

March 2015

EB 2015-02

Labor Issues and Employment Practices on New York Apple Farms

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This study is a collaborative effort between Cornell Cooperative Extension and the New York State Horticultural Society. This research is part of a larger project titled “Examining current labor options and the impact of labor policy reform on specialty crop markets” that is funded by the USDA-SCRI Block Grant Program and the NYS Department of Agriculture & Markets under grant #C200784.

The authors thank the following individuals for their review of this manuscript and their helpful comments: Nelson Bills, Professor Emeritus, and Marc Smith, Senior Extension Associate both in the Charles H. Dyson School of Applied Economics and Management at Cornell University.

The authors express their sincere appreciation to Sue Snyder for her time and effort spent formatting, editing and proofreading multiple versions of this publication.

The authors extend a sincere thank you to the farm employers who completed and submitted the survey questionnaire providing the valuable information for this report.

Additional copies of this report may be obtained by going to the following Cornell link: <http://www.dyson.cornell.edu/outreach/index.php> or by contacting Sue Snyder at sms237@cornell.edu or at Cornell University, 301 Warren Hall, Ithaca, NY 14853.

TABLE OF CONTENTS

Abstract	7
Introduction	8
Survey Methodology	9
Survey Results	10
Section A – Farm Characteristics	10
Section B – Job Requirements on New York Apple Farms.....	17
Section C – Wage Rates and Other Compensation.....	22
Section D – Regional Differences.....	27
Section E – Labor Availability	30
Section F – Labor Challenges Facing Apple Growers.....	35
Section G – Grower Attitudes Toward Labor Policies	37
Section H – Industry Issues to be Addressed.....	39
Section I – Research.....	40
Discussion & Implications	42
Summary	43
References	44
Appendix I: Survey Questionnaire	45

LIST OF TABLES

Table 1: New York State Apply Industry in Transition.....	8
Table 2: Wage Rates for Apple Picking	24
Table 3: Estimated Value of Crop Losses 2013.....	32
Table 4: Business impact from labor pressures	36
Table 5: Top three apple industry issues.....	39
Table 6: Apple growers' identification of research needs	41

LIST OF FIGURES

Figure 1:	Number of bearing apple acres per farm.....	11
Figure 2:	Three year average annual apple production per farm in bushels	11
Figure 3:	Average total workers employed per farm.....	12
Figure 4:	Average total workers by bearing apple acres	12
Figure 5:	Full time & part-time workers by bearing apple acres	13
Figure 6:	Average number of H-2A workers and non H-2A seasonal workers by bearing apple acres.....	13
Figure 7:	Apple farms hiring H-2A workers	14
Figure 8:	Home country to H-2A workers	14
Figure 9:	Length of seasonal employment	15
Figure 10:	Using a crew leader.....	15
Figure 11:	Plans for Marketing.....	16
Figure 12:	Worker experience requirements	17
Figure 13:	Months of experience required by types of work	18
Figure 14:	Percent of farms requiring workers to speak and understand English.....	18
Figure 15:	Picking requirement: daily minimum bushels	19
Figure 16:	Percentage of bruising allowed.....	19
Figure 17:	Farms that have a weight lifting requirement for hired workers	20
Figure 18:	Farms that have weight lifting requirements by bearing apple acres and average number of pounds required	20
Figure 19:	Farms requiring workers to climb and descend a ladder with a full picking bag	21
Figure 20:	Farms that have specific work experience requirements by types of work	21
Figure 21:	How apple pickers get paid.....	23
Figure 22:	Travel & meal allowance to travel to the job at the start of the season	25
Figure 23:	Travel & meal allowance to return home at the end of the season	25
Figure 24:	Bonus paid at season end?	26
Figure 25:	Percent of growers providing health insurance for employees.....	26
Figure 26:	Location of farms surveyed by regions.....	27
Figure 27:	Average bearing acres by region.....	28
Figure 28:	Percentage of farms by acres & region	28
Figure 29:	Market intention by region.....	29
Figure 30:	Farms that experienced worker shortages in 2013.....	31
Figure 31:	Percent of Farms, short of workers by region.....	31
Figure 32:	Average number of additional workers that would have been hired (if available) by farm size.....	32
Figure 33:	Number of weeks additional workers would have been hired (if available) by farm size.....	33
Figure 34:	Employees needed 3 years from now	33
Figure 35:	Number of additional employees needed per farm	34
Figure 36:	Negative impact of proposed changes in NY State law.....	37
Figure 37:	Negative impact of relevant labor policies	38
Figure 38:	Is the apple industry spending enough money on research?.....	40

Abstract

The primary purpose of this study is to gather information from commercial apple farm employers to benchmark employment practices and document labor issues related to the 2013 growing season. Further, the study identifies management responses to labor challenges that apple growers currently face. In January 2014, 580 surveys were mailed to New York apple growers. A total of 95 usable surveys were returned and summarized. Nineteen percent of survey participants had more than 250 acres bearing acres. Slightly less than half of those surveyed (48%) employed seasonal H-2A workers and 24% reported using a crew leader. Specific job requirements for seasonal workers include speaking English, avoiding bruising, lifting a minimum amount of weight, and climbing and descending a ladder with a picking bag. Survey participants also reported requiring experience for specific tasks such as pruning, thinning, sprayer operation, tractor and driving. Apple growers reported two types of wage payment methods; hourly rates and piece rates. Hourly rates average between \$10.80 and \$11.40 per hour for fresh apples. The average piece rate for fresh apples ranged from \$18.30 per bin to \$28.30 per bin depending upon the difficulty of picking. Thirty six percent of those surveyed reported they were short of workers in 2013 resulting in both late-harvested fruit and un-harvested apples. Estimated crop losses due to labor shortages for survey participants in 2013 totaled over \$7 million. When asked how their business has changed as a result of labor pressures, the top three business changes growers implemented as a result of current labor pressures were the adoption of labor efficient planting systems, reducing production acreage and greater reliance on the H-2A Program.

Introduction

A longstanding concern for U.S. agriculture is the availability and adequacy of on-farm labor. In apple production, labor is the single largest production expense. (White et al., 2009). This study examines apple farm employment practices. The survey has two objectives. First, to inform state and federal policy decisions as they relate to farm employment. A second objective of the survey is to provide data that will allow apple farmers to compare their employment practices with others in the industry.

When looking at apple farm employment practices, it's important to understand how apple farms in New York have changed over time. The data in Table 1, taken from the New York State Agricultural Statistics Service, illustrates the dramatic changes that have taken place in New York's apple industry between 1990 and 2011. New, high density planting systems have almost doubled the number of trees while the number of farms and acres have declined.

In addition to concentrating production, high density planting has potential for significant labor savings. Uniform, high density plantings allow orchard work to be performed with specialized pruning and harvest assist equipment which increases labor efficiency and productivity. (Miranda Sazo et al., 2010).

Table 1: New York State Apple Industry in Transition

New York State Apples				
Year	Farms	Acres	Trees	Trees per acre
1990	801	56,101	5,484,346	98
2001	695	44,563	7,544,740	169
2006	697	42,360	9,464,203	223
2011	654	41,709	11,561,486	277
21 year change	-18%	-26%	+111%	+283%

Source: New York State Agricultural Statistics Service

Survey Methodology

This survey was designed to ask apple growers about key labor issues important to New York fruit farms. A three page mail survey was developed to gather information from commercial apple growers related to acreage, farm location, production, seasonal worker characteristics, worker availability, job requirements, wage rates, and labor policy issues. The survey was mailed on January 12, 2014. Respondents were drawn from the list of growers paying into the New York State Apple Marketing Order (which is maintained by the New York State Department of Agriculture and Markets). The farms on the list consist mainly of commercial apple growers large enough that they tend to employ hired workers. Apple production is the primary business of those surveyed yet it is likely that many have minor acreage of other fruit crops. A total of 580 surveys were mailed. A copy of the survey form can be found in the back of this publication. A total of 98 surveys were returned between February 1 and May 31, 2014; and 95 were usable. The survey results reported here are based on a total of 95 completed, usable surveys. Among the usable surveys, there were occasional instances of non-response for some questions. The charts in this publication include the corresponding response rate for individual questions. Survey participants were asked to base their responses on the 2013 production year.

It is important to note that survey respondents do not represent a random sample of New York apple growers. We are summarizing the results of surveys from 95 growers who chose to respond to the survey. Many of those responding were apple growers who hire H-2A workers.

Survey Results

A. Farm Characteristics

The 95 farms surveyed vary in size and productivity reflecting the diversity of the apple industry in New York State. Nineteen percent of those surveyed had less than 20 acres in production. At the high end of the range, 19% of survey participants had greater than 250 acres in production (Figure 1). In terms of volume, 21% of the farms surveyed produce less than 10,000 bushels and 37% produce greater than 100,000 bushels (Figure 2).

Figure 3 describes the total number of workers employed per farm and Figure 4 shows the average number of workers on farms of various sizes. Figure 5 separates full and part time workers by farm size. The largest farms, those over 250 acres, had an average of nearly 16.5 full time workers and over 7 part time workers per farm.

Figures 6, 7 and 8 relate to the employment of H-2A workers. H-2A is a federal program, which allows foreign-born seasonal farmworkers to be employed on U.S. farms up to 10 months per year. Growers make applications for H-2A workers annually through the New York State Department of Labor.

Figure 8 indicates the home country of H-2A workers on farms surveyed. Among farms hiring H-2A workers, 61% hired H-2A workers from Jamaica, 33% hired H-2A workers from Mexico and Central America, and 6% hired H-2A workers from other countries. Fifty-two percent of those surveyed do not hire any H-2A workers.

Figure 9 shows that 28% of growers surveyed employed seasonal workers only for harvest. The majority however, employed workers during the growing season to perform hand operations such as pruning, tying, etc.

Employment of a crew leader is a common practice on some farms (Figure 10). Twenty-six percent of farms in the survey reported using a crew leader and 74% were not using a crew leader.

Figure 11 indicates how participating farms marketed their apples. Twenty-six percent grew fruit for the fresh market only (retail bulk or bag sales). The majority however, reported more than one type of market. Thirty-six percent reported producing for process, fresh and fresh slice markets, and another 35% reported producing apples for both process and fresh markets.

Process markets include apples for applesauce and bakery slices or dices. It may also include apples for cider and juice. Fresh slice markets include apples that require apples firm enough to slice and often with skin color requirements. This market requires monitoring apple firmness and color at harvest time and these apples are often harvested before fresh apples for retail bulk or bag sales. Fresh apples are apples picked for retail bulk or bag sales. Each type of market demands very specific varieties and standards. Each apple variety has a harvest window of approximately five days.

Figure 1: Number of bearing apple acres per farm

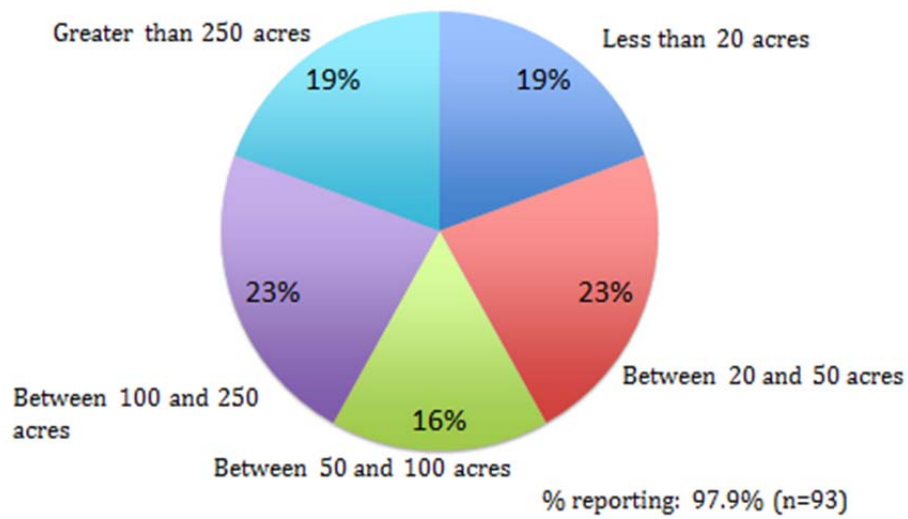


Figure 2: Three year average annual apple production per farm in bushels

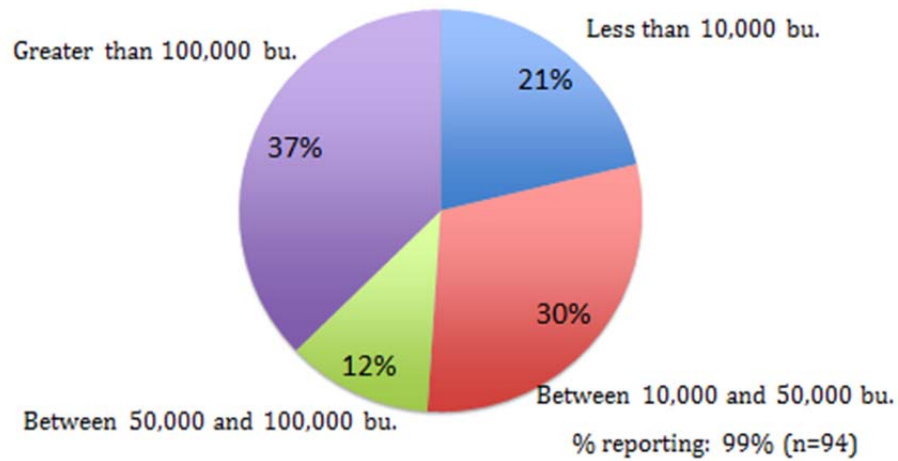


Figure 3: Average total workers employed per farm
Average number of workers employed in 2013: 43

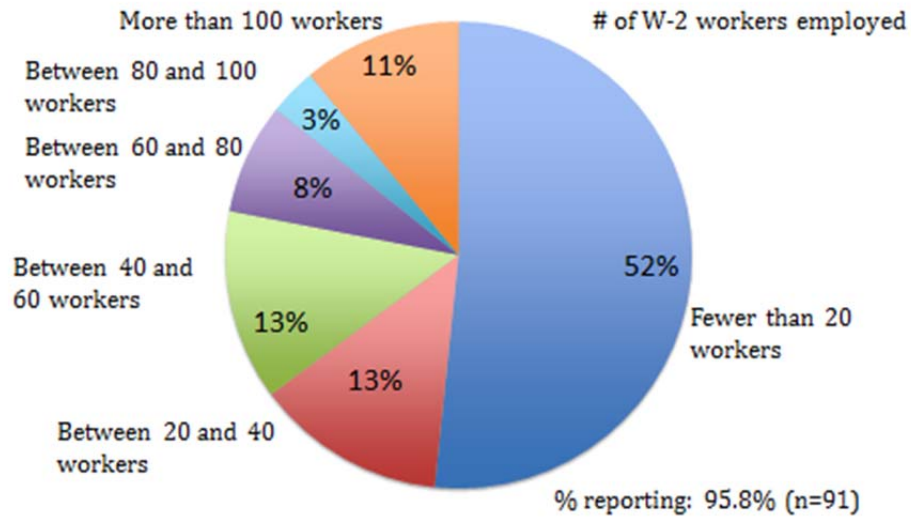


Figure 4: Average total workers by bearing apple acres (n=89)

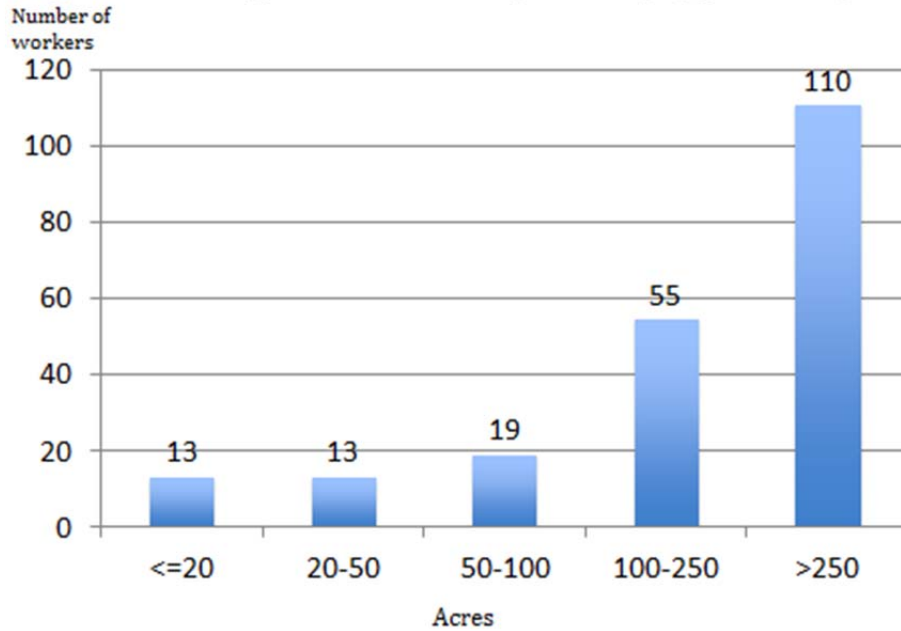


Figure 5: Full time & part-time workers by bearing apple acres (year round)

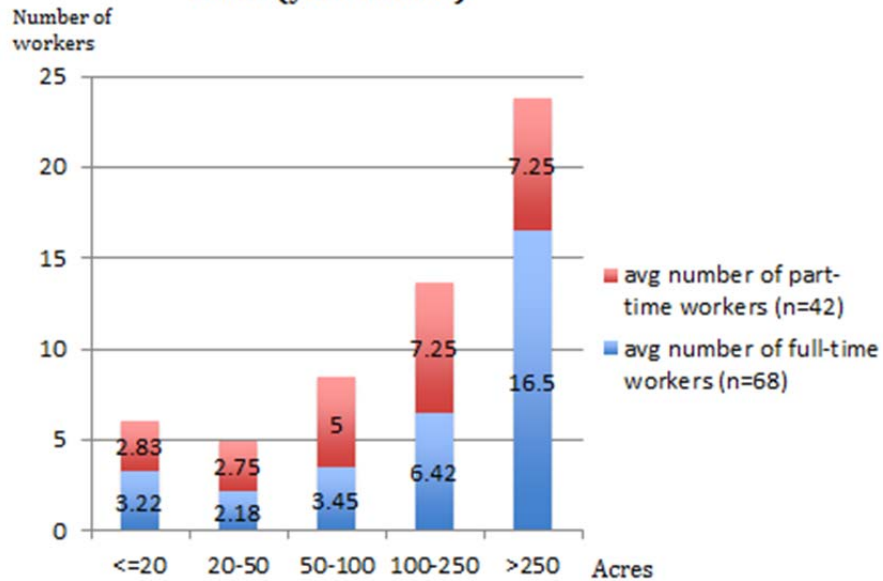


Figure 6: Average number of H-2A workers and non-H-2A seasonal workers by bearing apple acres

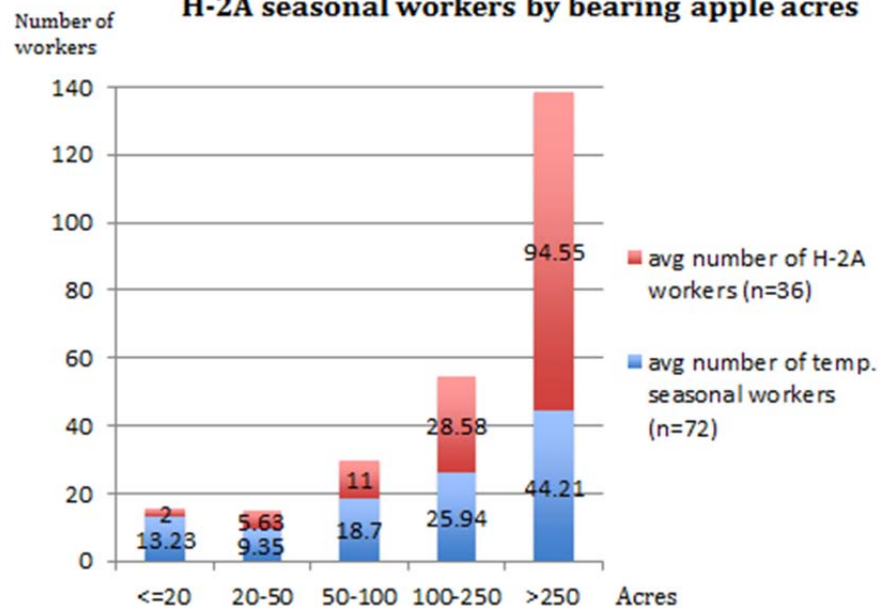


Figure 7: Apple farms hiring H-2A workers

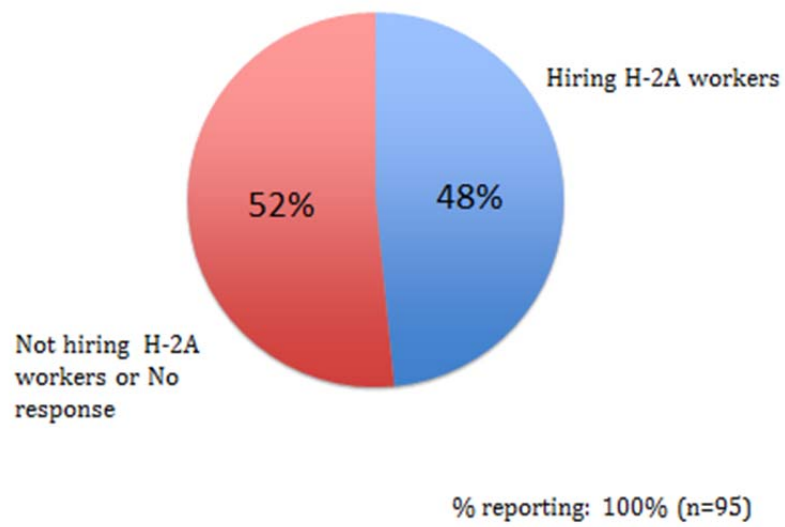


Figure 8: Home country of H-2A workers (n=46)

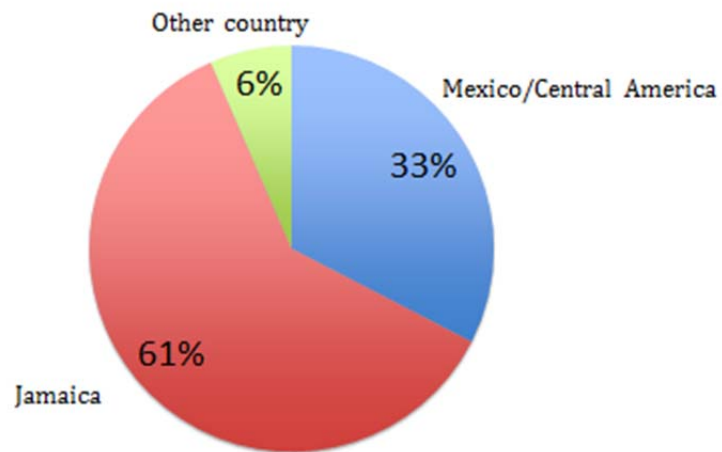


Figure 9: Length of seasonal employment

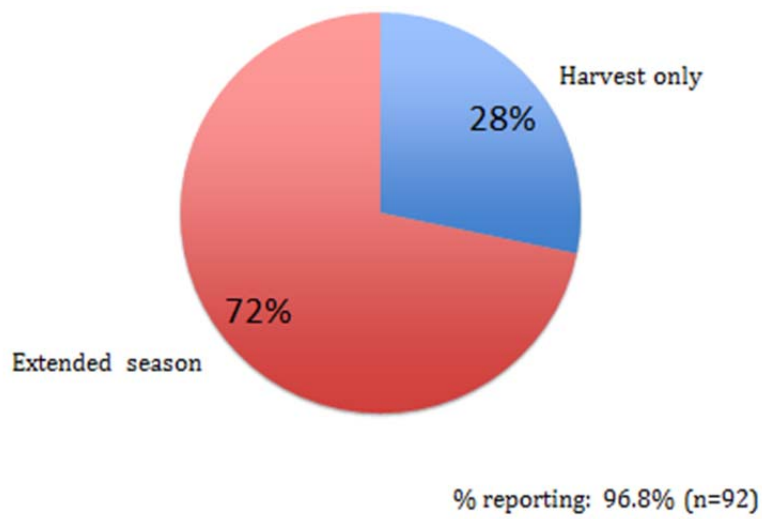
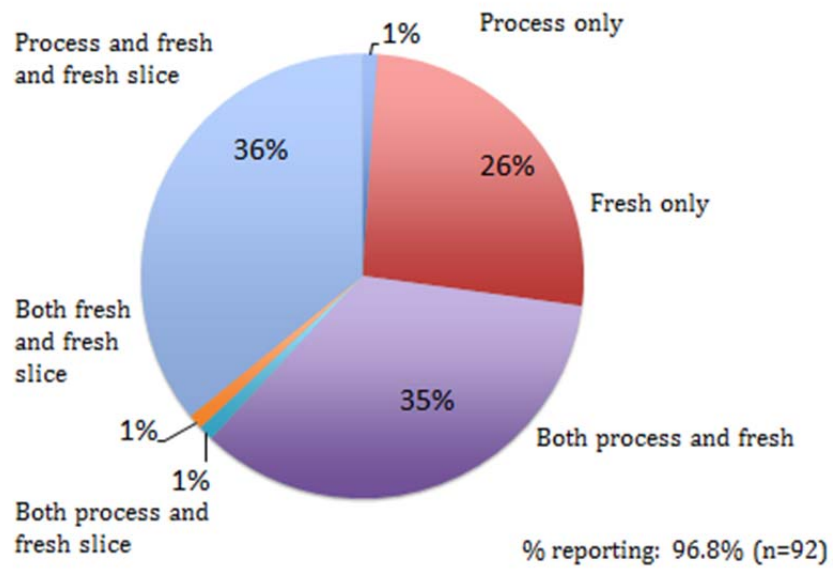


Figure 10: Using a crew leader



Figure 11: Plans for Marketing



B. Job Requirements on New York Apple Farms

A number of specific job skills are required on modern apple farms in New York. Many of the growers surveyed advertise for workers with skills and abilities specific to tree fruit production. Sixty-five percent of farm employers surveyed require some type of previous fruit farm experience (Figure 12). The number of months of experience required by type of work is indicated in Figure 13. Equipment operators and tractor drivers were the two farm positions most likely to require previous experience.

Some apple farms require employees to speak English. Figure 14 indicates that 32% of those surveyed require employees to speak and understand English to be hired.

The survey also inquired about other job skills, including minimum bushels of apples picked per day, prevention of bruising, weightlifting and ladder climbing. The percentages of farms requiring these skills are indicated in Figures 15 through 19.

Figures 20 and 21 indicate the specific types of work experience employers required when hiring workers.

Figure 12: Worker experience requirements

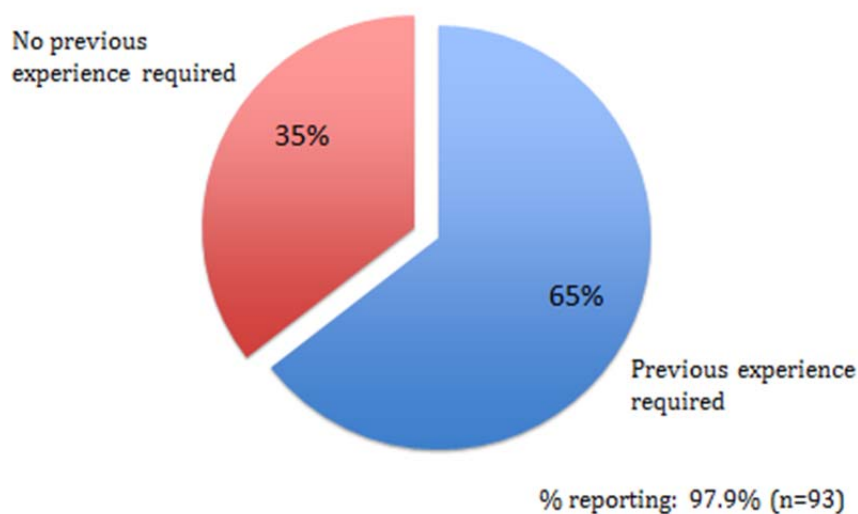


Figure 13: Months of experience required by types of work (n=55)

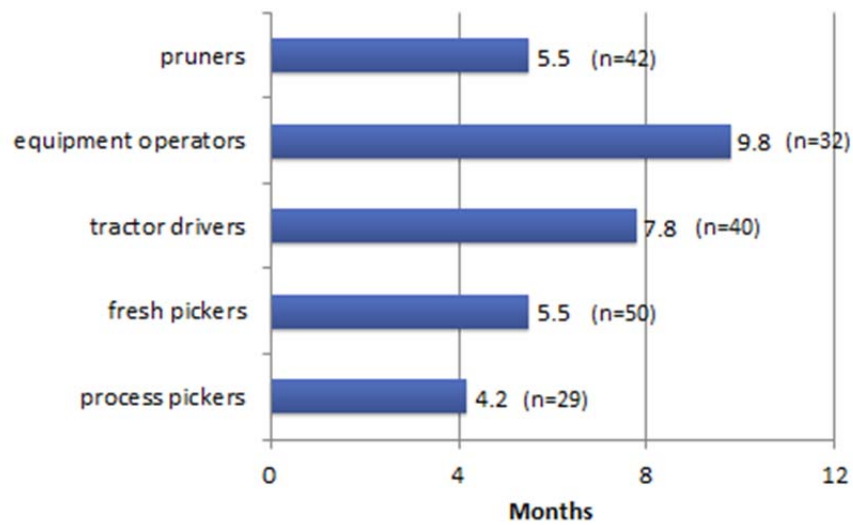


Figure 14: Percent of farms requiring workers to speak and understand English

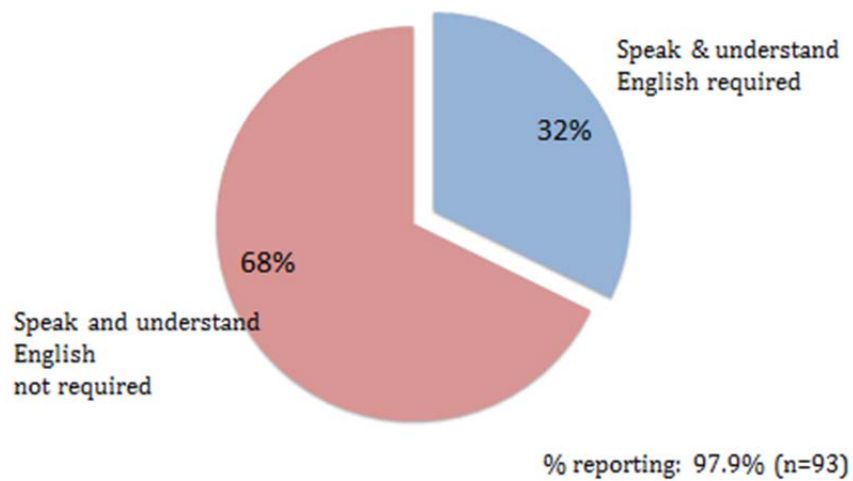


Figure 15: Picking requirement: daily minimum bushels

Average number of hours worked per day during harvest: 8.6

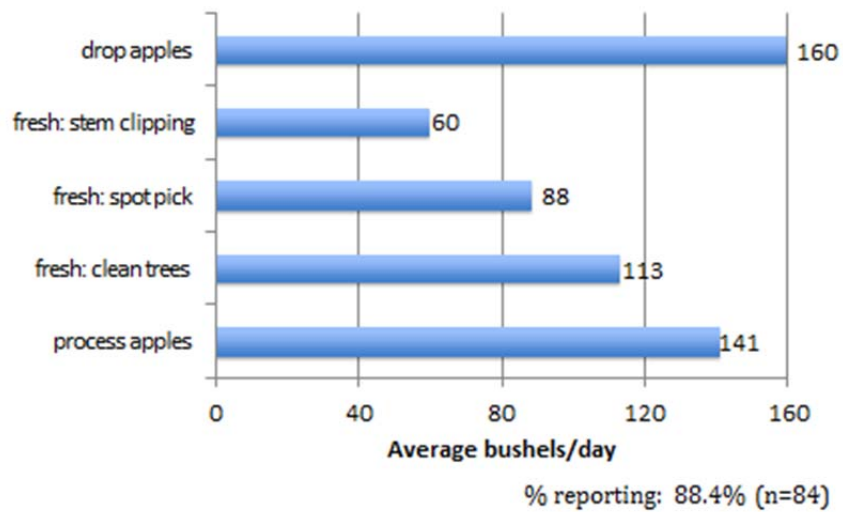


Figure 16: Percentage of bruising allowed

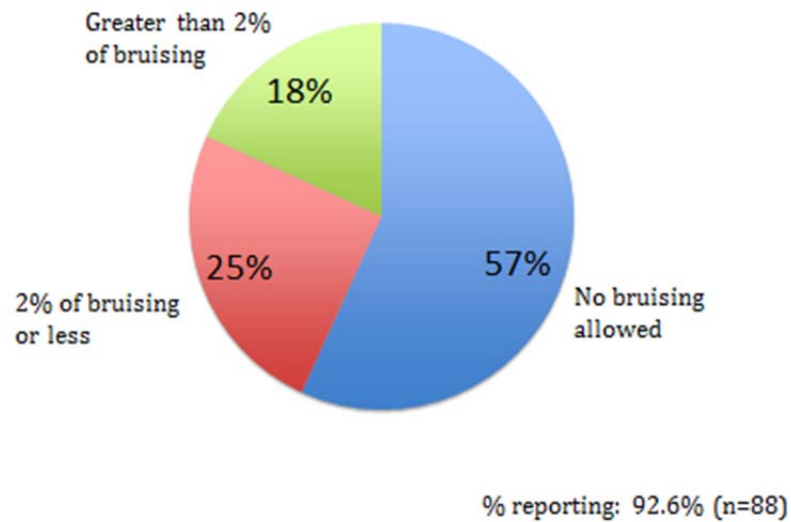


Figure 17: Farms that have a weight lifting requirement for hired workers

Average weight required for workers to lift: 47.8 lbs.

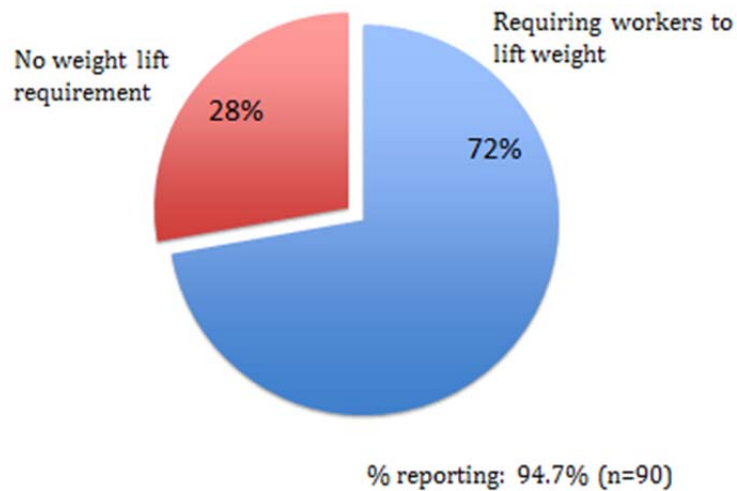


Figure 18: Farms that have weight lifting requirements by bearing apple acres and average number of pounds required (n=88)

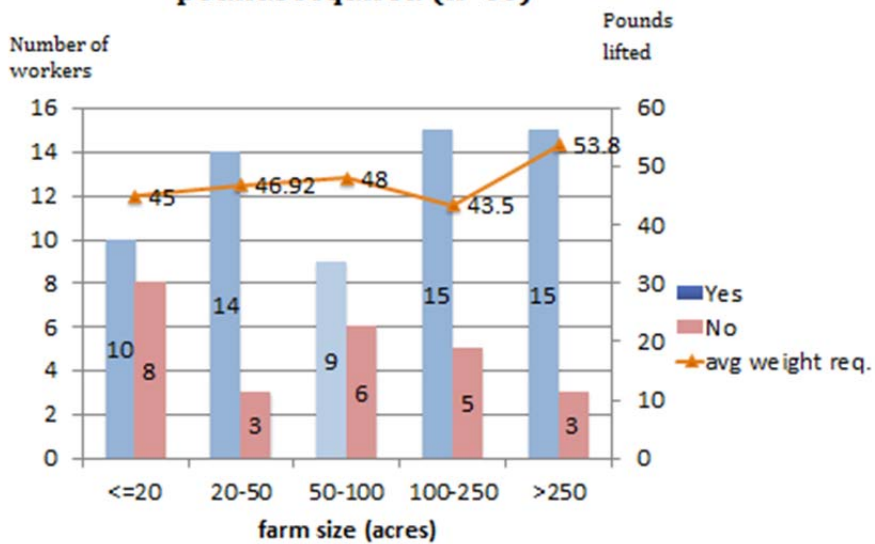


Figure 19: Farms requiring workers to climb & descend a ladder with a full picking bag

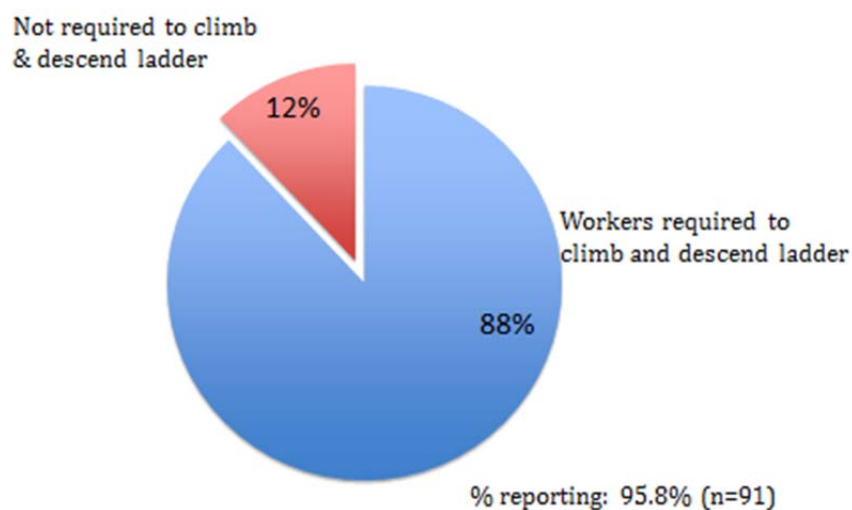
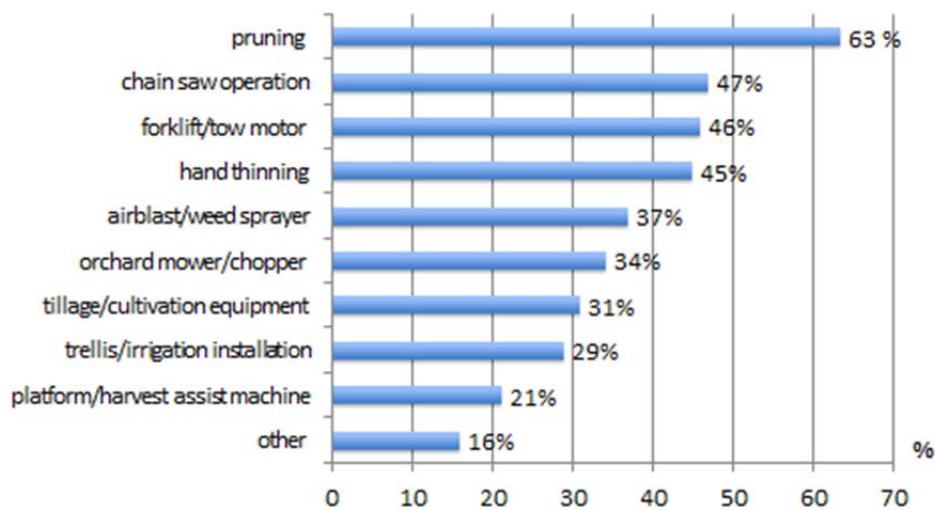


Figure 20: Farms that have specific work experience requirements by types of work



C. Wage Rates and Other Compensation

This section highlights the ways in which apple harvest workers are paid and the corresponding wage rates. Information on meal allowances, bonuses and health insurance was also collected.

There is no single way that apple growers pay apple pickers. Rather, there are a variety of wage rates based on the farm preference and difficulty of the job performed. Figure 21 shows the various ways apple growers paid their pickers. Twenty-six percent indicated that they pay only by the hour while 14% indicated that they pay only by piece rate. Others use a combination of the two. Some growers reported that rate of pay “depends upon picking conditions”. Picking conditions include: crop load (based upon fruit set), fruit defects requiring sorting, and color requirements by variety.

Table 2 indicates the various wage rates paid to apple pickers and the basis upon which the rates are paid. Those employers who paid an hourly rate for fresh apple picking had up to four hourly rates based on the type of picking performed. The fresh cleaning rate is \$10.80 per hour. It is the lowest of the four hourly wage rates because it is the easiest picking to perform. For spot picking the wage rate goes up to \$11.00 an hour and when fresh stem clipping is required the rate goes up to \$11.40 per hour. Those employers that paid a piece rate based the rate paid on the picking task performed. Rates listed are for each 20 bushel bin picked.

Figures 22 and 23 show the extent to which travel and meal allowances were paid. At the start of the season 49% of those surveyed paid travel expenses to the job. At the end of the season 58% of those surveyed paid employee travel expenses for the trip home. It is important to note that those growers using the H-2A Program are required to pay travel expenses. A total of 48% of survey respondents reported using the H-2A Program.

Figure 30 indicates that 30% of employers surveyed paid a bonus to those employees who stayed through the entire season.

Thirty-six percent of employers provided health insurance for at least some of their employees and 2% offered health insurance but the employees did not take it (see Figure 25).

Figure 21: How apple pickers get paid



Table 2: Wage Rates for Apple Picking

<u>Fresh Apples</u>	<u>Averages</u>
Hourly rates:	
Fresh cleaning the tree	\$10.80/hr.
Fresh – 1 st spot pick	\$11.00/hr.
Fresh – 2 nd /3 rd spot pick	\$11.00/hr.
Fresh – stem clipping	\$11.40/hr.
Piece rates:	
Fresh cleaning the tree	\$18.30/20 bu. bin
Fresh – 1 st spot pick	\$19.10/20 bu. bin
Fresh – 2 nd /3 rd spot pick	\$19.80/20 bu. bin
Fresh – stem clipping	\$28.30/20 bu. bin
<u>Drop and Processing Apples</u>	
Hourly rates:	
Process apples	\$10.67/hr.
Drop apples	\$10.70/hr.
Piece rates:	
Process apples	\$14.00/20 bu. bin
Drop apples	\$12.50/20 bu. bin

Notes:

Fresh apple: Any apple intended for fresh retail sales as a whole apple or packaged as a fresh slice.

Process apple: Apples intended for cider, fresh juice, bakery slices and dices or applesauce which involves processing the apple by squeezing, freezing, drying or cooking. Apples designated for fresh slices are NOT included in this category.

Drop apple: Apples which have fallen to the ground and are only suitable for juice or cider which will be pasteurized.

Fresh cleaning the tree: Picking all apples on the tree, regardless of market size or color requirements

Fresh spot pick: Partially/selectively picking to meet specific market requirements (degree of ripeness, color, size or freedom from defects).

Fresh – 2nd /3rd spot pick: Returning (often several days after the first pick) to repick the tree to specific market requirements. This allows apples left on the tree after the first pick to further size, ripen and color to meet specific market requirements.

Fresh – stem clipping: Specific varieties (Honeycrisp, for example) require the stems to be clipped to prevent the stem of one apple from piercing the skin of another apple, causing it to spoil.

Figure 22: Travel & meal allowance to travel to the job at the start of the season

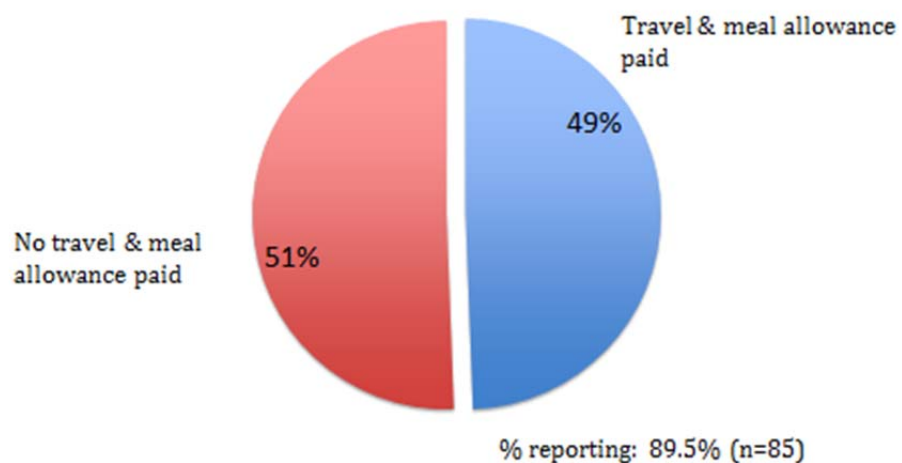


Figure 23: Travel & meal allowance to return home at the end of the season

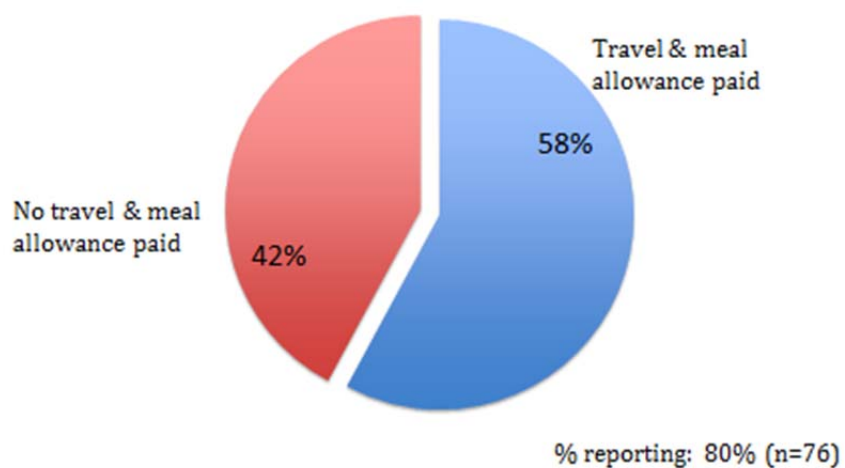


Figure 24: Bonus paid at season end?

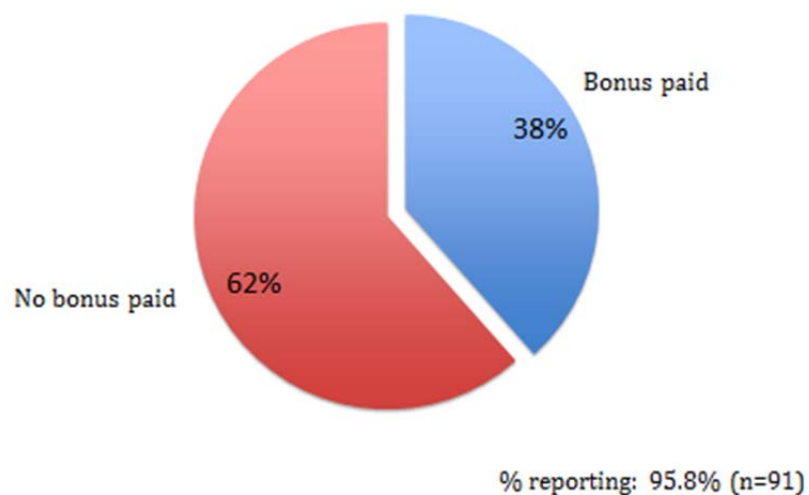
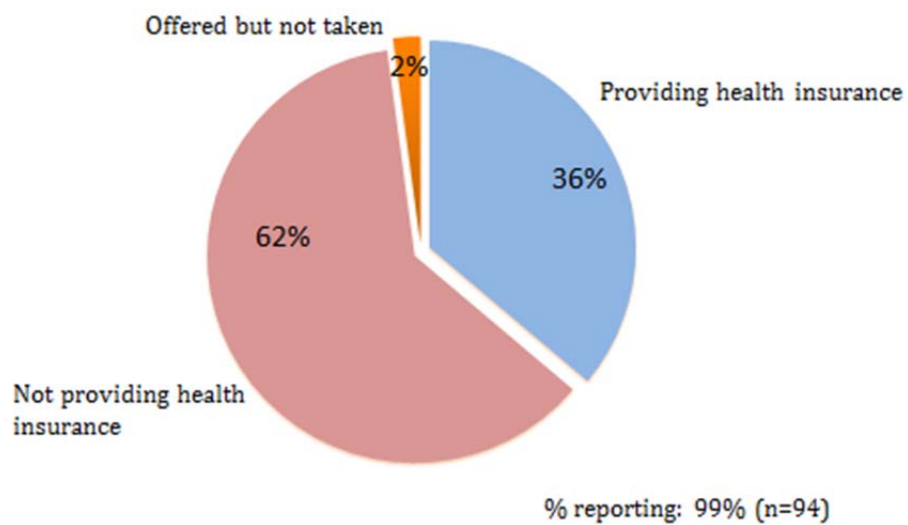


Figure 25: Percent of growers providing health insurance for employees



D. Regional Differences

There are four New York growing regions reflected in this survey; Central/Western New York, Northern New York, Eastern New York, and Long Island. This section highlights some of the key regional differences among survey participants. Figure 26 shows the percent of farms responding to the survey by region. Central/Western New York represents 77% of the farms, followed by Eastern New York at 16%, Northern New York at 5%, and Long Island at 2%.

Figure 27 shows average acres per farm in production per region. Northern New York averaged 485 acres, followed by Central/Western New York at 154 acres, Eastern New York at 76 acres, and Long Island at 16 acres.

Figure 28 details the percentage of farms by size and region. Figure 29 shows growers' intended markets by region.

Figure 26: Location of farms surveyed by regions

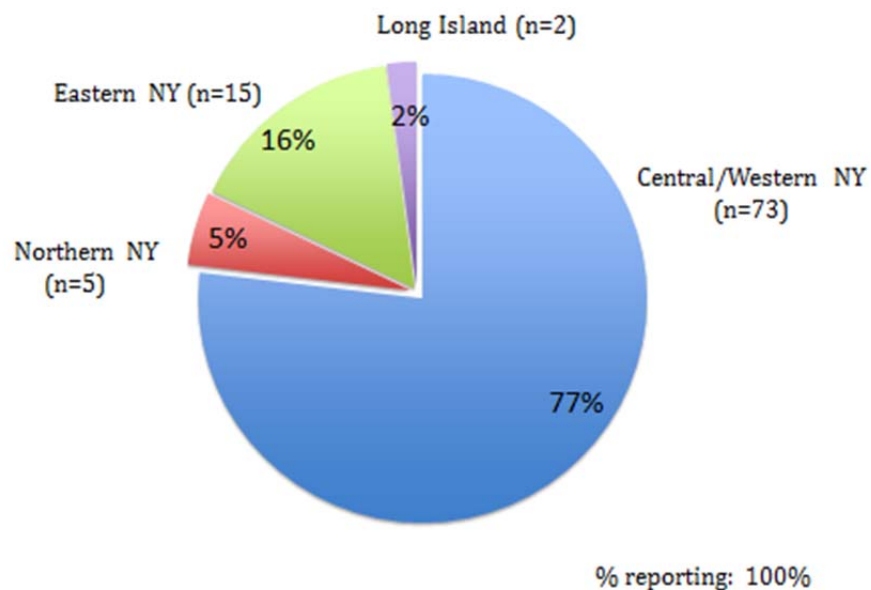
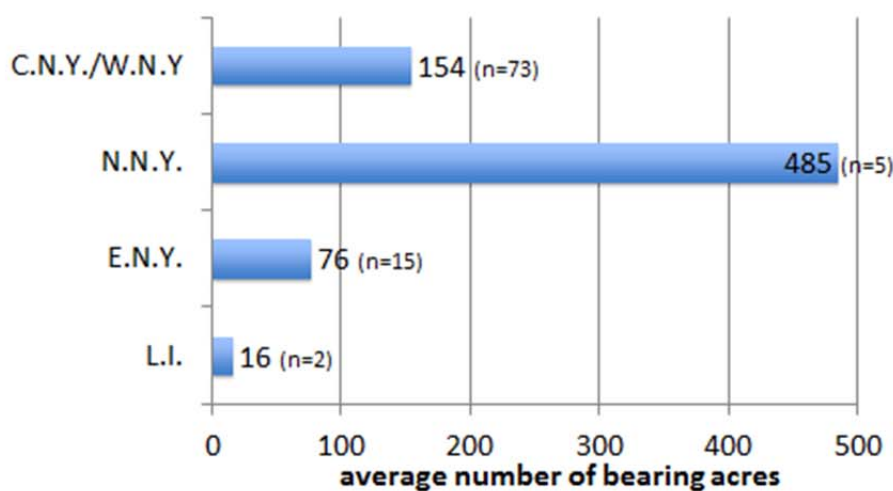


Figure 27: Average bearing acres by region



% reporting: 97.9% (n=93)

Figure 28: Percentage of farms by acres & region

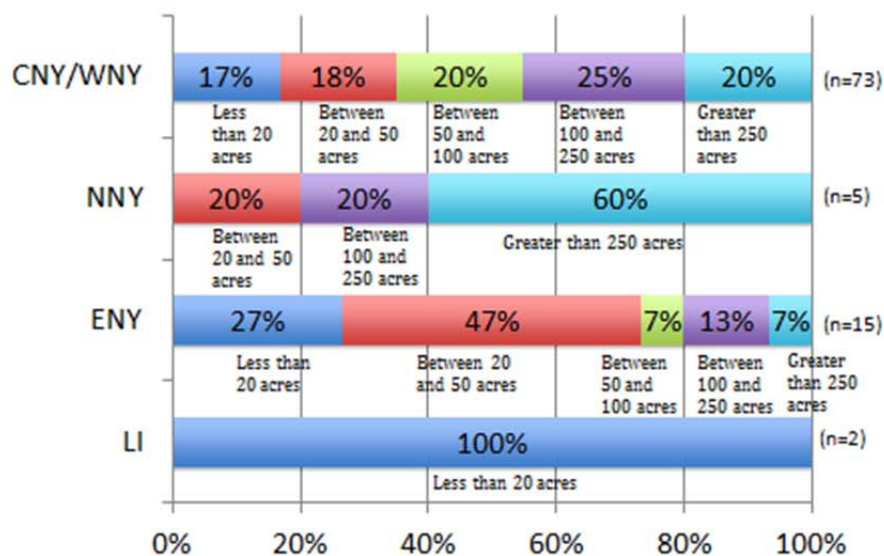
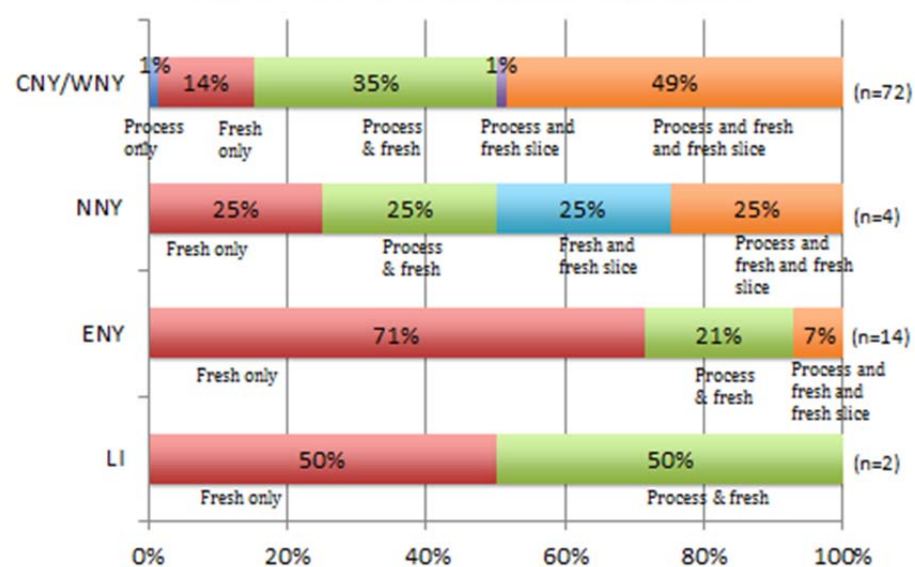


Figure 29: Market intention by region



E. Labor Availability

The availability of qualified workers at critical times in the growing season is an important issue for New York apple growers. This is especially true for an apple harvest lasting for 8 to 10 weeks per year with a harvest window of about 5 days per variety. Apple growers require workers who will arrive at the start of harvest and stay until the end. The work is labor-intensive and the crop is perishable. A one-week delay in harvest for some apple varieties would result in diminished quality and a substantially reduced price for apples. As a result, apple growers are continuously thinking about issues relating to labor availability and avoiding labor shortages. There are sometimes staffing challenges during harvest when multiple varieties are ready to be picked at the same time. For example, Gala and Honeycrisp varieties often compete for labor during harvest in late September.

Survey participants were asked if they were short of workers in 2013. Thirty-six percent of those surveyed reported that they were short of workers in 2013 (see Figure 30). Figure 31 shows worker shortages by region. Figure 32 gives estimates of additional workers that growers would have hired if they were available. Figure 33 shows the number of weeks additional workers were needed. Figure 34 indicates that 74% of growers surveyed estimated that they would need more employees 3 years from now. Figure 35 shows the number of employees needed based on workforce size.

Those survey participants who indicated they were short of workers were asked to provide additional information regarding the consequences of a worker shortage. Table 3 shows the consequences fruit growers face as a result of being short of workers. The top three consequences listed were un-harvested fruit, late harvested fruit and a combination of both. Table 3 also provides an estimated value of losses to survey participants in 2013. The estimated lost value of apples diverted to lower paying markets as a result of late harvest was \$4,212,000. The estimated value of un-harvested apples was \$3,059,200 for a total estimated 2013 crop loss of \$7,271,200. It is important to note that the crop losses reported here are for those growers responding to this survey.

Figure 30: Farms that experienced worker shortages in 2013

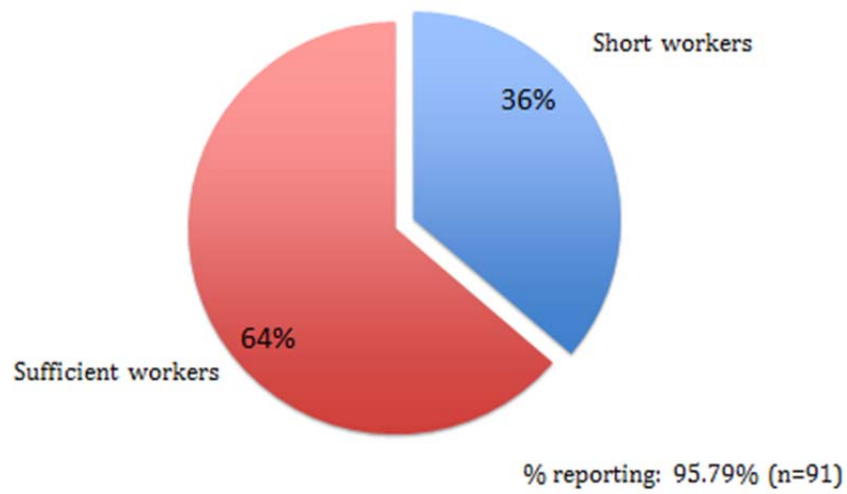


Figure 31: Percent of Farms, short of workers by region

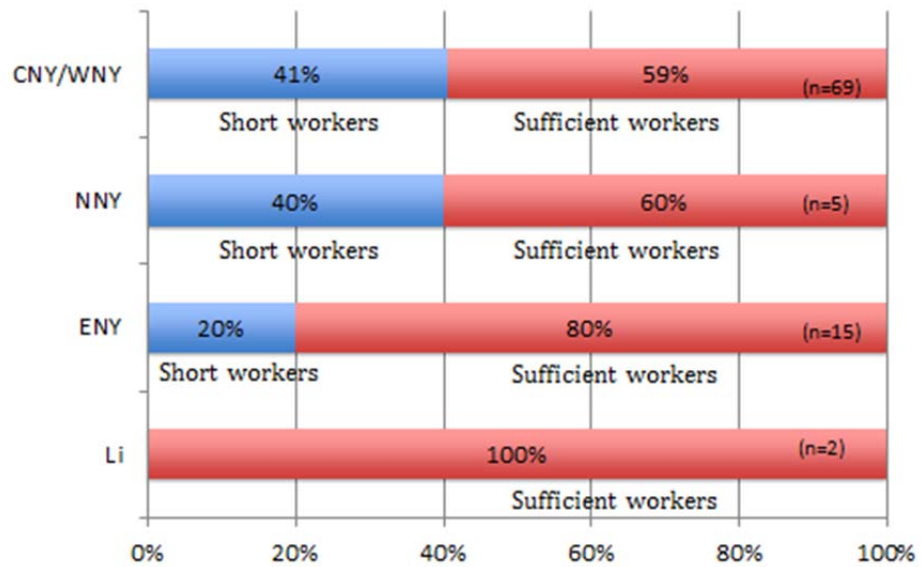


Table 3: Estimated Value of Crop Losses 2013

Apples harvested late and diverted to lower paying market (20 farms, 21% of those surveyed)	234,000 bushels
Apples left un-harvested (18 farms, 19% of those surveyed)	152,960 bushels
Lost value of late harvested apples (estimate \$18.00 loss per bushel)	\$4,212,000
Lost value of un-harvested apples (estimate \$20.00 loss per bushel)	\$3,059,200
Total value of apple crops, loss due to labor shortages	\$7,271,200

Figure 32: Average number of additional workers that would have been hired (if available) by farm size (n=31)

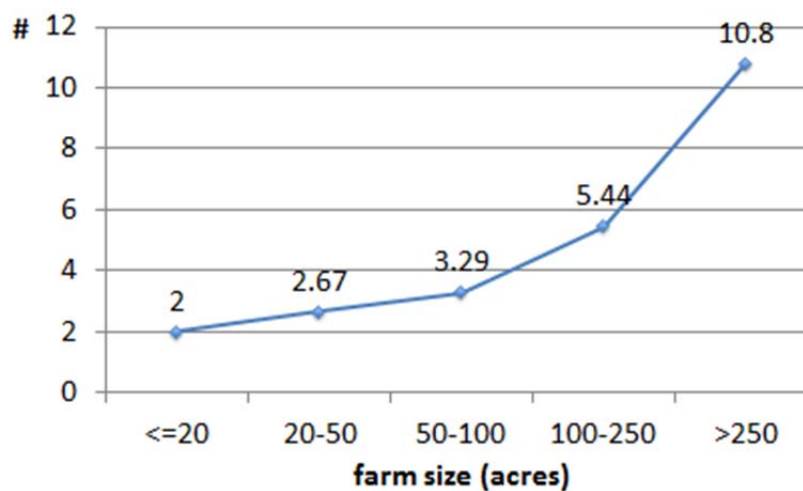


Figure 33: Number of weeks additional workers would have been hired (if available) by farm size (n=30)

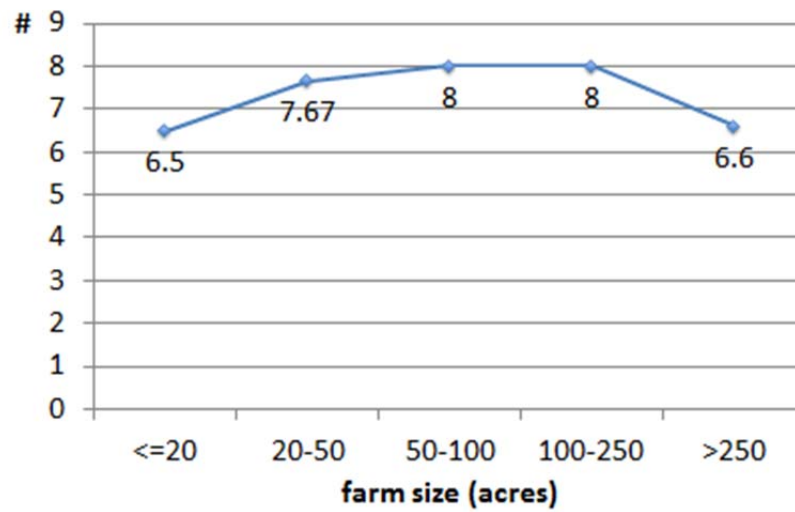


Figure 34: Employees needed 3 years from now

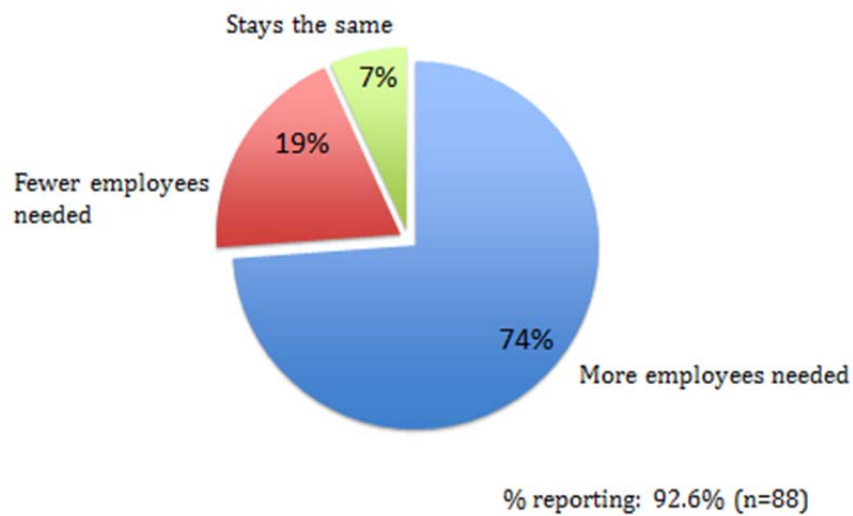
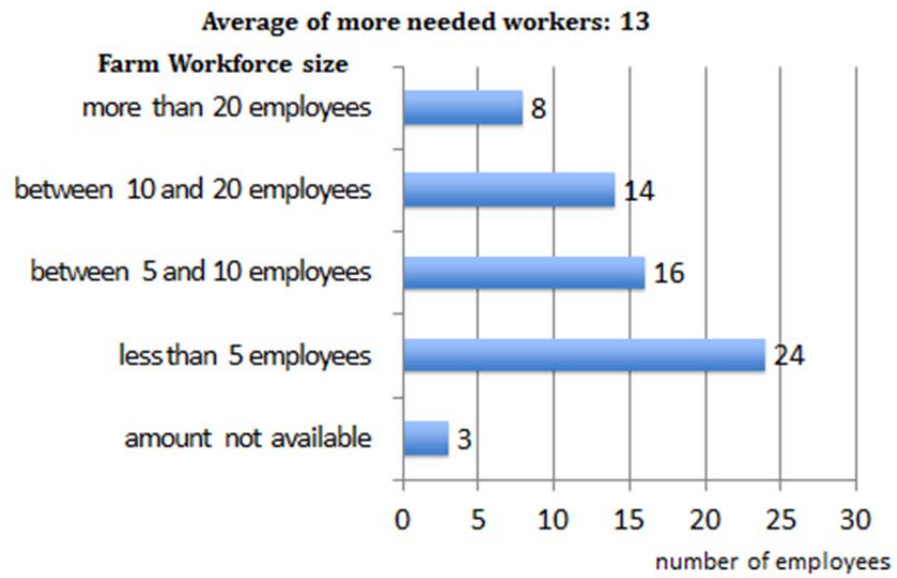


Figure 35: Number of additional employees needed per farm (n=65)



F. Labor Challenges Facing Apple Growers

Survey participants were asked in an open-ended question how the labor pressures they have experienced in the last several years have impacted their farm businesses. The responses are summarized in a set of general categories in Table 4. The top three responses in terms of frequency suggest that many apple growers are actively trying to minimize the impact tight labor supplies are having on their business.

The most frequent response had to do with the improvement in labor efficiency, including the adoption of planting systems to conserve labor and to increase productivity. Capital investments in new orchard systems were often mentioned. The second most cited strategy was the reduction in orchard size by eliminating old varieties or labor intensive plantings. The third most frequent response had to do with increased reliance on the H-2A seasonal worker program administered by the federal government. Many apple growers are using the program to take the risk and uncertainty out of hiring seasonal workers. The fourth most frequent response to labor challenges related to leaving the business or retiring because the business is not viable for the next generation.

Taken in total, the answers to the question regarding labor pressures suggest that farm managers are constantly assessing their labor situation and making decisions based on labor cost, efficiency and capital investments required to become more labor efficient and profitable. Comments from survey respondents suggest that growers are making more cautious business decisions as a result of concern about inadequate labor supplies.

The H-2A Program has a reputation among fruit and vegetable growers for being expensive, time consuming and bureaucratic. In spite of its shortcomings, apple growers are using the H-2A Program to ensure that they have an adequate supply of legally documented workers at critical times during the growing season.

Table 4: Business impact from labor pressures n=76

<i>Given labor pressures that you have experienced in the past several years, how has or will your business change?</i>	Percent
Design orchards, planting systems and equipment to be more labor efficient	14
Downsize/produce less/decrease acreage	13
Reliance on H-2A worker	12
Sell/out of business/retire/business not viable for next generation	11
More profitable variety or utilization/crop conversion/less labor-intensive crop	10
Labor related issues (labor housing, \$ rewards, min. wage, health insurance/affordable care act)	9
Less/insufficient labor	7
No labor pressure experienced	6
No change/business not growing	5
Did not answer the question	5
Other (business growing, decreased profits, contracting out to avoid paperwork, etc.)	4
Mechanize	2
Unsure	2

Notes: **Frequency** means the sum of responses to each item outlined in the first column over the 95 surveys, which represents how the survey respondent felt that this/her business will change given labor pressures they have experienced in past years (multiple answers from each farm were allowed). **Percentage** indicated the significance of each possible outcome. **N** means the number of respondents who have answered question 21 and provided at least one of the possible outcomes outlined in Table 4.

G. Grower Attitudes Toward Labor Policies

Survey participants were asked to assess the negative impact that certain labor related government policies will have on their businesses. Figure 36 focuses on a set of select policies related to proposed state legislation. For many years the Farmworker Fair Labor Practices Act has been introduced in the New York State Legislature, but it has never passed. If passed the bill would require farmers to pay their workers overtime after 40 hours of work each week. The legislation would also give farm workers collective bargaining rights. Currently, farmers are not required to pay overtime and their workers do not have collective bargaining rights under New York State law. Figure 36 shows how survey participants rated the negative impact that overtime pay and collective bargaining rights would have to their businesses. They report that overtime pay after 40 hours would have a substantial negative impact, while overtime pay after 50 or 60 hours would have a lesser impact. Growers also felt that allowing workers collective bargaining rights would have a significant negative impact on their businesses.

Figure 37 shows apple growers perceptions of the potential negative impact of selected labor policies. Affordable Care Act record keeping for the Internal Revenue Service and Occupational Safety and Health Administration (OSHA) inspections were perceived to have a substantial negative impact. Immigration reform and H-2A reform were perceived to have a smaller negative impact. It is important to note that it is difficult to draw conclusions regarding the Affordable Care Act because all of the rules have not yet been released.

Figure 36: Negative impact of proposed changes in NY State law

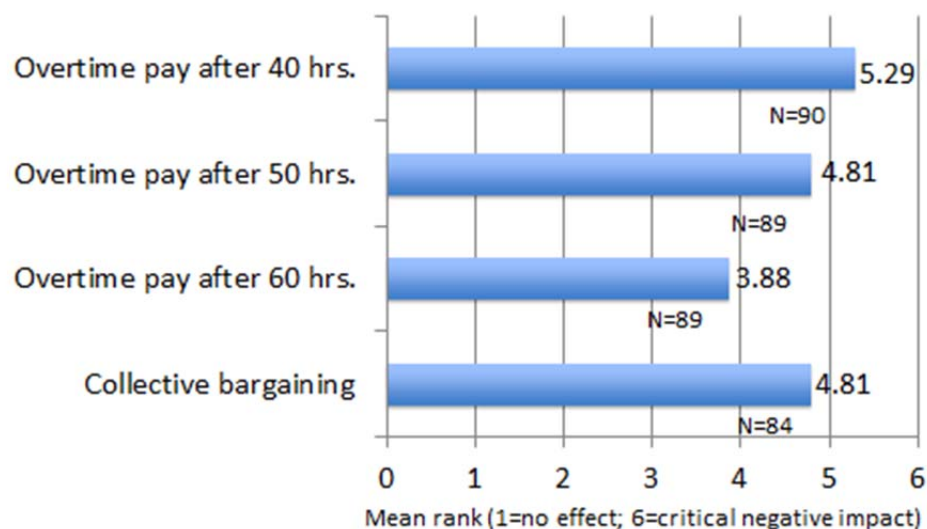
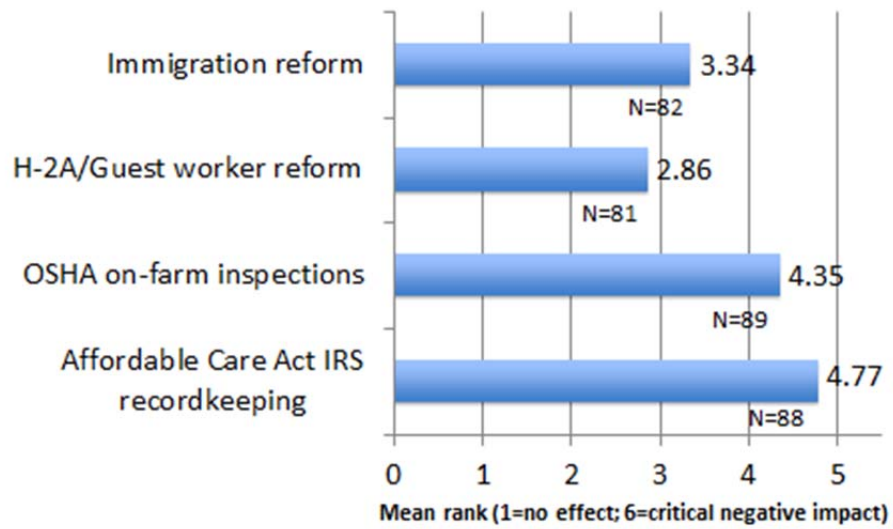


Figure 37: Negative impact of relevant labor policies



H. Industry Issues to be Addressed

Survey participants were asked what the top three issues are for organizations that support the New York State apple industry to work on in the next five years. The answers are summarized using a weighted ranking and are reported in Table 6. Issues related to farm labor were rated first by a large margin. Immigration reform and improving the H-2A Program were mentioned frequently. Also mentioned were a variety of issues related to workforce availability. The next highest ranked issue after labor was the burden of government regulation including the environment, taxation, and the Affordable Care Act. The third highest ranked industry issue was marketing.

Table 5: Top three apple industry issues n=77

<i>Top three issues for organizations that support the NYS Apple Industry (NYAA, ARDP, Cooperative Extension, NYS Hort. Society) to work on in the next five years?</i>	Frequency	Percent
Labor access/availability (immigration/H-2A/guest worker) & labor efficiency/human resource management (overtime, wage, union, etc.)	79	39
Gov't regulation: EPA/DEC/DOT, taxation, business climate, Affordable care act	38	19
Marketing/consumer education/trade/global market/promotion/health value/go local	30	15
Research/Extension/grower education/R&D/funding/technology	17	8
Food safety/GAP	15	7
Other - land, weather, climate change, etc.	9	4
Invasive pests/insects/disease/chemicals (pesticide)	6	3
Farm business management: finance, economy, crop insurance, crop size, cost, post-harvest	4	2
Not answering the question/not comprehensible	3	1

Notes: **Frequency** means the sum of responses to each item outlined in the first column over the 95 surveys, which represents the top issues that survey respondents think the apple industry to work on in the next five years (multiple answers from each farm were allowed). **Percentage** indicates the significance of each issue. **N** means the number of respondents who have answered question 22 and provided at least one of the issues outlined in Table 5.

I. Research

New York apple growers, through the New York State Apple Marketing Order, have approved and are subject to an assessment for marketing their apples as well as apple research. The assessment is \$0.176 per bushel and \$0.016 of this goes to research. For apples sold to processors, the assessment is \$0.12 per hundredweight with \$.08 going to research. Growers recently voted to double the amount of money for research. The level of funding for the current research order is just under \$500,000.

The survey included two questions relating to apple industry research. One question asked if the apple industry is spending enough money to research industry challenges. As shown in Figure 38, thirty one percent of those surveyed said not enough industry money was devoted to research while 60% said the apple industry is spending enough money to research industry challenges. A second question asked growers to identify three specific industry challenges. The answers to this question are summarized in Table 6. A weighted average was used take into account the respondent's ratings. The top rated answer had to do with pest control. There are likely two reasons for this. First, the appearance of new pests from Asia has impacted production; and second, there has been a resurgence of familiar pests due to restrictions on broad spectrum pesticides. The second highest rated answer was related to marketing and promotion. The third highest ranked answer focused on labor, immigration and labor efficiency.

Figure 38: Is the apple industry spending enough money on research?

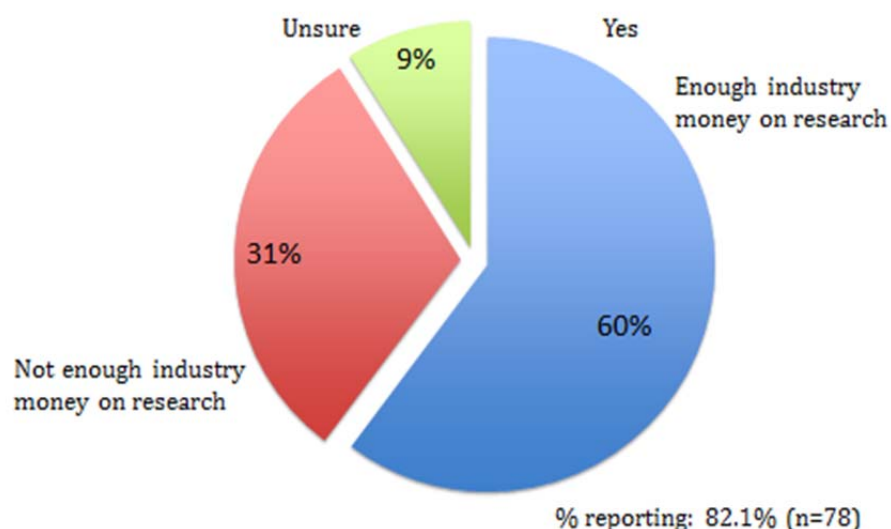


Table 6: Apple growers' identification of research needs n=59

<i>Please cite 3 specific apple industry challenges which need more research (in order of importance) in the space below:</i>	Weighted Frequency
Pest/insect/disease/chemicals	77
Marketing/consumer education/promotion/trade/supply/ price/value-added	64
Labor/immigration/improvements in labor efficiency	43
Research/Extension/grower education/personnel/funding	35
Orchard (root stock)/technology (spray)/cultural practice	26
Improving fruit quality thru specific practice - storage, post-harvest, pack-out	24
Genetics/GMO	12
Food safety/GAP	9
Government regulation/tax	9
Apple varieties	8
Farm business management	7
Other - weather, climate change, etc.	6
Not answering the question/not comprehensible	N/A

Notes: For the question asking farmers to cite 3 specific apple industry challenges that need more research in order of importance, **frequency** means the sum of responses to each item outlined in the first column over the 95 surveys. A weight of 3 is given to a specific challenge if provided in the first place, a weight of 2 to a specific challenge if provided in the second place, and a weight of 1 to a specific challenge if provided in the third place. The **weighted frequency** is the sum of the weighted responses to each item outlined in the first column over the 95 surveys. **N** is the number of respondents who have answered question 24 and provided at least one of the challenges outlined in Table 6.

Discussion & Implications

New York apple growers today face a complex set of issues and constraints related to attracting and managing an agricultural workforce. Over the past decade the presence of undocumented workers and the dramatic increase of immigration enforcement activities in New York have created risks and uncertainty for agricultural employers. The impact of these issues on New York agriculture is evident in the responses to the survey questions growers were asked.

When survey participants were asked what top three issues the apple industry needed to address in the next 5 years, the topic of agricultural labor was identified as number one by far. Labor issues specifically identified were labor availability, the H-2A Program, labor efficiency, and the need for immigration reform.

Farms represented in this survey ranged in size from less than 20 acres, to more than 250 acres. Farms with less than 20 acres averaged 13 workers and farms with more than 250 acres averaged 110 workers. Almost half of the survey participants (48%) reported hiring H-2A workers. The H-2A Program is a federally directed program that brings in seasonal farm workers from other countries who work in the United States up to 10 months per year.

References to the H-2A Program came up frequently in the survey. The challenge of tight labor supplies combined with increased immigration enforcement has increased the risk of crop losses at harvest time. Farm managers are often critical of the H-2A Program because of the high cost of labor and extensive paperwork. At the same time, an increasing number of apple growers in New York State are using it because the program helps to ensure that farm employers will have a legal workforce on a timely basis. Assurance of a timely legal workforce substantially decreases the risk of crop loss from harvest delays. Many growers rely heavily on the H-2A Program, yet at the same time they want to see the program improved.

Farm jobs are regarded by many as low-skilled work, yet survey participants reported numerous job requirements for orchard workers. Apple growers place a high priority on productivity as well as quality of work performed. Orchard tasks such as pruning thinning, and tying must be performed quickly and carefully to assure peak apple production as well as quality. High density planting systems have dramatically increased the amount of apples per acre. Likewise new orchard equipment such as platforms and conveyor belts has increased the productive capacity of each worker. In the absence of immigration reform, apple growers are likely to continue to mechanize their businesses and adopt planting systems that will improve labor efficiency. These improvements come at a very high cost because new plantings and new equipment require very high capital investments.

Concerns about labor availability came up frequently in the survey responses. Thirty six percent of growers surveyed reported losses due to labor shortages in 2013. The cost of those crop losses in 2013 estimated at more than \$7 million. The specter of future labor shortages is likely to make growers proceed with caution when they consider future expansions in the absence of adequate labor supplies.

Summary

Farm managers today are facing a variety of labor related challenges. On New York fruit farms labor is the largest cost of production (White et al, 2009). An adequate supply of productive and motivated workers is essential to maintain a viable and profitable agricultural industry in New York State. Successful apple farm management will increasingly require managers to adopt top-notch human resource management practices including competitive wages and benefits, as well as safe, comfortable working conditions. Apple growers are likely to continue to be actively involved in the legislative process for immigration reform since policy changes appear to provide the best opportunity for resolving the challenges created by the presence of undocumented workers. New trellised planting systems are increasing labor efficiency allowing workers to perform pruning, tying, and harvest operations from the ground or from a platform. These systems help ensure safety for the workers as well as increasing productivity. Although mechanization of apple production continues to improve, there is still no substitute for the skills and abilities of experienced hired orchard workers.

References

Miranda Sazo, Mario, Alison DeMarree and Terence Robinson. The Platform Factor-Labor Positioning Machines Producing Good Results for N.Y. Apple Industry. New York Fruit Quarterly, Volume 18, Number 2, Summer 2010. New York State Agricultural Experiment Station at Geneva.

White, Gerald B., Alison M. DeMarree and James Neyhard. 2009. Fruit Farm Business Summary: Lake Ontario Region New York 2008. E.B. 2009-19, Department of Applied Economics and Management, College of Agriculture and Life Sciences, Cornell University, October.

NYS Horticultural Society Fruit Grower Survey on Employee Needs & Practices

Based on the 2013 harvest please circle, check or print your answer

1. How many bushels of APPLES do you produce ANNUALLY? (3 yr. avg.) _____ Bu. # of Bearing Acres: _____
 2. Total Number of Workers Employed in 2013:

Full time Year Round (30 hrs. or more/week) _____

Part time Year Round (less than 30 hrs./week) _____

Temporary Seasonal _____

H-2A _____

Total # of W-2's _____
- Please circle Yes or No below:
3. Do you provide health insurance for any of your employees? Yes No b. Will the Affordable Care Act change this? Yes No
 4. Do you expect that you will need: MORE FEWER (circle one) employees three years from now? Please circle + or - for each:
How many? + - _____ Full time + - _____ Part-time + - _____ Temporary seasonal + - _____ H-2A = _____ Total
 5. I employ temporary seasonal workers for: harvest only _____ an extended season _____ both _____
 6. Where do your H-2A workers come from? _____ Mexico/Central America _____ Jamaica _____ Other, If other please indicate country: _____
 7. Where is your fruit farm business located? a. _____ C.N.Y. / W.N.Y. b. _____ N.N.Y c. _____ E.N.Y. d. _____ L. Island
 8. What percent of your 3 year average production is intended for; process: _____ % fresh: _____ % fresh slice: _____ %
 9. Do you require previous experience when hiring? _____ Yes _____ No If YES, please list experience required:
a. Process pickers _____ # of mos. experience required d. Equipment operators _____ # of mos. of experience required
b. Fresh pickers _____ # of mos. of experience required e. Pruners _____ # of mos. of experience required
c. Tractor drivers _____ # of mos. of experience required
d. Do you require employees to speak & understand English? _____ Yes _____ No If Yes, why?

 10. What is the minimum number of BUSHELS that you expect your pickers to pick each day in an average _____ hour day?
a. Process apples (peelers/sauce/stored juice) _____ BUSHELS / day (avg. # of hours worked / day during harvest)
b. Fresh apples: cleaning the tree _____ BUSHELS / day
c. Fresh apples: spot pick for color/size/defects _____ BUSHELS / day
d. Fresh apples: stem clipping required _____ BUSHELS / day
e. Drop apples: _____ BUSHELS / day
 11. Do you allow a certain percent bruising during picking? _____ Yes _____ No If yes, what percent? _____ 1% _____ 2% _____ 3% _____ 4% _____ 5% _____ >5%
 12. How do you pay your pickers? a. only by the hour _____ Yes _____ No If yes: Rate: \$ _____/hr.
b. only by the piece _____ Yes _____ No
c. a combination of the by the piece & hour: _____ Yes _____ No
d. by the hour or the piece, depending upon picking conditions or requirements _____ Yes _____ No
e. Please list the piece/hourly rates you pay below:

<u>Fresh apples:</u> Clean the tree	\$ _____ / 20 bu. bin	or	\$ _____ / hr.
1 st spot pick for color/size/defects	\$ _____ / 20 bu. bin	or	\$ _____ / hr.
2nd or 3rd spot pick for color/size/defects	\$ _____ / 20 bu. bin	or	\$ _____ / hr.
Fresh picking requiring stem clipping	\$ _____ / 20 bu. bin	or	\$ _____ / hr.
<u>Process apples:</u>	\$ _____ / 20 bu. bin	or	\$ _____ / hr.
<u>Drop apples:</u>	\$ _____ / 20 bu. bin	or	\$ _____ / hr.
 13. Do you require temporary workers to be able to lift a specific amount of weight? _____ Yes _____ No # of lbs: _____

14. Do you require workers to be able to climb and descend a ladder with a full picking bag? ____ Yes ____ No

15. Do you hire a crew leader to recruit & manage your pickers? ____ Yes ____ No

16. Do you require seasonal workers to have experience in the following areas?

- a. Pruning: Summer dormant of apples stone fruit (circle those which apply) ____ Yes ____ No
- b. Hand thinning: apples peaches apricots (circle those which apply) ____ Yes ____ No
- c. Trellis irrigation installation (circle those which apply) ____ Yes ____ No
- d. Chain saw operation ____ Yes ____ No
- e. Sprayer: Airblast Weed (circle those which apply) ____ Yes ____ No
- f. Orchard Mower or chopper (circle those which apply) ____ Yes ____ No
- g. Orchard Platform and or Harvest Assist Machine ____ Yes ____ No
- h. Tillage/Cultivation Equipment (chisel plow, disc, drag) ____ Yes ____ No
- i. Forklift, Tow motor (circle those which apply) ____ Yes ____ No
- j. Other: _____ ____ Yes ____ No

17. Do you pay travel & meal allowances at the: a. start of the season? __Yes __ No and b. end of the season? __ Yes __ No

18. Do you pay a bonus to harvest workers at season end? ____ Yes ____ No a. If Yes, please specify rate: \$ _____ per _____

19. Were you short workers in 2013? a. ____ Yes ____ No If yes, what were the consequences of being short of help? Check all which apply:

____ b. apples harvested late and diverted to lower paying market # of bushel: _____

____ c. apples left un-harvested # of bushel: _____

____ d. work not completed, please describe: _____

____ e. other, please describe: _____

If yes, how many more persons would you have hired, if available? _____ # of workers for _____ # of weeks

20. Please circle the rank of importance of labor/human resource management issues to your business

(0 will not affect my business to 5 will have critical negative impact on the viability of my business)

- | | | | | | | |
|---|---|---|---|---|---|---|
| a. Overtime Pay required after 40 hours | 0 | 1 | 2 | 3 | 4 | 5 |
| b. Overtime Pay required after 50 hours | 0 | 1 | 2 | 3 | 4 | 5 |
| c. Overtime pay required after 60 hours | 0 | 1 | 2 | 3 | 4 | 5 |
| d. Collective bargaining rights for workers | 0 | 1 | 2 | 3 | 4 | 5 |
| e. Immigration reform | 0 | 1 | 2 | 3 | 4 | 5 |
| f. H-2A / Foreign worker program reform | 0 | 1 | 2 | 3 | 4 | 5 |
| g. OSHA On-farm inspections | 0 | 1 | 2 | 3 | 4 | 5 |
| h. Affordable Care Act IRS record keeping* | 0 | 1 | 2 | 3 | 4 | 5 |

(*required recorded monthly calculations of different classifications of employees to prove eligibility/ineligibility for health insurance)

21. Given labor pressures that you have experienced in the past several years, how has or will your business change?

Other Industry Challenges:

22. In your opinion, what are the top three issues for organizations that support the NYS Apple Industry (NYAA, ARDP, Cooperative Extension, NYS Hort. Society) to work on in the next five years?

(1)

(2)

(3)

23. Is the apple industry spending enough money to research industry challenges? ____ Yes ____ No

24. Please cite 3 specific apple industry challenges which need more research (in order of importance) in the space below:

(1)

(2)

(3)

Thank you for assisting us in accurately representing the needs of the New York Fruit Industry!!!

OTHER A.E.M. EXTENSION BULLETINS

EB No	Title	Fee (if applicable)	Author(s)
2015-02	Labor Issues and Emploment Practices on New York Apple Farms		Baker, P., DeMarree, A., Ho, S-T, Maloney, T. and Rickard, B.
2015-01	Working with Farm Family Businesses: Some Suggestions and Procedures for Quality Advising		Conneman, G., McGonical, J., Crispell, C. and A. Staehr
2014-13	Marketing Channel Assessment Tool (MCAT) Benchmark Performance Metrics		Schmit, T. and M. LeRoux
2014-12	Manure Application Cost Study		Howland, B. and J. Karszes
2014-11	Cost of Establishment and Production of Hybrid Grapes in the Finger Lakes Region of New York, 2013		Tang, Y., Gómez, M. and G. White
2014-10	New York Economic Handbook, 2015	(\$10.00)	Extension Staff
2014-09	Dairy Farm Business Summary, Northern New York Region, 2013	(\$12.00)	Knoblauch, W., Dymond, C., Karszes, J., Howland, B., Murray, P., Deming, A., Balbain, D., Buxton, S., Manning, J., Collins, B. and A. Figueras
2014-08	Dairy Farm Business Summary, Hudson and Central New York Region, 2013	(\$12.00)	Knoblauch, W., Conneman, G., Dymond, C., Karszes, J. Howland, B., Buxton, S., Kiraly, M., Kimmich, R. and K. Shoen
2014-07	Dairy Farm Business Summary, New York Small Herd Farms, 140 Cows or Fewer, 2013	(\$16.00)	Knoblauch, W., Dymond, C., Karszes, J. and M. Kiraly
2014-06	Dairy Farm Business Summary, Western New York Region, 2013	(\$12.00)	Knoblauch, W., Dymond, C., Karszes, J., Howland, B., Hanchar, J., Carlberg, V., Kimmich, R. and J. Petzen

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