

Rural Migration News

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Alternatives to Hand Labor in Lettuce

Head (iceberg) and leaf (romaine, butterhead, and baby) lettuces are the most valuable US fresh vegetable. Lettuce is produced year-round, with 70 percent from CA and 30 percent from AZ. Americans are consuming less head and more other lettuces, so that each type was about half of the 25 pounds per person available in 2019.

Labor

Lettuce seeds are inserted into the ground or lettuce is transplanted when seedlings are 20 days old. Fields are thinned and weeded by machine and by hand, and the lettuce is ready to harvest after 60 to 90 days, depending on the time of the year and the weather. Growers plant lettuce each week so that there is always a crop to harvest, and two and sometimes three crops can be harvested each year from one piece of land in the Salinas area.

Mechanical thinners and weeders have reduced the need for pre-harvest hand workers. Machines recognize the location of each desired plant and can remove other plants and weeds with knives, flames, or

chemicals, allowing hand clean-up crews to cover more acres in the same time as they follow up after the machines, especially in organic fields.

The harvesting method depends on the type of lettuce and its usage. Iceberg lettuce destined for bagged salads is cut by field workers who remove the core and unwanted leaves before placing the heads on belts that convey them to bins for transport to salad processing plants.

These plants wash the lettuce in a chlorine solution and spin it dry before the lettuce is cut, mixed, and bagged; the plants are kept at 34F with 98 percent humidity. About 80 percent of head lettuce is mature during the first harvest, so fields can be harvested a second time if prices justify a second harvest.

Iceberg and romaine lettuces that are not bagged are typically harvested by crews of 20 to 26 workers who walk behind conveyor belts and select and trim mature heads before placing them on a belt that conveys them to packers who place the heads into plastic sleeves and pack them into cartons. Iceberg lettuce weighs about two pounds a head and is bagged individually or with three or six heads in each plastic sleeve, so that a carton of 24 heads weighs 48 pounds. Full cartons are placed on pallets and taken to vacuum cooling facilities that lower the temperature to 34F before the lettuce cartons are loaded onto trucks for transport to supermarkets and other buyers.

A crew of 10 cutters and 16 packers, stackers, and drivers can harvest 2,500 to 3,000 cartons of romaine

Harvesting and Bagging Head Lettuce



Source: Philip L. Martin

Harvesting Head Lettuce for Salad Plants



Source: https://tucson.com/business/yuma-lettuce-growers-look-to-rebuild-trust-after-deadly-e-coli-outbreak/article_8d663c35-a807-569a-9c00-582f8cb3bae5.html

Harvesting and Bagging Romaine Lettuce



Source: <http://calag.ucanr.edu/Archive/?article=ca.2017a0018>

lettuce in an eight hour day. Many growers guarantee all members of the crew the minimum wage, and offer a bonus that is shared by the crew if they harvest more than a target level of cartons that varies by field and yield. Crew-bonus systems allow most lettuce harvesters to earn several dollars an hour more than California's \$15 an hour minimum wage, often \$150 or more a day rather than the \$120 guaranteed by the minimum wage.

Machines

Baby leaf lettuces and immature romaine lettuce can be harvested with band-saw or water jet machines that make one pass through the field. There are several versions, including self-propelled and pull-behind lettuce harvesters. Ramsay Highlander's water jet machine can harvest 12,000 pounds of romaine lettuce into totes per hour, or 24,000 pounds an hour if the lettuce goes into bulk bins. Similar band-saw or water-jet machines are used to harvest spinach.

Outlook

The most significant labor savings in lettuce production have been in pre-harvest tasks. Machines recognize where desired lettuce plants are located, and remove weeds and excess plants in and between rows. Hand thinning and weeding requires one worker and eight hours of work or \$120 an acre, three times more than machines that can thin and weed 1.5 acres an hour at a cost of \$35 to \$40 an acre.

Consumer preferences are shifting toward the leaf and romaine lettuces that are easiest to harvest by machine. Heads of lettuce present several challenges, including the need to lift the head before cutting it to avoid leaving dirt on the cut head that would require washing before the head can be wrapped for sale. For this reason, most growers prefer to hand harvest head lettuce.

There are clean and core machines for the iceberg lettuce used in bagged salads. Hand harvesters follow conveyor belt machines, placing cut heads on the belt, but the packing platform has a device to remove the core from the head of lettuce and the outer leaves before placing the cored heads of lettuce into bulk bins traveling alongside the machine. The automatic core-and-leaf removal device allows harvesters to work faster,

Machines using water jets can cut six rows of romaine lettuce in once-over fashion and convey the heads to workers who ride on the machine and sort and orient heads for packers who place them in plastic bins for transport to a packing plant. The water jet machine reduces the harvest crew by half, from 24 to 12, and can harvest twice as fast as hand crews, 800 pounds per hour rather than the 400 pounds per hour.

Unions

Lettuce workers have long been a farm worker elite, with most employed by large and integrated firms with union-represented workers in their nonfarm packing and transport operations. Lettuce firms often paid higher than average wages to farm workers in the Salinas area, which was the center of farm worker union activities for decades.

The United Farm Workers union achieved its first contracts in table grapes in 1970, and then switched its focus to lettuce. The UFW sent letters to growers that said, “we represent your farm workers. please sign this contract or negotiate.” (until 1975, there was no requirement that workers vote on whether they wanted to be represented by a union). In response, many lettuce growers whose packing plant workers were represented by the Teamsters union, recognized the Teamsters as the representative of their field workers, setting off a three-way struggle between the growers, Teamsters and UFW.

The UFW in August 1970 called a strike against Salinas lettuce growers to persuade them to break their Teamster contracts and negotiate with the UFW, and asked consumers to boycott lettuce. The United Brands (Chiquita) Interharvest subsidiary, which leased land to produce 20 percent of Salinas-area lettuce, was the first lettuce grower to make the switch from the Teamsters in September 1972, as local managers reluctantly signed a UFW contract as instructed by Chiquita management.

The UFW-Interharvest contract called for a minimum wage of \$2.10 an hour and a piece rate of \$0.415 a box for iceberg lettuce, up over 30 percent from \$0.315 per box, so that the fastest cutters and packers

Harvesting Baby Lettuce



Source: <http://www.ramsayhighlander.com/products/romaine/Romaine-Mechanical-Harvester-Water-Jet-Stainless-Steel.htm>

Machines can Thin and Weed Lettuce Fields at 1/3 of the Cost of Hand Labor



could earn \$10 an hour at a time when the federal minimum wage for farm workers was \$1.30 an hour and \$1.60 for nonfarm workers.

Most Salinas growers complained that the Interharvest-UFW contract raised labor costs too much, but local grower D'Arrigo followed Interharvest and switched from the Teamsters to the UFW as the representative of field workers. The Teamsters agreed to withdraw from representing most Salinas lettuce field workers in March 1972, and

the UFW began negotiations with lettuce growers that usually ended with contracts.

The Teamsters returned to the fields in 1974 and replaced the UFW on 350 farms. The UFW, on the other hand, reported 60,000 workers under contract in 1972 and 5,000 in 1974, when the Teamsters had 55,000 farm workers under contracts. Most growers preferred to deal with the business-like Teamsters after they hired Spanish-speaking representatives and provided

field workers with Spanish-language materials. Both growers and workers were dis-satisfied with the UFW hiring halls that assigned workers based on their seniority with the UFW, since a family with one car might be assigned by the hiring hall to work on different farms.

California's 1975 Agricultural Labor Relations Act revived the UFW, which won most of the ALRB-supervised elections held in 1975-76. The UFW signed contracts with major lettuce growers that raised wages and added employer-paid benefits, including the UFW's RFK health insurance plan for farm workers and their families. The Teamsters stopped trying to organize field workers in 1977.

As the UFW prepared to re-negotiate the lettuce contracts signed in 1976, President Carter asked unions to limit their wage demands to seven percent. However, the UFW in 1978 demanded a 42 percent wage increase for lettuce workers that would raise the minimum wage in UFW contracts from \$3.70 to \$5.25 per hour when the federal minimum wage was \$2.90. Growers offered seven percent a year or a 21 percent wage increase over three years, prompting a UFW strike in January 1979 against the 27 lettuce growers in the Imperial Valley who were negotiating an uniform contract.

Many of the 8,000 Imperial Valley lettuce workers lived in Mexicali, Mexico, and commuted daily to US farm jobs. The UFW and the growers placed competing ads in Mexicali newspapers to persuade workers to stay home or come to work. There was violence on the picket lines and a UFW striker was killed.

The strike raised grower prices and revenue. Normal lettuce production in the Imperial Valley in February was 10 million cartons worth \$3.75 a carton for a total of \$38 million.

Machines with Water Jets can Harvest Heads of Romaine Lettuce



Source: <http://www.ramsayhighlander.com/products/romaine/green-leaf-lettuce-harvester.htm>

Cesar Chavez and Coretta Scott King Urged Consumers to Boycott Lettuce in 1972



The UFW's partially successful strike and whitefly problems reduced shipments by a third to 6.6 million cartons, but the grower price rose to \$12 a carton, which generated \$70 million in lettuce revenues.

The Imperial Valley lettuce strike of 1979 proved to be a Pyrrhic victory for the UFW. The wage leader in lettuce was the United Brands (Chiquita) Sun-Harvest (Interharvest until 1979) subsidiary, which agreed to raise its minimum wage in 1979 to \$5.25 an hour in a new UFW con-

tract. Soon after, Sun-Harvest exited the lettuce business, as did several other large Salinas-based lettuce and grower shippers that operated year-round.

The UFW hoped to win contracts with smaller growers who operated only in the Imperial Valley and did not agree to new Sun-Harvest model contracts via the ALRA's makewhole procedure, which allowed the ALRB to order employers who fail to bargain in good faith with certified unions to

pay affected workers for their lost wages and benefits. The Imperial Valley growers argued that they could not afford to raise wages as much as Salinas-based growers such as Sun-Harvest, and that the gap between the UFW's 42 percent wage demand and their seven percent wage offer was so large that there was an impasse that permitted the growers to raise wages by seven percent in order to persuade workers to return to work.

The UFW charged that there was no bargaining impasse, and that the lettuce growers failed to bargain in good faith. The ALRB agreed with the UFW and ordered growers to pay tens of millions of dollars in back wages and benefits to farm workers and begin good-faith bargaining with the UFW. The growers appealed, and California courts in 1984 reversed the ALRB, agreeing with the growers that there was a legitimate bargaining impasse.

There were several legendary labor disputes in the lettuce industry, including one between the UFW and lettuce grower Bruce Church that began with a UFW consumer boycott of Bruce Church's Red Coach lettuce in 1979. Bruce Church operated in both CA and AZ, and consumer boycotts were unlawful under Arizona's farm labor law. Bruce Church sued the UFW in AZ for damages caused by the lettuce boycott, and Cesar Chavez was testifying in this damage trial when he

The UFW and D'Arrigo Signed a Revised Contract in 2018



died in 1993. Three years later, new leadership of the UFW and Bruce Church signed a contract in a Salinas library named for Cesar Chavez, after which Bruce Church went out of business.

The UFW negotiated its only lettuce contract in 2007 with D'Arrigo, whose workers voted for UFW representation in 1975. The UFW-D'Arrigo covers about 1,500 workers employed by D'Arrigo, but not workers who are brought to D'Arrigo by FLCs.

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