**Labor Cost Challenges Facing California Agriculture**

Philip Martin

California will become the first state to require both a $15 an hour minimum wage and overtime pay for farm workers after eight hours of work a day or 40 hours a week in 2022.

AB 2757, the Phase-In Overtime for Agricultural Workers Act of 2016, would remove an exemption by January 1, 2022 that requires overtime pay for farm workers after 10 hours a day or 60 a week. Most nonfarm workers get overtime pay after eight hours a day and 40 hours a week.

California is one of four states that require overtime pay for farm workers; the 10/60 standard was established by the state Industrial Welfare Commission in 1976. AB 2757 failed in the Assembly June 2, 2016 on a 38-35 vote; 41 votes were needed for passage. However, farm worker overtime re-emerged as AB 1066 and became law in September 2016. A similar 8/40 overtime bill was vetoed in 2010 and failed in a final vote in the Assembly in 2012.

Under AB 1066, farm employers must begin to pay overtime to farm workers after 9.5 hours a day or 55 hours a week, with regular 8/40 overtime required after January 1, 2022. Employers with 25 or fewer workers will have until 2025 to pay 8/40 overtime.

There is very limited data on hours worked by California farm workers. Employers told the USDA’s Farm Labor Report that U.S.-hired farm workers were employed an average 39 hours a week in January 2016, versus 41 in California and almost 47 in Arizona and New Mexico. Hours per week were higher in October 2015, almost 42 across the U.S. and 44 in California.

In July 2015, average hours per week were 41 across the U.S. and almost 44 in California, and in April 2015, 40 in the U.S. and 42 in California. Arizona and New Mexico consistently have the longest average farm worker workweeks, often 46–47 hours, while Hawaii has the shortest workweek, with an average 37 hours.

The USDA data are averages for all types of workers: crop and livestock, and year-round and seasonal. They require two caveats for California. First, over three-fourths of the workers reported to USDA are employed on the reporting farm 150 days or more; that is, they are disproportionately long-season and livestock workers. Second, the USDA data do not include workers brought to farms by crop support services such as labor contractors, who bring the majority of workers to farms in California.

Most seasonal harvest workers work less than eight hours a day, but some work six days a week. A seven-hour, six-day worker would work 42 hours, although many farmers schedule only half a day’s work on Saturday.
Three types of workers are most likely to be affected by 8/40 overtime: livestock (dairy) workers, irrigators, and equipment operators. If 8/40 overtime were enacted, employers of dairy workers and irrigators would likely weigh the additional costs of hiring and training more workers versus paying current employees overtime. Calculations for equipment operators may be different, with overtime pay likely cheaper than buying additional equipment and hiring more operators.

The slowdown in Mexico-U.S. migration since the 2008–09 recession means that there are few newcomers arriving from Mexico, and many of the new workers entering the state’s farm workforce are H-2A guest workers. In current tight labor markets, many employers are likely to improve the efficiency of scheduling workers or pay overtime because of the difficulties involved in recruiting additional workers.

The UFW argued that farm workers deserve the same overtime protections as nonfarm workers. Farmers predicted 8/40 overtime would backfire and reduce worker earnings, as farmers hired more workers rather than pay overtime.

USDA data are from a sample of employers who hire workers directly. A survey of workers, the National Agricultural Workers Survey (NAWS), asks California crop workers how many hours they worked last week in the current job and the number of days worked per week in the current job. NAWS reports a significant share of workers are employed more than eight hours a day and 40 hours a week.

However, as with the USDA survey, most of the workers interviewed in the NAWS were hired directly by farmers rather than brought to farms by crop support services. The crop workers interviewed in California had an average of 16 years experience doing farm work and did an average 205 days of farm work in the past year. One quarter had harvesting jobs.

### Minimum Wages

California in April 2016 approved SB 3 to raise the state’s $10 an hour minimum wage to $15 by 2022 for large employers, and by 2023 for employers with 25 or fewer workers. The minimum wage will rise by $1 an hour in January each year beginning in 2017, and increase with inflation from 2024. The governor can suspend minimum wage increases for a year in recessions or if there are serious budget crises.

SB 3 was enacted to head off a $15 an hour union-sponsored initiative on the November 2016 ballot that was expected to be approved by voters. The minimum wage increase is expected to affect 5.4 million of California’s 15.1 million workers, raising their wages by an average $2.20 an hour or $3,700 a year.

### Table 1. California Farm Workers and Earnings, 2014

<table>
<thead>
<tr>
<th>Industry</th>
<th>Primary Workers</th>
<th>Earnings ($mil)</th>
<th>Average Earnings ($)</th>
<th>Only Job</th>
<th>Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>691,615</td>
<td>11,430</td>
<td>$16,527</td>
<td>499,440</td>
<td>72%</td>
</tr>
<tr>
<td>Oilseed and grain farming</td>
<td>4,587</td>
<td>116</td>
<td>$25,363</td>
<td>3,144</td>
<td>69%</td>
</tr>
<tr>
<td>Vegetable and melon farming</td>
<td>44,878</td>
<td>1,068</td>
<td>$23,789</td>
<td>30,760</td>
<td>69%</td>
</tr>
<tr>
<td>Fruit and tree nut farming</td>
<td>153,999</td>
<td>2,710</td>
<td>$17,600</td>
<td>102,805</td>
<td>67%</td>
</tr>
<tr>
<td>Greenhouse and nursery production</td>
<td>34,715</td>
<td>884</td>
<td>$25,452</td>
<td>26,530</td>
<td>76%</td>
</tr>
<tr>
<td>Other crop farming</td>
<td>19,052</td>
<td>446</td>
<td>$23,414</td>
<td>14,244</td>
<td>75%</td>
</tr>
<tr>
<td>Cattle ranching and farming</td>
<td>25,224</td>
<td>737</td>
<td>$29,223</td>
<td>19,817</td>
<td>79%</td>
</tr>
<tr>
<td>Hog and pig farming</td>
<td>132</td>
<td>4</td>
<td>$26,804</td>
<td>109</td>
<td>83%</td>
</tr>
<tr>
<td>Poultry and egg production</td>
<td>2,851</td>
<td>83</td>
<td>$29,143</td>
<td>2,123</td>
<td>74%</td>
</tr>
<tr>
<td>Sheep and goat farming</td>
<td>543</td>
<td>12</td>
<td>$21,759</td>
<td>465</td>
<td>86%</td>
</tr>
<tr>
<td>Animal aquaculture</td>
<td>441</td>
<td>13</td>
<td>$30,104</td>
<td>324</td>
<td>73%</td>
</tr>
<tr>
<td>Other animal production</td>
<td>3,069</td>
<td>77</td>
<td>$25,144</td>
<td>2,308</td>
<td>75%</td>
</tr>
<tr>
<td>Support activities for crop production</td>
<td>391,711</td>
<td>4,982</td>
<td>$12,719</td>
<td>288,435</td>
<td>74%</td>
</tr>
<tr>
<td>Support activities for animal production</td>
<td>3,156</td>
<td>81</td>
<td>$25,765</td>
<td>2,585</td>
<td>82%</td>
</tr>
<tr>
<td>Support activities for forestry</td>
<td>2,589</td>
<td>76</td>
<td>$29,217</td>
<td>2,012</td>
<td>78%</td>
</tr>
<tr>
<td>Nonfarm</td>
<td>137,711</td>
<td>4,548</td>
<td>$33,025</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>All Workers with at least one ag job</td>
<td>829,326</td>
<td>15,978</td>
<td>$19,266</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

The UCB Labor Center estimated that almost 40% of those affected by the $15 minimum wage are 20 to 29 years old, and that over half have a high school education or less. Over 55% of those expected to benefit from the rising minimum wage are Latino. A third of California workers affected are in retail trade and food services; less than 5% are in agriculture.

There is much speculation about the impacts of the $15 minimum wage in the San Joaquin Valley. In Fresno and other San Joaquin Valley cities, the $15 minimum wage would be three-fourths of the projected $20 median wage in 2022, while $15 will be less than half of the projected median wage in San Francisco in 2022.

California farmers opposed the 50% increase in the minimum wage. They complained that labor costs have risen rapidly because of the Affordable Care Act and paid sick leave, as well as the slowdown in Mexico-U.S. migration. Almost 200,000 workers in Fresno County are expected to be affected directly by the minimum wage increase. Many employers predict that they will have to lay off workers and raise prices.

Many of these commodities are labor intensive, meaning that labor costs are 20–40% of production costs. The 1986 Immigration Reform and Control Act ushered in an era of plentiful labor and falling real wages for farm workers, as unauthorized Mexicans moved to the United States and spread throughout U.S. agriculture and the U.S. economy. The number of unauthorized foreigners peaked at 12 million in 2007, including seven million Mexicans. At least a million of the eight million unauthorized foreigners in the U.S. labor force were employed in agriculture.

Since the 2008–09 recession, Mexico-U.S. migration has slowed, so that there are almost no newly arrived unauthorized Mexicans in the farm workforce, while in 2000 a quarter of farm workers had arrived within the past year from Mexico. Farm employers noticed the slowdown in Mexican newcomers, complained of labor shortages, and pursued four broad strategies to cope with the aging and settled farm workforce: satisfy, stretch, substitute, and supplement.

The first strategy is to satisfy current workers to retain them longer by offering bonuses, training supervisors, and taking other steps to make current employees feel wanted. Most farmers believe that the supply of labor inside U.S. borders is fixed or inelastic, so that higher wages will not attract or retain more farm workers. Instead, benefits and bonuses, such as low-cost health care to employees and their families or adding a 10% bonus to earnings for staying until the end of the season, are being implemented. Some employers are improving the training of first-level supervisors to reduce favoritism and harassment.

There may be physical limits to how long farm workers can continue to lift and carry heavy bags of fruits and vegetables in 100 degree heat as their average age approaches 40. A familiar aphorism says that it is hard to find a farmer under 40 because of the capital required to farm and hard to find a farm worker over 40 because of the physical demands of farm work.

The second strategy is to stretch the current work force with mechanical aids that increase productivity and make farm work easier. Most fruits and vegetables are over 90% water, and hand harvesters spend much of

---

**4-S Responses to Higher Wages**

California farmers specialize in the production of high-value fruits and nuts, vegetables and melons, and other horticultural crops, including nursery crops, mushrooms, and other minor crops. California produced $34 billion worth of FVH crops in 2014, including $21 billion worth of fruits and nuts, $8 billion worth of vegetables and melons, and $5 billion worth of other horticultural crops. That is, California accounted for 70% of the $30 billion value of U.S. fruits and nuts, 42% of $19 billion value of vegetables and melons, and 19% of the $27 billion worth other horticultural crops (Figure 1).

![Figure 1. U.S. and California Fruit, Vegetable and Horticultural Sales, 2014](http://www.ers.usda.gov/)
their time carrying harvested produce down ladders to bins or to the end of rows to receive credit for their work.

Smaller trees mean fewer ladders and faster picking, and hydraulic platforms reduce the need to fill 50 to 60 pound bags of apples and oranges from ladders. Slow-moving conveyor belts that travel ahead of workers harvesting berries, broccoli, and other vegetables reduce the need to carry harvested produce, making workers more productive and harvesting jobs more appealing to older workers and women.

More can be done to raise the productivity of hand harvesters. Trees and plants have been designed for maximum yields, not maximum worker productivity. Dwarf trees, talk-stalk broccoli that requires less bending to cut, and table top production of strawberries (as in some European countries) could stretch a smaller farm workforce by increasing worker productivity. However, the time between development of new plants and labor-saving machines and their widespread diffusion is often measured in decades.

The third strategy is substitution or replacing workers with machines. Labor-saving mechanization is the story of agriculture, as the U.S. went from 95% of U.S. residents in agriculture in 1790 to less than 2% today. The production of the big-five crops, corn, soybeans, wheat, cotton and rice, has been mechanized, and there have been enormous labor-saving changes in livestock production as well, including robotic milking systems. Most nuts are harvested mechanically, with machines shaking them from trees and sweeping them into rows for pick up.

Fresh fruits and vegetables have defied mechanization for several reasons. Many are fragile, and human hands are far gentler than mechanical fingers to harvest grapes or peaches. Machines that shake apples or pears from trees damage a higher share of the fruit than hand harvesters, meaning a smaller share goes to market. Finally, machines are fixed costs and workers are variable costs, meaning that farmers must pay for a $200,000 harvesting machine whether there are apples to pick or not, while they do not pay wages to workers if storms or disease destroy the apple crop.

The fourth adjustment is to supplement current workers with H-2A guest workers. The H-2A program was created in 1952 and was used primarily by sugar cane growers in Florida and apple growers along the east coast until the mid-1990s. North Carolina tobacco farmers became the largest users after ex-government officials created an association that, for a fee, recruits workers in Mexico, brings them to North Carolina, and deploys them to farmers. This turn-key and loyal H-2A labor force proved very attractive to farmers, especially as the workers gained experience by returning year after year.

Receiving government certification to employ H-2A guest workers requires employers to satisfy three major criteria. First, farmers must try to recruit U.S. workers and provide reasons why U.S. workers who applied for jobs were not hired.

Second, farmers must provide free housing to H-2A guest workers and out-of-area U.S. workers. Housing is a special concern in California, where most labor-intensive agriculture is in metro countries that often have shortages of affordable housing and restrictions on building more.

Third, the law requires that the presence of H-2A guest workers should not “adversely affect” U.S. workers. The government enforces this no-adverse-effect requirement by setting a super-minimum wage called the Adverse Effect Wage Rate, which is $11.89 an hour in CA in 2016, when the state’s minimum wage is $10 an hour.

The H-2A program is expanding, doubling over the past decade to over 140,000 farm jobs certified by the U.S., Department of Labor (DOL) to be filled by guest workers in FY15 on about 7,500 U.S. farms. California has experienced some of the fastest growth in H-2A jobs, doubling from 4,100 in FY13 to 8,600 in FY15 and likely to exceed 10,000 in FY16. One-half of the California H-2A certifications were with farm labor contractors (FLCs) who provide workers to farmers, moving them from one farm to another if necessary. Some 243 U.S. workers were referred to fill H-2A jobs in FY15, and 23 (or less than 10%) were hired.

**What’s Next?**

After two decades of plentiful farm workers and stable wages, California farmers face the prospect of higher labor costs due to market reasons linked to the slowdown in unauthorized Mexico-U.S. migration and state legislation that increases the minimum wage from $10 to $15 and requires 1.5 times regular pay for hours worked after eight a day and 40 a week. Higher wages and rising labor costs have prompted farmers to pursue satisfy, stretch, substitute, and supplement strategies. Stretch and supplement are the most likely short-term responses, and stretching and substitution are most likely over time.

**AUTHOR’S BIO**

Philip Martin is an emeritus professor in the ARE department at UC Davis. He can be contacted by email at martin@primal.ucdavis.edu.

**Suggested Citation:**