The Impacts of Recent State Minimum Wage Increases on the New Jersey Farm Sector

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A Report Prepared for the
New Jersey Farm Bureau

by

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LIST OF EXHIBITS

LIST OF ACRONYMS

BLS	Bureau of Labor Statistics
FLS	Farm Labor Survey
FLSA	Fair Labor Standards Act
NAICS	North American Industry Classification System
NASS	National Agricultural Statistics Service
NAWS	National Agricultural Workers Survey
NJAES	New Jersey Agricultural Experiment Station
NJDA	New Jersey Department of Agriculture
NJDOL	New Jersey Department of Labor
NJ-NASS	New Jersey Field Office – National Agricultural Statistics Service
OES	Occupational Employment Statistics
USDOL	United States Department of Labor

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EXECUTIVE SUMMARY

In 2005, New Jersey legislators passed a bill that mandated a 39 percent increase in the state minimum wage rate. The increase was scheduled to occur in two-phases. The first increase, from $5.15 to $6.15 per hour, took effect on October 1, 2005. The second increase to $7.15 per hour is scheduled for October 1, 2006, at which point New Jersey will have the fifth highest state minimum wage in the nation. This policy change comes at a time when twelve other states are planning increases in their respective minimum wages.

The state's farmers and agricultural leaders have expressed concern that the higher minimum wage will have negative effects on the financial well-being of farms in the state. This concern is attributed to rising input prices, the relative labor intensity of New Jersey agriculture, and flat or declining farm product prices in wholesale market channels.

The extent to which New Jersey farmers are paying their workers minimum wage is not documented. Therefore, the extent to which a higher minimum wage will increase the production costs of New Jersey farms is unclear. The primary objective of this study is to estimate and contextualize the total industry-level impact of the increase in New Jersey's minimum wage on hired farm labor costs and total farm production expenses. Impact estimates are based on data and assumptions regarding the extent of hired labor use by sector, cost structures of major farm commodities, and prevailing farm wages.

Three alternative scenarios were developed to estimate the impact of the increased minimum wage. Each scenario reflects different assumptions with respect to the wage structure for workers earning less than $7.15 per hour and the impact of the minimum wage increases on farm workers earning more than $7.15 per hour. Based on the "most likely" scenario, the total industry level impact of the increase in the state minimum wage is estimated to be $14.2 million. This is equivalent to a 1.9 percent increase in total farm production expenses. The impacts of the minimum wage increase are not, however, distributed evenly across all sectors. In relative (e.g., percentage) terms, the higher minimum wage will have a greater impact on production expenses within the vegetable (4.4 percent), nursery/flowers/sod (2.1 percent), and fruit (1.9 percent) sectors. In actual

dollar terms, the impacts are estimated to be greatest in the nursery/flowers/sod sector ($5.78 million), vegetable sector ($5.13 million), and livestock sector ($1.57 million).

Not all farms will shoulder the burden of the minimum wage increase. Only 2,374 farms (24 percent of all New Jersey farms) reported using hired labor in 2002; however, hired labor use is even more highly concentrated than these data suggest. For example, of the 454 largest New Jersey farms (in terms of market value of farm products sold), only 321 utilized hired labor. These farms paid wages of $142.9 million in 2002, or 76 percent of the entire industry's hired labor expense. Assuming that the distribution of the minimum wage impact is proportional to hired labor use, it is estimated that these 321 farms will bear $10.9 million in additional labor costs (an average of more than $33,800 per farm.)

To supplement the industry impact analysis, fourteen case studies were also conducted to provide an operation-level perspective of the likely effects of the minimum wage increase and validate the assumptions used in the impact analysis. Eight of the fourteen farms reported that they would be impacted by the minimum wage increase. Impacts varied considerably, ranging from a 2.6 to 36.5 percent increase in labor costs (or a 0.7 to a 9.5 percent increase in total production costs.) Supporting the hypothesis that the minimum wage increase would result in a "rising tide" effect, several farms reported that they would need to increase the wage rates of workers earning more than $7.15 per hour (from 4 to 12 percent) in order to maintain adequate wage differentials. Farms selling products through wholesale channels expressed concern regarding their limited ability to raise prices in order to offset these increased costs of production. Operators of farm direct marketing or agritourism enterprises also anecdotally reported increases in the payroll costs for non-production workers. The extent to which these costs could be mitigated by increasing prices was not fully known.

The increase in the New Jersey minimum wage will have an immediate impact on farm production expenses. The extent to which higher labor costs will be passed on to consumers in the form of higher prices or lowered via labor-saving practices cannot be accurately predicted. Overall, it is anticipated that the increase in the state's minimum wage will have an adverse impact on total farm industry profits, at least in the short run.

1. INTRODUCTION

The Fair Labor Standards Act (FLSA) establishes minimum wage, overtime pay, recordkeeping, and child labor standards affecting full-time and part-time workers in the private sector and in Federal, State, and local governments (US Dept. of Labor, 2006). Since its inception in 1938, the federal minimum wage has been increased nineteen times with the most recent revision occurring in 1997, setting the rate at $5.15 per hour. Proposals for an increase in the federal minimum wage raised during the Clinton administration were not adopted.[1] While the FLSA legislation outlines specific exemptions from the minimum wage, the large majority of U.S. jobs are covered under the provisions of the law.

Each state has the option of adopting a higher minimum wage or expanding the coverage of a state wage law to be more comprehensive than the FLSA. New Jersey first established a minimum wage rate of $1.25 per hour in 1966. Since that time the rate has been increased fifteen times. To a large extent, revisions in the state law mirrored changes in provisions of the FLSA.

In 2005, New Jersey legislators enacted legislation to increase New Jersey's minimum wage by two dollars over the course of two years.[2] The minimum wage rate was increased on October 1, 2005, from $5.15 to $6.15 per hour. On October 1, 2006 the rate will again increase to $7.15 per hour. This in effect represents a 39 percent increase in the minimum wage.

Debate over the impact and efficacy of the minimum wage is contentious and complex. Proponents of a minimum wage threshold often argue the need for a higher rate in order to provide a level of income sufficient to rise above federally defined poverty levels. Opponents, on the other hand, contend that increasing labor costs through mandatory minimum wage increases will reduce employment, impede business, and result in reduced workforce training and development by employers.

Members of the New Jersey farming community and the state's agricultural leadership have expressed concern that the increase in the state minimum wage rate will have negative repercussions on the financial well-being of farms in the state, many of which face intensifying

[1] As this report is being prepared, the 109th Congress is considering an increase in the federal minimum wage. A bill to raise the minimum wage from $5.15 to $7.25 was approved in the House of Representatives but failed to pass in the Senate.

[2] From an employer's perspective, this policy change also results in an increase in all associated employment taxes. Therefore, the realized effect of the minimum wage increase will be greater than two dollars per hour.

pressure on their bottom lines due to rising production costs and flat product prices. However, the extent to which farmers are paying workers minimum wage is not precisely documented. Therefore, the extent – if any – to which a higher minimum wage will increase farm production costs and erode the profitability of New Jersey farms is unclear.

2. STUDY OBJECTIVES AND APPROACH

This study is not intended as a commentary on the merits or demerits of a mandatory minimum wage, nor is it meant to be an exposition of the full implications of the current legislated minimum wage increase on the agricultural sector in New Jersey (e.g., impacts on the competitive position of New Jersey farmers in the marketplace resulting from any increase in labor costs). The primary objectives of this study are twofold. First, the total industry-level impact of the increase in the New Jersey minimum wage (from $5.15 to $7.15 per hour) on hired farm labor costs, and hence farm production expenses, is estimated. Second, because the state's farm sector is heterogeneous in terms of scale and type of production, the impact of any increase in farm production expenses resulting from the change in the minimum wage rate is placed in context by the anticipated distribution among various types of farm operations.

2.1 Relevant Past Research

In 1992, Cook College Professors Pritam Dhillon and Daymon Thatch measured the impact of the increase in New Jersey's minimum wage from $4.25 to $5.05 per hour (Dhillon and Thatch, 1992). The higher rate became effective on April 1, 1992 and represented an 18.8 percent increase. The authors estimated the effects of the policy change by examining the production costs of major agricultural crops and livestock produced in New Jersey, isolating the hired labor expense components, and calculating the increases in labor costs based on assumptions regarding the percentage of farm labor being hired at the minimum wage.[3] These labor cost increases were then placed in context of total production expenses for each product sector, and aggregated to assess the total industry-wide impact.

[3] Hired labor cost as a percentage of total labor cost varied widely across products. It ranged from 0.54% (egg production) to 45.64% (blueberries).

Dhillon and Thatch examined four scenarios, each based on varying assumptions regarding the wage structure of New Jersey farming:

1. 100 percent of hired farm workers were employed at the old minimum wage ($4.25). In other words, the authors made the assumption that labor costs across all sectors would increase by 18.8 percent. This essentially provided an upper bound to the impact of the minimum wage increase.
2. 75 percent of hired farm workers were employed at $4.25; 10 percent were employed at a wage at or above the new minimum wage ($5.05); and 15 percent were employed at a wage between $4.25 and $5.05.
3. 50 percent of hired farm workers were employed at $4.25; 20 percent were employed at a wage at or above $5.05; and 30 percent were employed at a wage between $4.25 and $5.05.
4. 25 percent of hired farm workers were employed at $4.25; 25 percent were employed at a wage at or above $5.05; and 50 percent were employed at a wage between $4.25 and $5.05.

In scenarios 2-4, above, the authors considered the possibility that the minimum wage increase would also lead to modest upward pressure on the wages of workers earning more than $5.05 at the time of the policy change. Their assumption was that the wage rates of workers earning more than the new minimum wage would rise by 5 percent.

Dhillon and Thatch ultimately estimated the total aggregate effect of the 1992 minimum wage increase based on the assumption that 75 percent of hired farm workers were earning the minimum wage at the time of the policy change (Scenario 2, above). They estimated the total impact on farm production expenses to be in the range of $18 - $19 million. Given the differing cost structures of the various sectors of New Jersey agriculture, the authors found considerable variation in the impacts of the minimum wage increase that took place in 1992. The fruit and vegetable sectors were found to be the most affected by the increase, not surprising in light of their high labor intensity.

2.2 Study Methods

This study employs an approach similar to that used by Dhillon and Thatch in order to derive an industry-level estimate of the impact of the minimum wage increases in New Jersey mandated in 2005 and 2006. However, the authors opted to refine the approach by:

1. Basing the development of assumptions for the proportion of farm workers earning minimum wage on empirical information on the structure of agricultural wages in New Jersey.
2. Examining the structure and composition of New Jersey agriculture for the purpose of determining the likely distribution of any estimated impacts.
3. Conducting several case studies of farms in the most labor-intensive sectors of the state's farming industry in order to illustrate potential operation-level impacts on labor costs associated with the minimum wage revisions.

2.3 Research Team

The study team comprised Brian J. Schilling, Kevin P. Sullivan, and Margaret F. Brennan. Brian Schilling, Associate Director of the Food Policy Institute at Rutgers University, served as project director. He has expertise in agricultural economics and policy, as well as planning. Kevin Sullivan is an institutional research analyst at the New Jersey Agricultural Experiment Station, specializing in agricultural economic analysis and farm viability issues. Margaret Brennan is Associate Director of the New Jersey Agricultural Experiment Station. She has a background in agricultural economics and brings specific expertise in analyzing farm costs of production.

3. ISSUE BACKGROUND AND POLICY CONTEXT

It is useful to frame the examination of the impact of New Jersey's minimum wage increase vis-à-vis similar policy changes being implemented or planned in other states. This section briefly reviews the current status of minimum wage requirements in all fifty states.

Labor use and cost in New Jersey's farming sector is also summarized in order to contextualize the impact assessment of the minimum wage increase. Specifically, data are presented to assist with understanding the distribution of impacts within the state's agricultural industry.

3.1 State Minimum Wage Rates: Current Status and Outlook

The current state minimum wage rates are summarized in Table 1. According to the U.S. Department of Labor (USDOL), as of April 2006, 24 states had minimum wage rates set at the federal level of $5.15 per hour. Nineteen states had established a minimum wage rate higher than the federal mandate. All Northeast states (except for New Hampshire and Pennsylvania) had adopted rates higher than that defined under the FLSA. Six states did not have a state minimum wage law, by default deferring to the federal provisions. Only Kansas had a state minimum wage less than that established under the FLSA; however, workers covered under the FLSA must earn at least the federal minimum wage of $5.15 per hour.

Table 1: State Minimum Wage Rates (as of April 2006).

State	Basic Minimum Rate ($ per hour)	State	Basic Minimum Rate ($ per hour)
Alabama	No state minimum wage law	Montana	5.15
Alaska	7.15	Nebraska	5.15
Arizona	No state minimum wage law	Nevada	5.15
Arkansas	5.15	New Hampshire	5.15
California	6.75	New Jersey	6.15
Colorado	5.15	New Mexico	5.15
Connecticut	7.40	New York	6.75
Delaware	6.15	North Carolina	5.15
District of Columbia	7.00	North Dakota	5.15
Florida	6.40	Ohio	5.15
Georgia	5.15	Oklahoma	5.15
Hawaii	6.75	Oregon	7.50
Idaho	5.15	Pennsylvania	5.15
Illinois	6.50	Rhode Island	7.10
Indiana	5.15	South Carolina	No state minimum wage law
Iowa	5.15	South Dakota	5.15
Kansas	2.65	Tennessee	No state minimum wage law
Kentucky	5.15	Texas	5.15
Louisiana	No state minimum wage law	Utah	5.15
Maine	6.50	Vermont	7.25
Maryland	6.15	Virginia	5.15
Massachusetts	6.75	Washington	7.63
Michigan	5.15	West Virginia	5.15
Minnesota	6.15	Wisconsin	6.50
Mississippi	No state minimum wage law	Wyoming	5.15
Missouri	5.15	**United States**	**5.15**

Source: U.S. Department of Labor, April 3, 2006.

New Jersey established its minimum wage rate in 1966. Prior to the most recent policy changes, the state minimum wage had been increased 14 times since its inception; however, it has been relatively static since 1990 (Table 2). Entering the 1990s, New Jersey's minimum wage was $3.80 per hour, mirroring the federal increase that became effective in April 1990. In 1991, the federal and New Jersey rates were raised to $4.25 per hour. In 1992, New Jersey surpassed the FLSA requirement and adopted a $5.05 per hour minimum wage. In 1997, the federal minimum wage was again raised to the present rate of $5.15 per hour. In 1999, New Jersey raised its minimum wage rate to the federal level.

Table 2: Nominal and Real Values of the New Jersey Minimum Wage (1966-2004).

Year	Minimum Wage Rate	Real Minimum Wage Rate (2004 dollars)	Year	Minimum Wage Rate	Real Minimum Wage Rate (2004 dollars)
1966	$1.25	$7.60	1986	$3.35	$6.11
1967	$1.25	$7.40	1987	$3.35	$5.81
1968	$1.40	$7.94	1988	$3.35	$5.55
1969	$1.50	$8.02	1989	$3.35	$5.25
1970	$1.50	$7.46	1990	$3.80	$5.62
1971	$1.50	$7.05	1991	$4.25	$6.01
1972	$1.75	$7.88	1992	$5.05	$6.89
1973	$1.75	$7.42	1993	$5.05	$6.69
1974	$2.00	$7.66	1994	$5.05	$6.54
1975	$2.20	$7.82	1995	$5.05	$6.38
1976	$2.40	$8.06	1996	$5.05	$6.20
1977	$2.50	$7.98	1997	$5.05	$6.06
1978	$2.50	$7.55	1998	$5.05	$5.96
1979	$2.90	$8.06	1999	$5.15	$5.96
1980	$3.10	$7.73	2000	$5.15	$5.78
1981	$3.35	$7.61	2001	$5.15	$5.64
1982	$3.35	$7.20	2002	$5.15	$5.50
1983	$3.35	$6.87	2003	$5.15	$5.33
1984	$3.35	$6.55	2004	$5.15	$5.15
1985	$3.35	$6.31			

Source: Poverty Research Institute (2005).

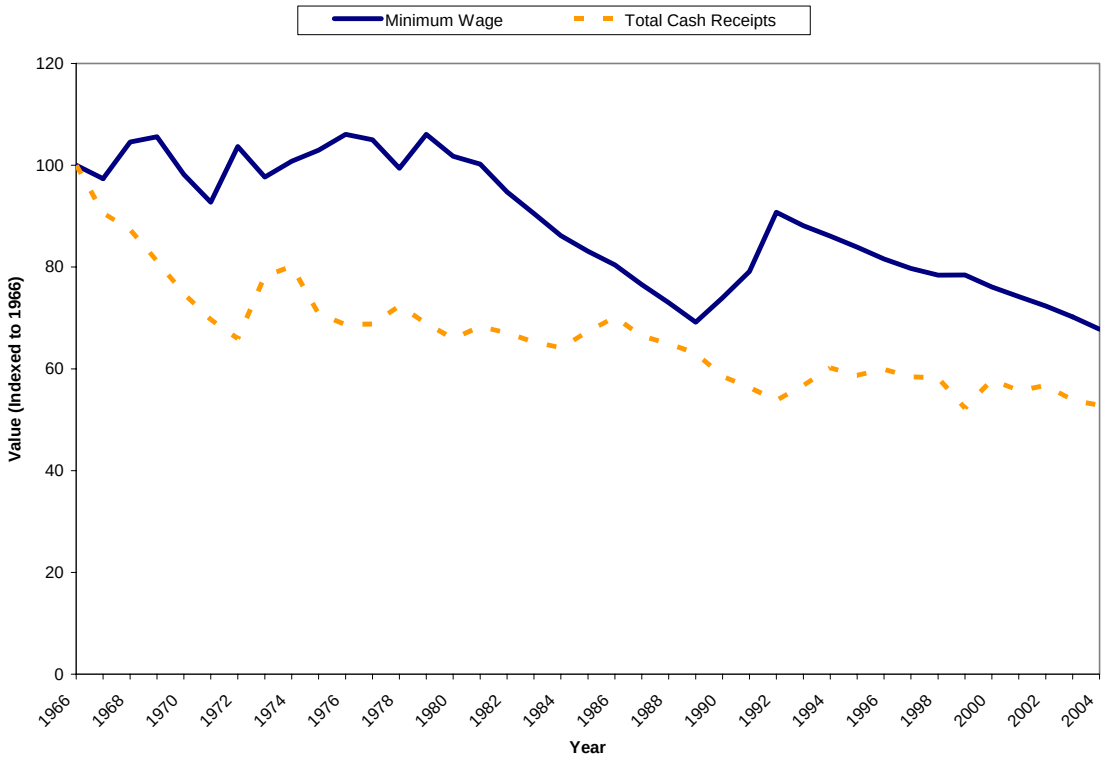
Table 2 also shows the trend in the inflation adjusted, or "real," value of the New Jersey minimum wage in current (2004) dollars.[4] The real value of the minimum wage peaked in 1976 and 1979 at $8.06 per hour (in 2004 dollars). In 2004, the real purchasing power of New Jersey's minimum wage was at its lowest point since its inception in 1966.

To place this in proper context, a useful comparison – and one relevant to this study – can be made by examining the trend in New Jersey farm cash receipts against the trend in the state minimum wage. In Figure 1, the real value of the state minimum wage and farm cash receipts are indexed (1966 = 100). The chart demonstrates that in real terms, both the state minimum wage and farm cash receipts have been generally declining over the past four decades. It also shows that the real value of farm cash receipts has declined more sharply than the real value of the minimum wage, adding some credence to the concerns expressed by many

[4] The conversion of nominal to real dollar values was based on the Consumer Price Index for All Urban Consumers: New York-Northern New Jersey-Long Island, NY-NJ-CT-PA (all items) provided by the Bureau of Labor Statistics.

farmers that rising production expenses (fuel, labor, and other inputs) are not being offset by commensurate increases in product prices.

Figure 1: Trend in the Real Value of the New Jersey Minimum Wage and Total New Jersey Farm Cash Receipts - 1966 to 2004 (in 2004 dollars).



A number of states are currently in the process of revising their minimum wage laws. USDOL data show that as of April 2006, thirteen states had planned increases in their state minimum wages (Table 3). Four states (Florida, Oregon, Vermont, and Washington) intend to have annual adjustments linked to the rate of inflation.

In April 2005, New Jersey legislators authorized a two-phase 39 percent increase in the state's minimum wage. Senate bill S-2065 and Assembly bill A-3781 required an increase in the minimum wage from $5.15 to $6.15 (effective October 1, 2005) and a subsequent increase to $7.15 (October 1, 2006). Once effective, New Jersey's $7.15 per hour minimum wage will

rank fifth highest state minimum wage in the U.S. (tied with Alaska). Only Washington ($7.63), Oregon ($7.50), Connecticut ($7.40), and Vermont ($7.20) will have higher rates.[5]

Table 3: Planned Increases in State Minimum Wage Rates (as of April 2006).

State	Planned Revision
Arkansas	From $5.15 to $6.25 (October 1, 2006)
Connecticut	From $7.40 to $7.65 (January 1, 2007)
Florida	Adjusted annually on January 1 (indexed to inflation rate)
Hawaii	From $6.75 to $7.25 (January 1, 2007)
Maine	From $6.50 to $6.75 (October 1, 2006) to $7.00 (October 1, 2007)
Michigan	From $5.15 to $6.95 (October 1, 2006) to $7.15 (July 1, 2007) to $7.40 (July 1, 2008)
New Jersey	From $6.15 to $7.15 (October 1, 2006)
New York	From $6.75 to $7.15 (January 1,2007)
Oregon	Adjusted annually on January 1 (indexed to inflation rate)
Rhode Island	From $7.10 to $7.40 (January 1, 2007)
Vermont	Adjusted annually on January 1 (indexed to inflation rate), beginning in 2007
Washington	Adjusted annually on January 1 (indexed to inflation rate)
West Virginia	From $5.15 to $5.85 (July 1, 2006) to $6.55 (July 2007) to $7.25 (July 1, 2008)

Source: U.S. Department of Labor, April 3, 2006.

3.2 Labor Use and Agricultural Wage Structure in New Jersey

Federal statistics provide several metrics of the nature and intensity of hired labor use and associated costs in New Jersey agriculture.[6,7] The data quickly reveal that (1) New Jersey agriculture tends to be more labor intensive in comparison to other states; (2) the reliance on hired labor varies substantially within the industry based on the scale of operation and type of production; and (3) farm labor use is relatively concentrated by region and type of operation.

[5] On January 1, 2007, several more states will increase their respective minimum wage rates: Connecticut ($7.65), Hawaii ($7.25), New York ($7.15), and Rhode Island ($7.40). Michigan and West Virginia are in the process of three-phase increases in their minimum wage rates that will raise their rates from the current federal level to, respectively, $7.40 and $7.25 in July 2008.

[6] "Hired farm labor" is defined by the National Agricultural Statistics Service to include "regular workers, part-time workers, and members of the operator's family if they received payments for labor." Hired labor expense, as reported in the Census of Agriculture, also includes social security taxes, state taxes, unemployment taxes, payments for sick leave or vacation pay, workman's compensation, insurance premiums, and pension plans.

[7] Data are not presented for custom labor expenditures or contract services in this section, nor elsewhere in the report. In the latter case, farmers in New Jersey reported that they are generally not aware of the specific wages paid to laborers retained on contract through a crew leader; therefore, the impact from the minimum wage increase on agricultural contract labor in New Jersey is not known.

3.2.1 Labor Intensity in New Jersey Agriculture

New Jersey farm operations tend to be very labor intensive, with labor costs accounting for 29 percent, or $186.9 million, of all New Jersey farm production costs in 2002. This proportion is nearly three times higher than the national average for all farms (Table 4).[8] An analysis of Census of Agriculture data across all states reveals significant variability in the use and cost of hired labor. New Jersey ranks second in the continental U.S. in terms of the percentage of total farm production expenses represented by hired labor (only Connecticut is higher).

Differentials in the cost of labor can explain only part of New Jersey's disproportionately high expenditure on farm labor. While the average wages paid per farm worker in New Jersey were 35 percent higher than the national average, further analysis shows that New Jersey farms tend to employ more workers than their national counterparts.[9] *Among farms reporting hired labor*, the average New Jersey farm employed 9.6 workers in 2002. In comparison, the national average was only 5.5 workers per farm. These differences in labor use reflect the state's specialization in considerably more labor-intensive horticultural crop production (e.g., nursery products, fruits, and vegetables).

3.2.2 Farm Labor Use Across Sectors

According to the Census of Agriculture, New Jersey farms employed 22,718 workers in 2002 (NASS 2002). However, these jobs were concentrated on the 2,374 New Jersey farms – slightly less than one-quarter (24%) of all farms in the state – that actually report the use of hired farm labor. More detailed analysis shows that the reliance on farm labor varies significantly across sectors (Table 5). For example, 73 percent of all dairy farms, 40 percent of fruit farms, 35 percent of vegetable farms, and 31 percent of nurseries reported hired labor use

[8] Farm production expenses are reported for all farms in the Census of Agriculture. However, only 24% of New Jersey farms – and 26% of U.S. farms – report hired labor. Therefore, the calculation of labor costs as a proportion of total production expenses is somewhat misleading. Hired labor expense as a proportion of total production expenses is actually higher among farms with hired labor.

[9] The average wages paid per worker in New Jersey amounted to $8,228 in 2002. This compares to a national average of $6,115 per worker. Average wages, as calculated, include full-time and part-time/seasonal workers.

in 2002. The labor intensity of the state's nursery, vegetable, and fruit sectors is also evident in terms of the composition of production costs. While labor costs comprise, on average, about 29 percent of total farm production expenses in New Jersey, they represent a larger share of total production expenses in the vegetable (32%), nursery (34%), and fruit (42%) sectors (Table 5). Interestingly, these sectors combined accounted for only 39 percent of all farms in the state in 2002, but generated 82 percent of the state's agricultural cash receipts and paid 85 percent of hired labor wages (NASS 2002).

Table 4: Hired Labor Expense as a Percent of Total Farm Production Expenses (All States, 2002).

State	Hired Labor Expense as a % of Total Production Expenses	State	Hired Labor Expense as a % of Total Production Expenses
Connecticut	32.0%	**United States**	**10.7%**
New Jersey	***28.9%***	Wyoming	9.9%
Rhode Island	28.1%	North Carolina	9.8%
Massachusetts	27.2%	Ohio	9.2%
Florida	24.4%	Tennessee	8.7%
Oregon	22.3%	Georgia	8.5%
Washington	22.3%	Colorado	8.3%
New Hampshire	22.0%	West Virginia	7.8%
California	21.0%	Montana	7.5%
Maine	19.6%	Texas	7.1%
Arizona	18.8%	Alabama	7.0%
New York	16.1%	Indiana	7.0%
Nevada	16.0%	Illinois	6.8%
Vermont	14.7%	Delaware	6.7%
Michigan	14.1%	Mississippi	6.7%
Pennsylvania	12.3%	Arkansas	6.5%
Utah	12.3%	Minnesota	6.3%
New Mexico	12.2%	Missouri	6.3%
South Carolina	12.1%	Oklahoma	5.8%
Virginia	11.8%	North Dakota	5.2%
Maryland	11.3%	Nebraska	4.1%
Kentucky	11.2%	South Dakota	4.1%
Louisiana	11.2%	Iowa	4.0%
Wisconsin	11.1%	Kansas	3.9%
Idaho	10.8%		

Source: Derived from data provided by the National Agricultural Statistics Service, 2002 Census of Agriculture.

Table 5: Hired Labor Expense as a Percent of Total Farm Production Expenses (New Jersey, by Industry Sector 2002).

	Farms	Farms with Hired Labor	Pct. of Farms with Hired Labor	Hired Labor Expenses $1,000	% of Total Expenses in Sector
All Farms	**9,920**	**2,374**	**23.9%**	**186,913**	**28.9%**
Fruit and tree nut	602	241	40.0%	29,608	42.2%
Greenhouse, nursery, and floriculture	2,301	719	31.2%	88,029	33.5%
Vegetable and melon	942	327	34.7%	40,475	32.2%
Poultry and egg production	267	31	11.6%	5,315	21.3%
Aquaculture/other animal production	1,885	434	23.0%	11,469	20.4%
Dairy cattle and milk production	165	120	72.7%	4,379	13.4%
Field Crops	1,666	237	14.2%	3,503	12.8%
Oilseed and grain farming	613	151	24.6%	2,859	10.1%
Cattle feedlots	239	21	8.8%	228	9.3%
Beef cattle ranching and	609	52	8.5%	767	7.9%
Sheep and goat farming	525	35	6.7%	154	3.5%
Hog and pig farming	106	6	5.7%	126	5.0%

Source: National Agricultural Statistics Service, 2002 Census of Agriculture.

The type of hired labor required to support production also varies considerably across sectors. Available data do not readily allow for the determination of "full-time" or "part-time" employment. However, distinction is made between workers hired for less than 150 days annually and 150 or more days per year. As shown in Table 6, 13,676 hired farm workers (approximately 60 percent of all farm workers) worked fewer than 150 days (i.e., they were more seasonal in nature or part-time).

Farms reporting the use of hired labor employed on average 9.6 workers annually. Of these, 3.8 worked 150 or more days and 5.8 worked fewer than 150 days. Fruit farms tend to be the most labor-intensive type of production. Fruit farms reporting hired labor employed, on average, 24.5 workers in 2002. Of these, 20.2 were hired on a seasonal or part-time basis.

Table 6: Hired Labor Use in New Jersey Agriculture, by Industry Sector (2002).

	Total Workers		Workers: 150+ Days/Year		Workers: Less than 150 Days/Year	
	Number	Avg. No. per Farm*	Number	Avg. No. per Farm*	Number	Avg. No. per Farm*
All Farms	***22,718***	***9.6***	***9,042***	***3.8***	***13,676***	***5.8***
Greenhouse, nursery, and floriculture	7,888	11.0	3,986	5.5	3,902	5.4
Vegetable and melon	5,610	17.2	2,579	7.9	3,031	9.3
Fruit and tree nut	5,914	24.5	1,050	4.4	4,864	20.2
Aquaculture/other animal production	1,351	3.1	569	1.3	782	1.8
Poultry and egg production	320	10.3	190	6.1	130	4.2
Dairy cattle and milk production	390	3.3	236	2.0	154	1.3
Other Crops	632	2.7	219	0.9	413	1.7
Oilseed and grain farming	292	1.9	130	0.9	162	1.1
Beef cattle ranching	92	1.8	26	0.5	66	1.3
Cattle feedlots	100	4.8	7	0.3	93	4.4
Sheep and goat farming	75	2.1	24	0.7	51	1.5
Hog and pig farming	54	9.0	26	4.3	28	4.7

* Average number of workers per farm is calculated only for farms reporting hired labor in 2002.
Source: National Agricultural Statistics Service, 2002 Census of Agriculture.

More than half of all hired farm labor in New Jersey is concentrated in four highly agricultural counties: Atlantic, Cumberland, Gloucester, and Burlington (Table 7). The geographic concentration of farm labor need is linked to the nature of existing production, as these counties also account for a high concentration of the state's fruit, vegetable, and nursery production.

Table 7: Distribution of Hired Farm Labor by County (2002).

County	No. of Farms	Farms with Hired farm labor	Total No. of Hired Workers
Atlantic	456	113	4,440
Bergen	90	40	191
Burlington	909	217	2,262
Camden	215	42	537
Cape May	199	44	265
Cumberland	616	218	3,541
Essex	15	4	32
Gloucester	691	151	2,379
Hudson	0	0	0
Hunterdon	1,512	275	1,351
Mercer	305	76	517
Middlesex	276	92	572
Monmouth	889	288	1,824
Morris	406	83	834
Ocean	215	41	339
Passaic	71	17	143
Salem	753	156	1,676
Somerset	440	114	385
Sussex	1,030	217	363
Union	18	8	119
Warren	814	178	948
New Jersey	**9,920**	**2,374**	**22,718**

Source: National Agricultural Statistics Service, 2002 Census of Agriculture.

3.2.3 New Jersey Farm Industry Concentration

The issue of farm industry concentration warrants further consideration given its relevance for understanding the distribution of any impacts resulting from changes in the state minimum wage policy. Like many industries, New Jersey's agricultural sector is highly concentrated in terms of production output (Table 8). According to the Census of Agriculture, only 7 very large farms account for approximately 10 percent of total industry sales ($80.7 million). These farms, averaging more than $11.5 million in sales each, paid 13.6 percent of all hired labor expenses in 2002. In a similar manner, the 142 largest New Jersey farms (in sales terms) generated 50 percent of industry revenue. The data in Table 8 reveal several points

relevant to understanding the impact of the state's minimum wage increase on the farming industry.

The largest New Jersey farms have a larger share of hired farm labor expense vis-à-vis total farm production expense. As an illustration, according to Census of Agriculture data the 454 largest New Jersey farms (equivalent to less than 5 percent of all farms) accounted for three-quarters of total industry sales in 2002. These farms (only 321 of which reported hired labor) incurred 63.6 percent of total industry production costs, but 76.4 percent of total hired farm labor costs. Assuming no significant disparity in wage rates exists between the largest farms in the state and all others, these data reveal a considerable concentration of labor intensity among the state's large farms.

Table 8: Farm Industry Concentration in New Jersey (2002).

	Number of Farms Accounting for:			
	10% of Farm Sales	**25% of Farm Sales**	**50% of Farm Sales**	**75% of Farm Sales**
Number of farms	7	28	142	454
Market value of farm products ($1,000)	$80,724	$188,338	$375,449	$562,714
Avg. market value of farm products per farm	$11,532,058	$6,726,371	$2,644,005	$1,239,457
Total farm production expenses ($1,000)	$70,589	$147,091	$269,708	$411,409
Avg. total production expenses per farm	$10,084,142	$5,253,250	$1,899,352	$906,187
Pct. of industry total production expenses	10.9%	22.7%	41.7%	63.6%
No. of farms with hired labor	**6**	**24**	**108**	**321**
Total hired labor expenses ($1,000)	$25,496	$51,399	$95,872	$142,882
Avg. hired labor expenses per farm	$4,249,333	$2,141,625	$887,704	$445,115
Pct. of industry hired labor expenses	**13.6%**	**27.5%**	**51.3%**	**76.4%**

Source: Derived from data from the National Agricultural Statistics Service, 2002 Census of Agriculture.

4. DATA COLLECTION

Following the approach of Dhillon and Thatch, the impact of the two-phase minimum wage increase on New Jersey farm labor costs, and hence total farm production costs, was derived based upon a set of assumptions regarding (1) farm labor costs within each major commodity sector and (2) the proportion of workers estimated to be earning less than the October 2006 minimum wage of $7.15 per hour. All estimations of the impact of the wage increase use the pre-October 2005 rate of $5.15 per hour as a reference point. The impact assessment required the collection or derivation of three primary sets of data. These include:

1. Estimation of hired labor costs as a percentage of total farm production costs for the major farm commodities produced in New Jersey.
2. Estimation of total hired farm labor expenses for each major farm commodity.
3. Estimation of the proportion of hired farm workers in each commodity sector earning (1) less than $6.16 per hour and (2) between $6.15 and $7.15 per hour (prior to the minimum wage increase).

4.1 Hired Labor Costs as a Percentage of Total Production Costs

The proportion of total production costs constituted by hired labor was determined for each major farm commodity produced in New Jersey. These proportions were derived from available farm cost of production studies (Table 9). Many of the cost of production studies utilized were conducted at Cook College in 1996. However, in several instances older New Jersey-based cost of production studies – generally those used by Dhillon and Thatch in 1992 – were utilized to isolate hired labor costs.[10] When New Jersey specific data were not available, USDA farm costs and returns data from the Northern Crescent region were utilized, if available.[11] USDA costs and returns data were utilized for five commodities (cattle, hogs, corn, soybeans, and wheat). There were three commodities for which both New Jersey-specific data and USDA data were unavailable (strawberries, asparagus and nursery); for these commodities cost of production studies were utilized from Florida, Kentucky, and Ohio, respectively. Finally, the hired labor percentage used for the "other" categories (i.e., other livestock, other field crops, other vegetables, and other fruits) was calculated as a simple average of all of the commodities within that commodity group.

The proportion of farm production costs represented by hired labor varies considerably across commodities. In general, hired labor represents a much larger share of overall costs for fruits, vegetables, nursery, flowers and sod, than for field crops and livestock production.

[10] The decision to use older New Jersey cost of production studies was predicated on the assumption that a greater level of inaccuracy may result from using cost of production studies from other states that have different production practices, economies of scale, and business (including labor) costs.

[11] The USDA estimates production costs and returns for major field crop and livestock enterprises for the United States and major production regions for corn, soybeans, wheat, cotton, grain sorghum, rice, peanuts, oats, barley, beets, tobacco, milk, hogs, and cow-calf. The data used to estimate cost and returns are based on producer surveys conducted every 3-8 years for each commodity and updated each year with estimates of annual price, acreage, and production changes.

Notable exceptions to this are horses, dairy and potatoes (both potatoes and sweet potatoes), which have hired labor percentages of 17.4, 8.9 and 10.1 percent respectively.

Table 9: Hired Labor as Percentage of Production Costs by Commodity.

Commodity	Hired Labor Percentage	Source
Livestock		
Eggs	2.1%	Brumfield and Brennan (1996).
Milk	8.9%	Brumfield and Brennan (1996).
Horses	17.4%	Latimer and Vaughn (1984).
Cattle	0.4%	USDA-ERS (2004).
Hogs	4.6%	USDA-ERS (2004).
Other Livestock	6.7%	Simple average of all livestock
Field Crops		
Corn	1.1%	USDA-ERS (2004).
Hay	1.0%	Brumfield and Brennan (1996).
Potatoes	10.1%	Brumfield and Brennan (1996).
Soybeans	1.2%	USDA-ERS (2004).
Sweet Potatoes	10.1%	Same as white potatoes
Wheat	0.2%	USDA-ERS (2004).
Other Field Crops	4.0%	Simple average of all field crops.
Vegetables		
Asparagus	29.2%	Ernst and Woods (2005).
Cabbage	25.0%	Brumfield and Brennan (1996).
Cucumber	31.9%	Brumfield and Brennan (1996).
Eggplant	27.3%	Dhillon and Latimer (1986)
Escarole	21.4%	Dhillon and Latimer (1986)
Iceberg Lettuce	21.8%	Brumfield and Brennan (1996).
Bell Peppers	23.0%	Brumfield and Brennan (1996).
Snap Beans	6.7%	Brumfield and Brennan (1996).
Spinach	14.3%	Dhillon and Latimer (1986)
Sweet corn	16.1%	Brumfield and Brennan (1996).
Tomatoes	28.6%	Brumfield and Brennan (1996).
Other Vegetables	20.9%	Simple average of all vegetables
Fruits		
Apples	23.1%	Brumfield and Brennan (1996).
Blueberries	44.3%	Brumfield and Brennan (1996).
Cranberries	8.8%	Brumfield and Brennan (1996).
Peaches	12.8%	Brumfield and Brennan (1996).
Strawberries	25.1%	Smith and Taylor (2003).
Other Fruit	22.2%	Simple average of all fruit
Other		
Nursery	17.3%	Taylor et al. (1990).
Flowers	39.0%	Brumfield and Brennan (1996).
Sod	23.8%	A. Turner Price et al. (1985).
Nursery, Flowers, Sod	20.0%	Weighted average of nursery, flowers and sod

4.2 Total Farm Labor Expenses by Commodity

Total farm labor expenses are not available at the commodity level (e.g., tomatoes, blueberries, peaches, etc.) for the major crops and livestock produced in New Jersey and therefore needed to be estimated. The Census of Agriculture does, however, report production expenses at the commodity group level (e.g., vegetables, oilseed crops, etc.).[12] The National Agricultural Statistics Service (New Jersey field office) annual bulletin likewise reports total cash receipts for each major commodity group.

For each commodity group, total production expenses as a percentage of total sales was calculated based on data from the 2002 Census of Agriculture (Table 10). In instances where the total production expenses within a commodity group exceeded total sales (e.g., oilseeds, "other" crops, beef cattle, and cattle feedlots), this percentage was assumed to be 100 percent. In the absence of more appropriate data, the assumption was made that the total production expenses as a percent of sales was consistent for all commodities within a commodity group. As an example, total production costs for apples, blueberries, cranberries, peaches, strawberries, and other fruit crops were assumed to be 76.9 percent of sales.

Table 10: Production Expenses as Percentage of Sales by Commodity Group (2002).

Commodity	Market Value of Products Sold ($1,000s)	Production Expenses ($1,000s)	Production Expenses as % of Sales	Percentage used to Estimate Expenses by Commodity Type
Oilseed and grain farming	26,343	28,330	107.5%	100.0%
Vegetable and melon farming	171,278	125,767	73.4%	73.4%
Fruit and tree nut farming	91,249	70,213	76.9%	76.9%
Greenhouse, nursery, and floriculture	356,162	262,631	73.7%	73.7%
Other crop farming (hay other crops)	14,630	27,326	186.8%	100.0%
Beef cattle ranching and farming	3,122	9,674	309.9%	100.0%
Cattle feedlots	935	2,453	262.4%	100.0%
Dairy cattle and milk production	34,422	32,579	94.6%	94.6%
Poultry and egg production	26,178	24,988	95.5%	95.5%

Source: National Agricultural Statistics Service, 2002 Census of Agriculture.

[12] Commodity groups are defined in the Census of Agriculture according to the North American Industry Classification System.

To derive an estimate of total production costs by commodity, these percentages were applied to 2004 farm cash receipts data reported by the National Agricultural Statistics Service's New Jersey field office (Table 11). The total estimated production expenses for all crops and livestock ($698.8 million) is a summation of the commodity estimates in the table. As a point of validation, this derived total is comparable to the total industry-wide production expense (i.e., purchased inputs plus total hired labor) of $708 million reported by the National Agricultural Statistics Service annual bulletin for 2004.

Table 11: Estimated Production Expenses by Commodity.

Commodity	2004 Cash Receipts ($1,000s)	Expenses as % of Cash Receipts	Estimated Production Expenses ($1,000's)
Livestock			
Eggs	$31,500	95.5%	$30,068
Milk	$32,308	94.6%	$30,578
Horses[1]	$109,000	96.7%	$105,403
Cattle	$7,656	100.0%	$7,656
Hogs [1]	$1,056	96.7%	$1,021
Other Livestock [1]	$5,146	96.7%	$4,976
Field Crops			
Corn	$11,640	100.0%	$11,640
Hay	$9,492	100.0%	$9,492
Potatoes	$3,270	100.0%	$3,270
Soybeans	$22,185	100.0%	$22,185
Sweet Potatoes	$3,683	100.0%	$3,683
Wheat	$3,658	100.0%	$3,658
Other Field Crops	$4,079	100.0%	$4,079
Vegetables			
Asparagus	$2,700	73.4%	$1,983
Cabbage	$6,475	73.4%	$4,755
Cucumber	$15,481	73.4%	$11,367
Eggplant	$5,376	73.4%	$3,948
Escarole	$2,426	73.4%	$1,781
Iceberg Lettuce	$8,160	73.4%	$5,992
Bell Peppers	$23,200	73.4%	$17,035
Snap Beans	$6,448	73.4%	$4,735
Spinach	$3,796	73.4%	$2,787
Sweet corn	$10,920	73.4%	$8,018
Tomatoes	$25,530	73.4%	$18,746
Other Vegetables	$47,873	73.4%	$35,152
Fruits			
Apples	$5,751	76.9%	$4,425
Blueberries	$45,630	76.9%	$35,111
Cranberries	$13,514	76.9%	$10,399
Peaches	$23,180	76.9%	$17,836
Strawberries	$1,944	76.9%	$1,496
Other Fruit	$4,844	76.9%	$3,727
Nursery, Flowers & Sod	$368,546	73.7%	$271,763
Total All Crops and Livestock	$866,467	80.6%	$698,765

[1] Expenses as a percentage of cash receipts for horses, hogs, and other livestock are calculated as a simple average of the percentages for eggs, milk, and cattle.

Source: 2004 cash receipts data are from the National Agricultural Statistics Service, New Jersey Field Office 2005 Agricultural Statistics report.

4.3 Proportion of Farm Labor Earning Less than Minimum Wage

Anecdotally, it is known that many New Jersey farmers pay wages - or a combination of wages and other benefits – in excess of $5.15 per hour because of the intense competition for labor experienced both within the industry and with the construction industry, landscaping, and quick service foodservice businesses. Some farmers offer monetary bonuses, often determined as an increment added to the base wage rate, to workers that stay with the operation over a specified period of time or meet productivity targets.

Currently available data are, however, generally not informative from the standpoint of wage distribution within the New Jersey farm sector. The authors identified three sources of agricultural wage data that provide some – albeit limited – perspective on the nature of wages paid in the industry and place the imminent $7.15 minimum wage in context. These are the National Agricultural Workers Survey and the H2A Certification for Agricultural Work program, both administered by the U.S. Department of Labor, and the Farm Labor Survey conducted by the National Agricultural Statistics Service.

The National Agricultural Workers Survey (NAWS) is conducted annually by the U.S. Department of Labor. It provides detailed data on the social and economic characteristics of U.S. field laborers working in crop production. Approximately 3,600 randomly selected field workers are surveyed nationally, generating information on earnings, monetary bonuses, insurance benefits, and working conditions. This data is not available at the state level; however, the 2002 NAWS reported a national average wage of $7.30 per hour for all U.S. crop workers.

Farm labor wage information is also available from the Farm Labor Survey (FLS), also known as the National Agricultural Labor Survey. The FLS is conducted four times annually by the National Agricultural Statistics Service (NASS). Hourly wage rates for hired workers are provided by type of worker (i.e., field and livestock) and by region and state. Hourly wage rates are not reported by commodity type, and in New Jersey the sample size is not large enough to support wage rate estimates by type of worker. Therefore, caution is strongly urged in interpreting these data as the statistical reliability of the estimates is highly questionable.

Despite these limitations, the authors requested a special tabulation of the 2005 FLS data specifically for hired agricultural workers in New Jersey. NASS estimated the average farm wage rate to be $9.90 per hour. In addition, the agency provided detailed information (e.g., quartiles) on the wages for hired farm workers in New Jersey (Table 12).[13] For example, in January 2005, 25 percent of all workers surveyed earned less than $10.15 per hour. Interestingly, the first quartile wage rate fell to $8.05 in April, $8.10 in July, and $7.10 in October.[14]

At first glance, the FLS data are ostensibly useful for establishing an upper bound for the proportion of farm workers in New Jersey earning the minimum wage. More specifically, the first quartile values in Table 12 suggest that less than one-quarter of all farm workers in the state earned less than minimum wage (i.e., $7.15) in 2005. However, given the caveat regarding the limited statistical reliability of these data, the authors do not believe these data are appropriate for guiding the assumptions needed to analyze the minimum wage impact.

Table 12: NASS 2005 Farm Labor Survey: New Jersey Wage Distribution.

Quarterly Labor Survey

Quartile	Jan 05 Wages	April 05 Wages	July 05 Wages	Oct 05 Wages
Q1	$10.15	$8.05	$8.10	$7.10
Q2	$12.75	$10.35	$9.45	$8.00
Q3	$13.10	$11.35	$11.65	$12.15

Source: USDA National Agricultural Statistics Service (Special tabulation).

Arguably the most useful and insightful data source for this study is the farm labor wage information the U.S. Department of Labor collects under its H2A Certification for Agricultural Work program. The U.S. Department of Labor, Bureau of Labor Statistics (BLS) provides wage data collected for use in the Foreign Labor Certification process. The New Jersey data are collected through surveys conducted by the New Jersey Department of Labor

[13] Quartiles are the value of the boundary at the 25th, 50th, or 75th percentiles of a distribution, each containing one-quarter of the sample or population.

[14] The fact that wages in January are higher than at other times of the year makes intuitive sense since a higher share of workers on farms in January would likely be permanent, full-time workers who would presumably earn higher wages.

(NJDOL). The NJDOL conducts surveys annually for 11 different crop types; however, every crop type is not surveyed each year.

As background for this study, the authors compiled H2A survey results from the three most recent years (2003, 2004, and 2005) through the NJDOL. Table 13 provides an overview of the crop types covered under the survey, as well as the number of farms surveyed (by region), number of workers surveyed, and the prevailing wage rates provided by the NJDOL.[15] The crop types cover most major fruits, vegetables, and nurseries: dig and ball nurseries, greenhouse nurseries, cranberries, apples, peaches, blueberries grapes, sweet potatoes, tomatoes, asparagus, mixed fruit and vegetables (e.g., melons, cucumbers, sweet corn, squash, peppers, and eggplants), and grapes. New Jersey prevailing wage rates collected from 2003 to 2005 range from $5.15 per hour (sweet potatoes) to $9.00 per hour (cranberries).

[15] The prevailing wage rate is defined as the average wage paid to similarly employed workers in the requested occupation in the area of intended employment.

Table 13: New Jersey Department of Labor Data H2A Farm Worker Survey General Survey Information.

Region	South	South	North	South	North	South	North	South
Survey Year	2003	2003	2003	2003	2003	2003	2003	2003
Survey Period	10/14-10/24	10/6-10/10	9/15-9/24	9/17-9/22	7/21-8/13	8/8-8/15	7/21-8/28	8/8-8/16
Crop	Cranberries	Sweet Potatoes	Apples	Apples	Peaches	Peaches	Mixed Vegetables	Mixed Vegetables
Prevailing Wage	$9.00	$5.15	$7.00	$5.35	$7.50	$5.35	$7.00	$5.90
Total Employers	17	28	25	100	22	70	65	100
Workers Covered	200	266	150	2,100	140	2,225	440	2,156
Employers Contacted	11	17	18	24	16	29	29	39
% Employers in Survey	65%	61%	72%	24%	73%	41%	45%	39%

Region	North	South	South	North	South	North	South	South
Survey Year	2003	2003	2003	2003	2003	2003	2003	2003
Survey Period	7/21-8/7	7/14-7/31	7/2-7/10	4/24-5/15	5/13-5/20	4/24-5/15	5/5-5/20	5/5-5/20
Crop	Tomatoes	Tomatoes	Blueberries	Nursery - Dig & Ball	Asparagus	Nursery - Greenhouse	Nursery - Dig & Ball	Nursery - Greenhouse
Prevailing Wage	$7.00	$5.50	$3.30/flat	$7.25	$5.50	$7.00	$6.50	$7.00
Total Employers	50	100	55	65	20	40	65	75
Workers Covered	300	2,100	3,349	497	487	492	473	478
Employers Contacted	30	27	33	30	14	30	31	27
% Employers in Survey	60%	27%	60%	46%	70%	75%	48%	36%

Region	North	North	North	South	North	South	South	South
Survey Year	2004	2004	2004	2004	2004	2004	2004	2004
Survey Period	7/23-8/27	9/1-9/22	8/25-9/22	8/2-8/18	7/2/-8/20	7/7-7/30	6/7-6/29	5/20-6/1
Crop	Mixed Vegetables	Apples	Peaches	Peaches	Tomatoes	Tomatoes	Blueberries	Asparagus
Prevailing Wage	$7.00	$8.00	$8.00	$5.15	$7.25	$5.45	$3.30/flat	$5.25
Total Employers	65	25	22	70	50	100	55	20
Workers Covered	123	150	200	666	300	818	2,715	548
Employers Contacted	24	11	13	20	21	37	34	17
% Employers in Survey	37%	44%	59%	29%	42%	37%	62%	85%

Region	North	North	South	South	South	South	South	South
Survey Year	2004	2004	2005	2005	2005	2005	2005	2005
Survey Period	4/13-4/26	4/13-4/26	9/1-9/12	10/11-10/26	10/3-10/10	9/13-9/28	8/16-8/31	8/1-8/15
Crop	Nursery - Dig & Ball	Nursery - Greenhouse	Apples	Cranberries	Sweet Potatoes	Grapes	Mixed Vegetables	Peaches
Prevailing Wage	$7.00	$7.50	$5.50	$9.00	$6.15	$5.15	$6.00	$5.40
Total Employers	60	40	100	20	28	20	70	70
Workers Covered	416	521	2,100	134	244	39	1,229	604
Employers Contacted	27	28	22	9	13	17	66	24
% Employers in Survey	45%	70%	22%	45%	46%	85%	94%	34%

Notes: Total employers are the total number of employers within a region. Workers covered are the number of workers included in survey.

Source: New Jersey Department of Labor.

The proportion of hired labor costs, by commodity, that will be impacted by the minimum wage increase was ultimately estimated utilizing New Jersey Department of Labor H2A data. While the data cannot be viewed as statistically representative of each sector, the study team believes that the data is most suitable for this analysis.

Using the H2A data, the percentage of workers earning less than $6.15 per hour and workers earning between $6.15 and $7.15 were identified and used as a proxy for the percentage of wages that would be impacted by the minimum wage increase. This proxy is considered conservative because intuitively it can be assumed that the proportion of workers that earned less than $7.15 per hour by crop type would generally be greater than the proportion of wages paid to workers who earn less than $7.15 per hour. This assumption is reasonable since (1) there are a smaller proportion of higher paying jobs on farms relative to lower paying jobs, and (2) farm workers in higher paying jobs generally work more hours during the year (i.e., lower paying jobs are generally seasonal work while higher paying jobs are often full time jobs).

In order to estimate the percentage of workers earning less than $7.15 per hour, a number of transformations were made to the raw H2A data. First, regional data were aggregated to the state level. Second, nursery (dig and ball) and nursery (greenhouse) data were aggregated to "nursery." Third, blueberry piece rates were converted to hourly rates using a productivity estimate of 2.25 flats picked per hour (i.e. 18 flats per 8-hour day).[16] In instances where more than one year of data was available for a specific crop, the most recent year was used. The H2A data tabulations provided useful insight into the structure of agricultural wages paid in New Jersey across several commodity areas and allowed for the estimation of the percentage of workers earning (1) less than $6.15 per hour and (2) between $6.15 and $7.15 per hour (Table 14).

[16] In the course of this study, an operator of a large blueberry farm stated that their piece rate workers picked between 20 and 30 flats per day; thus the productivity conversion of 18 flats per day is deemed conservative.

Table 14: Summary of Information Utilized from H2A Farm Worker Surveys.

Commodity	% Workers Earning Less Than $6.15	% Workers Earning Between $6.15 and $7.15
Apples	50.7%	15.1%
Asparagus	79.2%	17.5%
Blueberries	0.0%	17.8%
Cranberries	4.5%	3.0%
Nursery	28.4%	30.1%
Peaches	90.2%	3.7%
Sweet Potatoes	82.0%	11.9%
Tomatoes	77.5%	11.0%
Vegetables	60.2%	25.5%

5. IMPACT ASSESSMENT

The impact assessment was divided into three components, or wage brackets. First, the impact on farm labor costs due to wage increases for workers earning less than $6.15 per hour prior to the minimum wage increase (Wage Bracket 1) was estimated. The maximum increase for workers earning less than $6.15 per hour is 38.8 percent. Second, the impact on farm labor costs due to wage increases for workers earning between $6.15 and $7.15 per hour prior to the minimum wage increase (Wage Bracket 2) was estimated. The maximum increase for workers in this wage bracket is 16.3 percent. Third, the impact on farm labor costs due to wage increases for workers earning $7.15 or more per hour prior to the minimum wage increase (Wage Bracket 3) was estimated. This impact, viewed in this report as a “rising tide” effect, stems from the assumption that farmers may raise the wage rates of employees who earn more than minimum wage in order to preserve the wage parity among their employees.

Three alternative scenarios were considered when estimating the increased minimum wage impacts. Each scenario reflects different assumptions with respect to the wage structure for workers earning less than $7.15 per hour and different assumptions about the magnitude of

the "rising tide" effect for workers earning more than $7.15 per hour. Table 15 summarizes the three scenarios.

Table 15: Impact Assessment Scenarios and Assumptions.

Assumptions	Scenario 1 (Low Estimate)	Scenario 2 (Middle Estimate)	Scenario 3 (High Estimate)
Average Hourly Wage for Workers Earning Between $5.15 and $6.15	$5.90	$5.65	$5.40
Average Hourly Wage for Workers Earning Between $6.15 and $7.15	$6.90	$6.65	$6.40
% Wage Increase for Workers Earning Between $5.15 and $6.15	21.2%	26.5%	32.4%
% Wage Increase for Workers Earning Between $6.15 and $7.15	3.6%	7.5%	11.7%
% Wage Increase for Workers Earning More than $7.15 ("Rising Tide" Effect)	0.0%	2.0%	5.0%

Scenario 1 provides a low estimate of the impact of the minimum wage increase. It assumes that workers earning under $7.15 per hour before the policy change were in the upper end of Wage Brackets 1 and 2. Specifically, it reflects that workers in Bracket 1 ($5.15 to $6.15) earned an average of $5.90 per hour and workers in Bracket 2 ($6.15 to $7.15) earned $6.90 per hour. It further assumes that workers in Bracket 3 ($7.15 or more) will not receive an increase in their wage rate.

Scenario 3, in contrast, provides what is believed to be a high estimate of the impact of the change in minimum wage. It assumes that workers earning less than $7.15 per hour before the rate increase were in the lower end of Wage Brackets 1 and 2. The assumptions are that workers in Bracket 1 earned an average of $5.40 per hour and that workers in Bracket 2 averaged $6.40 per hour. Workers in Bracket 3 are assumed to receive a 5 percent increase in their wages.

Scenario 2 represents the middle or "most likely" estimate of the impacts from the minimum wage increase. In Scenario 2, the average hourly wage assumed for workers earning between $5.15 and $6.15 was $5.65 (i.e., the mid-point of the range). This implies that the minimum wage increase will necessitate a 26.5 percent increase in the wage rate of these workers in order to comply with the new minimum wage level of $7.15 per hour. Similarly, the average hourly wage assumed for workers earning between $6.15 and $7.15 was $6.65, which translates into a 7.5 percent wage increase for all workers in Bracket 2. Finally, in Scenario 2, the "rising tide" impact was assumed to be a 2 percent wage increase for the

remainder of the workers (i.e., those earning more than $7.15 per hour). While there was no general consensus among New Jersey farmers interviewed for this study, estimates of the rising tide effect by farmers ranged from 0 to 8 percent, with the majority of farmers speculating that the impact would be between 0 and 3 percent. For purposes of presentation, the impact calculations in Tables 16 and 17 are based on Scenario 2. For a description of how these calculations were derived, see Appendix A. Refer to Appendices B and C to see detailed results of Scenarios 1 and 3.

Table 16: Impact on Production Costs by Commodity Type – Scenario 2, Part 1.

	A	B	C	D	E	F	G	H	I
Commodity	**% Workers Earning Less Than $6.15**	**% Workers Earning Between $6.15 and $7.15**	**% Increase in Labor Cost from Workers <$6.15**	**% Increase in Labor Cost from Workers >$6.15 and <$7.15**	**Total % Increase in Labor Cost**	**Hired Labor as % of Total Production Costs**	**% Increase in Production Costs**	**Production Costs ($1,000s)**	**Increase in Production Costs from Workers <$7.15 ($1000's)**
Livestock									
Eggs	41.9%	19.9%	11.1%	1.5%	12.6%	2.1%	0.3%	$30,068	$80
Milk	41.9%	19.9%	11.1%	1.5%	12.6%	8.9%	1.1%	$30,578	$343
Horses	10.0%	25.0%	2.7%	1.9%	4.5%	17.4%	0.8%	$105,403	$832
Cattle	41.9%	19.9%	11.1%	1.5%	12.6%	0.4%	0.1%	$7,656	$4
Hogs	41.9%	19.9%	11.1%	1.5%	12.6%	4.6%	0.6%	$1,021	$6
Other Livestock	41.9%	19.9%	11.1%	1.5%	12.6%	6.7%	0.8%	$4,976	$42
Total Livestock							**0.7%**	**$179,702**	**$1,307**
Field Crops									
Corn	82.0%	11.9%	21.8%	0.9%	22.7%	1.1%	0.2%	$11,640	$29
Hay	82.0%	11.9%	21.8%	0.9%	22.7%	1.0%	0.2%	$9,492	$22
Potatoes	82.0%	11.9%	21.8%	0.9%	22.7%	10.1%	2.3%	$3,270	$75
Soybeans	82.0%	11.9%	21.8%	0.9%	22.7%	1.2%	0.3%	$22,185	$60
Sweet Potatoes	82.0%	11.9%	21.8%	0.9%	22.7%	10.1%	2.3%	$3,683	$84
Wheat	82.0%	11.9%	21.8%	0.9%	22.7%	0.2%	0.0%	$3,658	$2
Other Field Crops	82.0%	11.9%	21.8%	0.9%	22.7%	4.0%	0.9%	$4,079	$37
Total Field Crops							**0.5%**	**$58,007**	**$309**
Vegetables									
Asparagus	79.2%	17.5%	21.0%	1.3%	22.3%	29.2%	6.5%	$1,983	$129
Cabbage	60.2%	25.5%	16.0%	1.9%	17.9%	25.0%	4.5%	$4,755	$213
Cucumber	60.2%	25.5%	16.0%	1.9%	17.9%	31.9%	5.7%	$11,367	$649
Eggplant	60.2%	25.5%	16.0%	1.9%	17.9%	27.3%	4.9%	$3,948	$193
Escarole	60.2%	25.5%	16.0%	1.9%	17.9%	21.4%	3.8%	$1,781	$68
Iceberg Lettuce	60.2%	25.5%	16.0%	1.9%	17.9%	21.8%	3.9%	$5,992	$234
Bell Peppers	60.2%	25.5%	16.0%	1.9%	17.9%	23.0%	4.1%	$17,035	$701
Snap Beans	60.2%	25.5%	16.0%	1.9%	17.9%	6.7%	1.2%	$4,735	$57
Spinach	60.2%	25.5%	16.0%	1.9%	17.9%	14.3%	2.6%	$2,787	$71
Sweet corn	60.2%	25.5%	16.0%	1.9%	17.9%	16.1%	2.9%	$8,018	$231
Tomatoes	77.5%	11.0%	20.6%	0.8%	21.4%	28.6%	6.1%	$18,746	$1,147
Other Vegetables	63.5%	23.5%	16.9%	1.8%	18.6%	20.9%	3.9%	$35,152	$1,368
Total Vegetables							**4.4%**	**$116,299**	**$5,062**
Fruits									
Apples	50.7%	15.1%	13.5%	1.1%	14.6%	23.1%	3.4%	$4,425	$149
Blueberries	0.0%	17.8%	0.0%	1.3%	1.3%	44.3%	0.6%	$35,111	$208
Cranberries	4.5%	3.0%	1.2%	0.2%	1.4%	8.8%	0.1%	$10,399	$13
Peaches	90.2%	3.7%	23.9%	0.3%	24.2%	12.8%	3.1%	$17,836	$553
Strawberries	47.0%	12.2%	12.5%	0.9%	13.4%	25.1%	3.4%	$1,496	$50
Other Fruit	47.0%	12.2%	12.5%	0.9%	13.4%	22.2%	3.0%	$3,727	$111
Total Fruit							**1.5%**	**$72,994**	**$1,084**
Nursery, Flowers, Sod	28.4%	30.1%	7.5%	2.3%	9.8%	20.0%	**2.0%**	**$271,763**	**$5,328**
Industry Total							**1.9%**	**$698,765**	**$13,090**

Notes:

Livestock: % workers earning less than $7.15 per hour for Eggs, Milk, Cattle, Hogs, and Other categories is the average for all commodities included in the DOL survey data.

Horses: % workers earning less than $7.15 per hour based on Case Study and discussions with other industry experts.

Field Crops: % workers earning less than $7.15 per hour is same as Sweet Potato.

Other Vegetables: % workers earning less than $7.15 per hour is average of all vegetables.

Strawberries and Other Fruit: % workers earning less than $7.15 per hour is average of Apples, Blueberries, and Peaches.

Table 17: Impact on Production Costs by Commodity Type – Scenario 2, Part 2.

	J	K	L	M	N	O	P
Commodity	% Workers Earning More Than $7.15	% Increase in Labor Cost from Workers >$7.15	% Increase in Production Costs from "Rising Tide" Effect	Increase in Production Costs from "Rising Tide" Effect ($1000's)	Increase in Production Costs from Workers <$7.15 ($1000's)	Total % Increase in Production Costs	Total Increase in Production Costs ($1000's)
Livestock							
Eggs	38.2%	0.8%	0.02%	$5	$80	0.3%	$85
Milk	38.2%	0.8%	0.07%	$21	$343	1.2%	$364
Horses	65.0%	1.3%	0.23%	$238	$832	1.0%	$1,070
Cattle	38.2%	0.8%	0.00%	$0	$4	0.1%	$4
Hogs	38.2%	0.8%	0.04%	$0	$6	0.6%	$6
Other Livestock	38.2%	0.8%	0.05%	$3	$42	0.9%	$45
Total Livestock			**0.15%**	**$267**	**$1,307**	**0.9%**	**$1,574**
Field Crops							
Corn	6.1%	0.1%	0.00%	$0	$29	0.3%	$29
Hay	6.1%	0.1%	0.00%	$0	$22	0.2%	$22
Potatoes	6.1%	0.1%	0.01%	$0	$75	2.3%	$75
Soybeans	6.1%	0.1%	0.00%	$0	$60	0.3%	$61
Sweet Potatoes	6.1%	0.1%	0.01%	$0	$84	2.3%	$85
Wheat	6.1%	0.1%	0.00%	$0	$2	0.0%	$2
Other Field Crops	6.1%	0.1%	0.00%	$0	$37	0.9%	$37
Total Field Crops			**<0.01%**	**$2**	**$309**	**0.5%**	**$310**
Vegetables							
Asparagus	3.3%	0.1%	0.02%	$0	$129	6.5%	$130
Cabbage	14.3%	0.3%	0.07%	$3	$213	4.5%	$216
Cucumber	14.3%	0.3%	0.09%	$10	$649	5.8%	$659
Eggplant	14.3%	0.3%	0.08%	$3	$193	5.0%	$196
Escarole	14.3%	0.3%	0.06%	$1	$68	3.9%	$69
Iceberg Lettuce	14.3%	0.3%	0.06%	$4	$234	4.0%	$238
Bell Peppers	14.3%	0.3%	0.07%	$11	$701	4.2%	$713
Snap Beans	14.3%	0.3%	0.02%	$1	$57	1.2%	$58
Spinach	14.3%	0.3%	0.04%	$1	$71	2.6%	$72
Sweet corn	14.3%	0.3%	0.05%	$4	$231	2.9%	$235
Tomatoes	11.5%	0.2%	0.07%	$12	$1,147	6.2%	$1,160
Other Vegetables	13.0%	0.3%	0.05%	$19	$1,368	3.9%	$1,387
Total Vegetables			**0.06%**	**$71**	**$5,062**	**4.4%**	**$5,133**
Fruits							
Apples	34.2%	0.7%	0.16%	$7	$149	3.5%	$156
Blueberries	82.2%	1.6%	0.73%	$256	$208	1.3%	$464
Cranberries	92.5%	1.9%	0.16%	$17	$13	0.3%	$30
Peaches	6.1%	0.1%	0.02%	$3	$553	3.1%	$556
Strawberries	40.8%	0.8%	0.20%	$3	$50	3.6%	$53
Other Fruit	40.8%	0.8%	0.18%	$7	$111	3.2%	$118
Total Fruit			**0.40%**	**$292**	**$1,084**	**1.9%**	**$1,377**
Nursery, Flowers, Sod	**41.5%**	**0.8%**	**0.17%**	**$451**	**$5,328**	**2.1%**	**$5,779**
Industry Total			**<0.01%**	**$1,083**	**$13,090**	**1.9%**	**$14,173**

Table 18 summarizes the estimated impacts of the minimum wage increase by commodity group for all three scenarios. The overall industry estimates range from a 1.4 to 2.8 percent increase in total farm production costs. In nominal terms, overall industry estimates range from $9.7 million to $19.5 million, with a middle estimate of $14.2 million. As noted previously, Scenario 2 represents the "most likely" estimate of the impacts of the minimum wage increase. Therefore, the remainder of this section will focus exclusively on the results of Scenario 2.

Table 18: Impacts of Minimum Wage Increase for Three Scenarios.

	Impacts ($1,000s)			Impacts (% of Production Costs)		
Commodity Group	Scenario 1 (Low Estimate)	Scenario 2 (Middle Estimate)	Scenario 3 (High Estimate)	Scenario 1 (Low Estimate)	Scenario 2 (Middle Estimate)	Scenario 3 (High Estimate)
Livestock	$916	$1,574	$2,398	0.5%	0.9%	1.3%
Field Crops	$242	$310	$385	0.4%	0.5%	0.7%
Vegetables	$3,901	$5,133	$6,504	3.4%	4.4%	5.6%
Fruit	$790	$1,377	$2,135	1.1%	1.9%	2.9%
Nursery, Flowers, Sod	$3,863	$5,779	$8,047	1.4%	2.1%	3.0%
Industry Total	**$9,712**	**$14,173**	**$19,471**	**1.4%**	**1.9%**	**2.8%**

5.1 Distribution of Minimum Wage Impacts

The commodity groups likely to experience the largest proportional impacts on production expenses from the minimum wage increase are vegetables (4.4%), nursery/flowers/sod (2.1%), and fruit (1.9%). In actual dollar terms, the impacts are projected to be greatest in the nursery/flowers/sod sector ($5.78 million), followed by vegetables ($5.13 million), and livestock ($1.57 million). Table 19 lists the 10 most impacted commodities ranked by percent increase in production costs and by nominal increase in production costs. The three most impacted commodities in terms of percent increase in production costs are asparagus, tomatoes and cucumber. In dollar terms, the three most impacted commodities are nursery/flowers/sod, other vegetables, and tomatoes.

Table 19: Ten Most Impacted Commodities.

Ranked by %		Ranked by $	
Commodity	**Increase in Production Costs (%)**	**Commodity**	**Increase in Production Costs ($1000's)**
Asparagus	6.5%	Nursery, Flowers, Sod	$5,779
Tomatoes	6.2%	Other Vegetables	$1,387
Cucumber	5.8%	Tomatoes	$1,160
Eggplant	5.0%	Horses	$1,070
Cabbage	4.5%	Bell Peppers	$713
Bell Peppers	4.2%	Cucumber	$659
Iceberg Lettuce	4.0%	Peaches	$556
Other Vegetables	3.9%	Blueberries	$464
Escarole	3.9%	Milk	$364
Strawberries	3.6%	Iceberg Lettuce	$238

The overall estimated impact of $14.2 million represents a 1.9 percent increase in total farm production costs in New Jersey. However, this impact will be concentrated on the 2,374 farms (24 percent of all New Jersey farms) that hire farm labor. As discussed in Section 3.2, hired labor use is even more highly concentrated than this data suggests. As shown in Table 20, the 454 largest New Jersey farms accounted for 75 percent of the market value of farm products sold in 2002. Among these farms, 321 utilized hired labor earning wages of $142.9 million (76 percent of the entire industry's hired labor expense.) Assuming a distribution of minimum wage impacts in accordance with relative labor expenses, this suggests that these 321 farms will bear $10.9 million in additional labor costs, an average of more than $33,800 per farm, once the minimum wage increases to $7.15 per hour. The impacts on the state's largest farms are projected to be even more pronounced.

Table 20: Concentration of the Estimated Impacts of the Minimum Wage Increase.

% of Total Farm Sales	No. of Farms	No. of Farms with Hired Labor	Hired Labor Expenses ($1000)	% of Total Hired Labor Expenses	Estimated Increase in Labor Costs ($1000)*	Estimated Increase in Labor Costs per Farm
10% of Sales	7	6	$25,496	13.6	$1,936	$322,728
25% of Sales	28	24	$51,399	27.5	$3,915	$163,144
50% of Sales	142	108	$95,872	51.3	$7,304	$67,631
75% of Sales	454	321	$142,882	76.4	$10,878	$33,887

* Estimated increase in labor costs is calculated based on the total industry impact estimated under Scenario 2 ($14.2 million) multiplied by the percentage of total hired labor expenses.

5.2 Farm Case Studies

The minimum wage impact assessment developed in this study provides an estimate of the industry level impact expected as the $7.15 minimum wage takes effect in October 2006. The analysis in the preceding section suggests that the distribution of the impacts of the minimum wage increase within the farming industry will be highly concentrated. As a supplement to this assessment, a series of case studies were conducted to provide an operation-level perspective of the likely impacts of – and responses to – the minimum wage increase.

A structured farmer interview protocol was developed by the research team to guide field research and ensure procedural consistency among interviewers (a copy of the protocol is provided in Appendix D). The development of the protocol was informed by consultation with agricultural leaders and experts from the farm community. The interview protocol poses a number of questions regarding the farm's workforce and wage structure in 2005, farm revenues, production costs, and labor costs.

It is important to note that case study findings should not be viewed as representative of the impacts or views within the agricultural community. Case study participants were selected from the New Jersey Farm Bureau membership list, which the study team stratified by region, type of farm, and farm size. A form of purposive sampling was employed whereby farms were selected so that a reasonable cross-section by region, farm type, and farm size was attained. Only the most labor-intensive sectors as demonstrated through available agricultural statistics were chosen (i.e., nursery, vegetables, fruit, equine). Approximately 45 farms were identified through this process, all of which were contacted by phone. In total, 14 farms agreed to participate in the study.

Information collected in the case studies has been generalized to protect the anonymity of specific operations and protect sensitive information. Of the fourteen farms that participated in the study, six were fruit farms, four were vegetable farms, three were nursery farms, and one was an equine breeding farm. For purposes of this report, a "small" farm is less than 100 acres, a "medium" farm is between 100 and 200 acres, and a "large" farm is greater than 200 acres.

All financial information – farm revenues, labor costs, and total production expenses – are presented in the following ranges: $0 - $99,999; $100,000 - $249,999; $250,000 - $499,000; $500,000 - $999,999; $1,000,000 - $2,999,999; and $3,000,000 or more. Specific locations of farms are also not revealed. Only the region in which the farm is located – northern, central, or southern New Jersey – is reported.[17]

Table 21 presents the overall findings from the case studies (a summary of each case study can be found in Appendix E). Eight of the fourteen farms reported that they would be impacted by the minimum wage increase. Interestingly, none of the case study farms in central or northern New Jersey reported being impacted by the minimum wage increase. These findings are supported by the H2A data obtained from the New Jersey Department of Labor, which suggested that wage rates for agricultural workers were higher in northern New Jersey than in southern New Jersey.

Table 21: Summary of Case Study Findings.

Case #	Region	Farm Type	Size Class	Labor Costs	Labor Cost %	# Workers	# Workers under $7.15	Estimated Impact (% Incr. in Labor Costs)	Estimated Impact (% Incr. in Production Costs)
1	North	Fruit	large	$100,000-$249,999	15%	12	0	0.0%	0.0%
2	North	Nursery	small	$250,000-$499,999	30%	12	0	0.0%	0.0%
3	North	Vegetable	large	$250,000-$499,999	16%	22	0	0.0%	0.0%
4	Central	Fruit	medium	$100,000-$249,999	11%	12	0	0.0%	0.0%
5	South	Fruit	medium	$100,000-$249,999	36%	12	10	13.0%	4.7%
6	South	Fruit	large	$250,000-$499,999	59%	15	0	0.0%	0.0%
7	South	Fruit	large	$3,000,000 +	44%	1,050	0	8.0%	3.6%
8	South	Fruit	large	$500,000-$999,999	26%	153	151	36.5%	9.5%
9	South	Nursery	medium	$1,000,000-$2,999,999	27%	92	41	2.6%	0.7%
10	South	Nursery	medium	$1,000,000-$2,999,999	N/A	86	21	4.6%	N/A
11	South	Vegetable	small	$100,000-$249,999	N/A	13	10	15.3%	N/A
12	South	Vegetable	medium	$100,000-$249,999	65%	37	11	7.0%	4.6%
13	South	Vegetable	large	$3,000,000 +	59%	279	205	2.8%	1.6%
14	Central	Equine	large	$100,000-$249,999	N/A	20	0	0.0%	0.0%

[17] The regions conform to the regional boundaries used by the National Agricultural Statistics Service. Northern New Jersey consists of Bergen, Essex, Hudson, Hunterdon, Morris, Passaic, Somerset, Sussex, Union, and Warren counties. Central New Jersey consists of Burlington, Mercer, Middlesex, Monmouth, and Ocean counties. Southern New Jersey consists of Atlantic, Camden, Cape May, Cumberland, Gloucester, and Salem counties.

Impacts varied considerably, ranging from a 2.6 to 36.5 percent increase in labor costs (or a 0.7 to a 9.5 percent increase in total production costs.) Three of the impacted farms stated that they would be increasing wages (from 4 to 12 percent) for workers who already earned more than the new minimum wage in order to maintain adequate wage differentials. This provides empirical evidence of a "rising tide" impact from the new minimum wage law, as discussed previously.

The focus of the case studies was primarily on the agricultural production side of the farm operation. Farms selling some or all of their products through traditional wholesale channels expressed concern regarding their limited ability to command higher prices in order to offset the increased costs of production resulting from higher wage bills. Increasingly, however, New Jersey farmers are relying on farm-related businesses, such as a retail market or agritourism activities, to supplement farm income. One-half (seven) of the case study farms reported having an associated farm-related business. Of those, four farms reported that their farm-related business would also be impacted by the minimum wage increase. While these operators anticipated that they would likely mitigate some of the additional labor costs by raising product prices, the case studies suggest a tension between state policies. More specifically, the higher state minimum wage may reduce the effectiveness of direct marketing and agritourism opportunities (an economic development strategy endorsed by the New Jersey Department of Agriculture) since these activities often rely on low-wage workers.

During the case study interviews, farm operators shed light on a number of other important issues impacting farming in the state. Labor *availability* and retention (e.g., adequacy and consistency of supply of seasonal and non-seasonal workers) was the most commonly expressed challenge reported by farmers. The current supply of available labor, as well as the increasing competition between farmers and other industries (e.g., landscaping) for the local labor pool, was viewed as a critical problem facing New Jersey agriculture.[18]

On a related point, farmers noted that they face the added cost of non-wage benefits (e.g., housing, transportation, etc.) provided to workers as a means of attracting and keeping workers throughout the production season. Several farmers were quick to point out that the value of these benefits is above and beyond a worker's hourly wage rate. The combined effect

[18] One farmer stated that the increased competition for labor among industries would likely drive agricultural labor wages high enough to render the new minimum wage law irrelevant in his labor market.

of the increase in the state mandated minimum wage (plus associated increases in employment taxes), the cost of non-wage benefits, and rising fuel and energy costs were seen as substantially impacting the financial outlook of New Jersey farms.

5.3 Limits of the Study

This study focused specifically on measuring the impact of New Jersey's minimum wage increase on farm production costs and was based on several informed assumptions about farm production costs and the agricultural wage structure in New Jersey. However, lack of available data makes it difficult to assess the implications of the minimum wage increase on future production decisions and market positioning of New Jersey farmers. A few of these considerations are discussed below.

First, the proportion of the labor cost increases experienced by farmers that will be passed on to consumers in the form of higher prices remains unknown. The relatively high reliance (vis-à-vis other states) on direct marketing by New Jersey farmers raises the possibility that some proportion of any cost increase could be passed on to consumers. Case studies completed as part of this study, as well as informal consultation with a number of farmers operating retail outlets or selling through community farmers' markets suggest that at least some portion of the increase in labor expenses will in fact be shifted to consumers. However, those farmers in the wholesale market are "price takers" and it is hypothesized that little or no cost increase can be recovered by them, as a result of their inability to control prices.

Second, the broader competitive impacts of New Jersey's increased minimum wage are also yet to be determined. According to data available from the U.S. Department of Labor, New Jersey's minimum wage will be the fifth highest in the U.S. (effective October 1, 2006). The extent to which the competitive positioning of New Jersey farmers may be impacted – particularly in the horticultural sectors – is unclear.

Third, without the use of some form of general equilibrium model, it will not be possible to ascertain the impact of wage rate increases on the costs of goods and inputs used by farmers. Anecdotally, it is known that farmers are experiencing rises in a number of input costs due to recent rises in energy prices. The extent to which the minimum wage may similarly drive up the cost of production inputs or services is unknown.

Fourth, the potential for substitution of capital for labor has not been considered. Farmers in New Jersey have changed production and marketing practices over the past decades in response to a variety of regulatory, social, and economic pressures. For instance, one of the reasons New Jersey farmers cite for the transition to alternative forms of on-farm income, such as direct marketing and agritourism activities, is a reduction in the labor force caused by rising labor costs and declining worker availability (Schilling et al. 2006). It is possible that rising labor costs could result in a substitution of capital for labor. Such transitions will be predicated upon the marginal rates of substitution for production inputs within the various product sectors.

Fifth, potential changes in the competition for labor between farmers and other industries (e.g., landscaping, construction, foodservice, etc.) and any related impacts on prevailing wage structures were not assessed. Farmers often pay wages – or a combination of wage and non-wage benefits – in excess of the minimum wage to attract appropriate labor. If the wage floor is raised, a new equilibrium wage rate may be established in local and regional labor markets even if prevailing wages are predominantly higher than the new minimum wage.

Lastly, the extent to which non-wage compensation of farm workers may be affected by a higher minimum wage remains unclear. Some farmers offer non-wage benefits in the form of meals, housing, or transportation to seasonal and non-seasonal workers. The value of these benefits is not reflected in a monetary wage, yet factor into the farmer's labor costs.

6. CONCLUSIONS

In 2005, legislation was enacted that mandated a 39 percent increase in the New Jersey minimum wage over two years. The state minimum wage rate was increased on October 1, 2005, from $5.15 to $6.15 per hour. On October 1, 2006 the rate will again increase to $7.15 per hour. The purpose of this study was to estimate the impact of the recent and pending increases in the New Jersey minimum wage on farm production expenses in the state's agricultural sector. The analysis was based on available data and informed assumptions relating to the extent of hired labor use in the industry, the cost structure of major New Jersey farm commodities, and the prevailing wages paid in the industry.

The increase in the minimum wage, from $5.15 to $7.15 per hour, will result in an estimated $14.2 million increase in annual hired farm labor costs – and hence total farm

production expenses. To place this in context, this is equivalent to 9 percent of the $157.3 million in total net farm income reported by NASS in 2004. It is unclear how much of the estimated increase in farm labor expenses will be offset through higher product prices; farmers selling products primarily through wholesale channels will be much less able to pass on additional costs.

Given their labor intensity and prevailing wage structures, it is projected that the nursery, vegetable, and fruit sectors will be the most heavily impacted in terms of the relative (proportional) increase in production costs. Another key finding in the study is the anticipated concentration of the increased labor costs among a relatively few large farms. For example, 76 percent, or $10.9 million, of the estimated increase in labor costs resulting from the minimum wage revision is expected to be borne by only 321 farms. For these operations, the average increase in the hired labor bill will approach $34,000 per year.

Overall, it appears that the increase in the New Jersey minimum wage will have an immediate impact on the farm production expenses in New Jersey. The extent to which increased labor costs will be passed on to consumers in the form of higher prices or lowered via labor-saving practices cannot be accurately predicted. It is therefore anticipated that the increase in the state's minimum wage will have an adverse impact on total farm industry profits, at least in the short run. The farm-level impacts of the policy change will vary with the extent of hired labor need. However, for some farms, particularly in the nursery, vegetable, and fruit sectors, the impacts may be considerable.

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Appendix A – Derivation of Impact Assessment Calculations.

The column designations in the equations below correspond to the column headings in Tables 16 and 17 (Scenario 2) and for Scenarios 1 and 3 provided in Appendices B and C.

Column A = % Workers in Bracket 1

Column B = % Workers in Bracket 2

Column C (% Increase in Labor Costs 1) = Column A * % Pay Increase Bracket 1 (e.g., 26.5% for scenario 2)

Column D (% Increase in Labor Costs 2) = Column B * % Pay Increase Bracket 1 (e.g., 7.5% for scenario 2)

Column E (% Increase in Labor Costs 1&2) = Column C + Column D

Column F = Hired Labor as % of Production Costs

Column G (% Increase in Production Costs 1&2) = Column E * Column F

Column H = Production Costs (from Table 11)

Column I ($ Increase in Production Costs 1&2) = Column G * Column H

Column J = % Workers in Bracket 3

Column K (% Increase in Labor Costs 3) = Column J * % Pay Increase Bracket 3 (e.g., 2% for scenario 2)

Column L (% Increase in Production Costs 3) = Column K * Column F

Column M ($ Increase in Production Costs 3) = Column L * Column H

Column N = same as Column I

Column O = Column G + Column L

Column P ($ Total Increase in Production Costs) = Column I + Column M

Appendix B – Impact Assessment - Scenario 1.

Commodity	A % Workers Earning Less Than $6.15	B % Workers Earning Between $6.15 and $7.15	C % Increase in Labor Cost from Workers <$6.15	D % Increase in Labor Cost from Workers >$6.15 and <$7.15	E Total % Increase in Labor Cost	F Hired Labor as % of Total Production Costs	G % Increase in Production Costs	H Production Costs ($1,000s)	I Increase in Production Costs from Workers <$7.15 ($1000's)
Livestock									
Eggs	41.9%	19.9%	8.9%	0.7%	9.6%	2.1%	0.2%	$30,068	$61
Milk	41.9%	19.9%	8.9%	0.7%	9.6%	8.9%	0.9%	$30,578	$261
Horses	10.0%	25.0%	2.1%	0.9%	3.0%	17.4%	0.5%	$105,403	$555
Cattle	41.9%	19.9%	8.9%	0.7%	9.6%	0.4%	0.0%	$7,656	$3
Hogs	41.9%	19.9%	8.9%	0.7%	9.6%	4.6%	0.4%	$1,021	$5
Other Livestock	41.9%	19.9%	8.9%	0.7%	9.6%	6.7%	0.6%	$4,976	$32
Total Livestock							**0.5%**	**$179,702**	**$916**
Field Crops									
Corn	82.0%	11.9%	17.4%	0.4%	17.8%	1.1%	0.2%	$11,640	$23
Hay	82.0%	11.9%	17.4%	0.4%	17.8%	1.0%	0.2%	$9,492	$17
Potatoes	82.0%	11.9%	17.4%	0.4%	17.8%	10.1%	1.8%	$3,270	$59
Soybeans	82.0%	11.9%	17.4%	0.4%	17.8%	1.2%	0.2%	$22,185	$47
Sweet Potatoes	82.0%	11.9%	17.4%	0.4%	17.8%	10.1%	1.8%	$3,683	$66
Wheat	82.0%	11.9%	17.4%	0.4%	17.8%	0.2%	0.0%	$3,658	$1
Other Field Crops	82.0%	11.9%	17.4%	0.4%	17.8%	4.0%	0.7%	$4,079	$29
Total Field Crops							**0.4%**	**$58,007**	**$242**
Vegetables									
Asparagus	79.2%	17.5%	16.8%	0.6%	17.4%	29.2%	5.1%	$1,983	$101
Cabbage	60.2%	25.5%	12.8%	0.9%	13.7%	25.0%	3.4%	$4,755	$163
Cucumber	60.2%	25.5%	12.8%	0.9%	13.7%	31.9%	4.4%	$11,367	$496
Eggplant	60.2%	25.5%	12.8%	0.9%	13.7%	27.3%	3.7%	$3,948	$147
Escarole	60.2%	25.5%	12.8%	0.9%	13.7%	21.4%	2.9%	$1,781	$52
Iceberg Lettuce	60.2%	25.5%	12.8%	0.9%	13.7%	21.8%	3.0%	$5,992	$179
Bell Peppers	60.2%	25.5%	12.8%	0.9%	13.7%	23.0%	3.1%	$17,035	$536
Snap Beans	60.2%	25.5%	12.8%	0.9%	13.7%	6.7%	0.9%	$4,735	$43
Spinach	60.2%	25.5%	12.8%	0.9%	13.7%	14.3%	2.0%	$2,787	$55
Sweet corn	60.2%	25.5%	12.8%	0.9%	13.7%	16.1%	2.2%	$8,018	$177
Tomatoes	77.5%	11.0%	16.4%	0.4%	16.8%	28.6%	4.8%	$18,746	$902
Other Vegetables	63.5%	23.5%	13.5%	0.8%	14.3%	20.9%	3.0%	$35,152	$1,051
Total Vegetables							**3.4%**	**$116,299**	**$3,901**
Fruits									
Apples	50.7%	15.1%	10.7%	0.5%	11.3%	23.1%	2.6%	$4,425	$115
Blueberries	0.0%	17.8%	0.0%	0.6%	0.6%	44.3%	0.3%	$35,111	$100
Cranberries	4.5%	3.0%	1.0%	0.1%	1.1%	8.8%	0.1%	$10,399	$10
Peaches	90.2%	3.7%	19.1%	0.1%	19.2%	12.8%	2.5%	$17,836	$439
Strawberries	47.0%	12.2%	10.0%	0.4%	10.4%	25.1%	2.6%	$1,496	$39
Other Fruit	47.0%	12.2%	10.0%	0.4%	10.4%	22.2%	2.3%	$3,727	$86
Total Fruit							**1.1%**	**$72,994**	**$790**
Nursery, Flowers, Sod	28.4%	30.1%	6.0%	1.1%	7.1%	20.0%	**1.4%**	**$271,763**	**$3,863**
Industry Total							**1.4%**	**$698,765**	**$9,712**

Notes:

Livestock: % workers earning less than $7.15 per hour for Eggs, Milk, Cattle, Hogs, and Other categories is the average for all commodities included in the DOL survey data.

Horses: % workers earning less than $7.15 per hour based on Case Study and discussions with other industry experts.

Field Crops: % workers earning less than $7.15 per hour is same as Sweet Potato.

Other Vegetables: % workers earning less than $7.15 per hour is average of all vegetables.

Strawberries and Other Fruit: % workers earning less than $7.15 per hour is average of Apples, Blueberries, and Peaches.

	J	K	L	M	N	O	P
Commodity	**% Workers Earning More Than $7.15**	**% Increase in Labor Cost from Workers >$7.15**	**% Increase in Production Costs from "Rising Tide" Effect**	**Increase in Production Costs from "Rising Tide" Effect ($1000's)**	**Increase in Production Costs from Workers <$7.15 ($1000's)**	**Total % Increase in Production Costs**	**Total Increase in Production Costs ($1000's)**
Livestock							
Eggs	38.2%	0.0%	0.00%	$0	$61	0.2%	$61
Milk	38.2%	0.0%	0.00%	$0	$261	0.9%	$261
Horses	65.0%	0.0%	0.00%	$0	$555	0.5%	$555
Cattle	38.2%	0.0%	0.00%	$0	$3	0.0%	$3
Hogs	38.2%	0.0%	0.00%	$0	$5	0.4%	$5
Other Livestock	38.2%	0.0%	0.00%	$0	$32	0.6%	$32
Total Livestock			**0.00%**	**$0**	**$916**	**0.5%**	**$916**
Field Crops							
Corn	6.1%	0.0%	0.00%	$0	$23	0.2%	$23
Hay	6.1%	0.0%	0.00%	$0	$17	0.2%	$17
Potatoes	6.1%	0.0%	0.00%	$0	$59	1.8%	$59
Soybeans	6.1%	0.0%	0.00%	$0	$47	0.2%	$47
Sweet Potatoes	6.1%	0.0%	0.00%	$0	$66	1.8%	$66
Wheat	6.1%	0.0%	0.00%	$0	$1	0.0%	$1
Other Field Crops	6.1%	0.0%	0.00%	$0	$29	0.7%	$29
Total Field Crops			**0.00%**	**$0**	**$242**	**0.4%**	**$242**
Vegetables							
Asparagus	3.3%	0.0%	0.00%	$0	$101	5.1%	$101
Cabbage	14.3%	0.0%	0.00%	$0	$163	3.4%	$163
Cucumber	14.3%	0.0%	0.00%	$0	$496	4.4%	$496
Eggplant	14.3%	0.0%	0.00%	$0	$147	3.7%	$147
Escarole	14.3%	0.0%	0.00%	$0	$52	2.9%	$52
Iceberg Lettuce	14.3%	0.0%	0.00%	$0	$179	3.0%	$179
Bell Peppers	14.3%	0.0%	0.00%	$0	$536	3.1%	$536
Snap Beans	14.3%	0.0%	0.00%	$0	$43	0.9%	$43
Spinach	14.3%	0.0%	0.00%	$0	$55	2.0%	$55
Sweet corn	14.3%	0.0%	0.00%	$0	$177	2.2%	$177
Tomatoes	11.5%	0.0%	0.00%	$0	$902	4.8%	$902
Other Vegetables	13.0%	0.0%	0.00%	$0	$1,051	3.0%	$1,051
Total Vegetables			**0.00%**	**$0**	**$3,901**	**3.4%**	**$3,901**
Fruits							
Apples	34.2%	0.0%	0.00%	$0	$115	2.6%	$115
Blueberries	82.2%	0.0%	0.00%	$0	$100	0.3%	$100
Cranberries	92.5%	0.0%	0.00%	$0	$10	0.1%	$10
Peaches	6.1%	0.0%	0.00%	$0	$439	2.5%	$439
Strawberries	40.8%	0.0%	0.00%	$0	$39	2.6%	$39
Other Fruit	40.8%	0.0%	0.00%	$0	$86	2.3%	$86
Total Fruit			**0.00%**	**$0**	**$790**	**1.1%**	**$790**
Nursery, Flowers, Sod	**41.5%**	**0.0%**	**0.00%**	**$0**	**$3,863**	**1.4%**	**$3,863**
Industry Total			**0.00%**	**$0**	**$9,712**	**1.4%**	**$9,712**

Appendix C – Impact Assessment - Scenario 3.

	A	B	C	D	E	F	G	H	I
Commodity	**% Workers Earning Less Than $6.15**	**% Workers Earning Between $6.15 and $7.15**	**% Increase in Labor Cost from Workers <$6.15**	**% Increase in Labor Cost from Workers >$6.15 and <$7.15**	**Total % Increase in Labor Cost**	**Hired Labor as % of Total Production Costs**	**% Increase in Production Costs**	**Production Costs ($1,000s)**	**Increase in Production Costs from Workers <$7.15 ($1,000's)**
Livestock									
Eggs	41.9%	19.9%	13.6%	2.3%	15.9%	2.1%	0.3%	$30,068	$100
Milk	41.9%	19.9%	13.6%	2.3%	15.9%	8.9%	1.4%	$30,578	$433
Horses	10.0%	25.0%	3.2%	2.9%	6.2%	17.4%	1.1%	$105,403	$1,132
Cattle	41.9%	19.9%	13.6%	2.3%	15.9%	0.4%	0.1%	$7,656	$5
Hogs	41.9%	19.9%	13.6%	2.3%	15.9%	4.6%	0.7%	$1,021	$7
Other Livestock	41.9%	19.9%	13.6%	2.3%	15.9%	6.7%	1.1%	$4,976	$53
Total Livestock							**1.0%**	**$179,702**	**$1,731**
Field Crops									
Corn	82.0%	11.9%	26.6%	1.4%	28.0%	1.1%	0.3%	$11,640	$36
Hay	82.0%	11.9%	26.6%	1.4%	28.0%	1.0%	0.3%	$9,492	$27
Potatoes	82.0%	11.9%	26.6%	1.4%	28.0%	10.1%	2.8%	$3,270	$92
Soybeans	82.0%	11.9%	26.6%	1.4%	28.0%	1.2%	0.3%	$22,185	$74
Sweet Potatoes	82.0%	11.9%	26.6%	1.4%	28.0%	10.1%	2.8%	$3,683	$104
Wheat	82.0%	11.9%	26.6%	1.4%	28.0%	0.2%	0.1%	$3,658	$2
Other Field Crops	82.0%	11.9%	26.6%	1.4%	28.0%	4.0%	1.1%	$4,079	$46
Total Field Crops							**0.7%**	**$58,007**	**$381**
Vegetables									
Asparagus	79.2%	17.5%	25.7%	2.1%	27.7%	29.2%	8.1%	$1,983	$160
Cabbage	60.2%	25.5%	19.5%	3.0%	22.5%	25.0%	5.6%	$4,755	$267
Cucumber	60.2%	25.5%	19.5%	3.0%	22.5%	31.9%	7.2%	$11,367	$816
Eggplant	60.2%	25.5%	19.5%	3.0%	22.5%	27.3%	6.1%	$3,948	$242
Escarole	60.2%	25.5%	19.5%	3.0%	22.5%	21.4%	4.8%	$1,781	$86
Iceberg Lettuce	60.2%	25.5%	19.5%	3.0%	22.5%	21.8%	4.9%	$5,992	$294
Bell Peppers	60.2%	25.5%	19.5%	3.0%	22.5%	23.0%	5.2%	$17,035	$881
Snap Beans	60.2%	25.5%	19.5%	3.0%	22.5%	6.7%	1.5%	$4,735	$71
Spinach	60.2%	25.5%	19.5%	3.0%	22.5%	14.3%	3.2%	$2,787	$90
Sweet corn	60.2%	25.5%	19.5%	3.0%	22.5%	16.1%	3.6%	$8,018	$290
Tomatoes	77.5%	11.0%	25.1%	1.3%	26.4%	28.6%	7.6%	$18,746	$1,416
Other Vegetables	63.5%	23.5%	20.6%	2.7%	23.3%	20.9%	4.9%	$35,152	$1,714
Total Vegetables							**5.4%**	**$116,299**	**$6,328**
Fruits									
Apples	50.7%	15.1%	16.4%	1.8%	18.2%	23.1%	4.2%	$4,425	$186
Blueberries	0.0%	17.8%	0.0%	2.1%	2.1%	44.3%	0.9%	$35,111	$324
Cranberries	4.5%	3.0%	1.5%	0.4%	1.8%	8.8%	0.2%	$10,399	$17
Peaches	90.2%	3.7%	29.2%	0.4%	29.7%	12.8%	3.8%	$17,836	$677
Strawberries	47.0%	12.2%	15.2%	1.4%	16.7%	25.1%	4.2%	$1,496	$63
Other Fruit	47.0%	12.2%	15.2%	1.4%	16.7%	22.2%	3.7%	$3,727	$138
Total Fruit							**1.9%**	**$72,994**	**$1,405**
Nursery, Flowers, Sod	28.4%	30.1%	9.2%	3.5%	12.7%	20.0%	**2.5%**	**$271,763**	**$6,920**
Industry Total							**2.4%**	**$698,765**	**$16,764**

Notes:

Livestock: % workers earning less than $7.15 per hour for Eggs, Milk, Cattle, Hogs, and Other categories is the average for all commodities included in the DOL survey data.

Horses: % workers earning less than $7.15 per hour based on Case Study and discussions with other industry experts.

Field Crops: % workers earning less than $7.15 per hour is same as Sweet Potato.

Other Vegetables: % workers earning less than $7.15 per hour is average of all vegetables.

Strawberries and Other Fruit: % workers earning less than $7.15 per hour is average of Apples, Blueberries, and Peaches.

	J	K	L	M	N	O	P
Commodity	% Workers Earning More Than $7.15	% Increase in Labor Cost from Workers >$7.15	% Increase in Production Costs from "Rising Tide" Effect	Increase in Production Costs from "Rising Tide" Effect ($1,000's)	Increase in Production Costs from Workers <$7.15 ($1,000's)	Total % Increase in Production Costs	Total Increase in Production Costs ($1,000's)
Livestock							
Eggs	38.2%	1.9%	0.04%	$12	$100	0.4%	$113
Milk	38.2%	1.9%	0.17%	$52	$433	1.6%	$485
Horses	65.0%	3.3%	0.57%	$596	$1,132	1.6%	$1,728
Cattle	38.2%	1.9%	0.01%	$1	$5	0.1%	$5
Hogs	38.2%	1.9%	0.09%	$1	$7	0.8%	$8
Other Livestock	38.2%	1.9%	0.13%	$6	$53	1.2%	$59
Total Livestock			**0.37%**	**$668**	**$1,731**	**1.3%**	**$2,398**
Field Crops							
Corn	6.1%	0.3%	0.00%	$0	$36	0.3%	$36
Hay	6.1%	0.3%	0.00%	$0	$27	0.3%	$27
Potatoes	6.1%	0.3%	0.03%	$1	$92	2.9%	$93
Soybeans	6.1%	0.3%	0.00%	$1	$74	0.3%	$75
Sweet Potatoes	6.1%	0.3%	0.03%	$1	$104	2.9%	$105
Wheat	6.1%	0.3%	0.00%	$0	$2	0.1%	$2
Other Field Crops	6.1%	0.3%	0.01%	$0	$46	1.1%	$46
Total Field Crops			**0.01%**	**$4**	**$381**	**0.7%**	**$385**
Vegetables							
Asparagus	3.3%	0.2%	0.05%	$1	$160	8.1%	$161
Cabbage	14.3%	0.7%	0.18%	$8	$267	5.8%	$276
Cucumber	14.3%	0.7%	0.23%	$26	$816	7.4%	$842
Eggplant	14.3%	0.7%	0.20%	$8	$242	6.3%	$250
Escarole	14.3%	0.7%	0.15%	$3	$86	5.0%	$88
Iceberg Lettuce	14.3%	0.7%	0.16%	$9	$294	5.1%	$303
Bell Peppers	14.3%	0.7%	0.16%	$28	$881	5.3%	$909
Snap Beans	14.3%	0.7%	0.05%	$2	$71	1.6%	$74
Spinach	14.3%	0.7%	0.10%	$3	$90	3.3%	$93
Sweet corn	14.3%	0.7%	0.12%	$9	$290	3.7%	$300
Tomatoes	11.5%	0.6%	0.16%	$31	$1,416	7.7%	$1,446
Other Vegetables	13.0%	0.7%	0.14%	$48	$1,714	5.0%	$1,762
Total Vegetables			**0.15%**	**$176**	**$6,328**	**5.6%**	**$6,504**
Fruits							
Apples	34.2%	1.7%	0.40%	$17	$186	4.6%	$204
Blueberries	82.2%	4.1%	1.82%	$639	$324	2.7%	$964
Cranberries	92.5%	4.6%	0.41%	$42	$17	0.6%	$59
Peaches	6.1%	0.3%	0.04%	$7	$677	3.8%	$684
Strawberries	40.8%	2.0%	0.51%	$8	$63	4.7%	$70
Other Fruit	40.8%	2.0%	0.45%	$17	$138	4.1%	$155
Total Fruit			**1.00%**	**$731**	**$1,405**	**2.9%**	**$2,135**
Nursery, Flowers, Sod	**41.5%**	**2.1%**	**0.42%**	**$1,128**	**$6,920**	**3.0%**	**$8,047**
Industry Total			**0.39%**	**$2,707**	**$16,764**	**2.8%**	**$19,471**

Appendix D – Case Study Interview Protocol.

Case # _____

1. Type of Farm Operation (i.e., primary output in terms of revenues)
   ___Vegetables ___Fruits or Berries ___Nursery/Ornamentals

2. Do you consider yourself to be a ____ full-time farmer ____ part-time farmer?

3. What percentage of your gross household income is generated from your farm operation?
   _____ 0%-25% _____ 26%-50% _____ 51%-75% _____ 76%-100%

4. Please indicate the percentage of sales to the following clients in 2005.
   a) Wholesale to buyer/sellers …… _____ %
   b) Wholesale to retailers or restaurants……. _____ %
   c) Retail to public……... _____ %
   d) Other (specify) _____…….. _____ %

5. Does this farm operation have a related business? (e.g., farmstand, bakery, farm tours, hayrides, other agri-tourism activities) _____ yes _____ no

5a. If yes, provide a brief description of the related operation._____
_____
_____

6. Size of Farm Operated in 2005 _____ acres owned
   _____ acres rented

7. Main Crops in 2005 _____acres _____ _____acres _____
   _____acres _____ _____acres _____
   _____acres _____ _____acres _____
   _____acres _____ _____acres _____
   _____acres _____ _____acres _____
   _____head livestock (specify_____

8. Please indicate 2005 Annual Gross Sales from Farm Products.
   _____$0 - $99,999 _____$500,000 - $999,999
   _____$100,000 - $249,999 _____$1,000,000 - $2,999,999
   _____$250,000 - $499,000 _____$3,000,000 or more

9. 2005 Farm Production Expenses (including farm labor) $ _____

10. 2005 Hired Farm Labor Wages Paid (not including Social Security, Medicare, Workers Compensation) $_____

10. Please complete the table below for **all farm labor** that you hired during 2005 (including piecework).

Wage Bracket	Number of workers	Total Hours Worked *Or* Average Hourly wage	Total Wages paid (excluding benefits)	Cost of benefits (wage taxes, workman's comp)	Description of Work
$5.15 - $6.14					___ field work ___ livestock ___ supervisory ___ other _____
$6.15 - $7.14					___ field work ___ livestock ___ supervisory ___ other _____
$7.15 +					___ field work ___ livestock ___ supervisory ___ other _____

10a. How will workers earning less than $7.15 per hour be impacted by the minimum wage increase?

_____% increase _____($ increase)

10b. How will workers earning more than $7.15 per hour be impacted by the minimum wage increase?

____ No Impact _____% increase _____($ increase)

11. Please complete the table below for **related business labor** that you hired during 2005. ***Complete this table only if the related business had employees earning less than $7.15 per hour during 2005.***

Wage Bracket	**Number of workers**	**Total Hours Worked *Or* Average Hourly Wage**	**Total Wages paid (excluding benefits)**	**Cost of benefits (wage taxes, workman's comp)**	**Description of Work**
$5.15 - $6.14					___ processing ___ retail ___ supervisory ___ other _____
$6.15 - $7.14					___ processing ___ retail ___ supervisory ___ other _____
$7.15 +					___ processing ___ retail ___ supervisory ___ other _____

11a. How will workers earning less than $7.15 per hour be impacted by the minimum wage increase? _____% increase _____($ increase)

11b. How will workers earning more than $7.15 per hour be impacted by the minimum wage increase?
____ No Impact _____% increase _____($ increase)

12. Please complete the table below regarding non-wage benefits provided to your farm workers in 2005.

Benefit	Benefit Provided? (check)	Number of Workers Receiving Benefit	Estimated Total Cost to Farmer	Will the provision of this benefit be affected in any way because of the minimum wage increase? If yes, explain.
End-of-Year Bonus				
Housing (seasonal)				
Housing (year-round)				
Paid Utilities				
Television				
Telephone/Calling Cards				
Meals				
Uniforms/Clothing				
Transportation (airfare)				
Transportation (local automobile)				
Paid Vacation				
Weekend/Holiday Pay				
Recreational Opportunities				
Extended Time off w/pay (e.g. downtime)				

13. Did you have difficulty acquiring labor in 2005? ____ yes ____ no

13a. If so, what types of labor did you have difficulty acquiring?

_____
_____
_____
_____

14. Comments regarding the minimum wage increase to $7.15/hour and its impacts on your operation?

_____
_____
_____
_____
_____

Appendix E – Minimum Wage Case Studies.

Case Study 1 - Northern New Jersey Fruit Farm

General Farm Information

This large family farm, located in northern New Jersey, has been in business for more than 3 generations. The main crops are apples, peaches, sweet corn, and pumpkins. More than 80 percent of the family income was derived from the farm business. Retail sales to farm visitors accounted for 80 percent of the farm income, while the remaining 20 percent was derived from sales to other farms, food retailers and restaurants.

Related Businesses

The farm has a small retail market on its premises as well as a roadside farm stand.

Workforce

The farm employed 12 total workers in 2005, all of which were seasonal farm field workers and supervisory workers. All of the farm workers earned more than $7.15 per hour; the average wage rate was approximately $11 per hour.

The retail business employed 20 workers, of which 7 earned less than $6.15 per hour.

Labor Costs

All of the 12 farm workers were paid more than the minimum wage in 2005. The total wages paid in 2005 was between $100,000 and $249,999. In addition, farm employees received end-of-year bonuses, housing, utilities, television, calling cards, meals, uniforms, local transportation, and recreational opportunities (i.e., soccer field). The total cost of benefits provided to farm workers in 2005 was approximately $72,000.

Seven out of 20 retail workers were paid less than $6.15 per hour in 2005. Total cost of benefits provided in 2005 was $10,000.

Farm Income and Expenses

2005 cash receipts for farm products……..……between $1,000,000 and $2,999,999
Total production expenses……..between $500,000 and $999,999
Labor expenses……between $100,000 and $249,999
Labor cost as a percentage of total expenses……..15%

Conclusion

The farm business will not be directly impacted by the minimum wage increase. However, the farm's related retail business must increase the wages for seven of its twenty employees. The estimated impact on the retail business is approximately $10,000 in additional wages.

Case Study 2 - Northern New Jersey Nursery Farm

General Farm Information

Located in northern New Jersey, this small nursery operation has been in business for almost 50 years. The operation grows ornamental nursery crops (e.g., evergreen and deciduous shrubs/trees) to support the related landscaping business. The ornamentals grown on the farm are all utilized in support of the related landscaping business; therefore, 100 percent of the nursery products are sold retail to the public.

Related Businesses

The company performs landscaping services, including installation and maintenance of ornamentals as well as lawn maintenance.

Workforce

The nursery employed 12 employees in 2005 (field and supervisory); all of them earning more than $7.15 per hour.

The landscaping business employed an additional 74 workers in 2005, all of them earning more than $7.15 per hour as well. Fifty-five workers were seasonal, and 31 workers were permanent. Sixty-seven workers were full-time, while 19 workers were part-time.

Labor Costs

All of the farm workers were paid more than the $7.15 per hour in 2005. The total wages paid to farm workers in 2005 were between $250,000 and $499,999. In addition, the employer provided end-of-year bonuses for its workers. The employer would not provide information on costs of benefits or labor costs for the related landscaping business.

Farm Income and Expenses

2005 cash receipts for farm products……..……. between $1,000,000 and $2,999,999
Total production expenses…….... between $1 and $3 million
Labor expenses…….between $250,000 and $499,999
Labor cost as a percentage of total expenses……30%

Conclusion

The minimum wage increase will have no impact on this farm operation.

Case Study 3 - Northern New Jersey Vegetable Farm

General Farm Information

This large family farm is located in northern New Jersey and has been in business for more than twenty years. The farm's crops consist of large acreages of corn, hay, and pumpkins. The remainder of the farm is comprised of smaller acreages of mixed produce, including tomatoes, peppers, peaches, apples, strawberries, and raspberries. Ninety-two percent of the land is rented, and more than 80 percent of the family income is derived from the farm business. Retail sales to farm visitors accounted for 95 percent of the farm income and the remaining 5 percent was derived from sales to other farms and food retailers.

Related Businesses

The farm has a small retail market on its premises. Other farm-related business activities included: hayrides, U-pick sales, an animal farm, hay pyramids, and tractor rides.

Workforce

The farm and retail operation employed workers from a wide spectrum of skill sets including: high school students, foreign university students, and local labor.

The farm employed 22 workers (field workers and supervisory workers), all of which earned more than $7.15 per hour in 2005. In addition, the related retail business employed 37 workers, of which 27 earned less than $7.15 per hour.

Labor Costs

All of the 22 farm workers were paid more than $7.15 per hour in 2005, with the average hourly wage at $10.00. Total wages paid to farm workers in 2005 was between $250,000 and $499,999. The cost of benefits was roughly $65,000. The employer provided housing, transportation and several amenities to retain its employees. In 2005, farm employees received end-of-year bonuses, housing, utilities, television, calling cards, meals, uniforms, local transportation, and recreational opportunities (i.e., soccer field). The farmer stated that these benefits will remain the same regardless of the minimum wage increase.

Twenty retail workers were paid less than $6.15 per hour in 2005, and 7 retail workers were paid between $6.16 and $7.15 per hour in 2005.

Farm Income and Expenses

2005 cash receipts for farm products..……between $1,000,000 and $2,999,999
Total production expenses……between $1,000,000 and $2,999,999
Labor expenses…….between $250,000 and $499,999
Labor cost as a percentage of total expenses……16%

Conclusion

The farm business will not be directly impacted by the minimum wage increase. However, the farm's related retail business must increase the wages for 27 of its 37 employees. The estimated impact on the retail business is approximately $27,000 in additional wages.

Case Study 4 - Central New Jersey Fruit Farm

General Farm Information

This medium sized fruit farm is located in central New Jersey and is comprised mainly of apples and peaches, with smaller acreages strawberries, blueberries, raspberries, cherries and pears. In addition, the farm has pumpkins and mixed vegetables. The farm, which has been in business for more than 30 years, is preserved in the state's farmland preservation program. Twenty-two percent of the land is rented, and almost all of the family income is derived from the farm and its related business activities. Retail sales to farm visitors accounted for 95 percent of the family earnings and the remaining 5 percent is derived from sales to other farms and food retailers. The farm owns several branded products that are co-packed by other farms located in New Jersey.

Related Businesses

There is a small market located on the farm premises where the farm markets its farm products as well as other retail items. Other related business activities included hayrides, U-pick activities, and an animal farm. In addition, the farm markets its products at local festivals and the Trenton Farmers Market. Farm income is highly dependant on the success of the retail store and the number of people visiting the farm.

Workforce

The farm employed 12 workers (field work and supervisory). The farm's related retail business employed 37 total workers in 2005.

Labor Costs

The 12 farm employees all earned more than $7.15 per hour in 2005. The average hourly wage for farm workers was approximately $12. Total wages paid to farm workers in 2005 was between $100,000 and $249,999, and the cost of benefits was approximately $35,000. In addition, the employer provided transportation and end-of-year bonuses to farm workers to retain employees. The farmer stated that these benefits will remain unchanged in the future.

Four of the retail employees earned between $6.15 and $7.15 per hour. However, the remainder of retail employees earned more than $7.15 per hour.

Farm Income and Expenses

2005 cash receipts for farm products……... between $1,000,000 and $2,999,999
Total production expenses……... between $1,000,000 and $2,999,999
Labor expenses…….between $100,000 and $249,999
Labor cost as a percentage of total expenses……11%

Conclusion

The minimum wage increase will have no impact on the farm operation. However, there may be a slight impact on the retail operation; however, the farmer has stated that any impact will be negligible. The farmer expressed that a raise in minimum wage will not affect most of the farms in the region since all of them offer competitive wage rates and benefits to their workers.

Case Study 5 - Southern New Jersey Fruit Farm

General Farm Information

This medium-sized fruit farm is located in southern New Jersey. The farm has been in business for more than 150 years. The family is the 5th generation on this farm and farms fulltime. The oldest son intends to remain involved in the operation. Ninety percent of the crops are sold wholesale to buyers or sellers. Ten percent of the crops are sold retail to the public. Between 76 and 100 percent of the gross household income is generated from the farm operation.

Related Businesses

A farm market on premises includes a bakery and a winery. The farm also provides pumpkin picking, hayrides, farm tours and other activities.

Workforce

The farm employed 12 workers in 2005 (field work and other).

Labor Costs

Ten field workers earned $5.15 per hour in 2005. Wages paid to those 10 workers was $105,000 (excluding benefits). The two other employees earned an average hourly wage of $9.00. Total wages paid in 2005 was between $100,000 and $249,999. In addition, the farmer provided seasonal housing to 10 workers, year-round housing to 1 worker, utilities, television, transportation, and airfare. The farmer estimated the cost of these benefits at approximately $20,000 and stated that these benefits will not be reduced because of the minimum wage increase. Moreover, two farm workers received end-of-the-year bonuses at a cost of $4,000. The farmer noted that the rate of the bonus will be reduced if farm profits are impacted by the minimum wage increase.

Farm Income and Expenses

2005 cash receipts for farm products……... between $250,000 - $499,999
Total production expenses.……. between $250,000 - $499,999
Labor expenses.……..…...……. between $100,000 and $249,999
Labor cost as a percentage of total expenses.…….. 36%

Conclusion

The farmer does not expect to increase wage rates for the two employees earning over $7.15 per hour. However, wages for workers earning less than $7.15 will increase by 39 percent. The increase in the minimum wage will increase the farm's total labor costs by 13 percent and total production costs may increase by 4.7 percent.

The farmer did not have difficulty obtaining local labor in 2005. They just hope they can stay in business.

Case Study 6 - Southern New Jersey Vegetable Farm

General Farm Information

This large family farm has been in business for almost 80 years. The land, which is preserved in the state's farmland preservation program, is located in southern New Jersey and comprises large acreages of vegetables and fruit, including sweet corn, pumpkins, peaches, green beans, strawberries, and broccoli. One hundred percent of the farm's crops are sold retail directly to the public through the farms retail market located on premises.

Related Businesses

A farm market is located on premises, and includes a bakery and deli. The farm also provides hayrides, pumpkin picking, and corn mazes.

Workforce

The farm employed 15 hourly workers in 2005, of which 9 workers were seasonal migrant workers and 6 were year-round employees. Another 91 hourly employees worked in the retail market.

Labor Costs

All farm workers earned more than $7.15 in 2005. Total farm labor costs for 2005 were between $250,000 - $499,999 (not including wage taxes and benefits). In addition, the farmer paid wage taxes, workman's compensation, end-of-year bonuses, housing and utilities for 9 seasonal employees, and transportation for the 9 seasonal employees. Year-end bonuses totaled $12,500 in 2005. The farmer was unable to estimate the costs of the additional benefits.

Seventeen part-time farm market employees earned less than $6.15 per hour in 2005, earning total wages of $66,000.

Farm Income and Expenses

2005 cash receipts from farm products……. between $500,000 and $999,999
Total production expenses.……. between $250,000 and $499,999
Labor expenses…… between $250,000 and $499,999
Labor cost as a percentage of total expenses…….. 59%

Conclusion

With the increase in minimum wage to $7.15, labor costs for the farm will not be impacted. However, the related retail business will experience a 4.5 percent increase in labor costs. The farmer has stated that the farm market prices will increase to reflect increased labor costs.

Case Study 7 - Southern New Jersey Fruit Farm

General Farm Information

This large blueberry farm is located in southern New Jersey. Virtually all of the farm's crops are sold wholesale; 57 percent to processors and 43 percent to retailers. Less than 1 percent is sold retail to the public. The farm, which has been in operation for more than 70 years, is preserved in the state farmland preservation program.

Related Businesses

There are no other related businesses associated with this farm.

Workforce

In 2005, the farm employed approximately 700 workers plus an additional 350 through sub-contracts. Fifty workers were full-time, year-round employees. The remainder of work was part-time and seasonal. The work included field work, sorting and packing, and supervisory positions. All field workers worked for piece rates during the 6-week harvest season.

Labor Costs

Total wages paid in 2005 were more than $3 million. In addition, the farm paid $454,000 for wage taxes and $96,000 for workman's compensation. The farm offered end-of-year bonuses, seasonal housing, paid utilities and television for many of its workers. Full-time, year-round employees received paid vacation, holiday pay, health insurance, and profit sharing. The farm will be reducing its profit sharing benefit to the extent of labor cost increases due to the higher minimum wage.

Field workers were paid based on their productivity (i.e., paid per 12-pint flat picked). In 2005, the farm's piece rates ranged from $3.25 to $3.80 per flat. The average number of flats picked per 8-hour day ranged from 20 to 30 flats per worker; thus, very few workers were paid an equivalent less than $7.15 per hour. However, in 2005 the farm paid $5,592 to piece workers in order to bring them up to the minimum wage equivalent of $5.15 per hour. Those "under-producing" workers were moved to sorting and/or packing jobs.

Farm Income and Expenses

2005 cash receipts from farm products…….. more than $3 million
Total production expenses……more than $3 million
Labor expenses…….more than $3 million
Labor cost as a percentage of total expenses…….. 44%

Conclusion

The farmer stated that there is a lot of competition for labor between farms and between industries (e.g., landscapers, construction, etc.). Although very few workers earned less than $7.15 per hour in 2005, the farmer expected to increase all wages by approximately 8 percent because of the minimum wage increase (i.e., "rising tide" effect). Furthermore, since the farm sells its products on the wholesale market, it has little control over the prices it receives.

Case Study 8 - Southern New Jersey Fruit Farm

General Farm Information

This large fruit farm is located in southern New Jersey. It is comprised mainly of peaches and nectarines. Ninety-nine percent of the crops are sold wholesale to buyers, 1 percent is sold wholesale to retailers. The farm is deed restricted under the state farmland preservation program. Between 76 and 100 percent of the gross household income is generated from the farm operation. The farmer has 50 years of experience and farms full-time. He is a 3rd generation farmer with the next generation participating in the farming operation.

Related Businesses

There are no other related businesses associated with this farm.

Workforce

The farm employed 153 hourly workers in 2005. One hundred and fifty-one field workers worked a total of 97,000 hours. Two employees were supervisors as well as field workers. These employees worked a total of 5,000 hours.

Labor Costs

One hundred and fifty-one workers earned $5.15 per hour in 2005. One supervisory worker earned $8.15 per hour; the second earned $12 per hour. The total wages paid to 153 workers were between $500,000 and $999,999 (excluding social security, Medicare, and workers compensation). The cost of the wage taxes and workers compensation for all workers was approximately $70,000.

Fifty-five workers received end-of the year bonuses at a cost of $15,000. Eighty workers received seasonal housing and utilities at a cost of $112,000. Ten workers received year-round housing and utilities at a cost of $50,000.

Farm Income and Expenses

2005 cash receipts from farm products……between $1,000,000 and $2,999,999
Total production expenses……... between $1,000,000 and $2,999,999
Labor expenses.……between $500,000 and $999,999
Labor cost as a percentage of total expenses.…….. 26%

Conclusion

Total wages for 151 field workers will increase by 39 percent when the minimum wage increases to $7.15 per hour. Wages for the supervisory-field worker earning $12.00 will increase to $13.00, or 8.3 percent. The employee earning $8.15 per hour will increase to $9.15 per hour or 12.3 percent. In total, this farm's labor costs will increase by approximately 36.5 percent and total production expenses may increase by 9.5 percent.

The farmer had difficulty obtaining labor in 2005. Available labor decreased 15 percent. He indicated that the number of "walk-ins" declined and that he had to go to Bridgeton to obtain the additional field workers. He could not explain the decline in available labor.

Case Study 9 - Southern New Jersey Nursery Farm

General Farm Information

This medium sized nursery operation is located in southern New Jersey. The business began more than 50 years ago, and the operator has been a full-time farmer for more than 30 years. He is a 1st generation farmer whose son may be interested in continuing the operation. One hundred percent of the crops are sold to retailers or restaurants. Between 76 and 100 percent of the gross household income is generated from the farm operation. The farm is enrolled in the state's farmland preservation program.

Related Businesses

There are no other related businesses associated with this farm.

Workforce

The farm employed 92 workers in 2005. Eight workers were salaried: 2 were sales, 4 were supervisory; 1 was clerical; and 1 was a mechanic. Thirty workers were part of the H2A program. The remaining 54 employees were hourly, non-H2A production workers. The farmer did report having difficulty obtaining local labor in 2005.

Labor Costs

The thirty H2A workers earned $8.55 per hour and worked 52,319 hours in 2005. Thirteen production workers earned more than $7.15 per hour (average rate of $8.55). These employees worked a total of 23,572 hours in 2005. Forty-one production workers earned between $6.15 and $7.14 per hour in 2005 (average wage rate of $6.73). These employees worked a total of 56,314 hours.

In 2005, the farmer provided end-of-the-year bonuses at a cost of $9,900. In addition, the farmer provided health insurance, housing, transportation, paid vacation, weekend/holiday pay, and recreational opportunities to many of the workers. The farmer also offered a "reporting bonus" as an incentive to retain workers. The farmer noted that the rate of the end-of-year bonus will be affected by the minimum wage increase because profitability will be affected. However, the remaining benefits will not be affected by the increase in the minimum wage.

Farm Income and Expenses

2005 cash receipts from farm products……...more than $3 million
Total production expenses……... more than $3 million
Labor expenses……..…...……...between $1,000,000 and $2,999,999
Labor cost as a percentage of total expenses……..…. 26.7%

Conclusion

Total wages for workers earning less than $7.15 will increase 6 percent. The farmer anticipates that wages for workers earning between $7.15 and $10.55 per hour will increase between 4 and 6 percent ("rising tide" effect). However, the farmer does not expect the increase to affect his salaried, supervisory, clerical or mechanic employees. In total, the farmer expects labor costs to increase by 2.6 percent and total production costs to increase by 0.7 percent.

Case Study 10 - Southern New Jersey Nursery Farm

General Farm Information
This medium-sized nursery farm in southern New Jersey grows general nursery crops such as shrubs, perennials, trees and grasses. 100 percent of the nursery products are sold wholesale to retailers. All of the land is owned by the farm family.

Related Businesses
The farm operation has no related businesses.

Workforce
This farm employed 86 workers in 2005. Twenty-one of the workers were involved primarily with weeding, moving pots, trimming, and loading. Sixty-five workers were involved with filling orders, operations, and machine work. The farm is owned and operated by several family members.

Labor Costs
Twenty-one earned less than $7.15 per hour (average wage of $6.65) and worked approximately 30,000 hours in 2005. Sixty-five workers earned more than $7.15 an hour. Total farm labor costs for 2005 were between $1,000,000 and $2,999,999 (not including wage taxes and benefits). The farmer/owners paid wage taxes and workman's compensation for all 86 employees.

In addition, the farmer provided bonuses, paid time off totaling about $240,000, raincoats and gloves at a cost of $4,500, transportation at a cost of approximately $40,000, and recreational activities such as BBQ's and fishing trips at a cost of $15,000. The farmer intends to maintain all current benefits provided to their workers once the increase in minimum wage becomes effective.

Farm Income and Expenses
2005 cash receipts from farm products……more than $3 million
Total production expenses…….. ……not available
Labor expenses…….between $1,000,000 and $2,999,999
Labor cost as a percentage of total expenses…….. not available

Conclusion
With the increase in minimum wage to $7.15, it is estimated that labor costs will increase by approximately 4.6 percent.

Case Study 11 - Southern New Jersey Vegetable Farm

General Farm Information

This small southern New Jersey vegetable farm produces herbs, greens (i.e., leeks, scallions and beets), cabbage, and lettuce based on a double-cropping production system. The farm owns approximately 72 percent of the land, and the remainder is leased. Eighty five percent of the farm's crops are sold wholesale to buyer/sellers and 15 percent are sold wholesale to retail brokers.

Related Businesses

The farm operation has no related businesses.

Workforce

The farm employed 13 seasonal migrant workers in 2005, with 10 involved primarily with field work and 3 doing tractor work and/or field management. The farmer/owner has sole responsibility for all farm operations and management.

Labor Costs

Ten workers earned less than $7.15 per hour (average of $6.50) and worked approximately 21,500 hours in 2005. Three workers earned more than $7.15 per hour. Total farm labor costs for 2005 were between $100,000 and $249,000 in 2005 (not including wage taxes and benefits). The farmer paid wage taxes and workman's compensation for all thirteen employees. In addition, the farmer/owner provided end-of-year bonuses for nine workers at a cost of $6,800; however, the farmer intends to eliminate this benefit because of the minimum wage increase.

Farm Income and Expenses

2005 cash receipts from farm products……between $500,000 and $999,999
Total production expenses…….…….. not available
Labor expenses…….between $100,000 and $249,000
Labor cost as a percentage of total expenses…….….. not available

Conclusion

With the increase in minimum wage to $7.15, the farmer estimates the impact to the farm will be a 13 percent increase in labor costs. Given that this farm sells the majority of its product through wholesale buyer/sellers, it will be very difficult to re-capture any of the cost increase. The farmer intends to eliminate the end-of-year bonus for his workers as a result of the minimum wage increase. This may affect his ability to acquire good labor, which is already a significant problem for this operation.

Case Study 12 - Southern New Jersey Vegetable Farm

General Farm Information

This third generation, medium-sized vegetable farm in southern New Jersey produces greens (i.e., spinach and beets), summer squash, herbs and lettuce (including red leaf, green leaf and romaine). Thirty percent of the land is owned by the farm and the remainder is leased. One hundred percent of the farm's crops are sold wholesale to buyer/sellers.

Related Businesses

The farm operation has no related businesses.

Workforce

The farm employed 37 seasonal migrant workers in 2005, with 34 involved primarily with field work and 3 involved doing tractor work and/or field management. The farmer has sole responsibility for all farm operations and management. There are no other family members involved with the operation.

Labor Costs

Eleven of the workers earned less than $7.15 per hour (average of $6.50) and worked approximately 5,700 total hours in 2005. Twenty-six workers earned more than $7.15 per hour. Total farm labor costs for 2005 were between $100,000 and $249,000 (not including wage taxes and benefits). The farmer paid wage taxes and workman's compensation for all 37 employees. In addition, the farmer provided housing, utilities, and local telephone service for 10 of the seasonal employees. The value of these extra benefits totaled about $7,500.

Farm Income and Expenses

2005 cash receipts from farm products…… between $250,000 and $499,000
Total production expenses…….. between $100,000 and $249,000
Labor expenses…….between $100,000 and $249,000
Labor cost as a percentage of total expenses …….. 65%

Conclusion

The farmer estimated that the business will experience a 7 percent increase in labor costs and a 4.6 percent increase in total production costs due to the minimum wage increase. Since this farm sells all of its products through wholesale buyer/sellers, there is no way to recoup the added production expense. However, given the difficulty obtaining reliable labor in the region, the farmer intends to maintain the benefits currently provided to the workers despite the increase in minimum wage.

Case Study 13 - Southern New Jersey Vegetable Farm

General Farm Information

This large vegetable farm in southern New Jersey consists of vegetables and field crops. The major vegetable crops are cucumbers, peppers, lettuce and asparagus. The major field crops are wheat and soybeans. The farm family owns approximately 65 percent of the farmland and leases the remainder. The farm's products are sold through the related sales business. Approximately 35 percent of products are sold to wholesalers, 35 percent to retailers and 30 percent to foodservice.

Related Businesses

The farm operation has two related businesses: a sales company through which the farm's products are sold, and a partnership that owns the land and farm buildings.

Workforce

The farm employed 269 seasonal workers and 10 permanent workers in 2005. Two-hundred and five workers were involved primarily with fieldwork and the packing house operation. Seventy-four workers were involved with tractor work and/or field management. The farm is owned and operated by several family members.

Labor Costs

One-hundred and forty-five workers earned an average of $6.00 per hour in 2005, 60 earned an average of $6.90, and 74 earned more than $7.15 per hour. Total farm and packing house labor costs for 2005 were more than $3 million (not including wage taxes and benefits). The farmer paid wage taxes and workman's compensation for all 279 employees. In addition, the farm provided the following benefits to workers: end of year bonuses totaling about $84,000, housing and utilities for 149 workers costing about $125,000, pay phones on premises costing approximately $11,000, uniforms for fifteen workers at a cost of $75.00 per week, transportation at a cost of approximately $35,000, paid vacation for 22 workers at a cost of $100,000, and over time pay at a cost of $185,000.

Farm Income and Expenses

2005 cash receipts from farm products…….more than $3 million
Total production expenses..……..more than $3 million
Labor expenses…….more than $3 million
Labor cost as a percentage of total expenses..…….. 60%

Conclusion

With the increase in minimum wage, the farmer reports that labor costs will increase by 2.8 percent and overall production expenses will increase by 1.6 percent. The farmer intends to reduce overtime pay by approximately $85,000 as a result of the increase in the minimum wage.

Case Study 14 - Central New Jersey Equine Breeding Farm

General Farm Information
This large equine breeding farm is located in central New Jersey. The farm breeds, boards, and raises standardbred mares and foals. In the spring of 2006, the operation had 350 standardbreds on the farm, including 80 foals. The farm, which is preserved through the state farmland preservation program, has been operating for more than twenty years.

Related Businesses
There are no other related businesses associated with this farm.

Workforce
The farm employed 20 hourly workers in 2005, all which were full-time, year-round livestock workers.

Labor Costs
In 2005, all 20 farm workers were paid more than $7.15 per hour. Total farm labor costs for 2005 were between $100,000 and $249,999 (not including wage taxes and benefits). Wages taxes and workman's compensation costs totaled $38,000. In addition, the farm provided end-of-year bonuses (at a total cost of $10,000), year-round housing (estimated at $24,000) and uniforms (cost of $1,000). These benefits were provided to all 20 employees.

Farm Income and Expenses
2005 cash receipts from farm products……between $100,000 and $249,999
Total production expenses……not available
Labor expenses…….between $100,000 and $249,999
Labor cost as a percentage of total expenses…….. not available

Conclusion
The farmer does not expect the higher minimum wage to have an impact on the labor costs of the farm operation. However, the farmer stated that competition for labor among industries (especially landscapers) in the region is fierce. The farmer stated that it is difficult finding new workers who are "livestock knowledgeable"; however, the main reason that the farm is able to retain employees is the fact that their workers truly enjoy working with horses.