

# LABOR-INTENSIVE AGRICULTURE

The following is a condensed version of a recent article by P.L. Martin in *Scientific American*, Volume 249, October, 1983, pages 54 to 59, discussing problems in the fruit and vegetable industry that contains a warning for the greenhouse industry. The sub-heading to the article states: "The \$18-billion U.S. fruit and vegetable industry is increasingly reliant on illegal-immigrant labor. By postponing mechanization it is becoming vulnerable to cheaper produce from other countries."

Agriculture is the single largest industry in the U.S., employing 4% of the labor force and generating 4% of the gross

national product. The enterprise consists of 2.5 million farms that combine family labor and hired labor, land and

water, seed and fertilizer, and energy and machinery to produce livestock and commodities worth nearly \$150 billion per year. The U.S. food system is the envy of the world because it provides a wide variety of foods at low cost. The average family in the U.S. spends about 17% of its disposable income on food, whereas in Europe 25% is common and in developing countries, the fraction can go as high as 2/3rds.

Another part of the picture is that 5% of the farms produce half of the nation's food and fiber, and it is these commercial farms that employ most of the hired workers. Many of the commercial farms that grow fruit, vegetables and nursery products — all labor intensive — resemble nonfarm businesses, with hired managers and up to several thousand seasonal workers to do the farm work. These seasonal farm employees are increasingly illegal aliens or undocumented workers. Agriculture's growing dependence on alien workers runs counter to U.S. law and policy, retards the pace of labor saving technological changes that have made the rest of U.S. agriculture a paradigm of efficiency and sends the wrong signal to farmers who face increased international competition. The continued availability of alien workers discourages farmers from making necessary labor and production changes, thereby increasing their vulnerability to foreign competition.

The major problems of farm labor arise in the \$18-billion fruit, vegetable and nursery industry which hires more than one million seasonal farm workers and usually pays them piecework harvest wages.

The farm labor market must match more than a million seasonal workers annually with farm jobs of short duration and must do so under conditions that include many workers who do not speak English, few incentives such as seniority and fringe benefits to hold workers to a particular farm, and perishable crops that may be lost if the harvest is delayed.

Seasonality, the contractor system and piecework wages have fostered a condition in which workers and jobs are interchangeable: farmers know the piecework cost of harvesting, and so they are indifferent about who picks their crops; since piecework wages are quite uniform, workers do not care who owns the field they are working in.

Debates over farm labor would leave less room for contradictory assertions if farm-labor statistics could provide an accurate profile of the workers. The statistics are incomplete and unreliable. The profile that emerges from the U.S.D.A. is that the typical hired farm worker is a 22-year-old white male college student who does one month of farm work during the summer. One could infer that the statistics systematically undercount seasonal fruit and vegetable workers.

The U.S.D.A. reports that the average employment of farm workers is about 1.3 million throughout the year and that the total farm work force is about 2.5 million. The implication is that a farmer must normally hire two workers during the year to keep one job slot filled. Some farmers have reported hiring 200 workers in one month to maintain a 20 person harvest crew.

Such an extreme turnover precludes a clear picture of who does farm work. The employment survey of July, 1982, reported that 1.8 million workers were employed on 475,000 farms, earning an average of \$3.96 per hour. Farmers reported that they provided fringe benefits such as housing,

meals and transportation to 45% of their employees, although the actual value of these benefits ranged from a carton of the crop being harvested to free room and board. The average wage of production workers in industry was \$7.89 per hour. The work-force survey in December, 1981, indicated that the work force was mostly white (73%), male (77%), young (55% under age 25), and poorly educated (median 11 years). Most worked for a short time or 73% less than 150 days. The people who worked more constituted only 26% of the farm work force, but did 75% of all the farm work done by hired hands. Migrants make up only 5% of the total work force.

This picture is distorted because "average" statistics on the work force are determined by the large number of students who do a few days or weeks of farm work in the summer and are easy to find in December. Farm labor data are the source of much frustration. Notwithstanding the evidence that the seasonal farm work force in the Southwest is largely Mexican, the U.S.D.A. data would have it that young, white American men predominate. Indeed, a survey in 1981 of 472 seasonal-farm-worker families in the Central Valley of California found that more than 90% of the workers were Mexicans and Mexican-Americans. Most representatives of farmers, farm workers and government agencies say the work force of 700,000 to one million in the fruit and vegetable industry consists largely of Mexican nationals, many of whom are working in the U.S. illegally.

The largest alien work force in agriculture consists of illegal aliens or undocumented workers who come primarily from Mexico. The bracero program, lasting for 22 years, admitted almost five million Mexican farm workers to the U.S. After it was terminated in 1964, farmers obtained immigrant status for many of their best workers.

The Simpson-Mazzoli bill on immigration reform and control, now before Congress, would: 1) make it a Federal crime to knowingly hire or employ an illegal alien, 2) grant amnesty to certain aliens living illegally in the U.S., and 3) modify the H-2 regulations to make it easier for employers to get alien farm workers. The basic question is where does the duty of the farmer to hire an American work force stop and the obligation of the Federal Government to open the border start. The H-2 program is controversial because it attempts to strike a balance between protecting American farm workers and ensuring a plentiful supply of low-cost farm labor. Clearly, if farmers have to scour the U.S., offer high wages, adequate housing, inexpensive food, etc., they will have a greater incentive to mechanize.

The debate over need for alien workers diverts attention from an unsettling shadow on the horizon: competition from other nations. The automobile industry faced a similar juncture in the late 1960s. In an affluent and health conscious society, the demand for fruits and vegetables is expanding, and farmers envision continued expansion and profits if the Federal Government does not enact costly new labor regulations. Cheap labor benefits agriculture in the short run, but it also helps to blind farmers to the technological changes they will have to make in order to compete with foreign producers who have access to even cheaper labor.

The cost of hand harvesting is 20% of the price the farmer gets for oranges and lemons and up to 40% of the price for lettuce, strawberries and tomatoes. The wages of farm workers in the U.S., however, are five times higher than they are in Greece and 10 times higher than they are in Mexico. As other nations expand their labor-intensive agri-

culture, the already loud complaints by American farmers about Brazilian oranges, Greek raisins, Mexican tomatoes and Italian wine will intensify.

The increasing dependence of American fruit and vegetable farmers on alien workers confronts policy makers with two options: 1) preserve the status quo by approving an open-ended temporary worker program, or 2) encourage the industry to mechanize in order to limit its need for alien farm workers. If the U.S. gradually reduced the supply of alien farm workers, the production of labor-intensive commodities that cannot be easily mechanized could be shifted abroad by removing import barriers, thereby increasing employment in Mexico and the Caribbean basin and decreasing incentives to migrate illegally to the U.S.

Debates on farm labor often fail to recognize linkages of immigration, trade and technology. Many farmers believe the optimal strategy is to preserve the status quo with an open-ended temporary-worker farm program. They recognize that mechanization is inevitable, but they want to decide when and how machinery will replace workers instead of being confronted with the sudden elimination of traditional labor supplies. Organizations of farm workers oppose a temporary-worker program because they believe aliens selected from a huge pool of foreign labor will always be preferred to Americans, who are often the castoffs of other labor markets. These organizations also oppose mechanization that displaces farm workers.

The most plausible coordinator of systems approach to mechanization is government, primarily through the established land-grant universities. An increased role by the universities will be controversial. The University of California is defending itself in a lawsuit brought by the representatives of farm workers. The suit charges that the University's research on mechanization is biased in the direction of helping large operations and undermining farm worker unions. Universities can head off some of the controversy by making clear the importance of mechanization in preserving a profitable fruit and vegetable industry, and taking pains to avoid conflict of interest in research programs.

Public policy is trying to discourage agriculture from using aliens by enacting laws and making regulations forcing farmers to meet certain standards or recruitment, wages and working conditions. A better way is to link immigration reform to a plan for restructuring the industry. One way would be a tax on wages earned by aliens and would apply the funds to restructure the production of commodities that

depend upon alien workers. Farmers do not now have to pay the Social Security tax of 6.7%, or the Federal unemployment-insurance tax of 0.8% on wages of H-2 workers. Most states exempt such workers from taxes of this kind. These various exemptions suggest an H-2 wage tax of at least 10%.

The U.S. Select Commission on Immigration and Refugee Policy recommended that no industry depend indefinitely on alien workers. The Commission urged that such workers constitute a subsidy to employers unable or unwilling to attract American workers, to mechanize or to produce abroad, and could find no justification for such a subsidy just to maintain a given industry in the U.S.

The continued dependence of the fruit and vegetable industry on alien farm workers for hand work spells disaster in the long run. The industry has two choices: it can move toward mechanization, meanwhile trying to improve conditions for handworkers by adopting modern personnel policies and installing equipment that facilitates handwork, or it can obtain access to a rotating pool of alien farm workers with another program of the bracero type. The second option would imply an indefinite dependence on an alien work force. Few U.S. citizens will become seasonal workers at prevailing wages or even at higher wages because workers with options reject the uncertainties of seasonal farm labor. The U.S. will have an American work force in fruit and vegetables when that industry is mechanized. Without mechanization, the U.S. must both accept an isolated, alien dominated labor force for seasonal handwork and erect trade barriers to keep out produce grown abroad at even lower wages. If farmers successfully oppose the immigration reforms that could begin to alter this picture, they may win the short-run battle over labor but will lose the long-run war for survival in the increasingly competitive international fruit and vegetable industry.

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