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# Analysis of Farmworker Wages from 1997-2016 and Effect of Yearly Rainfall on Farmworker Wages

## Keywords

farm workers, south texas, pay per crop

## Disciplines

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# Analysis of Farmworker Wages from 1997-2016 and Effect of Yearly Rainfall on Farmworker Wages

Farmworkers are traditionally underpaid. They suffer from low wages, stolen wages and poor working conditions. The Economic Policy Institute found that nationally “over 70% of federal labor standards investigations of farms . . . detect violations..like wage theft” and in Texas there were an average of 9.7 violations per investigation.<sup>1</sup> Farm workers are paid a per-piece wage but it must equal to at least minimum wage for their hours worked. For example, if a farmworker works 6.25 hours filling 55 buckets they must be paid at least \$45.31 even when they must wait another x amount of hours on the field until the field’s daily quota is met to receive pay and finally leave.<sup>2</sup> This informal way of “clocking in” and “clocking out” makes it possible for farmers to get away with underpaying their employees, or steal their wages. Wage

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<sup>1</sup> Costa, Daniel, and Philip Martin, and Zachariah Rutledge. “Federal Labor Standards Enforcement in Agriculture: Data Reveal the Biggest Violators and Raise New Questions about How to Improve and Target Efforts to Protect Farmworkers.” Economic Policy Institute, December 2020.

<sup>2</sup> Sorrentino, Joseph. 2014. “Stealing Pennies from Chileros.” *In these Times*, 01, 24-25,27-29,4.

theft also takes the form of minimum wage violations, meal break violations, and illegal deductions. The U.S. Department of Labor's Wage and Hour Division (WHD) found in 2019, that the average back wages owed totaled \$6 million dollars.<sup>3</sup> Therefore, I put together this study to depict how farmworker wages have progressed. This study will serve as a basis and knowledge piece for farmworkers, as well as their advocates, to know the average hourly rate for their work and reclaim stolen wages.

I set out to find two answers: how the median pay of farmworkers in Texas has changed from 1997-2016 and secondly, what influence, if any, did rainfall have on farmworker wages?

### **Analysis of Texas Farm Workers Wage 1997-2016**

Farmwork often involves undocumented, documented and holders of H-2A visas; their legal status makes farmwork data difficult to collect. For the sake of this paper, I will use data from the U.S. Bureau of Labor Statistics' Occupational Employment and Wage Statistics (OEWS) data and the U.S. Department of Labor's National Agricultural Workers Survey (NAWS) reports. I acknowledge that the NAWS collects characteristics of crop farm workers, excluding those employed through the H-2A temporary work visa program. Additionally, when I use the term "farmworkers" I am referring to what the U.S. Bureau of Labor Statistics refers to as "Farmworkers and Laborers, Crop, Nursery, and Greenhouse".

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<sup>3</sup> Costa, Daniel, and Philip Martin, and Zachariah Rutledge. "Federal Labor Standards Enforcement in Agriculture: Data Reveal the Biggest Violators and Raise New Questions about How to Improve and Target Efforts to Protect Farmworkers."

I used the federal minimum wage as a basis to compare the median hourly pay of farmworkers in Texas since we know this is the minimum of what they should be paid an hour. For this paper, I am working under the assumption that all median hourly wages above federal minimum wage occur as a result of farmworker productivity compensation in the per piece rate. In 1997, minimum wage was set at \$5.15. It increased at a rate of 40.78% percent or \$2.10 dollars and in 2016 was set at \$7.25.<sup>4</sup>

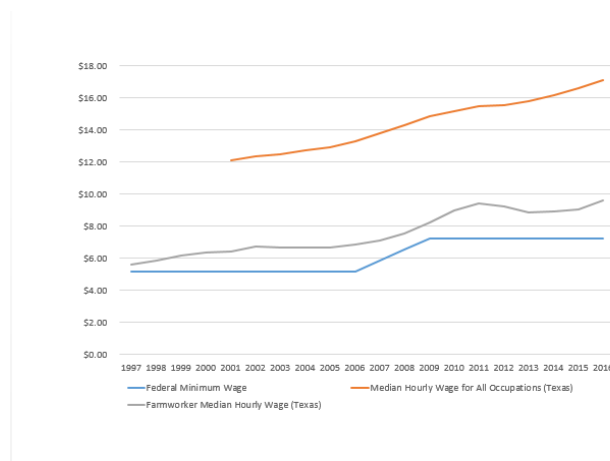
According to the NAWS conducted by the U.S. Department of Labor, from 1998-2016 the average hourly wage a farmworker earned in the Southwest has increased from \$6.52 to \$9.36.<sup>5</sup> This demonstrates a 43.56% increase or \$2.84 increase. In comparison, the OEWS median hourly pay for farmworkers in Texas increased from \$5.58 in 1997 to \$9.58 in 2016. The median hourly pay increased 71.88% or \$4. Despite different growth rates, median hourly pay for Texas farmworkers and average hourly pay for Southwestern farmworkers ended at a \$.22 difference so I will use the OEWS data for further comparisons.



<sup>4</sup> U.S. Department of Labor. "History of Federal Minimum Wage Rates Under the Fair Labor Standards Act, 1938 - 2009."

<sup>5</sup> U.S. Department of Labor. "National Agricultural Workers Survey Data Tables." <https://www.dol.gov/agencies/eta/national-agricultural-workers-survey/research/data-tables>.

Farmworker median pay in Texas increased at a larger rate than the federal minimum wage which is a sign indicating higher than expected pay due to productivity. However when comparing the data to the growth of median hourly wages for all occupations in Texas it is seen that although farmworkers saw a growth of 48.99% from 2001 to 2016 and “all occupations” saw a growth of 41.34%, the dollar increase for “all occupations” was \$1.84 higher than for farmworkers.<sup>6</sup> This indicates that although farmworker median earnings experienced a larger growth this growth only occurred because they initially began at a lower wage.



Compared to minimum wage, farm workers are receiving a higher hourly wage. However, the wage growth falls behind when compared to the median of all occupations in Texas. This data helps clarify where the improvements and failures of their wages lie. In order to increase farmworker pay minimum wage would have to amount to greater than \$9.59+. However, despite any median hourly earnings growth there is a further issue to consider regarding farmworker pay: how will upcoming changes in weather patterns, specifically rainfall, affect farm workers wages?

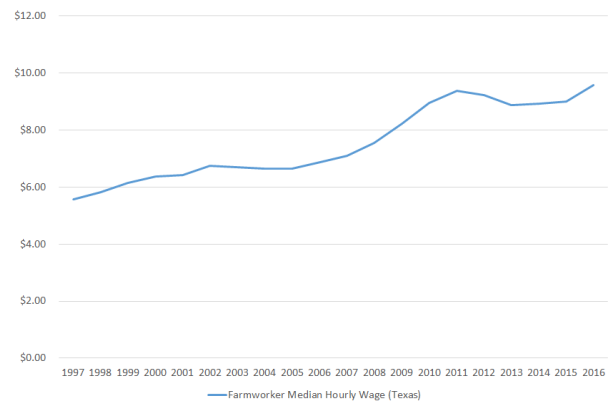
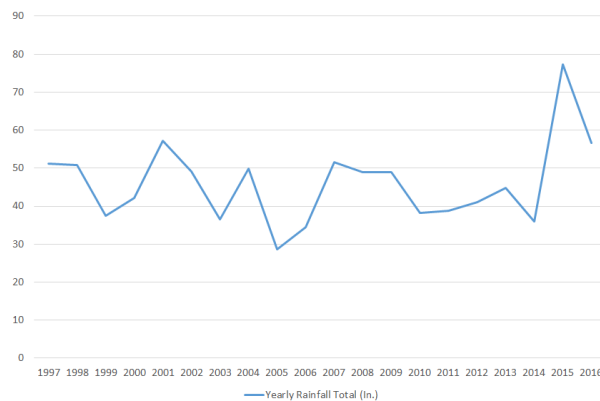
## Rainfall

<sup>6</sup> U.S. Bureau of Labor Statistics. “Occupational Employment and Wage Statistics.”

Extreme weather conditions make it difficult for farm workers to harvest their crops.<sup>7</sup>

Yet, there was no clear pattern in the data specifying yearly rainfall affecting farm workers wages.<sup>8</sup> If more data was available like average yearly income or average hourly rate per month there would be a way to control for crop and find this relationship.

However, more rainfall in the appropriate time, during the growing season, would increase crop yield making harvesting at a per piece rate easier.<sup>9</sup> Yet, having rainfall during harvesting season makes harvesting more difficult and slows down farmworkers, therefore



decreasing possible earnings.

This makes me believe that pay would increase as rainfall increases until a certain threshold then increasing rainfall would decrease farmworker wages. One must especially consider which month the rainfall takes place since this will have an effect. From here there are further questions to be answered such as how upcoming changes in weather patterns, in the next 20 years, affect farmworker wages.

<sup>7</sup> Iris Karami. "The fields are filled with water', farmworkers asked to work in floods." Valley Central, July 9, 2021.

<sup>8</sup> Texas A&M Agrilife Extension. "Monthly Rainfall (1968-2021)."

<sup>9</sup> Plains Cotton Cooperative Association. "South Texas Crop Delayed by Extended Rainfall."

Although we are seeing farm workers' hourly wage increased at a rate similar to the average of other occupations in Texas, changing weather conditions may put a stop to this. By making the harvesting process more difficult farm workers may experience a pay decrease. Yet the only minimum hourly pay barrier they currently have is the federal minimum wage which has not changed since 2009. It is important to all current and future farmworkers that action be taken now to put a stop to the tradition of stolen wages and find new ways to mitigate future wage decreases.



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