time family workers; many farmers will forget to include family members that have other full-time jobs, but that also do, for example, the paperwork for the dairy operation)

- 9. Please approximate how many workers you employed five years ago.

| | U.S. Workers (non-family) | | Family (paid and non-paid) | | Latinx Workers | | Other Foreign Workers | | Don't Know |
|-------------------------------|---------------------------|---|----------------------------|---|----------------|---|-----------------------|---|------------|
| | M | F | M | F | M | F | M | F | |
| Number of Full-Time Employees | | | | | | | | | |
| Number of Part-Time Employees | | | | | | | | | |

10. How many hours per week do your full-time employees work on average?

| | U.S. Workers | Latinx Workers | Other Foreign Workers | Don't Know |
|------------|-----------------|-------------------|-----------------------------|---------------|
| # hrs/week | | | | |

11. What are the job responsibilities of each of the full-time and part-time workers you employ, including family? If they regularly perform more than one job, which is their primary job responsibility?

(Note to interviewer: check all responsibilities indicated for each worker, and indicate their primary responsibility with a "1"; please include all workers, even if you have to go beyond the provided columns)

(Note to interviewer: please ask specifically whether an employee is responsible for supervising other employees; farmers will often forget to include this)

U.S. Workers:
(including family; please indicate family when applicable)

| Worker # | 1 | 2 | 3 | 4 | 5 |
|--|---|---|---|---|---|
| Milking | | | | | |
| Barn cleaning/scraping | | | | | |
| Feeding calves | | | | | |
| Feeding cows | | | | | |
| Young stock and heifer care | | | | | |
| Field work (tractor) | | | | | |
| Seasonal crop work | | | | | |
| Employee supervision | | | | | |
| Herdsman | | | | | |
| Assistant Herdsman | | | | | |
| Mechanic | | | | | |
| Maintenance | | | | | |
| General labor (sometimes called "outside") | | | | | |
| Paperwork | | | | | |
| Other: | | | | | |

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Latinx Workers:
(please note if worker is neither U.S. nor Latinx)

| Worker # | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--|---|---|---|---|---|---|---|
| Milking | | | | | | | |
| Barn cleaning/scraping | | | | | | | |
| Feeding calves | | | | | | | |
| Feeding cows | | | | | | | |
| Young stock and heifer care | | | | | | | |
| Field work (tractor) | | | | | | | |
| Seasonal crop work | | | | | | | |
| Employee supervision | | | | | | | |
| Herdsman | | | | | | | |
| Assistant Herdsman | | | | | | | |
| Mechanic | | | | | | | |
| Maintenance | | | | | | | |
| General labor (sometimes called "outside") | | | | | | | |
| Other: | | | | | | | |
| Other: | | | | | | | |

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12. How would you describe the domestic labor supply for the following groups of Vermont agricultural workers?

| | Surplus | Sufficient | Shortage | Don't Know |
|-----------------------|---------|------------|----------|------------|
| U.S. Workers | | | | |
| Latinx Workers | | | | |
| Other Foreign Workers | | | | |

(Note to interviewer: please include in the margins if participant qualifies their answer; i.e., "shortage of high quality U.S. workers")

12a. If you perceive a labor shortage, have there been any consequences to being short of help? *(Interviewer probes: cow health, herd health, production, efficiency, worker morale)*

II. Labor Management

13. How do you train your workers? *(Interviewer probes: orientation meeting, designated trainer, review pay stubs/benefits with your workers)*

14. Does the farm have regular meetings with the majority of employees present?

- Yes
- No

14a. If so, how often?

- Once every few months
- Monthly
- Weekly
- Other: _____

15. How long would an employee need to work on your farm before you would consider them worth your investment (of time, money, etc.) in training?

| | | | | |
|-------------------------|--------------|----------------|-----------------------|------------|
| | U.S. Workers | Latinx Workers | Other Foreign Workers | Don't Know |
| Length of Time (Months) | | | | |

16. Over the past 5 years, please estimate the length of time a typical worker has remained employed on your farm.

| | | |
|-----------------------|-------|--------|
| | Years | Months |
| U.S. Workers | | |
| Latinx Workers | | |
| Other Foreign Workers | | |

___ Don't Know

(Note to interviewer: if farmer has trouble providing an estimate, they can provide a range of length of tenure, or they can indicate how long each of their workers has been employed on their farm; regardless, write down all detail farmer provides)

17. What are the 3 greatest challenges related to retaining workers you have already hired? Rank by importance after responses are given.

17a. U.S. Workers

| Rank | Challenge |
|------|-----------|
| | |
| | |
| | |

___ Don't Know

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17b. Latinx Workers

| Rank | Challenge |
|------|-----------|
| | |
| | |
| | |

___ Don't Know

17c. Other Foreign Workers

| Rank | Challenge |
|------|-----------|
| | |
| | |
| | |

___ Don't Know

18. Is there anything that you feel would help you retain workers?

19. Have you ever observed tension/conflicts among your workers?

___ Yes ___ No ___ Don't Know

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| | Yes | No |
|-------------------------------|-----|----|
| U.S. - U.S. | | |
| U.S. - Latinx | | |
| U.S. - Other Foreign | | |
| Latinx – Latinx | | |
| Latinx - Other Foreign | | |
| Other Foreign - Other Foreign | | |

(Note to interviewer – please write down any notes or anecdotes the farmer has about tension/conflicts among workers)

20. How well do you feel you understand the proper tax and identification documents required to employ workers?

| | U.S. Workers | Latinx Workers | Other Foreign Workers |
|-----------------------------|--------------|----------------|-----------------------|
| Fully understand | | | |
| Somewhat Understand | | | |
| Don't Understand Adequately | | | |
| Don't Know | | | |

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III. Perceptions of Employees

This section pertains primarily to your perceptions of the workers you currently employ and/or workers you have previously employed.

21. Please describe your typical experience with your employees. Would you describe your experiences with (INSERT CATEGORY FROM BELOW) as being:

| | U.S. Workers | Latinx Workers | Other Foreign Workers |
|-----------|--------------|----------------|-----------------------|
| Very Good | | | |
| Good | | | |
| Moderate | | | |
| Poor | | | |
| Very Poor | | | |

___ Don't Know

21a. Please elaborate on your experience (*INTERVIEWER - CLEARLY DISTINGUISH WHICH GROUP OR CHARACTERISTIC IS BEING DISCUSSED*):

22. How would you describe the work ethic of the employees who are employed or have been employed previously on your farm?

| | U.S. Workers | Latinx Workers | Other Foreign Workers |
|-----------|--------------|----------------|-----------------------|
| Excellent | | | |
| Good | | | |
| Moderate | | | |
| Poor | | | |

___ Don't Know

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23. I will read you a list of common challenges or problems that may be faced when employing workers on your farm. Please indicate any problems you have experienced on a scale from 0 to 5, where 5 is the most serious, and 0 is never experienced.

| | U.S. Workers | Latinx Workers | Other Foreign Workers |
|--|--------------|----------------|-----------------------|
| Drinking/Drug use | | | |
| Late to work | | | |
| Not showing up to work | | | |
| Lack of skill (unable to complete tasks) | | | |
| Unwilling to complete tasks | | | |
| Encounters with law enforcement | | | |
| Communication Issues | | | |
| Other: | | | |
| Other: | | | |

___ Don't Know

23A. - Additional Comments (*INTERVIEWER: RECORD ANY ADDITIONAL COMMENTS ON THE WORK ETHIC OF EMPLOYEES IN ANY OF THE GROUPS*):

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IV. Wage and Compensation Data

24. The purpose of the next section is to collect information about wages and other benefits you provide your workers. I will first ask you about hourly wages or monthly salary for your employees. Please report wages and salary before taxes.

| | Part-time workers (please indicate if U.S. or Latinx) | U.S. Workers | Latinx Workers | Other Foreign Workers |
|--------------------------------|---|--------------|----------------|--------------------------|
| Average Hourly Wage (\$/hr) | | | | |
| Highest Hourly Wage (\$/hr) | | | | |
| Lowest Hourly Wage (\$/hr) | | | | |

| | U.S. Workers | | Latinx Workers | | Other Foreign Workers | |
|--------------------------------------|------------------|----------|------------------|----------|--------------------------|----------|
| Pay Period (i.e. monthly, yearly) | | | | | | |
| | \$/pay period | hrs/week | \$/pay period | hrs/week | \$/pay period | hrs/week |
| Average Salary | | | | | | |
| Highest Salary | | | | | | |
| Lowest Salary | | | | | | |

24a. Do workers have the opportunity for a wage or salary increase after a certain length of employment?

_____ Yes _____ No _____ Don't Know

24b. If yes, please explain.

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25. The following is a list of other benefits which you may provide over and above the workers' wages or salary. I will ask you which benefits you offer your full-time workers, whether you as the employer pay the cost, the employee pays the cost, or the cost is shared, and an estimated value for each benefit. First, I will ask you about benefits you may offer your U.S. workers.

| Non-Wage Benefits for U.S. Workers | Employer pays | Employee pays | Cost is shared | Estimated value (please indicate if monthly or annual) | Does not offer |
|---|---------------|---------------|----------------|--|----------------|
| Housing (<i>ask for type & division of workers</i>) | | | | House #1: Type of housing: # workers: value per month: House #2: Type of housing: # workers: value per month: | |
| House cleaning service (<i>if not, does employer do housing inspection? How often?</i>) | | | | | |
| Utilities (<i>heat, electricity, water, landline</i>) | | | | | |
| Internet | | | | | |
| Satellite TV | | | | | |

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| | | | | | |
|---|--|--|--|--|--|
| Use of farm vehicle (<i>non-work use</i>) | | | | Approx. miles driven per day: # days per week: | |
| Bonuses (<i>please indicate type: production, milk quality, yearly, etc.</i>) | | | | | |
| Health Insurance | | | | | |
| Retirement plan | | | | | |
| Transportation | | | | # hours per trip for driver: Approx. miles driven per trip: Frequency: | |
| Farm products (<i>milk, meat, etc.</i>) | | | | Product #1: Amount per time period (i.e. gallons per week): | |
| Uniforms/work clothes/work boots | | | | | |
| Garden space | | | | | |
| Sick time (<i>note if paid or unpaid</i>) | | | | # of days: | |
| Vacation time (<i>note if paid or unpaid</i>) | | | | # of days: | |

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| | | | | | |
|---------------------------|--|--|--|--|--|
| Other (<i>specify</i>): | | | | | |
| Other (<i>specify</i>): | | | | | |

26. Next, I will ask you about benefits you may offer your full-time Latinx workers.

| Non-Wage Benefits for Latinx Workers | Employer pays | Employee pays | Cost is shared | Estimated value (please indicate if monthly or annual) | Does not offer |
|---|---------------|---------------|----------------|--|----------------|
| Housing (<i>ask for type and division of workers</i>) | | | | House #1: Type of housing: # workers: value per month: House #2: Type of housing: # workers: value per month: | |
| House cleaning service (<i>if not, does employer do housing inspection? How often?</i>) | | | | | |
| Utilities (<i>heat, electricity, water, landline</i>) | | | | | |
| Internet | | | | | |

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| | | | | | |
|---|--|--|--|--|--|
| Satellite TV | | | | | |
| Use of farm vehicle | | | | Approx. miles driven per day: # days per week: | |
| Bonuses (<i>please indicate type: production, milk quality, yearly, etc.</i>) | | | | | |
| Health Insurance | | | | | |
| Retirement plan | | | | | |
| Transportation | | | | # hours per trip for driver: Approx. miles driven per trip: Frequency: | |
| Farm products (<i>milk, meat, etc.</i>) | | | | Product #1: Amount per time period (i.e. gallons per week): | |
| Uniforms/work clothes/work boots | | | | | |
| Garden space | | | | | |
| Sick time (<i>note if paid or unpaid</i>) | | | | # of days: | |
| Vacation time (<i>note if paid or unpaid</i>) | | | | # of days: | |

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| | | | | | |
|------------------|--|--|--|--|--|
| Other (specify): | | | | | |
| Other (specify): | | | | | |

VI. Latinx Labor Management

27. Do you have any concerns about hiring Latinx or other foreign workers? (Mark all that apply) *(Note to interviewer: please ask this question whether farmer hires Latinx workers or not)*

- Fear of legal repercussions
- Unsure of the proper paperwork/requirements needed
 - Language concerns
 - Don't know how to contact/locate them
 - Local labor has been sufficient to meet my needs
 - Concerns about supporting local economy
 - Cost of hiring foreign labor
 - Unable to provide worker housing
- Other (specify): _____
- Other (specify): _____
- Don't Know

27a. Among the concerns you just identified, is there one that you would say is the most important concern you have?

(INTERVIEWER: COMPLETE THE NEXT PART OF THIS SECTION ONLY IF THE FARMER CURRENTLY EMPLOYS LATINX WORKERS)

28. How would you describe the language barrier on your farm?

- Not a problem
- A moderate problem
- A significant problem
- Don't Know

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29. Please rank the Spanish language ability for all U.S. workers in management positions on your farm, including yourself. We will use a scale of 1 to 10 where 1 means the person doesn't speak any Spanish and a 10 means they are fluent in Spanish. (Interviewer - include job title/position for all responses)

| | Manager (include job title/position) | Rank |
|----|--------------------------------------|------|
| 1 | (interviewee) | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |
| 6 | | |
| 7 | | |
| 8 | | |
| 9 | | |
| 10 | | |

___ Don't Know

30. How many of your native Spanish speaking workers also speak English?
(Interviewer: record the number of workers included in each category below)

Fluent in English _____

Conversational English _____

Some basic English _____

No English _____

Don't Know _____

31. How do you typically communicate with non-English speaking workers on your farm? *(check all that apply)*

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- Bilingual worker
- Bilingual manager
- Bilingual owner
- Professional translator
- Spanish language signs
- Hand signals
- Other:
- Don't know

32. If you have more formal employment meetings, who acts as a translator for those meetings?

- Bilingual worker
- Bilingual manager
- Bilingual owner
- Family member (paid or non-paid)
 - Outside translator
 - Other:
 - None of the above

33. Next, I will ask you a few questions about your Latinx workers off-farm.

Do any of your Latinx workers have Vermont Driving Privilege Cards?

- Yes No Don't Know

34. Are you concerned about taking your Latinx workers off the farm for fear of encountering law enforcement officials?

- Yes No Don't know

35. Have your Latinx workers expressed concern about leaving the farm for fear of encountering law enforcement officials?

- Yes No Don't know

36. Which of the following do you feel are the most active about immigration enforcement?

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- Border Patrol (Customs and Border Protection)
- ICE (Immigration and Customs Enforcement)
- State police officers
- Sheriff or county police
- Local or town police officers
- Local residents
- Other employees
- Other: _____
- Don't Know

36a. Additional Comments:

37. Over the past year, have you noticed any change in how your workers travel off the farm for:

37a. Food or other shopping? Yes No Don't know

37b. Health clinic visits? Yes No Don't know

37c. Recreation? Yes No Don't know

Do you have any additional comments about this issue or any of these questions?

Thank you very much for your participation in this survey. Do you have any other questions or comments you would like to add?

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Appendix B: Precarious Employment Codes

- Changes in the Latinx workforce
 - Change in availability of Latinx labor
 - Change in quality of Latinx labor
 - Difficult for Latinx workers to cross the border
 - Good work ethic of Latinx workers
 - Latinx workers asking for days off/raises
 - Latinxs stay in the U.S. longer
 - Producers more used to Latinx workers
- Context
 - Competing with other businesses for workers
 - Farmers can't just farm anymore
 - Pressures of the dairy industry
 - Pressures of industry and growth
 - Pressures of industry and worker management
- Feel dependent on Latinx labor
 - Dependency on Latinx labor
 - Poor work ethic of U.S. workers
 - Relationship between opioid/drug crisis and shortage
 - Shortage of high quality U.S. workers
 - Shortage of U.S. workers that want to farm
- Recruitment practices
 - Bad apples
 - Dairy industry demands different than other industries
 - Justification of network recruitment
 - Latinx workers going home and coming back
 - My guys recruit
 - Producers checking references
 - Producers hiring workers out of desperation
 - Producers stealing workers
 - Some producers see disadvantages to network recruitment
 - Success of network recruitment = farm desired
- Job training
 - Latinx opportunities for more responsibility
 - Latinx workers are not good at/don't like to operate equipment
 - Latinx workers don't want to be the boss/don't want to advance
 - Latinxs less opportunities for professional development
 - Latinxs more opportunities for professional development
 - Latinxs train each other
 - Managing Latinx workers no different than U.S. workers
- Communication with Latinx workers
 - Challenge of communicating wages and benefits

- Communication challenges with Latinx workers
 - Communication strategies
- Retaining Latinx workers
 - Conflict between Latinx workers
 - Current Latinx workers decide who stays
 - Latinx workers leave for reasons not related to job
 - Latinx workers not providing notice
 - Latinxs will move for higher wages
 - Long-term positions and floating positions
 - Turnover because of problems between Latinx workers
- The Future
 - Future of dairy workforce is not Latinxs
 - Latinxs should be left alone by immigration to work
 - Work visas are not the answer
 - Work visas would help

Appendix C: Methods for Estimating the Value of Non-Wage Benefits

Housing

Especially if multiple U.S. employees received housing, an employer often owned several dwellings for U.S. and Latinx employees. To provide an estimated monthly value for each dwelling, producers were asked to imagine, given their location and knowledge of the local rental market, that they were renting each dwelling. The estimated monthly value of each dwelling was multiplied by twelve, and the total annual value was divided by the number of workers living in each dwelling. The estimated annual values for each worker were then averaged to obtain an average annual value for housing per worker (separated by U.S. and Latinx workers). For example, if one dwelling is worth \$1000 per month, and there are three Latinx workers living there, then the average annual value for each of those three workers would be \$4,000. If that same producer offered another dwelling for four Latinx workers, worth \$1100 per month, then the average annual value for each of those four workers would be \$3,300. The average annual value for all Latinx workers would be $[(\$4,000 * 3) + (\$3,300 * 4)]/7$, or \$3,600.

House Cleaning Service

On the survey, there is a space to indicate if an employer provides a house cleaning service for workers living in farm housing. It quickly became clear that very few producers provided a house cleaning service, so surveyors instead began asking if the employer did a regular housing inspection to make sure employees were taking care of their housing. Information gathered from this line in the survey was primarily qualitative.

Utilities, Internet, Satellite TV

Utilities includes heat or A/C, electricity, and water. The estimated annual value per worker for utilities, internet, and satellite TV was calculated using the same procedure as the procedure used to calculate the estimated annual value per worker for housing. In one case, a producer did not have an estimated value for the fuel used by employees. Instead, they offered an estimated amount of fuel oil consumed annually by employee housing. This number was multiplied by the February 2018 price for fuel oil (\$2.88 per gallon) to obtain an estimated annual value.

Bonus

The reason for a bonus varied, but usually employers offered an annual or “Christmas” bonus. Some employers offered a milk quality bonus, which is typically based on the somatic cell count of milk, a primary indicator of milk quality. The value of a milk quality bonus was not given an estimated value if the employer indicated that employees (usually Latinx employees) had not been achieving the required level of milk quality.

Farm Products

Many producers offered their employees milk or beef from the farm, and in some cases, cheese and butter at cost from the co-op that purchases the producer’s milk. It was often very difficult for a producer to estimate a monthly or annual value for the farm products consumed by their employees. For example, we did not estimate the value to employees of allowing them to purchase cheese and butter at cost from the co-op that purchases the producer’s milk. We did, however, attempt to value some of the more common farm products offered to employees. One of the more frequently offered farm products is beef, primarily in the form of ground beef. Producers typically reported

estimated pounds per year of beef consumed by employees. The annual value for employee was calculated using \$5.00/lb as a typical price for ground beef in Vermont. This value came from observations conducted in Price Chopper, Shaw's, and Hannaford in South Burlington, Vermont on March 16th, 2018. Sometimes, participants only supplied information regarding the number of cows per year processed into beef for employees. In this case, to estimate the annual value per worker, I estimated that 470 lbs of meat comes from one culled dairy cow (Canadian Meat Council, November 2013).

Some producers also allowed employees to consume milk produced on the farm. Sometimes, an employer did not offer any estimate for how much milk an employee took home. USDA statistics indicate that the average person drinks 154 pounds of milk per year (Cessna & Law, 2016). The average gallon of milk weighs about 8.6 pounds (Yale, November 18 2011), so the average person drinks 17.9 gallons of milk per year. The annual value for milk consumed by each employee was calculated using the average price for a gallon of milk in Vermont, \$3.99. This value came from observations conducted in Price Chopper, Shaw's, and Hannaford in South Burlington on March 16th, 2018.

A few producers in Addison County offered pork to their employees. One producer estimated that two pigs were provided for all employees annually. The annual value to employees was calculated using an average value of \$3.00/lb for various cuts of pork in Vermont. This value came from observations conducted in Price Chopper, Shaw's, and Hannaford in South Burlington on March 16th, 2018. Each pig averages 144 pounds of retail cuts (Food Safety Division & Meat Inspection Services).

Use of Farm Vehicle for Non-Work Activities

In the case of U.S. employees, if an employee is offered the “use of farm vehicle for non-work use,” that usually means that the employer either bought the employee’s vehicle from them or provides them with a farm vehicle, pays for all vehicle expenses, and allows the employee to use the vehicle at will. In most of these instances, the producer provided an estimated value for the benefit.

In the case of Latinx employees, “use of farm vehicle for non-work use” typically means that Latinx employees are granted the use of a farm vehicle to drive back and forth from their housing to the milking parlor, and in rare cases, to use for travel off the farm. Most producers described the vehicle as a “junk” car, and said that Latinx workers were only permitted to drive the car to and from work. Employers were asked to estimate the miles per trip, and the number of trips per week in the farm vehicle. The annual number of miles was multiplied by the 2017 federal reimbursement rate of \$0.535, and then divided by the number of employees using the vehicle. The federal reimbursement rate was also used to estimate the value of the use of a farm vehicle for non-work use in another publication that tried to estimate the value of non-wage benefits offered to farmworkers across the U.S. (Edwards et al., March 2012).

Transportation

“Transportation” was one of the most challenging benefits to estimate. This benefit was almost exclusively offered to Latinx workers, and usually consisted of a weekly or biweekly trip to the grocery store for food, and often additional stops for workers to wire money home to their families, pick something up at a Wal-mart, or purchase takeout. A survey conducted by the Cornell Farmworker Program in 2013 estimated the value of the transportation benefit for Latinx workers by valuing the

driver's time (Hamilton & Dudley, November 2013). In our survey, producers were asked to estimate the number of hours per trip, and the number of trips per week. The hours spent by the producer each year was multiplied by a rate of \$20 per hour, and divided by the number of workers included in each trip. We did not encounter a producer that charged employees for transportation, but \$20 per hour seemed like a fair evaluation of the time the producer spent transporting workers.