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## Rise of the Beet: Irrigation, Labour, and Agricultural Intensification in the California Beet Sugar Industry, 1850-1903

In California, the climate is characterised by long cycles of extreme drought and flooding. As a result, most agriculture in California requires extensive infrastructure for moving and containing water to keep crops wet enough in times of drought and dry enough in times of flooding. Unfortunately, large scale irrigation projects are incredibly costly to construct and maintain, and can involve a complex web of water rights laws. In the 19th century, farmers found a new solution: sugar beet farming. Sugar beets were a profitable crop that could be grown without significant irrigation, making them ideal for the more arid regions of California. However, as irrigation works expanded, farmers realised that sugar beets could be even more profitable if they were better watered. Throughout the second half of the 19th century, irrigation and sugar beets experienced a parallel expansion. The expanding industry and the expanding desire for profits required a large, cheap labour force. Increasingly, sugar beet growers relied on poorly paid immigrant labour. Ultimately, the industry's growth and attendant labour practices culminated in the 1903 Oxnard Strike, in which Mexican and Japanese farm workers crossed ethnic lines and led a strike that threatened the sugar beet crop. In this paper I will demonstrate that a relationship between agricultural intensification, irrigation, and labour in the context of sugar beets, lead to the 1903 Oxnard Strike, providing an alternative perspective for an issue which has, until now, been understood primarily in the context of global economics and racial coalition politics.

### The Irrigation Transformation

Before the sugar beet industry could become a contentious battleground for race and labour, it first had to emerge from obscurity and become a major agricultural economy with large-scale labour demands. While sugar beets were being grown in the 1800s, it was only after a vigorous period of agricultural and infrastructural intensification, beginning in about 1890, that they became truly significant. Then in the late 1800s and early 1900s a mutually increasing cycle of sugar beet production and agriculture developed. Finally, the expanding industry would come to rely on large numbers of low-paid labourers, sowing the seeds of the 1903 strike.

In the mid 1800s, the sugar beet industry was fairly small and insecure, however as the benefits of irrigation became better known, efforts to expand irrigation and beet planting began to grow. Initially, the beet industry was anything but an economic powerhouse. One apologetically written 1854 article in *The Los Angeles Star* entreats readers to give the beet industry a second chance, reporting the superintendent of public works as saying:

We know that some were disappointed last fall in not getting sugar, and some in poor molasses. But, brethren, don't be discouraged; we have different workmen this year, and if we cannot give you sugar as you desire, no effort shall be wanting to give you good molasses. Bring your beets and try.<sup>1</sup>

The sugar beet industry was failing to produce the sugar that people demanded of it. In fact, even as late as 1890, in spite of some improvements, the sugar beet industry was still struggling. *The Coronado Mercury* contains several articles from that year deriding the sugar beet industry. One seemingly earnest article gives an in-depth explanation of why, “An acre of sugar beets changed into butter or beef will bring twice as much in the meat or butter market as It would at the sugar beet factory,”<sup>2</sup> suggesting that sugar beet production simply was ~~not~~ profitable. On other occasions articles mock the industry outright. A short profile of a local beet and beef mogul from

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<sup>1</sup> “Beet Sugar Factory,” *Los Angeles Star*, October 14, 1854.

<sup>2</sup> “Management of Sheep,” *Coronado Mercury*, (Coronado, CA), February 8, 1890.

the same year jokes that if his beet investments should fail, he would make more money feeding the beets to his cows anyway.<sup>3</sup> While sugar beet planting was a growing, developing industry, it simply would not be ready to become a flourishing industrial enterprise until the irrigation of beets became a serious factor.

While there were some early signs that irrigation of beets might prove profitable, it was only after 1890 that the industry truly became significant. A few early sources discuss the benefits of irrigation, such as an article from *The Los Angeles Star* in 1855 which details the success of experimental irrigation methods.<sup>4</sup> However, that category seems to be the exception, rather than the rule. The real shift comes around 1890. Suddenly newspapers were filled with articles about farmers expanding beet production. *The San Coronado Mercury* reports in 1891 that sugar beet planting in Chino will be expanded to 4,000 acres.<sup>5</sup> In 1894 *The San Bernardino Sun* describes the chaos that was caused when the sugar beet crop overwhelmed the capacity of the processing factory.<sup>6</sup> By October 14th of that year, the factory had received 42,330 tons of beets.<sup>7</sup> With outputs like that, beets were starting to look like a viable cash crop. Clearly, California farmers were enthusiastic for the profits sugar beets could yield, and yet, despite major expansions, the industry was still not operating anywhere near its full potential. In 1898, another San Bernardino paper, *The Evening Transcript*, ran a story comparing the results of a recent experiment in growing sugar cane in Delaware with the successes of Californian beet sugar. The article found that, per acre, the Delaware sugarcane yielded 400 pounds more sugar

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<sup>3</sup> "Farm Notes" *Coronado Mercury*, (Coronado, CA) June 28, 1890.

<sup>4</sup> "Experiments in Irrigation," *Los Angeles Star*, March 17, 1855.

<sup>5</sup> "A Brief Resume of the Current Events of Interest," *Coronado Mercury*, (Coronado, CA) December 12, 1891.

<sup>6</sup> "Big Output of Beets," *San Bernardino Sun*, September 8, 1894.

<sup>7</sup> "The Sugar Harvest," *San Bernardino Sun*, October 14, 1894.

than the sugar beets.<sup>8</sup> Delaware is hardly an ideal place for growing a tropical crop, such as sugar cane, so if sugar cane in Delaware could outproduce sugar beets in California, it indicates that sugar beets were at a serious competitive disadvantage. Sugar beets still needed large-scale infrastructure to become competitive.

At the turn of the century, irrigation changed everything. In 1900, Santa Barbara's *The Morning Press* reported that sugar beets were proving to be well above average in sugar content. The explanation: irrigation. The article explains that the beets are, "thoroughly irrigated from the general water supply which is drawn from artesian wells."<sup>9</sup> The improved irrigation systems led to more beets with higher levels of sugar. Moreover, irrigation also provided a protection against severe drought for investors and growers. Another article from *The Morning Press* extols the virtues of irrigation, writing that, "the dry years will probably not recur again; and if they should, Irrigation will be better arranged, and good crops of the sugar beet can be expected."<sup>10</sup> The reliable water supply and precise application of water that irrigation offered made for a resilient and profitable industry in beet sugar. Naturally, once this fact was realised, irrigation experienced a major boom. *The Los Angeles Herald* reports in 1902 that the Oxnard Irrigation Company had expanded wells and ditches to irrigate 20,000 acres, with plans to build more irrigation and pump more water according to demand.<sup>11</sup> This irrigation project marks a major transformation. Irrigated sugar beets had proven so profitable that they were inspiring major infrastructure projects. The importance of irrigating sugar beets became so crucial that not only

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<sup>8</sup> "Facts in a Few Lines," *Evening Transcript*, (San Bernardino, CA), December 24, 1898.

<sup>9</sup> "Making Sugar Again: The Big Factory in Oxnard in Operation, Two Thousand Men Find Employment in the Harvest— Chino Beets to be Worked Up," *Morning Press*, (Santa Barbara, CA), August 25, 1900.

<sup>10</sup> "The Beet Sugar Season," *Morning Press*, (Santa Barbara, CA), July 16, 1901.

<sup>11</sup> "Irrigation of Beets: Five Artesian Wells Completed by Oxnard Company," *Los Angeles Herald*, May 23, 1902.

did communities invest the funds to have irrigation built, they also began involving academics in their agriculture. In 1902, Oxnard held a “farmers’ institute” where scientific farming was discussed. Among the presentations was, “A paper by A. F. Maulhardt on ‘Irrigation and Development of Water’ [that] showed what had been and could be done in the growing of beets by Irrigation.”<sup>12</sup> In fact, Maulhardt’s work was shared widely in the irrigation community. The irrigation journal *The Irrigation Age* wrote about Maulhardt’s fields saying:

As one rides along the road between his irrigated fields of beans and beets, and those of his neighbors that have not had the benefit of the irrigation, the advantage is so marked that it must be most convincing to all interested in the production of maximum harvests.<sup>13</sup>

It is fairly obvious to us now that irrigation is likely to improve crop growth, but the truly interesting thing about Maulhardt’s work and *The Irrigation Age* is that there was clearly a community of scientifically-minded people directly engaged in proselytising the merits of irrigation, especially with regard to the production of sugar beets.

And just as beet production spurred interest in irrigation, irrigation magnified production. Prior to the major efforts at irrigating beets, the *San Bernardino Sun* had reported the harvest at 42,330 tons of beets,<sup>14</sup> but in 1902, the harvest for the American Beet Sugar Company was estimated at 90,000 tons<sup>15</sup> and a more comprehensive accounting done in 1903 put the 1902 production at 190,000 tons of beets.<sup>16</sup> In just eight years, the beet crop was more than quadrupled. Certainly some of that expansion must have been due to land being put towards beet

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<sup>12</sup> “To Improve the Farms: Farmers’ Institute at Oxnard Draws Large Crowds,” *Los Angeles Herald*, August 28, 1902.

<sup>13</sup> John E. Frost, *The Irrigation Age* 17 no. 9, (Chicago, IL: D.H. Anderson Publishing Co. 1902), 466.

<sup>14</sup> “The Sugar Harvest,” *San Bernardino Sun*, October 14, 1894.

<sup>15</sup> “Items from the California Towns which Interest Everybody,” *Evening Transcript*, (San Bernardino, CA) July 3, 1902.

<sup>16</sup> “Ventura: Queen of the Southland,” *Los Angeles Herald*, January 25, 1903.

production irrespective of irrigation. However, it is clear that irrigation played a role. After all, irrigation made investing in beets far safer. As Santa Barbara's *Morning Press* reported, prior to the irrigation of sugar beets, investors had "realized little on their investment."<sup>17</sup> Other sources report something similar. *The Imperial Valley Press* wrote a glowing piece of self-congratulation over the transformation of the Imperial Valley "From Desert to Garden."<sup>18</sup> In the article, the paper praises the flourishing agriculture that irrigation brought to the region, including a specific reference to sugar beets:

Sugar beets are being thoroughly tried this season, thus far with good success. The growth is all right and if the mature beets show a good percentage of saccharine matter, this country will prove to be one of the best— if not the best— beet sugar sections of the United States. Experiments heretofore made, have developed sugar in the sugar beet in a satisfactory manner. If present crop matures as sugar beets have heretofore matured, this country can support ten or more beet sugar factories the size of the one at Oxnard, and the season will be much longer than in any other section of the country.<sup>19</sup>

Even if we take the precise figures and comparisons with a grain of salt, *The Imperial Valley Press* is plainly indicating that the expansion of the sugar beet industry into the Imperial Valley was the direct result of irrigation. Whether through simple increase in productivity per acre of beet land or by expanding sugar beet cultivation into new territory, irrigation was the primary cause of the quadrupled beet output between 1894 and 1902.

#### Water and Labour: The 1903 Oxnard Strike

With massive expansion of beet production and sugar extraction came equally massive labour requirements. Additionally, pursuit of higher and higher profits forced down wages for

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<sup>17</sup> "The Beet Sugar Season," *Morning Press*, (Santa Barbara, CA), July 16, 1901.

<sup>18</sup> "From Desert to Garden," *Imperial Valley Press*, (El Centro, CA), August 9, 1902.

<sup>19</sup> *Ibid.*

farm workers, creating an untenable situation for labourers. Ultimately, the demands of the industry pushed workers too far, resulting in a violent and unprecedented strike.

Unfortunately, with rising beet production came rising labour requirements. Although I was unable to find the requisite information to calculate a reasonable estimate of the labor requirements to raise 190,000 tons of sugar beats, we can be sure that it was a massive undertaking. Meanwhile, a 1904 report by the USDA, *Progress in the Beet-Sugar Industry in the United States in 1903* reports that, “As a rule farmers do not advertise to secure labor; they simply depend upon local supply. Recently this has been going to the cities. Farm laborers have become scarce and expensive”.<sup>20</sup> The report goes on to examine the prospects of immigrant labour. After blaming immigrants for the moral and functional decrepitude of American cities, Saylor claims that the sugar beet industry would have a moralising influence on immigrants, drawing them to the “healthful living, the sobriety, and pure air of rural life”.<sup>21</sup> While we cannot wholly dismiss the moral justification for using immigrant labourers, because the early 20th century was a period in which social darwinism and cultural imperialism were considered both scientifically valid and morally righteous, it is suspiciously convenient that the moral argument aligns with the financial interests of the sugar beet industry. The opportunities for intensive agriculture opened up by irrigation projects remained limited, because labour constraints persisted. Putting more land into cultivation and cultivating a greater tonnage of crops per acre requires increasing the labour force. Yet while demand for labour was increasing, the supply of

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<sup>20</sup> Charles F. Saylor, *Progress in the Beet-Sugar Industry in the United States in 1903*, (Washington, DC: Government Printing Office, 1904), 103.

<sup>21</sup> *Ibid*, 104.



American-born labour was decreasing.<sup>22</sup> The natural response was to fill the void with the abundance of immigrant labourers.

However, solving the problem of the quantity of labourers was not enough. The beet sugar industry sought to raise profits further by cutting the cost of labour, and the result was a violent strike. In 1903, the Western Agricultural Contracting Company, a company that organised farmworkers through subcontracting, implemented a number of anti-labour policies. Wages dropped from five to six dollars per acre to \$4.25-\$3.75 or even as low as \$2.50, while additional WACC charged additional fees and restricted where workers could spend their earnings.<sup>23</sup> That proved to be a bridge too far for the WACC's profit-seeking, as Mexican and Japanese workers crossed ethnic lines and formed the Japanese-Mexican Labor Association (JMLA).<sup>24</sup> The resulting strike proved to be a bloody one. On 24 March, 1903, *The Los Angeles Herald* published an article with the headline, "Bloody Labor Riot at Oxnard: Five Men Desperately Wounded: At Least Two of the Victims Cannot Recover: Efforts of the Western Contracting Company to Organise a Rival Labor Union Said to Be the Cause of the Trouble—Over 200 Shots Fired".<sup>25</sup> *The Herald* reports:

The contracting company, unable to secure laborers, found some leaders who were dissatisfied with the present labor union and with the aid of these a new union was formed. Today the new union attempted to send a wagon-load of men to work at thinning beets for a rancher near town... At this critical moment a Japanese appeared with a doublebarreled shotgun and attempted to climb on the wagon.<sup>26</sup>

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<sup>22</sup> Ibid, 103.

<sup>23</sup> Frank P. Barajas, *Curious Unions : Mexican American Workers and Resistance in Oxnard, California, 1898-1961*, (Lincoln, NE: University of Nebraska Press, 2012), 134.

<sup>24</sup> Ibid.

<sup>25</sup> "Bloody Labor Riot at Oxnard: Five Men Desperately Wounded: At Least Two of the Victims Cannot Recover: Efforts of the Western Contracting Company to Organise a Rival Labor Union Said to Be the Cause of the Trouble— Over 200 Shots Fired," *Los Angeles Herald*, March 24, 1903.

<sup>26</sup> "Bloody Labor Riot at Oxnard: Five Men Desperately Wounded: At Least Two of the Victims Cannot Recover: Efforts of the Western Contracting Company to Organise a Rival Labor Union Said to Be the Cause of the Trouble— Over 200 Shots Fired," *Los Angeles Herald*, March 24, 1903.

From there the violence escalated further as both sides remained resolute. Irrigation had brought massive expansion of the beet industry, which in turn brought the promise of massive profits. Along with expansion and profit came desires to increase labour without increasing labour costs, and thus, irrigation led to violent labour protests.

It may sound absurd to tie irrigation to the 1903 strike, but it can be seen even in the reporting from 1903. The day after *The Herald* reported on the violent altercation just mentioned, it published a follow-up piece including the observation that twelve thousand acres of beets would go unthinned despite the large number of available Mexican and Japanese workers, because landowners feared that any farmworkers they might hire would spark further violence.<sup>27</sup> While *The Herald* certainly does express concern for the people whose lives were threatened by the strike, it also focuses on the economic situation. There is a definite fear that the strike might disrupt the all-important sugar beet industry, which had, by this point, become so massive that Oxnard and other beet towns were completely reliant on it.

While the story of the Oxnard strike is usually told in terms of its story of unusual early multi-ethnic coalition politics, or in terms of attempts by the United States to circumvent its dependence on other countries for the valuable commodity of sugar, it is also the climax of the story of irrigation and agricultural intensification in the beet sugar industry. Initially, sugar beets were an unprofitable, risky investment. Though they did not require irrigation, which made them a practical choice for farmers in much of Southern California, the beet industry was even considered something of a joke in 1890. Nonetheless, the beet industry continued to expand, and

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<sup>27</sup> “Situation Serious: Labor Troubles Continue: Both Sides Prepared for a Second Fight: Two Mexican Workmen Wounded in Riot Cannot Live, and Deputy Constable is Charged with Attempt to Kill— Beet Industry in Jeopardy,” *Los Angeles Herald*, March 25, 1903.

as it did farmers, investors, local governments, and academics began to experiment with and promote irrigation. When irrigation of sugar beets proved successful beyond their wildest dreams, the California beet culture expanded enormously, quadrupling in tonnage between 1894 and 1902 to a massive total of 190,000 tons. However, as irrigation vastly accelerated the beet industry's growth, the required labour increased equivalently. The need for labour, combined with the desire to cut costs led the beet industry to hire immigrant workers and systematically reduce their wages. The end result was the 1903 Oxnard Strike, in which bloody labour confrontations threatened the beet crop and demonstrated just how central the beet sugar industry had become to Southern California's beet growing regions. Moreover, the Oxnard Strike exposes a clear relationship between agricultural intensification, the expansion of irrigation and industrial agricultural infrastructure, and issues of labour, wages, and violence.

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