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SCIENCE FOR THE PEOPLE
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Farmworkers

Special Issue on Food, Agriculture & Agribusiness



CHAPTERS AND CONTACTS

Science for the People is an organization of people involved or interested in science and technology-related issues, whose activities are directed at: 1) exposing the class control of science and technology, 2) organizing campaigns which criticize, challenge and propose alternatives to the present uses of science and technology, and 3) developing a political strategy by which people in the technical strata can ally with other progressive forces in society. SftP opposes the ideologies of sexism, racism, elitism and their practice, and holds an anti-imperialist world-view. Membership in SftP is defined as subscribing to the magazine and/or actively participating in local SftP activities.

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about this issue

This issue was edited by a collective of Ann Arbor SftP members. This is the third issue of *SftP* to be edited outside of Boston, the first being the May 1974 and the September 1975 issue, both edited by members of the Stony Brook chapter. Our intent was to unify the various issues involved in food production, issues which are often analyzed in isolation and, therefore, incompletely or incorrectly. Yet, a variety of viewpoints are presented here. We trust that this diversity will stimulate debate and result in clarification of the issue rather than in confusion.

The first article is about the mechanization of tomato harvesting in Ohio. It was written by members of the Ann Arbor SftP FLOC Support Group drawing upon their two years of work with FLOC. The authors make the point that farmworkers and small farmers have the same enemy — the canneries. It is perhaps a reflection of the frustration that comes from a purely support position that the authors give consumers a key role in changing the relationship between labor and capital, instead of recognizing that such a role belongs ultimately to the workers.

Lauren Goldfarb writes on aspects of community canning in her article entitled “Del Monte — Move Over!” The canning operations she visited have, she believes, great potential for aiding both small farmers and consumers, while at the same time wresting some control from large corporate canneries. While we agree that community canning has promise for some small farmers and consumers, we are skeptical of her implication that it can have any significant impact on major agribusiness corporations such as Del Monte. Nevertheless, this article represents a major current of thought in the food movement, whose implications should be discussed and debated.

The most striking example of the possibility of alternatives to our present system of food production and distribution in the West is that of the People’s Republic of China. Two members of the Science for the People delegation which visited China in 1978, Mike Hansen and Steve Risch, compare the food systems of China and the United States, discussing such issues as how decisions are made, agricultural production methods, and food distribution. They emphasize that the differences between the two countries are not merely questions of agriculture, but depend on basic differences in

the organization and distribution of power. They also mention recent changes in China and how likely these are to alter the system they describe in pursuit of “modernization”.

In a format borrowed from Studs Terkel, the editors have tried to convey some of the concerns, beliefs, and feelings of some of the people who produce our food. This was done through interviews and appears as “People Who Produce Your Food Speak”. Farmworkers, farmers, and a corporate executive speak about their participation in the food system. These are the people whose labor puts the cornflakes, sugar, and milk on your breakfast table.

In his article about the use of food as a weapon, Mark Wilson utilizes a Marxist analysis to expose the underlying operation of the food system. But the analysis perhaps will be disappointing for some, since the practical program of action does not follow as easily as one would like from the analysis. Probably we need to engage in much more political thought and discussion to come up with a more explicit “what is to be done”.

Phil Balla reviews the recent book by poet and farmer Wendell Berry, *The Unsettling of America: Culture and Agriculture*. Berry denounces modern trends in American farming with both emotion and evidence, and Balla emphasizes the relevance of his critique to the quality of rural life and community in general. More could be added to the analysis of course, and in fact Berry’s book could be read as a set of unconscious variations on a phrase of Marx: “Capitalist production, therefore, develops technology, and the combining together of various processes into a social whole, only by sapping the original sources of all wealth — the soil and the labourer”.

A related subject is the enormous increase in the use of pesticides in recent years, discussed by Deborah Letourneau in her review of Robert van den Bosch’s book *The Pesticide Conspiracy*. The reasons are shown to be not merely technical ones of what is the best way to kill insects, but rather economic and social, involving corporate monopolies, farm labor unions, academic consultants, and government favoritism of large agribusinesses. While again the book does not have as much integrated analysis of the entire situation as one might like, it nevertheless is a passionately written indictment of the way agribusiness has come to power. □

news notes

News about politically significant events in science and technology.

CANADIANS FORM PEOPLE'S FOOD COMMISSION

At a 1977 meeting in Winnipeg, a non-government, independent commission, the People's Food Commission, was formed. The commission has as its goal the development of strategies whereby the people of Canada can shape their own food strategy. Since its start it has gained the support of the Canadian Labor Congress, the National Farmers' Union, Canadian Food and Allied Workers, the National Indian Brotherhood, and the Consumer's Association of Canada.

The commission is holding hearings in 65 communities across Canada to hear from the people who really count, and shape the observations and conclusions of the Canadian people into a food strategy for Canada at home and abroad. Taking the information from those people not normally involved in the policy-making decisions of Canada, local working groups will gather the material presented to the hearings into a report with specific recommendations. A national group will catalogue all the material from across Canada and return the collected information to the local groups for public discussion to determine by the people what actions are most suitable to each particular community.

According to Jean Christie, national coordinator of the People's Food Commission, "The government set out to consult corporate and private interests on a policy which the government admitted the first day was already in place and needed little revision. . . . Through it | the people's food commission |, we hope to develop a more solid network of people concerned about food and the food system".

The group puts out a monthly newsletter available free to Canadians (\$3 per year to non-Canadian Americans).
People's Food Commission
321 Chapel Street
Ottawa, Ontario

COALITION SUPPORTS FAMILY FARMS RURAL WOMEN ORGANIZE

Every year since 1945, America has lost more than 130,000 farmers as a result of economic pressure and political apathy. Since most Americans are urban consumers, the loss of these farmers may not seem to be an issue of importance to anyone but the farmers themselves. But food production — and who controls it — is as important to consumers as it is to farmers.

A new organization — the National Family Farm Coalition — believes that farm policy is everyone's business. The National Family Farm Coalition is being set up to show how federal agriculture policy could encourage and maintain a food and farm system based on small and moderate sized family farms. The Coalition believes that the most effective way to create a self-sustaining, environmentally sound, economically stable food system is to protect family farms as the basis of the US food system.

One important and immediate way this can be done is through the enactment of a new piece of federal legislation, the Family Farm Development Act. The Family Farm Development Act would eliminate the "get big or get out" bias in U.S. agricultural policy, thus making it possible for small and moderate sized farmers to remain on their land and to make an adequate income.

Small farmers are disadvantaged by tax laws, federal agricultural research/demonstration policies, and the concentration of economic power in the hands of a relatively small number of large food processors, distributors and retailers. The Family Farm Development Act attempts to eliminate these disadvantages.

The National Family Farm Coalition has already begun to organize around the nation. The Coalition is being built with the help of consumer, farm, relig-

ious, environmental, rural, appropriate technology, and public interest organizations who believe that the way to protect America's consumers from over-inflated prices is to protect family farmers. The Coalition and its sister organization, the National Family Farm Education Project, is working to educate the public and the Congress about the economic and social importance of small and moderate sized family farmers to the US food and fiber system. The work includes lobbying, information distribution, networking and education. For more information about membership or the bill itself, write:

National Family Farm Coalition
1346 Connecticut Ave., N.W.
Washington, D.C. 20036
(202) 483-1116 or (202) 783-8570

RURAL WOMEN ORGANIZE

A new organization, Rural American Women, Inc. has been formed to fight for improvements in the situation of women in the American countryside. A recent article by the group's president, Jane Threatt, points out that "In addition to sharing with men the problems of rural underdevelopment, rural women face traditional problems of inequality. In 1974 rural men earned an average of \$8912 a year, while women earned \$3952."

Rural women suffer from discrimination in many facets of life, ranging from education to inheritance taxes. Furthermore, they are often more isolated from each other than their sisters in the city. Threatt argues, "Rural women share common problems with all women, but they have them in greater depth with fewer options. Traditional farmers' groups do not meet these needs because they usually make the erroneous assumption that whatever helps the rural population will help women as much as men. Other groups which are specifically designed for farm women are generally not activist and usually represent only

one group of rural women. This leaves out large chunks of the rural population such as migrant working women and women who work in rural industries, such as textile mills and coal mines, or whose husbands do. Nor do traditional women's groups fill the gap. They are, by and large, oriented toward middle-class city women".

The group emphasizes that rural women's problems cannot be solved by outsiders. Threatt says that "any program for change must be based upon the feelings and insights of the women themselves." The group, a coalition of individuals and organizations, hopes to unite local groups into a nationwide force for change.

Christian Science Monitor
News Service

THE HUNGER PROJECT BACKS OFF

Werner Erhard is a successful "consciousness" guru whose highly successful "Erhard Seminars Training" (est), one of the evangelistic human potential movements of the 70's, has recently expanded its horizons from the self to the world. A new campaign, the Hunger Project, was launched by Erhard last year. The project has as its goal ending world hunger within 20 years. The December 1978 issue of *Mother Jones* magazine did an excellent job of exposing the hunger project for the sham it really is. While the programs of the Hunger Project include little more than thinking about world hunger (taking "personal responsibility" for world hunger) and contributing money to est, the financial dealings of Erhard were shown to be somewhat questionable. Est money has gone through a series of fast-changing tax shelters in Panama, Nevada, Holland, Switzerland, and the Isle of Jersey, not to mention the Saratoga Restaurant Equipment Company. Virtually nothing goes to the hungry — or to the IRS.

The *Mother Jones* expose got a quick and vigorous response from Erhard. A top est official called up one *Mother Jones* editor in the middle of the night to scream "This is all untrue! This is libelous!" A day later, while *Mother Jones* held a press conference about the story, two people from the Hunger Project leafleted all arriving reporters. Their

statement announced that the Hunger Project was going to sue *Mother Jones* and any other news media that reported these or similar charges.

Of course no suit was ever filed, but threats to sue were continued. Apparently such threats are becoming increasingly common among cult groups, as a way to intimidate the press. *Mother Jones'* Adam Hochschild told us that as of this writing (March 8) a suit still had not been filed and Erhard has taken to announcing at press conferences that est will not sue after all, because est believes in freedom of the press. Could also be that our Mother was right, Werner!

Mother Jones,
Feb/Mar 1979

A NEW DESERT IN CALIFORNIA

Because of excessive irrigation and other modern intensive agriculture methods in California's San Joaquin valley, the area now resembles the formative stages of a desert, at least according to a joint federal-state report released earlier this year. The major problem seems to be the accumulation of salt in the soils, resulting from irrigation and the application of fertilizers and pesticides. Farmers have already begun switching from salt-sensitive crops such as tomatoes, beans and fruit trees, to more salt-tolerant ones such as cotton, corn, and other grains. But the process of salination has not stopped and eventually the soils will be too salty for even these crops.

The report recommends the construction of a large canal to carry off salt-laden water. But farmers have balked at this idea since they will be required to pay the cost of the canal, approximately \$15 for each acre-foot of water discharged.

The process of desertification is not new. Apparently areas with a Mediterranean climate are especially prone to undergo desertification under intensive chemical agriculture. In the San Joaquin valley, already 400,000 acres have been affected and it is estimated that 57,400 acre-feet of unusable salt water is produced each year (remember, \$15 to discharge *each* acre-foot) and by the year 2000, it is estimated that 420,000 acre-feet of waste water will be produced. That's six million dollars to get rid of

something that probably should not have been produced in the first place.

A brand new desert in California will make a fitting monument to the marvelous accomplishments of U.S. agribusiness. Maybe they can turn it into a tourist attraction.

Los Angeles Times,
1/23/79

FOOD PRICES TO RISE THIS YEAR

If you thought last year's increases in food prices were unusual, you may be surprised to learn that they will go up this year again. After rising 10.5 percent in 1978, government forecasters predict a "most likely" increase of 8.5% in 1979, while other economic forecasters are less optimistic. For example, Jason Bendorly, an economist who works with a private economic consulting firm, predicts a 10-11% jump in food prices.

Whether or not these predictions turn out to be true, what we have seen already this year has been spectacular. By the end of January, grocery prices had increased by a 21% annual adjusted rate. Prices paid to farmers for crops and livestock rose at an annual rate of 60% in January and February, suggesting yet further increases in food costs later on this year.

Porterhouse steak (bourgeois beef) increased at a rate of 27% in 1978 and is expected to rise at a rate of 8% this year. Hamburger (proletarian beef) increased at a rate of 46% in 1978, and if government forecasters are right, will increase by 33% this year. Hamburger may cost \$1.90 or more by year's end. Canned and frozen vegetables are expected to remain stable, as is lettuce. Eggs and milk will rise at rates of 4% and 7% respectively, and an 8-10% increase in bread is expected. The only major commodity expected to decline is coffee.

The experts note also that the trends that have caused food prices to more than double since 1967 show no signs of easing yet (indeed) — a sad report for Jimmy Carter's war on inflation. The forecasters seem not to fully understand why consumers have to continually pay more for food while farmers and farm workers continue to get less real money for their produce and labor. Maybe the forecasters should try using a different economic model.

U.S. News and World Report,
3/12/79

MIGRANT WORKERS, FARMERS, AND THE MECHANIZATION OF AGRICULTURE: The Tomato Industry in Ohio

by Peter Downs, Bob Rice, John Vandermeer and Katherine Yih

Migrant Workers in Ohio

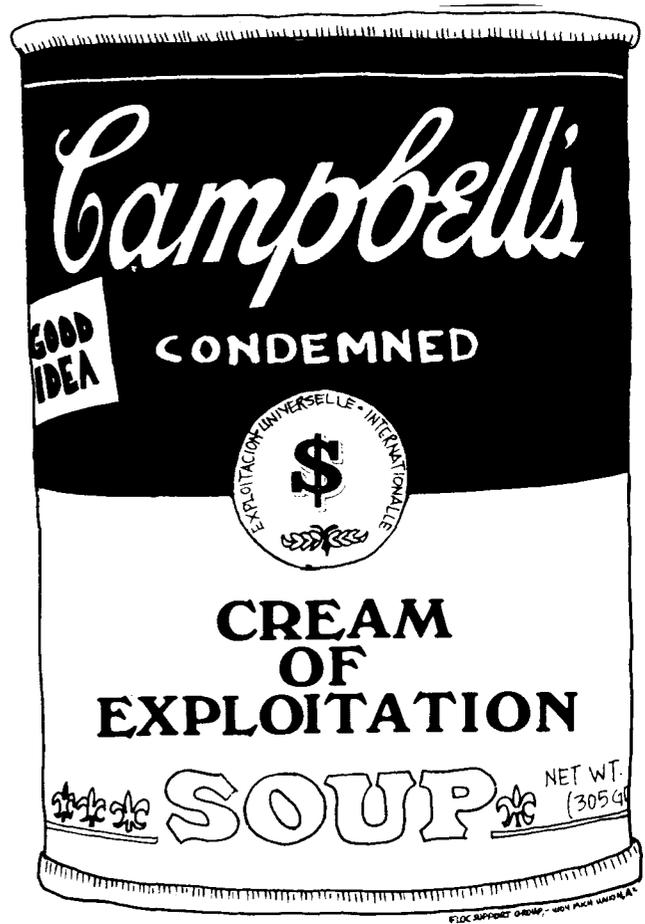
Summer in northern Ohio is Tomato Heaven. Migrant farmworkers from Florida and the Rio Grande valley in Texas move up to work the fields each summer. These workers, the backbone of much of the food industry, are offered housing with no inside plumbing — water must be carried from a common building. Light in rooms is fashioned from festooned extension cords and bare light bulbs. A hard rain changes the camp's grassless grounds into a mud bath. For bending, stooping, and picking a hamperful of tomatoes (33 lbs.), a worker in northern Ohio gets anywhere from 19-25 cents, at least ten cents per hamper less than that received by workers in other states.

When Edward R. Murrow exposed a national television audience to the plight of migrant workers in his "Harvest of Shame" in 1959, the public was outraged. How, in this land of plenty, could an entire class of people be forced to live in conditions so base? The public outcry was for legislative action to end such shameful conditions.

Yet the scene in northern Ohio today remains remarkably similar to that depicted in Murrow's "Harvest of Shame" 20 years ago. Legislation is never enacted for the powerless.

The Problems of the Farmer

If you were a tomato farmer in northern Ohio, you would not be likely to view the plight of the farmworker so sympathetically. While no one wants to see human beings forced into such a life, at the level of stark economic reality, the migrant is a cost of production. And labor costs are but one part of the equation that determines whether or not you make it each season. The farmer must purchase seed (or other planting material), machinery, fertilizers, and pesticides, in addition to labor. The amount of money a farmer must lay out each



The authors are members of the FLOC support group of Ann Arbor Science for the People. They have been working in alliance with the Farm Labor Organizing Committee (FLOC) for the past year.

season grows each year. A utility pickup in 1959 averaged \$2700, while in 1979 a similar pickup runs \$6000, an increase of 120%. In 1959 a 60 hp tractor cost about \$3500, while in 1979 the same size tractor costs \$12,000, a 240% increase. But in 1959 the price paid to an Ohio farmer for a ton of tomatoes was \$30, while in 1978 that same ton would bring \$60, only a 100% increase. Costs to the farmer are rising faster than the money received for produce. This growing imbalance threatens to push more farmers off the land.

The situation was dramatized last year when farmers across the country joined the American Agriculture Movement and attempted to organize a strike. The national agricultural strike frequently made headlines and was even a regular feature of national television news. The American public became aware of the squeeze the farmers felt. The call for "parity" — price guarantees for agricultural produce that would at least meet the costs of production — publicizes the needs of farmers. Again the public outcry was for legislation, this time to save the farmer. Such legislation seems about as likely as the legislation called for to protect migrants in the late '50's. Effective legislation is never enacted for the powerless.

The Migrant Worker and Farmer in Conflict

The farmer's view of migrant labor as a cost of production is an economic necessity. Any move to increase the political power of migrant labor is a threat to increase production costs for the farmer. There seems to be an inherent contradiction between labor (migrant workers) and "capital" (the farmer). If migrant workers demand more money for their labor or better housing or improved working conditions, costs of production for the farmer go up. But, as is always the case with those who have nothing to sell but their labor, such demands can only be effective with political power. And political power, for this class at this time, comes from a united front, a union.

In 1969 migrant farmworkers in northern Ohio founded the Farm Labor Organizing Committee (FLOC). FLOC's purpose has been to organize the workers into a tight unit capable of negotiating its position in the food industry. In the early seventies FLOC won contracts with several tomato growers. The contracts guaranteed a minimum price per hamper from those growers, and some minor concessions with regard to living and working conditions.

But the very existence of a union, as expected, caused much alarm on the part of the farmers. FLOC came to be viewed as one of the most important enemies of the farmers in their economic battle to stay alive. The conflict between farmer and migrant worker was clearly intensified by the presence of a union organization.

In mid-August of 1978, FLOC led migrant workers out on strike. Over 2,000 workers left the fields and refused to pick tomatoes. Many came to live in a "tent city" hastily set up by FLOC in Balmore, Ohio. No one knows exactly how effective the strike was, but it is estimated that from 10 to 30% of the tomato crop rotted in the fields.

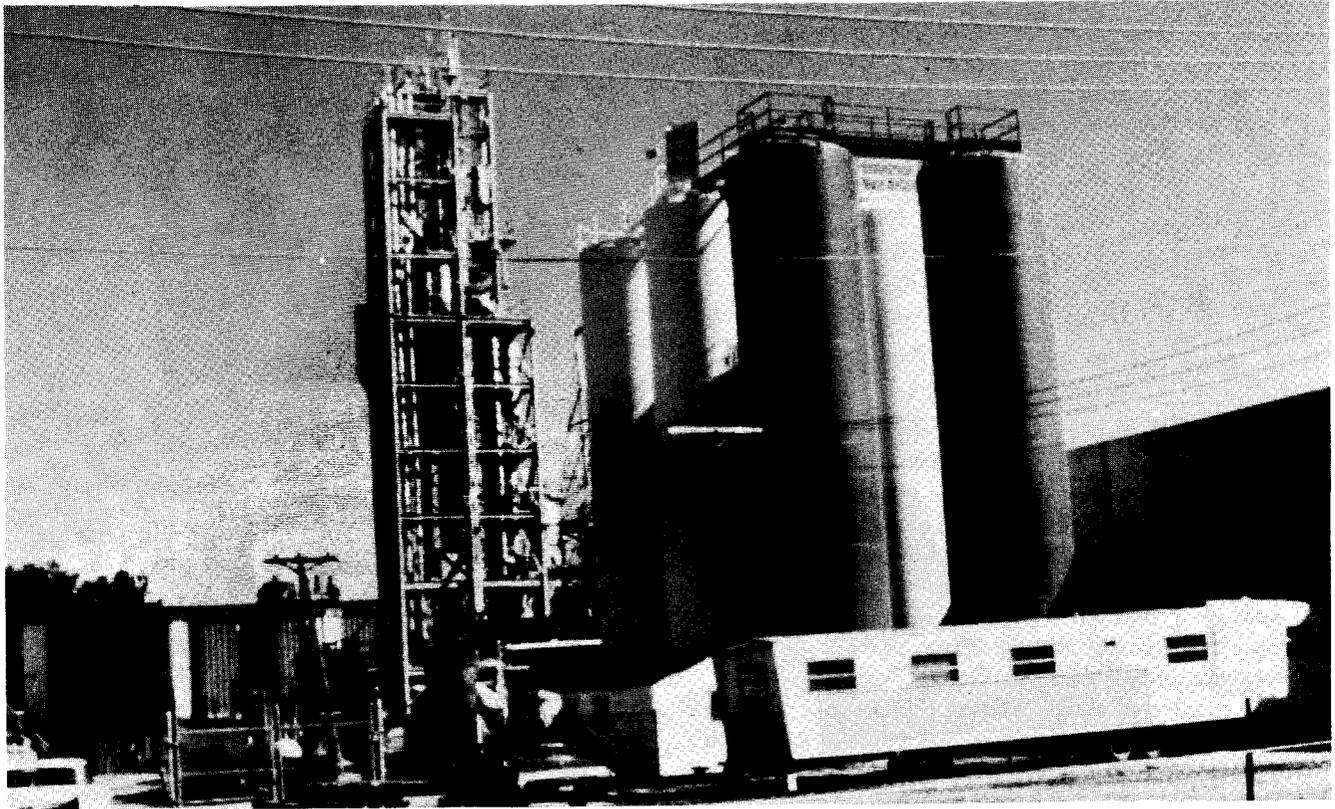
Can one fail to appreciate the tragedy in the relationship between the daily struggle of migrants and the economic plight of farmers? Any gains made in living conditions for the farm worker spell disaster for the farmer. Keeping production costs down for the farmer almost certainly means the retention of subhuman conditions for the migrants.

The Migrant Worker and Farmer in Conflict — Revisited

A somewhat different picture of this human tragedy emerges if we begin the analysis from the other end, the consumer end. Ketchup cost 36¢ for a 26 oz. bottle in 1959, while in 1979 it costs 77¢. Tomato juice increased 237% in price over the same period. In short, consumers are paying a great deal more for tomato products now than they did twenty years ago, yet the farmer received only slightly more for his/her produce than in 1959. Obviously a middleperson is benefitting considerably.



Photo by Ellen Shub



The tomato concentrator complex at Libby's plant in Leipsic, Ohio.

If we statistically break down the gross receipts from the tomato industry by the proportion that goes to each group of recipients, a rather dramatic result emerges. Fully 83% of the gross receipts go to the cannery and retail outlets. The farmer gets 9%, the migrant laborer 4%, and the cannery worker 4%. In other words the people who produce the tomatoes (the farmers, migrant workers, and cannery workers) get 17% of the gross receipts, while those people who do not engage in production but merely *own* the production facilities get 83% of those gross receipts.

From this point of view it seems a bit strange to view the situation as a conflict between farmer and migrant worker. It would seem that the major conflict is between the owners of the production facilities (who get 83% of the gross receipts and do no work) and the people who produce the tomatoes (who get 17% of the gross receipts and do all of the work). But such an interpretation would imply that the farmer and the migrant laborer are in the same "class" position, that is, their interests are the same. How convenient for those who own the canneries to have the migrants and farmers in conflict. Dividing the class that produces is an old trick, but one that is being played very effectively in northern Ohio.

Having gone through an analysis similar to the above, FLOC changed its strategy from dealing only

with the farmers who hire migrant labor to dealing more directly with the canneries. Thus, the strike last year was directed against those farmers who were under contract to either Libby's or Campbell's, the major producers of tomato juice in the area (tomato juice is made from hand-picked tomatoes because machine-picked tomatoes are much fleshier, so as to be resistant to bruising during harvest). One of the central demands of the strike was the FLOC be included as a third party in the annual contract negotiations between the canneries and growers. Efforts were made to include cannery workers as part of the strike and many walked off the job (although the cannery workers are organized under the Teamsters and were officially not in support of the strike — more on this later).

FLOC's strike served to intensify some major economic contradictions that already existed in the tomato industry. One set of problems that the strike helped to bring out clearly stems from the trend towards mechanization.

The Final Solution: The "Almost Complete" Mechanization of the Tomato Industry

Before describing the specific effects of mechanization in the tomato industry, it is well to recall the general impact of mechanization on agriculture. When the

first mechanical harvester was introduced in 1831, it was touted as a great work-saver: whereas earlier one person could harvest $\frac{1}{2}$ to $\frac{3}{4}$ an acre per day, after the introduction of the mechanical reaper, each person could harvest 6-8 acres per day. Recognized for what it was at its inception, a labor-saving technique, agricultural mechanization has retained its basic character to the present day. It is unimportant whether one says "displacement of the rural labor force to an urban labor force" or "great savings in labor costs". Both statements refer to the same process: machines in the fields force the workers off the land.

Although less obviously a consequence of mechanization, massive changes in land tenure have also resulted. So-called economies of scale have been inevitably associated with industrialization of agriculture. For example, a holding of 40 acres might produce one ton of corn, which might sell for \$400. Harvesting with hand labor would cost about \$300 for the harvest, while a mechanical harvester requires about \$20 for gasoline and upkeep. The catch, of course, is that a mechanical harvester costs about \$40,000. But the harvester costs \$40,000 whether your holding is 40 acres or 4000 acres. It is easy to see that mechanization puts large land holders at a distinct competitive advantage. The result is the gradual absorption of small holdings into large holdings, and today large holdings are usually the property of corporations. Indeed, mechanization put the small farmer into the same "class" position as the landless laborer — both are turned into proletarians: wage slaves and unemployed.



SftP members picket with Ohio farmworkers.



In an economy organized under the so-called principles of free enterprise, the social results of mechanization are three: small farmers are put out of business, farm laborers are put out of work, and corporate farmers are put into big profits.

Mechanization in the tomato industry takes on a variety of forms. Two specific forms are important for this analysis: the mechanical harvester and the evaporator. Mechanical harvesters, of course, cut down on labor costs dramatically, but they can't harvest just any old tomato. Tomatoes, to be harvested mechanically, must have tough skins and, consequently, have mealy insides. They must also ripen more closely to the same time than if they were to be hand-picked. These constraints are extremely important because tomatoes with thick skins and mealy insides cannot be used to make tomato juice — they are presently used exclusively in the production of ketchup. Mechanical tomato harvesting cannot take over completely if there is a need to produce tomato juice.

The evaporator constitutes a new procedure in the processing of tomatoes. Its purpose is to boil away water from cooked tomatoes until only a thick paste is left. The paste can be mixed later with water — using complicated technology — to obtain juice. Thus, rather than producing ketchup directly from machine-picked tomatoes and juice from hand-picked tomatoes, the properly developed evaporator changes the process to

producing both ketchup and juice directly from tomato concentrate. The concentrate is made from machine-picked tomatoes. The critical point is that the evaporator eliminates the necessity for hand-picked tomatoes. At the present time evaporator processing has not yet been perfected, at least for the varieties of tomatoes grown in Ohio.

Thus, the combination of the evaporator and the mechanical harvester will put the migrants (in the tomato industry) completely out of work. At the same time, it will generate economies of scale that will force smaller farmers to sell out to larger farmers. According to Ruben Peterson, field supervisor at Libby's plant in Leipsic, Ohio, "with the increase in mechanical harvesting, the smaller farmer will disappear."

The increased exploitation brought about by mechanization does not stop with the growers and pickers. Workers at the level of processing as well will feel the pressures of the new technology. The prospective amalgamation of the juice- and ketchup-production processes through the use of the evaporator and machine-harvested tomatoes will result in an overall reduction of jobs in the canneries. Consider Libby's two midwest canneries. The one in Leipsic, where the evaporation process is being attempted, presently operates two production lines, one for juice and one for ketchup. The one in Kokomo, Indiana, produces only juice, exclusively from hand-picked tomatoes. If the evaporation process is successful, the plant at Kokomo will be shut down, and juice-and ketchup-production in

THE STRIKE

On 20 August, 1978, farmworkers in Ohio decided to strike the entire tomato industry. This important decision was reached only after repeated attempts by the farmworkers to meet with growers and cannery officials had failed. Although some growers were willing to recognize the union and offered some wage increases, most followed the lead of the canneries and boycotted the meetings.

By striking the entire tomato industry, the farmworkers were telling grower and cannery alike that only a contract signed by both these parties would get farmworkers back to work. After a few weeks, many farmers were willing to enter negotiations. With over 2000 farmworkers on strike, almost thirty percent of the tomato crop was rotting in the fields. Many farmers now face economic ruin. The canneries, however, remain adamant in their refusal to negotiate with the farmworkers, seeking instead to fully mechanize the tomato harvest (see article).

This stand by the canneries is prolonging the strike. Some farmers have gone beyond some of FLOC's demands (see below), offering as much as 50¢ per hamper. But farmworkers remain firmly committed to getting a contract signed by the canneries.

FLOC's demands:

Coverage of Pickers

- \$.35 per hamper (33 lbs.) (Present rate \$.24 per hamper.)
- Minimum wage of \$3.25 per hour. (Presently some farmers are paying \$2.65.) Put in effect when piece rate does not come out to \$3.25 per hr.
- Work guarantee of 28 hours every 2 weeks. If it rains two weeks we should be paid for the 28 hours. If we work only 10 hours within any two week period then we should be paid for the other 18 hours guarantee. (This is already a state law in Wisconsin.) These hours to be paid at the \$3.25 rate.

- Transportation to Texas, Florida or home residence. Rate of \$.08 per mile plus \$.02 per worker passengers.

- Medical program. There is one policy available that will cover 4 months for \$196.00 per family. Coverage is minimum \$30.00 per person/\$70.00 room and board per day for 120 days.

- Custodian for each camp. His rate of pay to be whatever other workers are averaging in his location. Minimum to be \$3.25 but at peak season when workers can make over that amount under the piece rate system (35¢ per hamper) then the custodian's pay to increase to be commensurate with that of other workers at his camp location.

Coverage for Crew Leaders

- \$.06 for loading (to be divided up between 4 leaders) Presently 2 to 4 c.)
- \$.05 to crew leader for supervision (presently 1 or 2c.)
- Hauling rates: Under 10 miles (from field to processor) — \$4.25 per ton; 10 to 20 miles — \$6.50 per ton; over 20 miles — \$1.00 per ton for each additional 10 miles with \$6.50 per ton base.
- Waiting time: After 2 hours of waiting time at processing plant drivers to be paid \$3.25 per hour above hauling rates.
- Hauling preference: Any crew leader who brings a crew to work on any farm shall have the first opportunity to haul tomatoes from the fields his crew works to the processor. Many growers are now buying their own trucks and taking the hauling away from the migrant crew leaders.
- 50% payment of costs of insurance and license plates for crew leaders' trucks. □

Leipsic combined — three production lines will effectively be condensed to one. In addition, the new machines will concentrate production into a short period. Harvesting machines go through fields only once, taking everything, as contrasted with human pickers who work a field several times as the crop ripens. The evaporator is expected to process tomatoes at a much greater rate than the old methods. This period of intensified production should coincide with the time migrant pickers come north for work. It is clear that canneries can profit by a sudden shift to mechanization: migrants coming north to pick will find themselves part of a larger-than-usual labor pool serving the canneries, and workers will be in no position to bargain for anything.

The Strike and its Impact

The strike was directed against only those farmers under contract to either Libby's or Campbell's, the major producers of tomato juice. The canneries reacted swiftly. Libby's immediately filed a \$1.08 million suit against FLOC for losses due to the strike. Also, within a month they assembled a giant new "evaporator" at their Leipsic, Ohio plant. According to field supervisor Ruben Peterson, the research department is under a great deal of pressure from management to perfect the evaporator process by the Spring of 1979. When asked why, he replied "labor problems". (If they are successful

in perfecting this process, they won't need hand-picked tomatoes at all.)

FLOC was well aware that its confrontation with the canneries would reinforce existing trends toward mechanization. This gave greater urgency to their organizing efforts, so that workers would have some control over the implementation of machine production. FLOC is not opposed to mechanization, rather it welcomes the advent of machines in the field, but on the workers' terms. That is, the introduction of machines in field work must go hand-in-hand with training displaced workers for new jobs and supporting them and their families until new jobs are secured. Naturally the expenses for this must be covered not by the taxpayers, but by the canneries, whose profits have come from the labor of those workers.

FLOC recognized that mechanized farming threatens not only the migrant workers, but also the farmers. Thus for the last few years, it has tried to work with farmers against the canneries. This has been largely a failure. This failure was felt most acutely during the strike when farmers threatened strikers with guns and attacked them with baseball bats and even pesticides. Just as industrialists benefit from racial divisions within the working class, pitting black against white, nationality against nationality, so the canneries benefit from the division between the growers and the migrants.



Labor negotiations in northern Ohio.

A major obstacle to uniting the farmer and the migrant is the traditional individualism of the American farmer. The myth of the independent family farmer is just that, a myth, but a potent myth. Commercial tomato farmers are actually just agricultural laborers who happen to supply land with their labor. But they are laborers with a particular history, a particular ideology, a particular culture of "independence" and individualism, factors which contribute to the difficulties farmers have in organizing themselves and make it especially easy to splinter their movements (remember the American Agricultural Movement).

The relationship of a farmer to the cannery is always that of an individual. The acreage a farmer contracts for with Libby's, for instance, is based on his/her yield per acre average over the previous three years. In 1978 these amounts ranged from five to two hundred acres. The contracted acreage and the indi-

vidual's "average yield" then set a limit on the quantity of tomatoes (the tonnage) a farmer can bring to Libby's. A farmer can exceed his/her contracted tonnage by up to 10%. If s/he produces more than that, s/he must first offer the excess to Libby's, and if Libby's refuses the excess, it may be sold on the open market, with Libby's permission.

This loss of control over what happens to their crop is only one aspect of the farmer's loss of control over the entire agricultural production process. The tomato plants themselves are owned by the canneries. Some farmers are given seeds in the Spring, but most are given plants which the cannery starts earlier in the South (Libby's starts theirs in Georgia), and then bring up to Ohio. Once the plants are in the ground, representatives of the cannery inspect every farm once a week, looking for diseases, insects, etc. They then tell farmers what and when to spray.

THE BOYCOTT

Faced with the continued intransigence on the part of the canneries, FLOC decided it was necessary not only to maintain, but to increase the pressure on the canneries year-round — not just at harvest time. Towards this end, farmworkers prepared an international boycott of the products of the two largest tomato canneries in northern Ohio: Campbell's and Libby's. The boycott was kicked off on 25 January with press conferences across the country and a mass picket (involving over 70 people) at a Kroger's store in Ann Arbor, Michigan. FLOC is coordinating its boycott with INFACT (Infant Formula Action Coalition) which is boycotting Nestle products, which includes those made by Libby, a Nestle subsidiary. The two organizations are giving each other mutual support.

BOYCOTT the following companies and their products:

Libby-McNeil-Libby

- All Nestle's products (Nestle's is the parent company of Libby-McNeill-Libby)
- All vegetables, fruits, meats, and juices with the Libby's label.

Campbell's

- Campbell's Soup
- Swanson frozen prepared dinners and meats
- V-8 vegetable juice
- Efficient food service products
- Recipe pet food
- Hanover Trail restaurants
- Franco-American products
- Lexington Gardens retail garden centers
- Pepperidge Farm products

- Granny's Soups
- Bounty canned chili and entrees
- Godiva chocolates
- Pietro's Gold Coast pizzas
- Delacre cookies and pastries
- Herfy's Restaurants
- Kia-ora food products
- Vlasic

The effectiveness of the boycott is increased when company offices are flooded with letters from angry consumers, demanding justice for farmworkers. Write to:

Douglas B. Wells, Pres.
Libby, McNeil and Libby
200 S. Michigan
Chicago, IL 60604

D.Y. Robinson, Director
Consumer Affairs
Campbell's Soup
Camden, NJ 08101

Tell them you're boycotting their products and why. Send a copy of your letter to:

FLOC
714½ South St. Clair
Toledo, OH 43609

If you have any questions, please write to FLOC or
Ann Arbor Science for the People
FLOC Support Committee
4104 Michigan Union
Ann Arbor, MI 48109



FLOC and SftP initiate national boycott of Campbell's and Libby's in Ann Arbor.

When it comes to the migrant workers hired by the farmers, the control of the canneries is just as great. The wages and living conditions of the migrants are largely set by these canneries in their yearly negotiations with the growers. Once the evaporator and reconstitution process are ready, Libby's will effectively pressure growers to change over to machine harvesting. Not only will this result in the loss of jobs for thousands of migrant workers, but it will also cost many farmers their livelihood. In 1978 the number of acres individual farmers had in tomatoes ranged from five to two hundred. The field supervisor of Libby's Leipsic factory estimated that for a mechanical harvester to be profitable one would need one acre of tomatoes per \$1000 of machinery, and the smallest harvester costs about \$40,000! Therefore, if a farmer is to stay in business, s/he needs a minimum of 40 acres of tomatoes.

Farmers are thus in a very precarious position. They have effectively lost their independence, and many are in danger of losing their livelihood completely. This helps explain the violence of their reaction to the FLOC strike. Their present position, though precarious, is maintained by the even greater exploitation of farmworkers. Growers can persist in their position only if the growing strength and power of migrant farmworkers is curtailed. Having lost substantial control over their own work, farmers fear ending up in the same position as the migrants. Growers have already expressed the fear that if FLOC wins its strike, they will be represented at the bargaining table by a union of migrant workers.

Also contributing to disunity is the fact that cannery workers themselves either have failed to recognize that all workers in the tomato industry are exploited by the canneries, or they have failed to realize that the workers' only weapon against exploitation comes from unity. The workers at the Libby's plant in Leipsic are organized under the Teamsters. FLOC arranged a meeting with the Teamsters local last summer, well before

the strike, to convince them to honor the planned picket line. The Teamsters stated that this was impossible or impracticable, since such sympathy strikes were forbidden in their contract. The Teamster hierarchy was seen enforcing this position when, during picketing at the cannery, a Teamster official, apparently sent from outside the area, was seen escorting cannery workers across the picket line. According to one FLOC member, FLOC did receive support from many of the Chicano workers, some of whom joined the picket line and indeed got fired, but many of the Anglos seemed hostile to the strikers.

This division between cannery workers and field workers plays right into the hands of the canneries. It guarantees that the strike will be longer and costlier for the workers. The quickest way to end the strike would be if all the cannery workers went out, during the harvest, in solidarity with the field workers. When workers unite and successfully struggle with corporations for control of production, small farmers will also realize that their only chance for survival lies in an alliance with the workers, as opposed to slow death by siding with the canneries.

FLOC's struggle is clearly important for everyone whose life is influenced by technology. One of the major issues farmers and farmworkers are facing is mechanization. Who will control its implementation, whom will it benefit, the corporations and their owners, or the broad masses of working people? FLOC's stand, that mechanization must be implemented in such a way as to benefit workers, deserves our full support.

Through various organizing efforts (such as national boycotts), we can intensify the struggle between those who produce the food and those who own the production facilities, eventually providing for the producers to take control over those means of production. □

BOOK REVIEW

If you drive through the New River Valley region of southwestern Virginia — the Virginia Highland — you will see as beautiful a land as you could ever imagine. A rural land, surrounded by the Blue Ridge Mountains on one side, the Alleghenies on another, you'll see rolling hills and gentle valleys, forests on the steep land, but mostly the farms and pastures all around. This is Appalachia, not coal-mining Appalachia with its tipples, strip-gashed mountainsides, and fouled streams everywhere, but farming Appalachia, the peaceful, pastoral, gentle land such as you might conjure or remember upon hearing Aaron Copland's *Appalachian Suite*.

The people of the New River Valley are not, however, a rural people. Figures from the local, four-county planning district show that though the land — 95% of it — is devoted to agriculture, forestry, and open space, only 3% of the region's people are employed at rural-related occupations. Pulaski County, for instance, with 30,000 people, has only 300 people whose work is agricultural. So as you drive through this land, don't be deceived by all those farmhouses with their front porches and outbuildings, or the trailers parked ubiquitously throughout the countryside. Token gardens aside, most of the people living in these buildings have their primary relationships not with the land around them, or even with their neighbors anymore, but with the jobs and shopping habits they have in town, in the various little towns throughout the New River Valley.

The story of how this came to be is an interesting one, a story of how, during World War II, the U.S. government took over thousands of acres of the best farmland for a powder plant and arsenal which is still the area's largest employer. It is a story of how a utility corporation flooded out some of the best farmland and rural villages in the immediate New River valley for a 110-mile coastline lake, for electrical power the urbanization boosters wanted. It is a story of how the local community college confiscated some of the best corn and wheat-growing land for the view its administrators wanted for themselves. It is a story of an interstate highway cutting up Draper Valley, an airport taking more prime farmland, and consolidated schools, finally, removing kids from such traditions and familiarities their neighborhood schools had given them and setting them down, instead, in those modern, windowless buildings whose architecture and course content could be anywhere U.S.A.

The story of urbanization is, of course, a much larger one than the little sketch I've drawn, but, simple or complex, it is a story the kids of this area don't learn, ever, in any of their schools. It has been the job of teachers to uproot these kids, to teach them that their turns-of-phrase, their metaphors are inappropriate, wrong, and that their aspirations ought to be more primarily

mainstream American. The teachers don't really have a hard job of it because the kids themselves have their heads already turned to the culture which Los Angeles, Detroit, and New York have glamorized for them. At home the kids have already learned to denigrate their own culture from the simple fact they rarely see anybody cultivating, much less doing anything. All the adults drive off to work. Whether they go to the arsenal in Montgomery County, the furniture plant or clothing mill in Pulaski County, or the chemical-fiber plant on the New River in Giles County, the effect is the same: kids almost never have the chance to see adults doing meaningful or any other kind of work. Kids almost never experience anyone doing anything with the land all around them, and they go to school where the cycle is complete, where teachers in their turn ignore the local land and such experiences as are peculiar or interesting or relevant to these communities.

This whole process is what Wendell Berry, a farmer, writer, and former teacher calls the unsettling of America. His latest book goes by that title, *The Unsettling of America*, and is precisely

Phil Balla is a former teacher who now lives on a 200 acre farm near Cloyd's mountain in Southwest Virginia.

The Unsettling of America

by **Wendell Berry**. New York: Avon Books,
1977. 223 pp. \$4.95.

REVIEWED BY **Phil Balla**.



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the book someone has needed to write for a long time. It is a book which ties up many strings which heretofore have been separate — or only imagined as separate. It is a book which picks up from an earlier extended essay, *A Continuous Harmony: Essays Cultural and Agricultural*. And it picks up from all the poems, the two novels, and the various essays written from the perspective that has been his, to cult fame only, there on his hillside farm on the bank of the Kentucky River.

The Unsettling of America is, if one word need do, Jeffersonian. It is based on the vision that was historically Jefferson's: that the health and strength and beauty of America is and ought to be based on the diversity, neighborliness, and self-sufficiency of Americans rooted in their own regions, their own land, their own farms and communities. It was the Morrill Act of 1862, and its successors, the Smith-Lever and the Hatch acts, which mandated institutions to serve this great Jeffersonian vision. These were our land-grant colleges, each dedicated to serving local needs and problems so that local peoples might be nurtured. The prestigious universities were already based on the elitism of professions and the liberal arts: the land-grant schools would serve the sons (and daughters) of the working classes, preserving the skills and pride of such farming and mechanics as communities across America were in fact based upon.

All that changed, the mission of the land-grant schools changed, Wendell Berry argues in *The Unsettling of America*. It changed drastically. All these schools, the Michigan States, the Texas Agriculture & Mechanics, the Virginia Polytechnic Institutes, they all reduced their services to small farmers and focused their energies on large-scale, mechanized farming. They helped with the growth of such corporations as John Deere, Ralston-Purina, and Stokely-Van Camp. The bottom line was no longer the individual farm family on its land, in its community, but the chemical and industrial-based business which drove tens of thousands of Americans from their land. And Wendell Berry cannot resist the irony, the hypocrisy of this continual constant mass migration: in the 1950s, he writes, Americans were decrying the forced removal of villagers in communist lands, meanwhile acquiescing here in the philosophy of Get Big or Get Out.

The land-grant schools, meanwhile, were taking care of themselves. The professors of agriculture, no longer desiring to have to measure their services according to the needs of little people, small farmers, understood nevertheless that their own jobs were predicated on all these people who were rapidly becoming ex-farmers. So the professors and the agriculture school administrators lobbied to have legislation passed which would define land-grant school services in terms of what the professors wanted to do. In 1955 Congress amended the land-grant school legislation with section 347a, which was, as Wendell Berry says, foolproof job security for these professors. Henceforth they could teach ex-farmers such skills as hotel-motel management, highway construction, sewer development, housing development and so on until, as Berry narrates, at the University of Kentucky, where he taught, he learned of one woman, a waitress, who had to sit through a course where the professors of agriculture wanted to teach her how to set a good table, for that was part of the service the professors had worked up to be their new mission.

Berry doesn't underestimate the potency of the land-grant schools' real mission: their service to agribusiness. He doesn't deny their success, either, in driving Americans out of farming and off the land. As Earl Butz would say, proudly, it takes only 4% of us now to feed the rest of the nation and part of the world, besides.

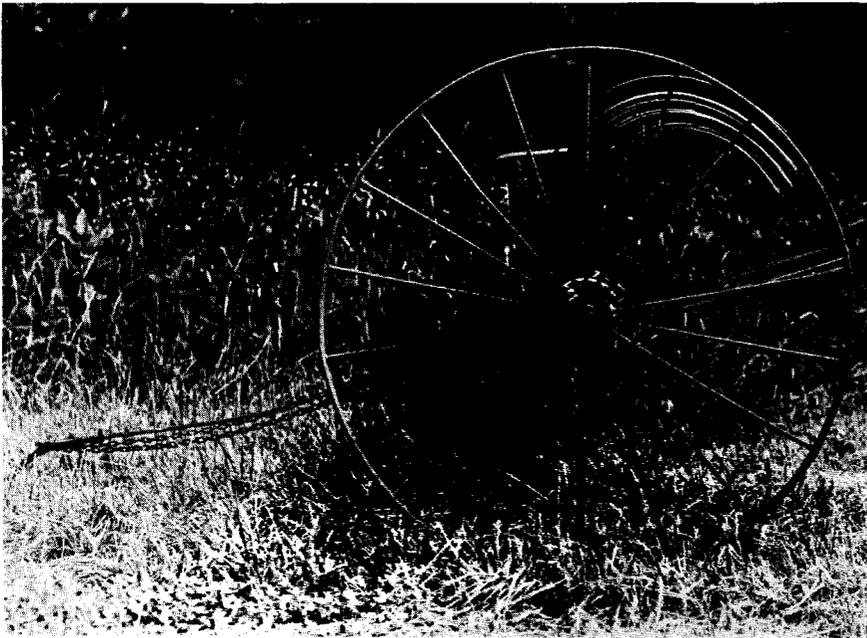
Wendell Berry and Earl Butz debated these issues in public once, in 1978, at a school in Indiana not far from either Berry's Kentucky home or Purdue, where Butz was dean. But it was a fruitless debate. Butz wanted only to bask in all the material advantages possible when so few people in a nation had to be on the farm. Berry wanted to consider the human losses of such a policy.

Though *CoEvolution Quarterly* published the transcript of that debate, and Appalshop people from Whitesburg, Kentucky, videotaped it, *The Unsettling of America* is the best place to go for the finest statement any American has written on the human losses in a nation which has given up so much of its original Jeffersonian impulses. They talk (scientists do) of farms of the future having human values deliberately blended with them. As if, Berry points out, these farms, mammoth, computer-run, had no

human values of their own to start with. But how typical a prospect that is for us to face. After all, our bread and our cereals have so little nutrition in them that we allow scientists to enrich them for us. Our education is so antiseptically sterile that we require our curricula to be sweetened with "humanities" courses. We expect so little literacy of our "scholars" that we relegate the teaching of that skill to Freshman English and those low enough in collegiate pecking orders to be consigned to teach it. We endow a multi-billion-dollar-a-year cosmetics industry to disguise our ill-health, just as we have a multi-billion-dollar-a-year entertainment industry to help us forget how deadly most of our jobs are. There's no reason for it, Berry figures, except some kind of growing national predilection to things quantifiable, measurable, and orderable. And so Wendell Berry is amazed at the ever-growing attempts of our scientists, our agricultural specialists, to reduce people and land to massively abstract and technological machinations.

What is it, Berry asks, which makes a scientist dream of multi-thousand-acre farms run by remote control, roofed, climate-controlled. At one level it is, he supposes, the same kind of value which inclines Audubon Society members to thrive on photos of landscapes beautiful in the proportion that they are empty, void of humanity or human traces. But at another level, he knows, it is the same impulse by which we all, to one degree or another, fantasize control over our lives. And scientists do this pre-eminently. The very process of specialization, for instance, means exclusion: the more a scientist excludes, the more he puts himself in charge of one possibility. And by leaving out all other possibilities, concludes Berry, "he enfranchises his little fiction of control."

How annoying it must be for an agricultural specialist, then, to be obliged to get involved with all the peculiarities and personalities of neighborhoods nearby the land-grant school itself. Dedicate yourself to a homogeneous agribusiness. Design all your universities to look the same, so you can work in them unaffected by local conditions as easily as you jump in and jump out of so many airports and motels that look the same. This transience, this rootlessness, appalls Berry. It is ruthless, it is un-human or anti-human, and notoriously geared to the bottom line:



The professor lives in his career, in a ghetto of career-minded fellow-professors. Where he may be geographically is of little interest to him. One's career is a vehicle, not a dwelling; One is concerned less for where it is than for where it will go.

Berry picks out several scientists in *The Unsettling of America* and looks closely at their praise and blueprints for an even more technological agriculture. Some of these scientists are buoyant with their sense of where people, "free" even more from the land, would go. They'd have amusement parks, recreation centers, giant ski-villages, retirement complexes, and planned living units with every known luxury. Berry sees through this scientific Babbitry as he summarized, "People will be *allowed* to be free to do *certain* things in *certain* places prescribed by *other* people." This kind of beneficence is, in a word, totalitarianism.

It is also violence. Reducing people to their quantifiable elements, and whole populations to their ordered places, invites only disorder. "Nothing," writes Berry,

could be more organized than one of our large cities, with its geometric streets, its numbered houses, its numbered citizens, its charted routes and zones, its great

numbers of police and other functionaries charged to keep order — and yet nothing could be more chaotic than one of these same cities during rush hour or after dark or during a riot or a garbage collectors' strike.

It's a symbiotic relationship, Berry guesses: order and disorder. Scientists might be happy with their own little fictions of control as they narrow themselves into departments and specialties, and as they conjure a world based strictly on quantifiable elements, but how long people can endure such narrowing is a matter not to be determined by our Earl Butzes glorying in color television sets.

And besides, says Wendell Berry, when did we forget that "people who have desired material quantities on such a scale have always been recognized as evil, and their stories have always involved a sort of ecological justice." Looking at another scientist's praise for the Heaven on Earth that data banks, sensors, and computers in agriculture can bring us — this time the vision of F.M. Esfandiary of New York City's New School for Social Research — Berry gives all this "progress" the name and the attack long deserved by it: "gluttony . . . licensed and given an illusory respectability because of its claim to be 'scientific.'"

Wendell Berry doesn't think much of the various cloaks our scientists have

worn as they've worked over the years to turn us all and price us all off the land. "Objectivity," he says, "has come to be simply the academic uniform of moral cowardice: one who is 'objective' never takes a stand." He picks to pieces those who have expressed "ignorant awe" and the "greenhorn's ecstasy" over the wonders of our high-cost, chemically-based, people-need-not-apply, technological agriculture. They should know better; they should bring to aloof scientists some of the criticism these same scientists, for "professional" reasons, are incapable of bringing to themselves.

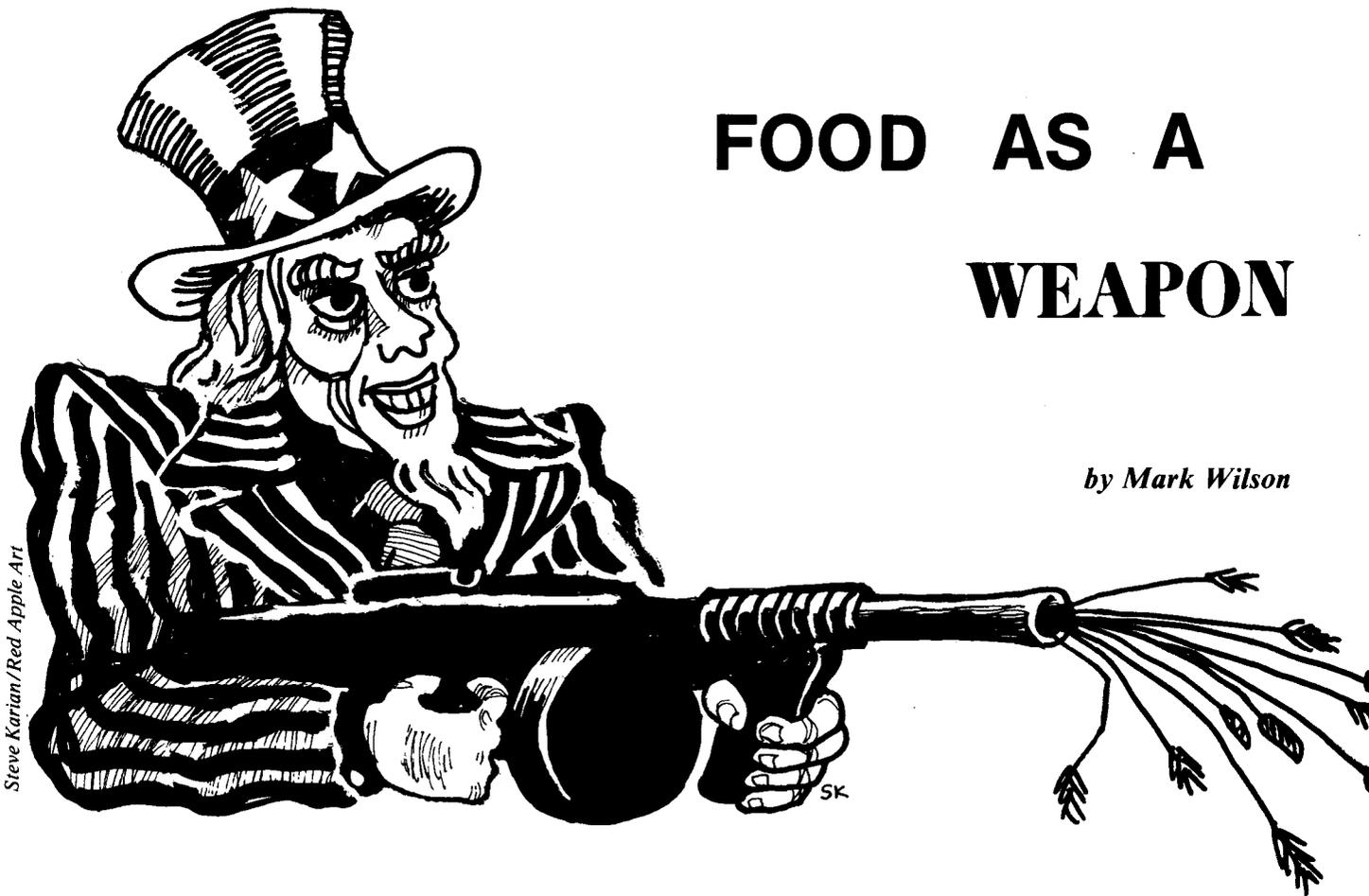
But in the final analysis, Berry notes, these specialists, these agribusiness planners, do cloak themselves in values beyond objectivity. They cloak themselves with the very pieties of Jefferson whose vision they are meanwhile undoing. They can't help themselves. Cliches come easily in America, and anyone can shout freedom, dignity, and equality of opportunity — and sincerely believe one means it. He calls this a flawed consciousness, but doesn't really explain it further.

I wish he had.

My vantage point is the New River Valley region here in southwest Virginia. Here, nights, I teach people how to write. These are adults, average age thirty, all of them working in the daytime. Most of them are local, New River Valley born and raised. But they, too, all speak, or write, in cliché and generalization. And they can't help themselves. They can't because in their upbringing and in their schooling they were systematically taught to ignore and to denigrate their region, a land whose literature, Appalachian literature, shows it to have been rich in images, metaphor, and analogy. To be strong, it seems to me Jefferson was right: you need to be rooted, in touch with specific, peculiar places, to have pride and consciousness of those places as home, dwelling, community. You need this not simply for bread or for "scenery," but so that your words have some meaning, so that your ideas and values are connected to things, people, and land that you will defend with your loyalty and nurture. If your words are not so rooted, then you will attach yourself like some passive molecule to whatever power system sweeps you up in it. Jefferson was afraid this might happen. Wendell Berry, in *The Unsettling of America*, shows how in fact it has. □

FOOD AS A WEAPON

by Mark Wilson



The blatant use of food as a weapon of control and manipulation by US imperialism is surprisingly openly discussed by capitalists and their policy makers. In the words of Earl Butz, past US Secretary of Agriculture: "Food is a weapon. It is one of the principal tools in our negotiating kit."(1) Or as Senator Hubert Humphrey recently put it: "Food is power. And in a very real sense it's our extra measure of power."(2)

Food is not a new weapon to US capitalists, however. Following WWI, under Herbert Hoover's administration, the US selectively offered and withheld food in eastern Europe in an attempt to control the "Bolshevik insurrection".(3) US food and other assistance, funneled through the U.N. Relief and Rehabilitation Administration, helped prop up Chiang Kai-Shek's forces near the end of WWII. Similar attempts to control the "Communist menace" followed WWII as the US shipped food to France and Italy to help quiet communist-led unrest.(4)

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Following these attempts to use food as a weapon of control, the "Food for Peace" program was begun in 1954. Food for Peace, the advertising title for Public Law 480, was a program designed to provide selective food aid to hungry peoples whose support was wanted or whose opposition wasn't, to unload US food surpluses, and to increase the dependence of recipient countries on the US. The program grew out of a long-standing problem of "overproduction" in which surpluses of agricultural produce had to be unloaded. This "crisis of overproduction" had developed in the 1920's and 1930's and was an important impetus behind the "New Deal". With PL480, surpluses took on new possibilities.

Although it was a relatively small weapon, food "aid" was used by the US in its war in southeast Asia. Nearly half of the \$152 million in PL 480 Title II food aid during 1974 went to *South* Vietnam and selected parts of Kampuchea (Cambodia), while only about 1/6 went to *all* of Africa and Latin America combined. (The U.N.'s list of 32 countries most affected by the global economic crisis includes neither Vietnam nor Kampuchea.)(5) PL 480 Title I food aid to Chile was about \$26 million in 1968 and \$30 million in 1969. Following the 1970 election of Allende as President, Chile received *no* food aid until after the CIA-funded coup of 1973. Under the fascist dictatorship of General Pinochet, food

aid was resumed and increased dramatically.

Another blatant and often more desperate way in which food is used as a weapon is by the prevention of its production or usefulness. The massive defoliation of Vietnam was effectively used to poison agricultural land or growing crops from which food could have been produced. Cloud seeding was also used to influence monsoon patterns partly in an attempt to destroy crops. Similarly, the Cubans suspect that cloud seeding was used by the US in an attempt to affect sugar cane harvests by causing rain to fall before the moist air reached Cuba.(6)

By no means exhaustive, these examples illustrate the blatant ways in which food is used as a weapon. US imperialism has and will continue to count food, the prospect of it, the destruction of it, the withholding of it, as an important part of its arsenal. "Mightier than missiles" is the way the American Feed Manufacturers Association sees it, indeed, "the strongest weapon in the US arsenal".(7)

In addition to the meaning of weapon as "any instrument used in combat", a second sense of the word is "any means employed to get the better of another." It is this latter meaning that is easier to ignore or misperceive, and it is this type of weapon to which US imperialism has increasingly turned. Popular protests and people's growing awareness have made it more difficult — for the time being at least — to justify the blatant use of food as a weapon. It is the less direct, more subtle form of control to which we now turn.

"Getting the better of" others is a motive force in all stages of food production. This includes agricultural research, various forms of production manipulation, food "aid", and ideological supports. All of these are strongly interactive and affecting each other. What follows is a sketch of just some of the issues.

Commodity Production

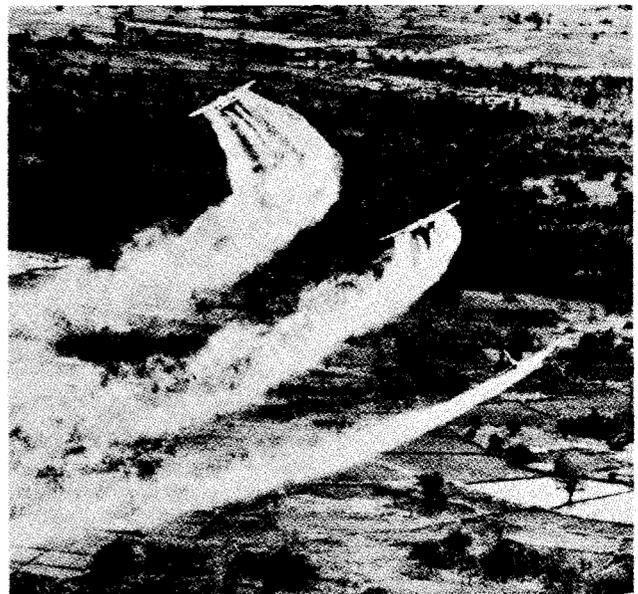
First it is important to understand that food is a commodity. Food is produced to be marketed. It can be exchanged (sold) on the market because it has use-value (i.e. it serves a need for people, it is used by people). However that alone is not sufficient; air, for example, fits this description but it is *not* sold on the market unless it has had labor performed on it (e.g. bottled gas, or Tokyo's infamous fresh air in vending machines). A commodity must also have exchange-value, meaning that labor was performed to produce or prepare it and this labor (itself a commodity) must receive some pay (i.e. it is sold). Thus, having both exchange-value and use-value, the commodity (in this case, food) is produced/prepared and is sold on the market place, because in the process of selling it a profit may be realized.

Profit is accrued by those who own and control the means of production. These people may be big capitalists in agribusiness, or smaller capitalists who are farming a medium size farm (say 500-2000 acres). They buy labor power from workers, sell the food they produce and (except for perhaps smaller family farms) make a profit because of the difference between the cost of inputs (labor, but also fuel, seeds, fertilizer, new machinery, etc.) and the price of the food that is sold. Capitalism is partly defined by this process of social and economic relations; under capitalism there is no other way.

Commodity production and exchange in order to profit is the driving force behind food production.

Commodity production and exchange in order to profit is the driving force behind food production. This includes agricultural research, one aspect of the food production process. Ag research is designed to maximize profits, whether it be through decreasing costs (mechanical harvesting, breeding for particular ripening times, etc.) or through creating a new commodity (seed varieties, new fertilizers, harvesting machinery, etc.) Commodity sales occur in agricultural research at three levels: labor, immediate results, and food produced.

First, the labor power of research scientists, technicians, research administrators, etc. is bought; the labor power itself is a commodity having use-value and exchange-value with a price that fluctuates depending on supply, demand, and other factors. The capitalist buys



U.S. Air Force C-123 aircraft spraying herbicides over cultivated South Vietnamese fields.

Wide World Photos

the research person's labor power with the hope that, in return, the immediate results of the research can be turned into a profitable commodity (be it a crop variety, a more effective pesticide, a new harvester, or a different fertilizer or technique). Finally, the food that is produced, partly as the result of the research, is a commodity.

Viewing food production as commodity production presents us with a fundamentally different interpretation of food production research than the predominant ideology which considers the primary goal of capitalist agricultural research to be increasing the production of food in order to feed people (and only incidentally but not necessarily making a profit). The two views lead to very different predictions and explanations. The example of corn breeding research is illustrative.

The "food-is-produced-to-feed-people" position can *not* explain why research on corn varieties continues, as it has for the past 30-40 years, to focus almost entirely on hybrid varieties, even though virtually no geneticist today believes the theory of inheritance and gene expression on which it is based.* If the same amount of research were being put into self-pollinated varieties as is being put into hybrids, it is likely that yields could be as high as or higher than those of hybrid varieties.(8) However, hybrid corn seed production and sales is a multimillion dollar business (usually part of large and diversified trans-continental monopolies), and the source for the hybrid seed that farmers must buy each year to plant. If research on non-hybrid varieties improved their yield, farmers could save some of each year's crop as seed for the next year, thereby not having to buy seed and lessening the control that big capital holds over them.

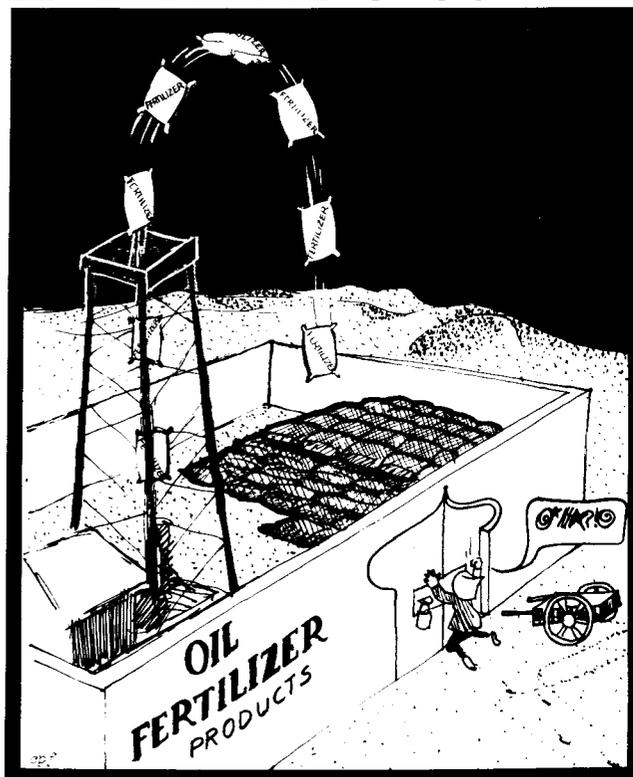
It is clear from this one example (for others see, e.g. Hightower's *Hard Tomatoes Hard Times*) that the drive to create, or increase the profitability of, a commodity is primary in directing the research. Increasing yield or quality only enters in as a variable that affects profitability. If it is profitable to produce, it will be produced (whether it is food, automobiles, housing, or bombs).

Dependence, Exploitation, & Control

How, though, is agricultural research a weapon that is "employed to get the better of another"? Agricultural research, like the other parts of the food production and distribution process, is used under capitalism, by the capitalists, both to bind farmers to a dependence on various commodities and eventually to drive most of them "out of business".

*The theory of "overdominance" has led to breeding for hybrids in which the "best" of one inbred line is mechanically crossed with the "best" of another, to produce a hybrid. "Partial dominance" or "intermediate dominance" is now believed to be the mechanism of gene expression; thus breeding research should use simple mass selection in which a few of the "best" are repeatedly bred to create a self-propagating, open-pollinated homozygote.

TELS FUEL FOOD CRISIS



Small farmers don't have capital, can't compete, and are driven out.

Agricultural research is, in this way, affecting not only farmers or peasants in those Third World countries that have been penetrated by US capital, but also the farmers here in the US. The dramatic decrease in the number of farmers and corresponding increase in the amount of land controlled by agribusiness is one of the direct results of agricultural research. The specifics are different but the principle is the same for peasants and small farmers in the Third World as well. Agricultural research develops seed varieties that produce higher yields, but only under conditions of increased fertilization, insecticides and controlled irrigation. Planting, tilling, and harvesting can be done more quickly with machinery specially designed (only) for the crop and cropping pattern. To obtain these means of increasing yield, farmers need capital. Small farmers don't have it, can't compete, and are driven out. Those who are able to continue farming must make large capital investments, and are bound to and increasingly controlled by agribusiness through its commodities of machinery, fertilizer, seed, and pesticides.

In the US, agricultural research is part of a weapon against the small farming sector; in most Third World countries the victims are the majority of people. First, Third World economies are generally based much more on food production and exchange. Increasing US control over food production exerts a very strong influence. Second, relatively more people in Third World countries are involved in food production, thus many producers are affected directly. Third, everybody has to eat and thus there is increasing control at a national level.

While scientific research in agriculture is a large part of the food weapon, there are other aspects of food production and distribution that serve similar purposes of dominance and control.

Market Manipulation

The simplistic "food-is-produced-to-feed-people" view can not explain why food is destroyed or purposely not grown while people starve. As Richard Bell, past Assistant Secretary of Agriculture stated: "our primary concern is commercial exports . . . We can't subordinate commercial exports to needy people."(9) The simple story is that to affect prices and profits, the US does not always produce the quantities of food it is technically capable of producing. Hunger and starvation enter into the issue, only through their effect on price and people's ability to spend.

Richard Bell: "Our primary concern is commercial exports . . . We can't subordinate commercial exports to needy people."

Most of the major western capitalist countries deliberately chose not to plant millions of acres of grain in 1970 and 1971, resulting in the loss of about 2 billion bushels of wheat.(10) Then in 1972, Earl Butz prevented the planting of another 5 million acres of wheat in the US, making a total of 62 million acres of US land purposely kept out of production. Policies of not producing food while millions of people starve are motivated out of a concern for increasing prices, lowering costs, and increasing profits, rather than feeding people. As Dan Ellerman of the National Security Council has stated: "To give food aid to countries just because people are starving is a pretty weak reason."(11) Justification for such policies comes mostly in the form of "balance of payments"-type arguments. How easy it is for us to accept this as an "explanation", and modus-operandi is an indication of how deeply ingrained the capitalist market exchange ideology actually is. Any attempt to change that must begin with an understanding of the ways in which capitalist social relations create and are reinforced by capitalist ideology.

Ideology and the Food Weapon

Bourgeois ideology concerning population and resources is supportive of and generated by the use of food as a weapon. First there is the view that separates production and consumption as well as ignoring the social relations thereof. This view sees food production at or near a physical maximum and hence can justify "selective" distribution. The "life boat" argument(12) is one of the more explicit and better known formulations. This is a reactionary bourgeois ideology that considers US aid to the poorest de-developed Third World countries to be overloading "the boat". Feeding starving babies leads to more survival and to population growth, which is seen as the cause of food shortage. Without detailing either the ideology or the argument (see 12) it should be clear that, from this point of view, the Third World is considered a threat deserving of harsh measures of control and the use of (food as one of many) weapons.



Eagle/cpf

A second example is the view that universalizes private ownership of and control over resources as the only "rational" solution. The "tragedy of the commons", popularized by Garret Hardin,(13) uses as a metaphor the grazing land to which people once brought their domestic animals. His claim is that such a system, in which access to the "Commons" was had by all, was doomed to failure: human nature dictates that we are all competitive; we will each individually try to graze as many of our animals as often as we can resulting in the overexploitation and ruin of the Commons. Thus, private ownership is the only way to prevent such destruction and to regulate the use of resources. This supports the private ownership of agricultural land and the distribution of its produce by 'them that has.' Furthermore it serves as an explanation for the very real land destruction in much of the Third World that is taking place due to overgrazing or overly intense farming. Rather than seeing the role of imperialism or national capitalism in pushing people onto smaller and more marginal land, or into continuous monoculture of nutrient-depleting crops, it becomes possible to rationalize practices as the fault of individual competition and ignorance.(14)

These are simplified statements of the thrust of the arguments. However, they are raised to illustrate how such ideology grows out of and reinforces capitalist social relations. Their legitimation comes from associations with science: "scientific" research which supposedly validates the ideas, popularization by natural scientists (Hardin among others); creation and development by "social scientists"; publication in scientific journals. For many, the ideological elements in the process and result can be obscured under the guise of "scientific objectivity". It is the job of radical scientists to expose the ideology in all thinking.

What is to be done?

The argument presented here is that, while food can conceivably be grown and distributed both nationally and internationally with the goal of feeding people, current capitalist political economic relations make food one of the primary weapons of exploitation and control. Strategies of opposition and change must recognize this as a long term war within which small tactical battles must be fought. A number of possibilities exist.

First, we might seek a moratorium on the use of food as a weapon. Such an effort could attract large numbers of progressives internationally; groups with related but more specific goals already exist (e.g. the campaign against infant formula in the Third World). A large coalition of anti-imperialists and humanitarians could become a strong and influential voice. The UN could serve as a powerful force. Boycotts and bad publicity can be effective in bringing about changes in the more oppressive or exploitative conditions.

Second, there is the task of spreading an *analysis* of why this problem exists, of the exploitative and destructive nature of capitalist social relations, and of the ultimate need for revolutionary social change. Others must be encouraged to face the contradictions of capitalism and to critically examine Marxist analyses of this and other problems. Using neither leftist jargon, nor liberal obfuscations, we must present clearly our perspective, rather than retreating to an elitist and condescending position that views others as either not interested in, or unable or unwilling to accept, a non-dogmatic Marxist analysis.

Third, we must continue to educate ourselves, to probe and question more, to look deeper into the interpenetration of capitalist social relations, ideology and science.□

It is the job of radical scientists to expose the ideology in all thinking.

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THE PEOPLE WHO PRODUCE YOUR FOOD SPEAK:

Interviews with Farm Workers, Farmers, and a Food Corporation Executive

by the Editorial Collective, Ann Arbor Science for the People

These interviews were conducted in February and March of 1979 by members of the Editorial Collective for this issue of the magazine.

Putting together an issue of *Science for the People* about food is certainly timely. But something would have been missing had we included only "analyses" of the food issue presented by academics. It seemed somehow important to include the voices of the people who actually are involved in the production of our food. To this end we interviewed several people who produce food: migrant workers, farmers, and a corporate executive in the food industry. We offer portions of those interviews below. We hope they convey something of the human element involved in the food system, as reflected in the words of those people most intimately involved in it.

We should admit, and perhaps apologize beforehand, that the questions we asked of the various people were in no way consistent from person to person. Our questions were colored by our own prejudices with regard to race, sex and class. Thus, we ask Lucy Sanduval (a migrant worker) about the size of her family, but not Chris McNaughton (a corporate executive). We hope the reader will excuse our lapse into bourgeois journalistic bias. It was certainly not intended, and was only recognized after the fact. On the other hand, given the small space available for printing these interviews, such biases are probably necessary to enable the presentation of such a diversity of opinion and feelings as is represented by these people.

DAIRY FARMERS

Ruth and Dale Crouch are dairy farmers near Grass Lake, Michigan. They have been farming all their lives, on the same farm.

SftP: *What kind of farming do you do?*

Dale: We have a dairy farm. Right now we have about 80 cows and that many young cows to go along with them. We try to grow all our own feed. If conditions are right we hope we can grow all our own corn for our cows.

SftP: *How big is your farm?*

Dale: We have about 340 acres that we own and about another 60 that we rent. We also have a vegetable operation.

Ruth: We're gradually getting into a vegetable operation. Eight years ago our children started a 4H project and started gardening. The result was a surplus of vegetables. So we started selling them at a stand by the roadside. The operation kept getting larger and larger.

The last couple of years we have had people come in to pick strawberries on a pick-your-own basis. This year there will be four acres of those. The business has expanded just through roadside selling. We are now to the point that we are going to build a permanent stand this year. In essence our family farm is becoming a dual operation; not only dairy but also fresh produce.

SftP: *When you sell the milk who do you sell it to?*

Dale: We belong to Michigan Milk Producers Association. It's a cooperative. They are the ones that we get our money from. Sometimes they haul milk directly to Detroit to the Krogers bottling plant. Another plant in Ovid is mainly a manufacturing plant — makes cheese, butter, etc. The guy that picks up the milk from me gets paid by Michigan Milk. Then Michigan Milk contracts to Jackson or Krogers or wherever.

SftP: *When was Michigan Milk Producers Association formed?*

Dale: About 60 years ago.

SftP: *Does any foreign milk get sold to the bottling plant?*

Dale: No fresh milk comes in from foreign sources, but a lot of milk products. It's a real problem for us. Right now we're running into another problem. They're making a lot of imitation products now. They're making bacon out of soybeans and they want to call it Bacon. The same thing is happening with cheese.

SftP: *Are you in fact making ends meet?*

Dale: To look on paper we're doing real well. Of course most of that is inflation.

Ruth: I think we are making a good living. I don't think anybody in this day and age is going to get rich farming. We go to the market. We are consumers just like you and everyone else and we have to pay the same prices. We have to go to the store and we have to buy gasoline not only for our car but for the tractor. And you know what the price of gasoline is. Inflation has really hit farm equipment. A tractor that we bought 15 years ago cost \$10,000 and would probably cost \$25,000 to \$30,000 right now. We as farmers have to have our income keep going up in accordance with the rest of the workers or we can't make it. Now we're all right because we got animals and milk is not that bad a price right now. I'm not saying it's super good, but it's not that bad. It's a price where we can break even or make a little money. But these farmers that you have been hearing about lobbying in Washington, they're really hurting. It probably costs them more than three dollars a bushel to grow corn, and they're turning around and having to sell it for about two dollars a bushel. Now you can't stay in business very long if you're doing that. And that's why they're hollering. This is one thing that people in general don't realize. Back following the Second World War, even as recently as four or five years ago, corn was up to \$4.00 a bushel, wheat was up to \$6.00 a bushel. Right now wheat is selling for \$2.60 and for corn you can get \$2 if you're lucky. So you see the prices for the products the farmer has sold have not continued to rise over the years as factory wages have. They (prices for produce) have gone up and down and we are at a low point on a lot of these things. Milk is at a high point. But I'm not going to say it's going to stay there.

Dale: We got about \$12 a hundred (pounds of milk) this last month. In 1946 they were getting \$6.00 a So even milk has only doubled in price in a 30-year period. Compared to some other things it has not gone up that much.

SftP: *Consumers are complaining that the price of food is going up and farmers are complaining that they're not getting enough for what they produce. Who's making all the profits?*

Dale: There's too many people in the middle. I think that's the biggest thing. When milk was at a cheaper level it was pasteurized and that was it. Now it's

pasteurized, homogenized, — you got low fat, half percent, 2 percent. You do all these things in between. They used to go to a store and buy a bag of potatoes. But now how many potatoes are sold in bags. They're sold in a box. Or maybe in TV dinners that you shove in the oven. But with milk, every time we get an increase (milk prices go up and down a lot) the dairies will increase just as much or more. But when it goes down you never hear about the dairy's taking off any. What I'm saying is, if our milk goes up 50 cents a hundred, they add fifty cents too, to cover their expenses — fine. But say our milk goes down 50 cents. They never take 50 cents off the milk that you buy.



Ruth and Dale Crouch

Ruth: Taxes is another thing that's hitting the farmer. We are being taxed at the potential for real estate development on land out here. No one ever thought of subdividing it, but still it's being assessed at its potential value for building. And as the population moves out west from Detroit and Ann Arbor our taxes are going higher and higher. There has been some tax relief in this open space act but not many of the farmers have gotten into it because we hate to have someone else tie up our land and tell us what we can do with it. But I do think this is an option that some of us are going to have to take. Now I do think maybe some of the solution is in selling direct to the consumer. We can sell a little cheaper than they can buy down at the store. And better quality. Maybe there is going to be more of a trend back this way.

SftP: *In general terms, what does it feel like to be a farmer?*

Ruth: Tired!

SftP: *Could you briefly go through a description of a typical day in the life of a dairy farmer?*

Dale: In the summer . . . Those cows gotta be milked first thing in the morning. I usually work till midnight and then don't get up till about 6:00 a.m. or 6:30. Milking starts at about 6:00. Probably takes about three, three and a half hours. After that, depending on what it is, if it's corn planting time you plant corn, from the time you get done milking until . . . depending on the day, if you think it's going to rain maybe you go on a little longer . . . till you can't see any longer and then you got another 3 to 3½ hours of milking. Or you may have hay that's gotta be baled, and if you got a rain cloud coming, you work till you get that hay baled.

Ruth: Let's put it this way. In the summer time a good many of your days run from 6:00 a.m. to midnight. It's not only him working those hours, it's also me working those hours and 2 or 3 or 4 of the children working those hours. In this day and age to keep a family farm you have to work hard and it involves the whole family. Just feeding this many animals, milking, cleaning up, taking care of the barn and so forth is an 8 to 10 hour job, 365 days a year. The cows have to be milked everyday. It doesn't matter if you want to go somewhere, those cows have to be milked. It is a very "tied down" job, but it has lots of rewards and advantages because we are our own boss. If we want to work twice as hard today we can take off a couple hours in the middle of the afternoon tomorrow if we want to. No one tells us when we have to work. It's rewarding, especially with a family of our size. We have eleven children, so this makes us an extra-normal family. It gives them all a job to do, keeps them out of trouble, keeps them busy. And there's lots of rewards for living in the country. And if you're working for yourself, you do a lot more than if you're working for someone else.

SftP: *Do you want your children to be farmers?*

Ruth: I want my kids to do what they want. I'm not going to try to force them to stay on the farm. I do think a lot of sons have been kept on the farm to work for their parents for nothing, and then when they're 50 years old and their parents die they're left with nothing. I've seen this situation happen over and over again, and I don't want it to happen with my kids. If they come in they're going to come in as full partners.

Dale: If they want to work on the farm we can find a place for them. As far as I'm concerned, farming is a good life. But they may not think so. I mean a lot of the time you'll see kids go up to school and get a job. Then they go out and find out they gotta punch that clock every day and work for 8 hours and so on.

Ruth: We got an 11-year-old and a 12-year-old boy. They just announced to me last summer that they weren't going to be farmers cause they weren't going to work that hard.

Dale: They probably just got through picking strawberries all day.

Ruth: These kids come home in the summer time and they don't have much vacation from school. Everybody from the 8-year-old up picks strawberries cause we also fill orders. I have one girl for two years in a row has picked over a thousand quarts of strawberries. And that's a lot of strawberries. As soon as the strawberries are in, you're right into sweetcorn. And one week last year 800 dozen went out of here. A lot of ears of corn went through those kid's hands.

SftP: *(to Ruth) Is it especially difficult for a woman in farming today?*

Ruth: Definitely yes. Not only do I have to take care of the house but I have to work on the farm today. I would like to sit in the house, do some sewing and just sit back and admire the work once in a while. But I can't. I have to work in the fields all day with him and then squeeze in the housework and taking care of the kids in addition. Being a woman you're always busy. Most farm women these days keep all the books on the farm . . . not always but usually. And keeping the books is a full time job in and of itself. And then on top of that you got all the housework and the regular farm work to help with. I wish I had the time to do the things that other women do, sew, keep a nice house and all that, but there's just too much work to do with the farm.

SftP: *Is there anything you would like to specifically say to the readers of Science for the People magazine?*

Ruth: We're just consumers too. We got to pay the prices you gotta pay. We aren't getting rich and we work hard.

* * * *

AN AGRIBUSINESS EXECUTIVE

Christopher J. McNaughton is Senior Vice President of Corporate Services, Secretary of the company, and holds primary authority for employee relationships. Other than a short stint with an accounting firm, his entire corporate career has been with the Kellogg Company, makers of Kellogg's cornflakes and a wide variety of other convenience food products.

SftP: *What are the differences between working in the food industry and working in other industries?*

Chris: The food industry is basically a clean industry compared with other forms of American industry. The quality of jobs and the job environment are excellent,



Christopher McNaughton

superior to most other jobs in American industry. Compared with, say, an assembly line job in the auto industry or a construction job, with regard to aesthetics, quality, occupational health and safety, the food industry offers much more than most other industries.

SftP: *What about at the corporate level? Is the food industry more or less the same as other industries?*

Chris: It's just about the same as other industries, I guess. I feel quite comfortable working here because Kellogg has a general commitment to people as people in and of themselves, as individuals. For example, in our newest plant in Lancaster, Pennsylvania, which has been in operation for two years, we spent more than 3 years with industrial sociologists planning the work environment. We were planning in terms of restructuring the job environment in the plant for two reasons. First, because productivity and happy, well-motivated employees go hand in hand. You cannot have a happy environment when either the company or union creates insecurity, which comes from a lack of concern about the employee as a person. Second, for the welfare of the individual employee. We attempted to promote harmonious working in a group or team. This involved restructuring several jobs. For example, in the past we allowed the production process to define certain so called station jobs, jobs where an individual was required to be all alone because the machine he worked on was isolated. We now rearrange the job so as to have people working in teams of 15 to 17 people. We reorganized the technology so as to group jobs in control centers so as to facilitate people getting together around the nucleus of a job. This process cost us an extra \$3,000,000, but we think it was worth it in terms of future labor relations and productivity. The whole process was done with full cooperation of the union at every step (American Federation of Grain Millers). The union represents the workers and is aware of things that we at the corporate level are not.

SftP: *When was the union organized here?*

Chris: It was first organized in 1937.

SftP: *Have there been many strikes, or more than in other places in the food industry?*

Chris: We have had relatively few strikes. This is not the same as in other places in the food industry. Being in the food industry there are certain things that automatically lead to good labor relations, but that is only one aspect. Beyond that, Kellogg has especially good relations, probably attributable to the philosophy of the founders of the company and their commitment to people.

SftP: *What about wages? Are people in Kellogg's well paid?*

Chris: Our people are very well compensated.

SftP: *What about at the corporate level?*

Chris: Less so, but still well compensated.

SftP: *What would you say was the average salary of a corporate executive in the food industry?*

Chris: I wouldn't want to say. I just don't know.

SftP: *Would you say that in general they are well paid or underpaid?*

Chris: I have too much self interest to answer that question.

SftP: *Do you feel that you have a special responsibility because you work in the food industry? That is, since food is so basic to life, do you feel especially responsible to do a good job?*

Chris: Yes, we recognize such a special responsibility. A majority of our employees feel this way, in terms of manufacturing clean, healthy and wholesome food.

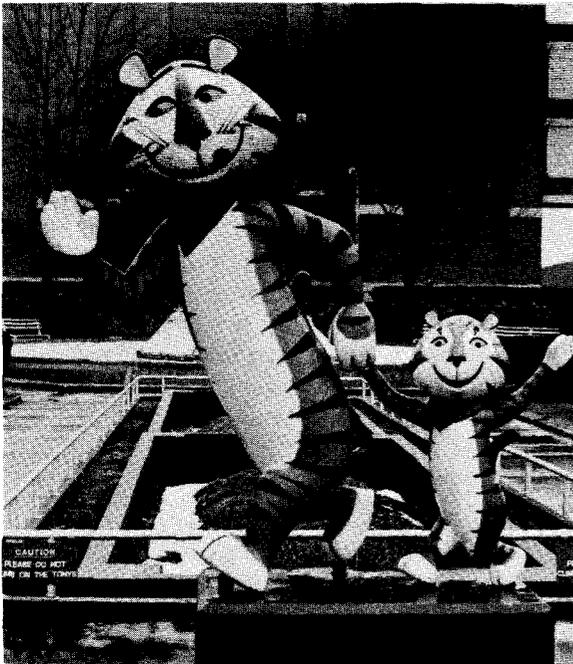
SftP: *What about the healthiness and wholesomeness of the food? Many people have complaints about the breakfast food companies in general producing food that is not very nutritious and loaded with too much sugar.*

Chris: We feel that we manufacture food that is very nutritious. I can give you figures on our fortified foods that show that our cereals give more than adequate nutrition, especially since they are eaten with milk and in the context of a whole breakfast. But fixing nutritious food is only one side of the question. People have to want to eat the food. Our studies show that 20% of all children skip breakfast. But of those that eat ready made cereals, only 5 to 6% of the time do they skip breakfast.

As it relates to sugar, a recent study by the Cereal Institute demonstrated that children who sweeten their own cereal put more sugar on cereal than the ones who eat ready-sweetened cereal, so the ones who eat ready-sweetened cereal actually take in less sugar. When you get right down to it, it's all a matter of consumer choice.

SftP: *What about food prices? Many people feel that since the farmer is getting squeezed and the consumer has to pay such a high price, it must be the middle person, the food processor, who is making a big profit.*

Chris: As it relates to prices of products, we think that you can look at various breakfast alternatives and see that ours are definitely competitive. Not only are they nutritious and taste good, but they are a good value. We enjoy certain economies of scale that enable us to produce food products with such good value. If we were not in a position to use those economies of scale, costs to the consumer would be higher. If the food processors were smaller, food prices would actually be higher. The ultimate determinant of value is the consumer.



SftP: *But when people hear that an executive of a large food corporation earns over \$100,000 per year, they begin to think that prices are jacked up by such a thing.*

Chris: In a free market both salaries and products find their own level. The food industry needs the right people in the right places. It needs special talents and special skills in the right place in order to work. It needs new types of equipment so we can help give the consumer the product that is wanted. All this has to be paid for in a highly competitive market.

SftP: *There are those who would take as truth the suggestion that the problem of excessively high food prices was mainly due to things like excessive salaries of corporate executives. Wouldn't your answer suggest to them that something must be wrong with the system? I mean, if the problem is that somebody in the middle is making too much, and that that somebody is making so much because of something structural, doesn't that imply that the structure itself needs changing? Wouldn't that give some credence to those who call for socialism?*

Chris: No I don't think so. Take the Soviet Union for example. In the Soviet Union about 95% of the land is held collectively, and the value of the produce is shared by all. Less than 5% of the land is owned privately. Yet over 25% of the actual goods are produced on that 5% that is in private lands. Or take Britain. That society is in an advanced state of decay because of what some socialists would advocate for us. It just doesn't work

SftP: *If we were to initiate some mild form of socialism in our country, what do you suppose would happen to your job?*

Chris: I would invite the reader to look at the post office, GSA, Amtrak, or the general fiscal responsibility of the government. I don't think that any responsible person would advocate that form of government intrusion. But look at the sort of things we're doing. When we designed our Lancaster plant one of the first decisions was to involve the people, both for the good of the people and for the productivity of the company (that is, the person on the job is the one who knows it best). Unfortunately not all people are willing to accept the responsibility and work that goes along with that kind of decision making. Relatively few people are willing to undertake the responsibility and hardships involved in such work.

SftP: *Why?*

Chris: I think that is generally true of people.

SftP: *Why are some people willing to accept such responsibility and others not?*

Chris: Who knows. It's a very complex question. Things don't get done without some sort of authority.

A Migrant Farmworker

Lucy Sanduval is a migrant farmworker and mother of two. She was born in Copland, Texas, and now lives and works in Florida (among other places). To date, her life has centered on the harvesting of food crops in many different states in our country. Today she is actively involved in helping to organize the farmworkers in northern Ohio.

SftP: *Were you born into the migrant stream?*

Lucy: I was born into it. I don't know — we've been travelling as long as I remember. We're always going to, well, a lot of states. The first one we started going to for beets.

SftP: *Sugar beets?*

Lucy: Yes. And from there on we just kept on going every year. Sometimes to a different state. We'd go to the same state for around two years — something like that — and later try another state.

SftP: *Where were the sugar beets?*

Lucy: In Minnesota and Nebraska. I been to Minnesota, Nebraska, Colorado, Indiana, Michigan, South Carolina, North Carolina — you name it, I've been there.

SftP: *How old were you when you started working in the fields?*

Lucy: Well, I started picking cotton at the age of eleven.

SftP: *That's when you first started?*

Lucy: Well, younger than that, but before that I was going to school, so, you know, I didn't have much time, they just took me to the fields to learn how to pick cotton. I went to school to the age of eleven. Then I sort of drifted away from school. And that's when I started picking cotton, like every day. And over there (Texas) school's out, and — back then, I don't know now — and if you don't start school, they don't look for you, you know.

SftP: *When? At the first of the (school) year?*

Lucy: Yeh . . . the first of the year. If you don't start school, they don't know that you're there, so they won't look for you. So that's what I did. And I've been to Indiana for tomatoes. And Michigan — apples are from Michigan. That's where I got married.

SftP: *When was that?*

Lucy: 1965. I was seventeen.

SftP: *What was the school year like? Would you stay with relatives sometimes or always go with your family?*

Lucy: No, I'd travel with them wherever they went. But I don't remember that much about school, cause I didn't go that much. You know, I was small. I was good when I was in school. And, I got a good head, so I learned how to read and write — Spanish and English. And I don't remember that much about school. I know we traveled a lot. I don't remember going to school in another state besides Texas. I don't remember. I know that it wasn't a school — it was like, ah, somebody came to the camps and it was more games than it was school. They just give you bunch of papers and, you know, learn how to spell this and spell that. But that's all I remember. But I don't remember riding a bus to school or anything like that, besides Texas.

SftP: *The people who taught were Anglos?*

Lucy: Anglos.

SftP: *What size family do you come from?*

Lucy: We're fourteen altogether. I'm right in the middle.

SftP: *And every time you'd go someplace to pick, the whole family would go?*

Lucy: Yeh. The whole family would go. There's only one time when we had to go by ourselves and that was to go work in — I don't know what it was. In Spanish it's called "escoba". And "escoba" in English means "broom".

SftP: *Where was this?*

Lucy: In New Mexico. And that's the only place only me and my father and some of my brothers went to work by ourselves (without the entire family) and we lived in this big grey house. We slept on the floor, of course. Some slept in the garage.



Tom Barry/LNS

SftP: *As a little girl growing up, were the things expected of you any different from the things expected of your brothers?*

Lucy: No, we had to do the same things. We both had to work you know. Well, the only difference was in the kitchen, 'cause I had to help in the kitchen. And, besides that, work. And my brothers, they only helped in the field — not in the kitchen.

SftP: *They never helped in the kitchen?*

Lucy: No. They carried water. They had to carry the water from outside — that's about it. They carried the water inside or if somebody wanted to take a bath or something, they'd just carry the water — that's about it. And I was little. I worked and helped my mother with cooking, washing, and ironing.

SftP: *Did that start pretty early for you?*

Lucy: Yeh. We learned how to cook way young — there was a lot of us — especially taking care of kids. We have twins . . . two brothers. I had to take care of the ones older than the twins down, which is seven kids.

SftP: *And how old were you when you started taking care of them?*

Lucy: I was real young. When the kids were born I was — what? — eleven. So I took them over, 'cause it was just too much for my mother. I remember a long time ago we're in the fields, working on sugar beets. And my brother was real little. He was in diapers, but he was real fat. I don't know how old I was. I was very young. And we're out in the fields. And my mother worked then. That's the last time I remember my mother working.

And I stayed in the car with my brother. And he walked right in the fields, with diapers, no shirt. I didn't know what to do. I was real young. And he started crying. I was real little, I mean, what could I do with a little kid crying? And I started crying myself. And she heard us the way to the other end of the row, and just came to pick up my brother. That's a long time ago. I don't know. I must've been around four years old or something like that.

SftP: *Could you talk about the strike that FLOC organized last summer?*

Lucy: Yeh. We came here last summer for tomatoes. And I only worked around three days, I guess. Then I joined the strike. Everybody joined. Nobody was picking. I wasn't going to stay there by myself. I had the two kids staying with me and I didn't like staying at the camp by myself at all.

SftP: *Do the kids go and help pick sometimes?*

Lucy: They help, but they, I don't know, they think it's fun. Maybe because they're young right now. They're ten and twelve. But I don't take 'em to the field. I don't say you *got* to work. If they want to go, fine. But my older one — he's more understanding, I think, than I was at his age. He just says "No, I'll go and help you. You can't do anything by yourself", you know. The little I'll make (by myself), you know.

SftP: *Could you tell us what a typical day is like being both a worker and a mother?*

Lucy: A typical day for me would be go out and work and come home and cook. I get up at five and I have to fix lunch for me and get the clothes ready for the kids — so they can go to school. My job now — usually I get up at five when I'm working in the fields, and we get back whenever. We're not working by the hour, so you can quit at lunch or work until six if you want. But people usually work until four or four thirty, then start cooking or whatever. And that's usually what I do.

SftP: *How do you feel about the women's movement?*

Lucy: I don't know what you mean by that. I think a woman should stay in the house. Not locked up, or any thing like that. But just be there. Do the housework. And the man should go out and work. But if you're talking about a job . . . if a man and a woman are working at the same job and the man gets paid more than the woman, then that's not fair. Sometimes in Florida I drive a tow motor (forklift) in packing house. And a man does, too. So he gets paid more than I do. And that's not fair.

SftP: *Have the women tried to do anything about that?*

Lucy: No. But I drive a tow motor in the mornings and I don't drive it *every* day that often. And another reason is that I never speak up. I don't say anything about it. But I think we should be paid the same if we're going to do the same job.

SftP: *Do you feel that women are treated the same as men by the growers and crew leaders?*

Lucy: Yeh. It's really the same. If you're going to do work in a field the crew leader — if he tells a man to hurry up and do something, he'll tell the woman the same thing. He don't say "Well, she's a woman. She can take it easy." He won't think that. At least not the ones I know. They just expect you to do the same work. And there's a lot of women I know that can — and do — do more than a man does in the field. I'm not one of them, but I do know some women that they can leave the man way behind. Especially picking tomatoes. I've got a nephew, and his wife can pick tomatoes twice as fast as he can. But I think even if I could I don't think I would. It's his job to support the family and work, so I'd just take it easy.

SftP: *Is your husband here (in Ohio) now?*

Lucy: No, I'm not married anymore. I've been supporting — and I mean supporting my kids for eight years now—on my own. I had help for a while from welfare, but it was only for a while. I can get a lot more working. For most of those eight years I been working, supporting.

MIGRANT CANECUTTERS

Lazaro Miranda and Abel Gaspar are migrant farm workers, who were interviewed in the state of Tabasco, Mexico. The reader should recall that Tabasco is the site of most of the recent celebrated oil discoveries. These workers are thus from one of the richest states in one of the most resource-rich countries in the world.

SftP: *What is your name and how old are you?*

Laz: Lazaro Miranda. I am 18 years old.

SftP: *Are you cutting cane here with relatives?*

Laz: Yes. I am here with a brother, a sister-in-law, and a niece. This is my first year working in sugar cane.

SftP: *Do you like it?*

Laz: Yes. It's a good job. A very good job. A year ago I was in the States, working in a restaurant in California.

SftP: *Could you tell us how a typical day goes here?*

Laz: We get up about 5 or 6 a.m. and go by truck to the fields. The foreman takes us, brings us lunch, and brings us back here at four in the afternoon.

SftP: *How long have you been here and how is it that you came to this particular camp?*

Laz: I've been here two months. There are some recruiters who go to where I'm from. They pay for our bus ticket to come here, and they give us money for food. The only thing is that we promise we're going to work for them. The trip and the food here are free. The recruiters get money for every person they bring here.

SftP: *Are you here on some sort of contract?*

Laz: No not really. I don't have to stay here if I don't like it. I'm free to leave here and look for a better job if I want. If you work until all the cane is cut, they pay for your trip back home.

SftP: *Do you think that the work you're doing is worth it?*

Laz: Well, it's very hard work. Sometimes it's raining, and that's when we get hurt. Our lungs . . . we get sick. I feel it's a tough job.



SftP: *Could you tell us your name and age?*

Abel: Abel Gaspar, and I'm 30 years old.

SftP: *Are you married and here with your family?*

Abel: No. I don't have a family.

SftP: *How is it that you're here right now cutting cane?*

Abel: Well, I just more or less do it. I only last a month or so at each place I work. I don't like working. I only cut cane. That's all I do, now. I've been doing this for five years. Five years . . . cutting cane . . .

SftP: *What do you think about the new cane-cutting machines they've brought in this year?*

Abel: I don't know anything about machinery, I only heard that they work. But I don't know anything about them.

SftP: *Do you think that people will lose jobs to those machines?*

Abel: I don't know. Look, I'm dumb. I only work. That's all I know.

SftP: *Do you think your energies are well spent cutting cane?*

Abel: They're wasted. Everything I earn I drink.

SftP: *No, I mean for Mexico. Could your energies be better spent working in something else?*

Abel: I don't know. It seems like all I work for is booze. And there are many people that do this. What's the purpose of working . . . for wine?

SftP: *Let's talk about the actual work. How long do you work?*

Abel: We work eleven hours a day, six days a week. I get a 1/2 hour for lunch, but no breaks other than that. We have to work the whole time.

SftP: *What do you get paid for the work you do?*

Abel: Sometimes nearly nothing. They do it by the ton. We get thirty pesos (about \$1.50) per ton now. It's very hard . . . and its filthy. Usually we just cut it and arrange it, but sometimes we have to lift a bundle up on our backs and haul it, too. I cut about two tons a day. That's it, you can't do more. It's hard. I might leave today or tomorrow. I hate staying in one place.

A FARMWORKER/ORGANIZER

Joe Velasquez is a former migrant farm worker and factory worker. He currently is a full time organizer for the Farm Labor Organizing Committee (FLOC). He was one of the 12 people who constituted the SftP delegation to China to study the food system.

SftP: *Where were you born and when did you start working in the fields?*

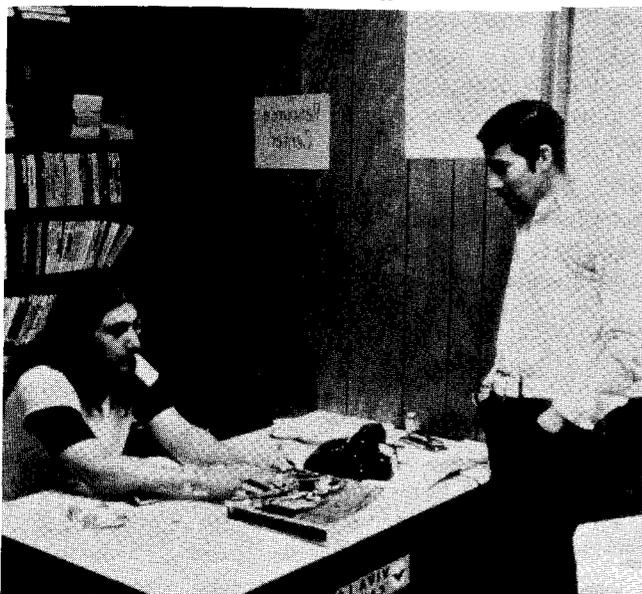
Joe: I was born in 1948 in Pharr, Texas. It's about 30 miles north of the border. We were moving around until 1952, and finally my dad decided to settle out of the migrant stream. He settled out in Sandusky, Ohio, and worked there in a factory. He worked there for a year or two, and then we moved from there to Yerbo, Ohio. The first year we got to Yerbo, that's when I started school. I

went to all 12 grades in that same school system. That was from September through May. The rest of the time we were out in the fields. As soon as school let out in May we either went and picked cherries in Michigan, or strawberries, or we hoed sugar beets and things like that. It was one thing here, then we'd go to Michigan to work, then we'd come back and do the sugar beets, then we might hoe some beans over here while the rest of the crops are ripening over there. Then the potatoes and tomatoes came into season in August, then we'd be picking potatoes until school started. That's what we did every summer, as soon as school let out, migrating and picking whatever crops were available in this area. Sometimes we even went down to Texas. Some years we finished the potatoes early and it was like a vacation, but we went down there to work. We got a vacation and went down and saw our grandparents, then of course the grandparents were still migrating all over the place, so we caught them at the time when they were about to go from Robstown to a place in north-central Texas to pick cotton. So they were moving from one part of the state to another and when we caught them in one spot we just jumped a ride with them.

SftP: *In those years was your father working during the school year in the factory?*

Joe: He worked all year round in the factory. When he moved here to Yerbo, he was working in the fertilizer factory. I remember him getting real sick one time because of the powder and the dust and all that. He was put in a hospital for about a year because the stuff just corroded his lungs, you know, so he had to take a year off and spend it in some hospital in Lima. Then he went back to work in a sugar beet factory. He worked in those two places all his life.

Joe Velasquez (right) at the FLOC office in Toledo



SftP: *So when you worked in the summer time, that was with your brothers and sisters?*

Joe: Yes.

SftP: *And what would your mother do, did she have a full time job or did she go with you?*

Joe: She was working right along with us. We were all picking potatoes until 1966, even after that, 1968, I think. As a matter of fact, until 1972 or 73 everybody was still picking potatoes except the older kids who'd moved away.

SftP: *How many of you are there, how many brothers and sisters?*

Joe: There's 11 in our family, 9 children and my mom and dad. That covered a whole decade of picking potatoes for the same guy. We made him rich.

SftP: *In the summertime would the rest of the family be separated from your father?*

Joe: During the summer he would try to take leaves of absence to go to Michigan, or he would have a two-week vacation and we would take off and go up to Michigan and work. But a lot of times he would have seasonal work. The sugar beet factory wouldn't be working until September, so he would have a month. This would give us a chance to go down to Texas or up to Michigan. But in the wintertime he usually had a regular job. All that happened up until '66 when I graduated. Then I got a job working in Sylvania, making TV tubes. I worked there almost a year and then I moved out to California. Then I got drafted.

SftP: *What did you do after the Army?*

Joe: After I got out of the Army I worked at Dow Chemical. I was still doing reading at home but it was just working and then coming home, a real drab life. Then I started seeing these posters, as you walk into work there was this poster on the things that Dow Chemical was doing, public relations, you know. And they were developing napalm — those kinds of things. I think the thing that I saw that impressed me most was that they had experimented with some type of nerve gas and they had tested it on some soldiers, Washington, somewhere like that, somewhere way out. The connection clicked between what I just came out of and how they used experiments without anybody even knowing about it (how do I know, I could have been part of that). So that just clicked. That just made the connection between what you're doing, and how other people are being affected without even knowing about it. How the company's not even caring about that. So at this time I started doing little things for FLOC. Volunteering to do things here and committing myself to do things there. All the time, take care of this for FLOC. Little by little, you start committing your left arm to do this and committing your right arm, and pretty soon your legs are



committed and before you know it everything else is committed except your eyes, and you better keep your eyes on the work. So that's how I ended up working for FLOC, just little by little.

SftP: *How long did you work for Dow?*

Joe: I only worked for Dow for a real short period. In 1971, the end of '70, I started working for FLOC full time.

SftP: *What similarities did you see between the kind of work the field workers did in China and the kind you did when you were a migrant worker in this country?*

Joe: There's practically no difference other than just the plants. The work is almost the same other than the type of plant that you're working with — you're still bending over, you're still getting your hands dirty, you're still really close to the earth. But there's a big difference with agricultural work here compared to there. In China you're working not for yourself but you're working for everybody in your community. You're working with everybody and you're all cooperating, doing the same work. And the difference is that you're in it so that all of you can benefit at the same time rather than just working for somebody else — you're working for yourself, and that's part of your life. The agricultural worker here doesn't have any kind of participation in terms of his work and the end product. In the United States everything that he does, he doesn't see it, he has no control over it after he puts it in the box. After he throws it into the basket — once it goes out of the basket he loses control over it. That's not the case in China, it still belongs to the workers. It's like they're guaranteed that they're going to benefit from their work. That's not the case here — you may work your butt off until you die and you won't get nowhere, but the difference over there

is that you participate in what happens after you harvest, everybody has a say. You know that you're not going to starve. You know that everyone is going to get just as much and that the country, the people aren't going to let you starve.

SftP: *Did anything that you saw on the trip give you any ideas for organizing here?*

Joe: I thought that their organization was really good, because it involved everybody. Here it's still embryonic. It hasn't developed into anything and it probably won't for a while. There's just a lot of loose things. There's all kinds of movements, but it's not coalesced, it's not focused on any specific thing. There's many different issues, everybody has different involvements, they come from different parts of different cultures here in the U.S. Your education is really corporate, it has a corporate mentality. I mean you think in terms of money, profit-and-loss. Here there is a lot of apathy, but there isn't in China. The reason why is that you participate at every level. You belong to a team and that team is responsible. You have to work in order to eat, if you don't work, you don't eat. You have to have the support of all the people, and if you have the support of all the people, your organization is as it is in China, which does have the support of most of the people. I'm not going to say that the answer is socialism, because the ultimate decision must be left up to the person. If there's anything I learned in China, it's that you have to keep plugging away at the people, even though you may not have the answers to everything, because the answers are made up by the people. One of the most important things that I learned in China was that you should never lose the support of the people because then you become false, you've set false goals. You have to maintain the support of the people and you have to work with the people. There's a lot of things in China that could not have been done without the people. With the people you can do anything, and China is just a perfect example of it. For a system, for a country like China to go from almost feudal conditions to a really advanced state, the credit has to go somewhere, and it doesn't go to the corporate mind.

SftP: *But now they (China) seem to have become dissatisfied with the slow progress they think they're making in technology and industry.*

Joe: So they're co-opting a little bit.

SftP: *Like "Let's try out the corporate mentality . . .?"*

Joe: Yes. "Let's bypass a lot of this work-on-our-own and let's go over to the US and buy a couple machines so we don't have to spend so much time developing them ourselves."

SftP: *Do you think that makes sense?*

Joe: I'm not opposed to machines. But I am opposed to the use of machines that doesn't benefit the people. I don't think they're wrong when they say they need

machines. It depends on why they want them. For example, as far as tomato is concerned (here in the US), they're already capitalists (e.g. Libby's, Campbells). Those guys are all pushing for mechanization. But they're not doing it because they think they can feed more people faster. They're doing it because they know they can produce more and then get more profit. They're not worried about whether people like it or not. They're in it for the profit If the Chinese are coming over here because they want to feed more people faster, that's different, and I don't think it's wrong. If they're over here for the expertise, if they're over here so they can feed more people faster, then I think it's legitimate. I mean, I would do that.

GRAIN AND LIVESTOCK FARMER

Carlton Irving has been a farmer for many years. In 1974, his livestock were poisoned by PBB-contaminated feed. This poison continued to affect his livestock until 1978, when he quit.

SftP: *How long have you been farming?*

Carl: I guess I was just kind of brought up around it. My parents farmed. Five years after I was out of school I went to farming full time. We fed cattle and hogs, and cash crops. More or less the same as even today. We didn't put any cattle in this year. We normally feed cattle and some hogs, but, oh we got kind of a problem on our farm so I just backed up this year.

SftP: *How large is your farm?*

Carl: Well, we only have 150 acres, but we have 12 other farms that we work. And about another 8 or 10 that we do custom work on. Another 800 acres of crops. Between my son and I, we get over about 1800 acres a year, between doing our work and somebody else's. And the wife does chores, and Mark does chores.

SftP: *Why did you join the American Agricultural Movement, or get involved?*

Carl: I didn't start in until last March. We always had so much work. If it wasn't hauling hay it was hauling straw. If it wasn't doing that, it was hauling manure for somebody. Worked every day for 25 years. We got to working 20 hours a day for 7 days a week and I figured I couldn't work that anymore. It's not uncommon for the sun to come out and go out and work till midnight or after. We harvest a lot of crops for other people. We work, my son and I, about 1000 acres, my wife and the other boy would help. We'd do chores in the morning. She'd start chores about 4:00 and then come out to the field. We'd stay there until 1 or 2 in the morning. I just didn't figure that was any kind of life anymore.

SftP: *Just on your own farm, were you making or losing money?*

Carl: Losing! And I know my crops weren't any worse than my neighbor's because I harvest my neighbor's too.



SftP: *Have things been getting progressively worse?*

Carl: Well, our wheat has helped us a lot this year. We're still not up to cost of production plus a profit, but its better than selling wheat for \$2 a bushel, like we did at harvest time. We sold our wheat after the first of the year at \$3.40, but see now our interest is going crazy on us. Our interest is up to 13%. What I got is 12¾. Some people giving 13½ already. So your interest goes up. If we didn't make money one year, you know, you just carried a little bit heavier note load the next year, that was all. When they stack up 3 or 4 of them end to end, then you get somebody's bad feed on top of that, it makes you rebel a little bit.

SftP: *Is your debt getting larger every year?*

Carl: Oh, hell yes. Five years ago I had about \$15,000 from the bank, 23 when my dad got his farm mortgaged. That was about '55 when he got that. With inflation, that makes your debt going to go up. And then you're not making any money, and it costs you \$8,000 or \$9,000 to feed the family. If you're making about a third of that or less, that's going to make your debt go up. Our debt was \$118,000 for farm operating this spring.

SftP: *Earlier you said you had some kind of problem on your farm. What kind of a problem?*

Carl: Well, we fed some Farm Bureau feeds. We've been losing about 8 percent of our cattle since '76. Last year we thought they straightened out pretty good and we dumped a bunch of sows back out on the dirt where we fed cattle and hogs, and same damn thing again. Same thing we had in '73. Had a lot of questions but I

couldn't get any answers. Even the manager at the Battle Creek Farm Bureau, he told me they elected to handle it that way. I didn't think that was a very Christian way to do business. It's a lot like a lot of politics is. It's very discouraging for people to see things handled in dishonest ways. As far as I'm concerned, when you feed livestock, you work hard at it, but you're going to have problems. But when you end up with *all* problems, that's something else. And you can't get any answers. I've chased them down at Lansing, and they'll run tests, but they won't give you any answers and they won't solve any problems. If you're not making any income, when you bury bucketful after bucketful of hogs and cattle, your income, regardless of how good you are, is going to dwindle. And then you got somebody at the head of Farm Bureau talking about how radical you are, that you're lying, and its not truthful and all this other stuff.

SftP: *What about your equipment? Do you think you're at the point where some of your equipment should be replaced, but you can't for financial reasons?*

Carl: Well, I haven't had any problem borrowing money, but I've been pretty conservative. When your income's so down, if you don't quit spending, you're going to be in trouble. You're going to be out of business is what's going to happen, because the interest load will get more than what you can acquire money to keep the interest debt down. If we was to put in a new herd to feed, and there's five barns full of hay, but you put in 300 head of cattle, at the price of cattle today that'd be about \$150,000. And, do you want to borrow \$150,000? With the health problems you've had on our farm? And then pay 13% interest on that? That'd be \$20,000 interest. You want to put 25 years of your working life, everything you've accumulated on the line on one batch of cattle? That you could lose? Some fellows have lost over 50% of their cattle, feeder cattle is what they're putting in. That kind of stuff don't hit the news media. That don't get out because that'd be disastrous. See there's a lot of this thing. I ain't never had time. I had my own problems. But after you get involved in things and find out about things, there's a lot more going down in the little old world I was working in. If you sat there and watched it, and if you then want to go to a place that make you feel bad, and get you mad, you go to Washington and listen to some of those economists. Some of those high-priced people, smart people, they don't know what it takes to put meat on that plate they're eating off of. But they think it would be exorbitant profits if a family farm, man, wife, and kids, made enough money to pay their debts and had something left over. They don't figure you're supposed to. You're supposed to just supply food. And I've been down there and talked to the interreligious task force, twice. These are the people who want to feed the world. If you want to feed the world, you better keep the people at home happy. No-

body's asking to get rich, but if you're going to win a game, you better win it with a little harmony, and not have people lose their spirit and fight. I don't know what we're going to do. There's farmers in Washington working hard today. The news media plays it up that they're gone. They're not there. Well I know its a damn lie because I was back last summer, and we was there all last summer. Maybe we ain't got enough people so they can stumble off of them, I'll grant that, but there was people in there every week working at it. I got a pretty good feeling from the public, which is a whole lot different than what the news media makes. Any place you was going around Washington, there was people interested.



BCISA/cpf

But, you take a few handfuls of people, and they can control the economy of you and I, truck drivers and everybody else, to me it's just so danged simple. Everyone deserves to make a living or profit, whichever way your money comes from, out of profit or paychecks. Everybody's entitled to be paid for what they're doing. I'm not asking for no handout. And I don't think a man should be downtrodden when he's doing.

SftP: *Do you think there's a lot of government manipulation in agriculture?*

Carl: Well, that's another story. Have you ever heard of the Trilateral? You know, when I was a small kid going to Sunday school, we talked about the greed for power and money of these pharaohs and everything in the Bible. It really never got to me until about 40 years later, and that was last year. I was too busy in my own little world, working, and living with the people I live with that I didn't have time to read and didn't care to read or anything else. But if you put it all together, there's still a lot of greed for money and power. Do you know what the Federal Reserve is? It's not Uncle Sam's Federal Reserve, it's the rich people's, is what it amounts to. A handful of wealthy families control the wealth of the Free World. I always figured, from everything I'd always read, you know, that the Federal Reserve, that's Uncle Sam, he prints some more money so that for that bad money he printed he'd collect a little more interest out of all of us to make everything solid again. But that ain't the way it works.□



Early in August, I accompanied a reporter to Northampton, Massachusetts to do a story on a community canning center. The Center consists of a one room extension of the Northampton Hall of records, a huge canning kit with accessories and three staff members. We decided to film the story line around the process of canning itself.

Community canning can ultimately be a big help to local farmers who are gradually being supplanted by agribusiness. During the summer, many people buy directly from the farmers at roadside stands or at farmers markets. But there is only so much that one can purchase and eat at a time before it goes bad. With community canning, consumers can buy all the farmers' surplus and can it for the winter.

You might question the value of this for the consumer. By buying from the farmer directly one pays about 50 percent under the retail price. The cost of vegetables canned at the center is also about 50 percent less than the same amount in cans from the supermarket. If you save your jars, you can save up to 70 percent. And if you grow your own vegetables and use your own jars, savings run over 90 percent, the only cost being for equipment use.

Lauren Goldfarb is a student at Wesleyan University in Middletown, Connecticut. She participated in the making of a series for WBZ-TV in Boston about community canning. A longer version of this article was originally published in the student newspaper at Wesleyan, Hermes.

Better Food

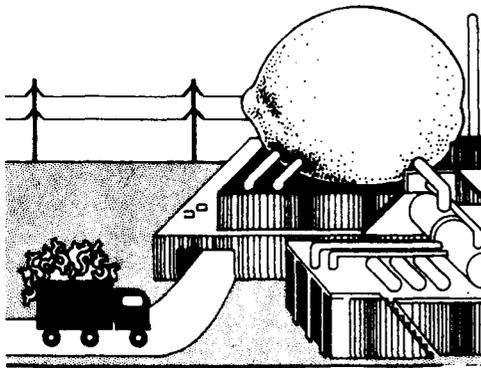
This issue can also be viewed from the aspect of health and flavor. One of the best kept secrets in this country is the harmful and sometimes carcinogenic effect that commercially grown and processed food can have on us. Hormones, antibiotics and other drugs are constantly being fed to animals to increase quantity at the expense of quality, taste and nutrition. Agribusiness destroys the land by forcing it to produce more than it should by use of chemical fertilizers, made of nitrogen, phosphorus and potash (NPK). NPK destroys the bacterial organisms which are needed to keep the soil healthy and produce good crops. The Nulls, in their book *Poisons in Your Body*, describe how this can affect your food. Read about one of your favorite salad, sandwich and spaghetti sauce ingredients, the tomato:

Once fragrant, flame-red orbs bursting with juice, tomatoes in recent years have become wholly tasteless blobules that can be practically bounced off the wall without being bruised. Fertilizers and hybrid strains combine to produce tomatoes that have superior handling and keeping qualities. But what about the loss of vitamin C and flavor?

No longer thinking of patches and pounds, farmers were faced with new problems when production covered acres and amounted to tons. Harvesting machines would damage normal, tasty tomatoes, so a pulpy, thick skinned hybrid that could withstand rough handling was created. Since agribusinesses have created a demand for to-

matoes the year round, the growing season has been unnaturally extended. Grown during the winter in southern and western states, tomatoes can no longer be left to ripen on the vine if they are able to survive being shipped thousands of miles to the north. As soon as NPK forces them into existence, tomatoes are picked green and ripened artificially. During the long voyage in refrigerated trucks and trains, tomatoes are kept in temperature-and-humidity-controlled environments that effectively stop their growth. Just before they are sent to your local market, tomatoes are sprayed with ethylene gas, which turns them red. The consumer is forced to purchase a nutritionally worthless, unripe, cosmetically treated product — or do without tomatoes.

In a new book *The Changing American Diet*, published by the Center for Science in the Public Interest, the authors review the bad state of our diet and encourage us to eat more fresh fruits and vegetables, potatoes, whole grains and beans. What they don't tell us is how to make sure our fruits and vegetables are really fresh.



The Workbook/cpf

Spreading the Word

In every way, then — in terms of health, taste, cost and helping local farmers — community canning is an excellent practice. Unfortunately, it is not that widespread. There are only 165 centers in the U.S. At the Northampton center, the only one in Massachusetts, only 4,000 jars were canned in 1977. The reason for the dearth of activity has to do with lack of publicity for canning, lack of prominence of the center in the community and the fact that the center was set up for reasons other than those mentioned above. (Most centers are funded by Comprehensive Employment and Training Act (CETA) grants as an impetus to temporary employment.)

WBZ (a television station in Boston) did a three-part series on the Northampton center. By the end of the week during which it aired, we were inundated with calls from viewers asking us directions to the canning center.

Some callers were interested in setting one up in the Boston area and wanted to know who to contact. Dorchester, an inner city neighborhood in Boston, holds weekly farmers markets in the summer. Farmers drive three hours from upstate because they always manage to sell everything. Residents love the savings. Therefore, a canning center need not be restricted to the countryside.

WBZ also received a call from the State Food and Agricultural Department. Commissioner Fred Winthrop has been encouraging direct marketing through farmers' markets, roadside stands and pick-your-own farms. He hopes to increase consumer demand for Massachusetts-grown products and ultimately spur agricultural production in the state. At a recent conference of the Northeastern Association of State Departments of Agriculture, Mass. Lt. Gov. Tom O'Neill stated that "agriculture in the Northeast has for far too long taken a back seat to industrial development." With such people in powerful positions, there is hope that there will be some drastic changes in agriculture which will affect more than the GNP. Commissioner Winthrop came to WBZ to view the tapes. He is now talking about initiating accredited programs in community canning where students of the UMass Agriculture School and regional technical and vocational schools would staff the centers.

Another interested viewer was Mass. Congresswoman Margaret Heckler of the House Agriculture Committee, a group which, except for Heckler and a couple of others, is composed of staunch agribusiness defenders. Heckler has been influential in proposing legislation which authorizes grants totalling \$1.5 million to help state agencies expand farmer-to-consumer direct marketing programs. Right now, in the U.S. there are more than 8,000 roadside stands, 3,000 pick-your-own farms and 500 permanent farmers' markets, according to the Agriculture Committee's research. In addition to saving consumers over 50 percent, these programs boost farmers' incomes 16 percent above wholesale.

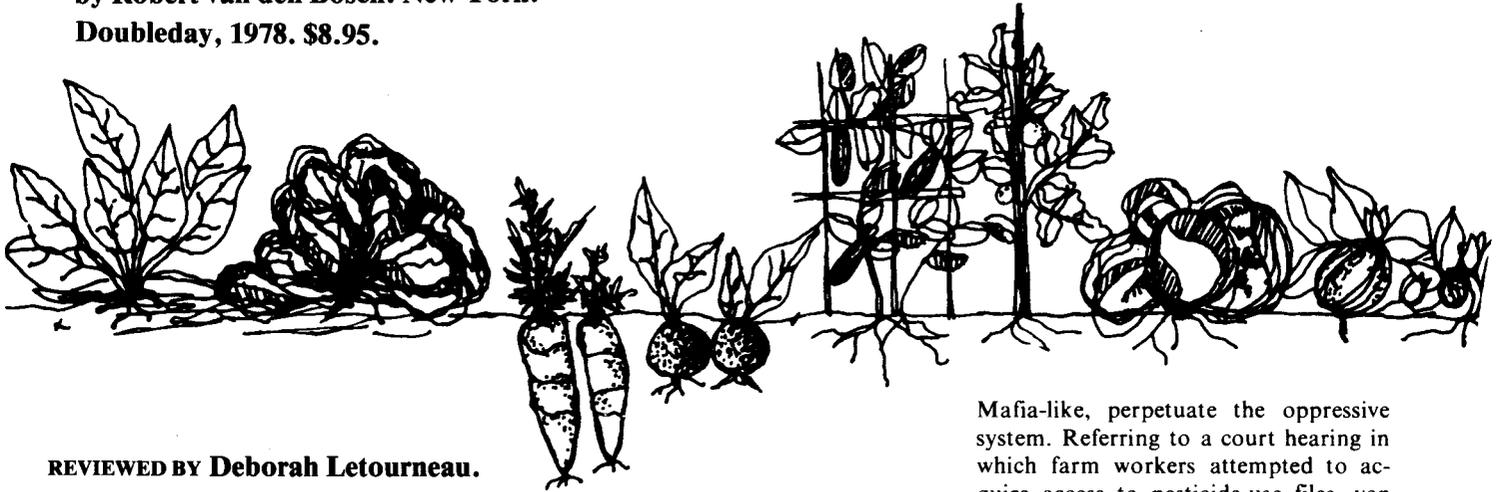
The Congresswoman met up with (reporter) Jack Borden and me when we did a follow-up story at the Dorchester market. She endorsed the promotion of community canning centers on the air and later sent a letter to the station requesting that Jack Borden come to Washington and present the tapes to the entire Congress. We also showed the tape to the Northeast director of The Hunger Project, a group which feels that 'the end of world hunger is an idea whose time has come' and hopes to end it within twenty years. The Northeast division, which includes the Boston and the Wesleyan chapters, is eager to promote the community centers in any way they can.

Any one interested in consumer rights, good nutrition and community organizing is sure to find work on the establishment of a community canning center a valuable and fulfilling experience. □

The Pesticide Conspiracy

Book Review

by Robert van den Bosch. New York:
Doubleday, 1978. \$8.95.



REVIEWED BY Deborah Letourneau.

Statements like: "the 'superbug' that last year destroyed \$45 million worth of cotton is now attacking the nation's 42,000-acre supply of winter lettuce, destroying 10% to 20% of the early plantings" and "It's threatening maybe 50% of the crop and if we don't get some kind of control, lettuce could go up to \$2 a head"(1) are more and more common in California newspapers these days. Insect pests which were rare a few years ago are becoming rampant. Why? Can these severe pest outbreaks be prevented? Who profits from this state of affairs? *The Pesticide Conspiracy* by Robert van den Bosch aptly deals with these and other important questions.(2)

The Pesticide Conspiracy is a blustery tale resulting from van den Bosch's turbulent 30-year involvement in pest management, during which he was transformed from an insect-collecting applied ecologist to a political activist. As he states it, "the idyllic world of beetles and butterflies has largely slipped away as I have increasingly involved in the roaring pesticide controversy — a vicious, nerve-racking imbroglio that has turned my entomological niche into a veritable hornet's nest."

Van den Bosch tells us that "... 30 years ago, at the outset of the synthetic-insecticide era, when the nation used roughly 50 million pounds of insecticides, the insects destroyed about 7 per cent of our preharvest crops; today, under a 600-million-pound pesticide load, we are losing 13 per cent of our

preharvest yield to the rampaging insects."(3) In fact, some entomologists have estimated that there would only be a 5% dollar value loss due to insects if insecticide use were halted this moment.(4) Clearly, then, a heavy reliance upon pesticides for the control and eradication of insect pests on crops, the "pesticide strategy", is a fiasco as far as sound pest management is concerned.

In his book van den Bosch demonstrates the price we pay for the use, misuse and overuse of chemical insecticides:

1. Growers may suffer failure and bankruptcy. All too often, poorly directed use of insecticides leads to resistant pest populations which are no longer killed by an entire family of pesticides. The insecticide-selected insects then succeed in ravaging the crops, putting the grower on an "insecticide treadmill"; she/he is forced to spray either more often, at higher concentrations or with different (likely, more expensive) poisons. Another pesticide-aggravated condition is that of secondary pest outbreaks. This occurs when broad spectrum insecticides applied to fields disrupt the natural controls (kill the natural enemies) of previously innocuous insects, which then *become* pests. Pests *created* by pesticide usage!

2. Farm workers and pesticide production factory employees work in close contact with these biocides (see "Seveso", *SftP*, Nov/Dec 1977). Van den Bosch describes several atrocities and goes on to reveal how public officials have colluded to bend the law and,

Mafia-like, perpetuate the oppressive system. Referring to a court hearing in which farm workers attempted to acquire access to pesticide-use files, van den Bosch remembers "the fear and hatred that the dominant San Joaquin Valley middle-class establishment holds for Cesar Chavez and his United Farm Workers, and the impression that this middle class considers the Chicano, Okie and black rural population to be somewhat outside the pale of humanity. . . The sociology of pest control is indeed an ugly game."(5)

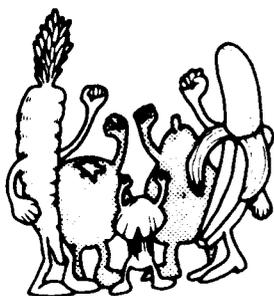
3. People everywhere (not to mention every other living thing) are subject to potential health hazards from the production of these chemicals and the subsequent concentration of the poisons in the food chain. Regulatory attempts in the U.S. are ineffective in preventing exposure to dangerous chemical pesticides as residues in our food. The situation in Third World countries is *more* severe. Van den Bosch cites many examples of poisoning by properly registered and labeled U.S.-produced insecticides sold to developing countries.

He implores us to consider an alternative to the "poison 'em" strategy. Various pest control tactics can be effectively employed in combination to constitute an integrated pest management strategy.(6) These include cultural pest control techniques, the use of natural enemies of pests (predators and also parasites, which are usually flies or tiny wasps that eventually kill the host), resistant plant varieties and the judicious use of pesticides which are specific

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to the problem and only applied when necessary. Examples of such programs which have been implemented in California include mosquito control, street tree pest control, citrus orchard pest control and even an integrated pest management scheme for cotton. These programs work! Not only are crop yields and quality maintained or improved, but pesticide use is drastically cut and the cost is often much lower. In the case of cotton, insecticide use and per acre control costs dropped by more than 50%, but rational pest control such as this is only practiced in 10% of the cotton fields.

How do growers fall victim to the insecticide treadmill? Van den Bosch offers several routes of influence. First, growers are confronted with an onslaught of pressures promoting agrichemicals. Ag-mags are distributed to growers free of charge with chemical ads (eco-pornography) that may occupy a majority of page space. These companies "discourage" printing of articles on alternative pest control methods. Even *Life* magazine opted not to print an article on IPM when the editors were leaned on by ag-chem honchos.



Beyond commercial advertising considerations lies a second impetus. A great percentage of farm advisors are employed by pesticide companies, and are nothing else than commissioned pesticide salespeople. Van den Bosch likens this to pharmacists giving medical advice rather than doctors. An example of such ludicrous advice-practice involves pressure toward pesticide insurance (that is, the use of spray calendars which *schedule* pesticide treatments to assure pest-free crops instead of monitoring pest populations and treating only when necessary — when pest populations are above the economic threshold).

Thirdly, bank loan and government subsidy procurement can indeed be influenced by whether or not the grower

includes pesticide insurance in his/her management plans. Fourthly, the prevailing attitude is such that we are compelled to kill bugs. A Washington State researcher sums up the problem van den Bosch calls "agri-macho techno-fascination" in a phone conversation: "It's crazy, Van; you just can't get some of the growers to follow the integrated program, after 10 years of success. It seems like it's in their blood to crank up their rigs and go out and spray the groves. And when they do this they foul things up. I don't understand it. They completely forget that just a few years ago the apple orchards of central Washington were burning up with spider-mite infestations created by excesses in spraying practices". Finally, the ever-prevailing mystique of science is used to maintain the insurmountable gap between grower and researcher. The privileged information phenomenon places the grower at the mercy of the "experts", such as farm advisor salespeople and U.S.D.A. or land-grant university researchers (see van den Bosch's chapter entitled "Science for Sale") who often serve agrichemical industry interests as well.

Well-protected vested interests plus a popular social attitude of entomophobia, combine to explain why pesticide support is perpetuated. Since the U.S.D.A. and land grant colleges are under the thumb of what van den Bosch calls the pesticide Mafia, what about the Environmental Protection Agency? In his chapter "The Rape of the E.P.A.", he sadly relates a progression of imposed legal restraints resulting from chemical industry backlashes to the early banning of DDT and a handful of other environmentally hazardous ag-chem products.(7)

The concluding chapter of *The Pesticide Conspiracy* reviews the obstacles against improving pest control practices in the U.S. and stresses the importance of social awareness of the problems involved. The book, written in non-technical lively prose, will be a step toward this goal by clearly illustrating the political and economic controls and constraints not only in the pesticide issue but the applied sciences in general. Van den Bosch, as mentioned previously, did not enter the pesticide arena from a political standpoint. There is some confusion in his book as to who the enemy really is. His approaches to an analysis of the pesticide-Mafia political economy

are cut short with discussions of what he considers to be inherent flaws of human nature. A broader perspective presents itself in considering the agribusiness industry concept in general. van den Bosch tells us that California shoulders 5% of the world pesticide load. Corporate farming is a huge industry in the state. What are the political and social implications of the connection? A dependence on insecticides not only creates a booming market for the products of multi-national petrochemical operations but, along with other facets of agribusiness technology, operates to force the small grower (not capable of meeting capital-intensive demands) off the land. Just as the prohibitive cost of mechanization is designed to effect channeling of production toward agribusiness conglomerates, so the pesticide investment, inexpensive at the outset, can become an insecticide treadmill, producing a situation in which increasingly larger percentages of the profit margin are fed into satisfying the chemical habit.

Van den Bosch is angry. His stance is straightforward and his book is a strong and important contribution. It also provides a starting point for a deep analysis of our prevailing political state of affairs.□

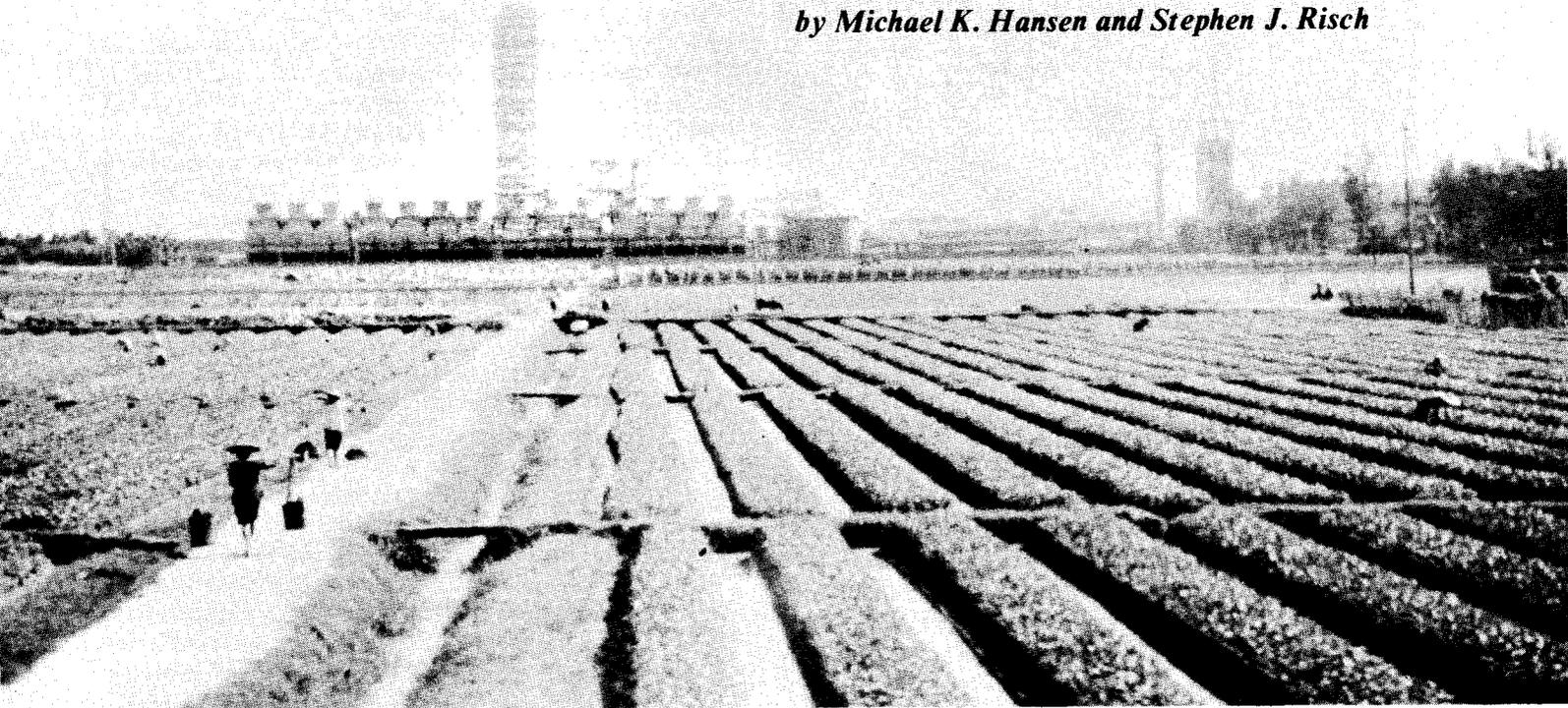
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2. Robert van den Bosch died soon after his book appeared on the shelves. He was a fighter. His inspiration has led many people, determined to carry on the struggle.
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7. A very recent article in *Science* exposes some of the problems in EPA functioning: "Toxic Substances: EPA and OSHA Are Reluctant Regulators." (1979). *Science* 263(4375):28-32, by R.J. Smith.

FOOD AND AGRICULTURE IN CHINA

PART I

by Michael K. Hansen and Stephen J. Risch



Vegetable farming outside Shanghai

The People's Republic of China has received tremendous publicity during the last six months, and deservedly so. The Chinese have embarked on an extremely ambitious program of modernization of their entire society and they have begun to look more outward as they seek to import advanced Western technology. There are also signs of important internal developments. These changes have been greeted by the popular Western press with unabashed glee, interpreting the Chinese moves as a signal that once again socialism is foundering and that the Chinese have come looking to the U.S., Japan, and Europe not only for modern technology, but possibly for new relations among the people involved in all aspects of production as well.

We are very skeptical of this interpretation and would like to present an alternative view, by way of discussing some aspects of agricultural production and food distribution in China. While we have some reservations about certain aspects of recent developments in

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China, we think that a close inspection of the current food system clearly demonstrates the essential success of the Chinese Revolution in food production and delivery. We further believe that the Chinese are committed to maintaining and building on the basic components of the system that have made it work so well.

What we would like to do here is to discuss the basic structure of the food system in the People's Republic of China — how decisions are made about what food to grow and how to grow it, and how the production and distribution processes themselves are organized. We hope that by comparing important aspects of the food system in China with those in the U.S. we can illustrate some of the differences between a society that produces food for profit as opposed to one that produces food to meet the needs of the people.

Most of the information comes directly from data we obtained on our trip to the PRC last summer, as part of the 12-member delegation of Science for the People. In January, 1978, in response to a proposal submitted to the PRC one year earlier, Science for the People received an invitation from the Science and Technical Association of China to send a delegation to spend one



*Joe Velasquez and one of our interpreters, Chang,
at Hsing-Lung State farm on Hainana Island.*

month studying agriculture and food production. During the month of June, the 12 of us traveled from tropical Hainan Island to as far North as Peking, visiting People's Communes, State Farms, factories, research institutes, and universities, and discussing our many questions with state and local officials.

China is still an overwhelmingly agricultural society, with approximately 85% of its 900 million people living in the rural areas and directly involved in some sort of agricultural work. Since 1958, the primary unit of rural social organization has been the People's Commune, composed of an average 15,000 people and comprising what was before the revolution of 1949, the agricultural marketing unit (the agricultural marketing unit was an area within which a large proportion of the agricultural commerce took place). The commune is composed of a collection of brigades (usually about 6 to 17 per commune), and each brigade is composed of production teams (about 12 per brigade). A production team usually comprises the inhabitants of one village (about 150 people), and serves as the principle accounting unit in the sense that the team is responsible for determining wages (via work points) and distributing them to its members. They thus manage the material incentives which help motivate production and innovation.

Deciding What to Grow

In China, agricultural production is determined by a State Plan. Although there are general 5-year, 10-year, and 15-year plans which set basic goals to be achieved, the annual plan is the most detailed and crucial one in terms of production. The annual plan is decided upon via an interplay of information and negotiations between the more central and more local levels.

Even the most local level, the production team, has a very significant input into the plan. In late summer or early fall, after the size of the harvest can be accurately predicted, team leaders hold a series of meetings with brigade leaders to evaluate the harvest information. Based on this information and a knowledge of what grains are needed on a national level, this body decides how much acreage is to be planted to each type of crop in the following year and predicts both the size of total output and consumption needs of the producers. When agreement is reached on these items, the plan is passed up the network (from brigade leaders to commune leaders to county leaders to Provincial leaders to State leaders). On the basis of plans received in this way from all China, the State generates a revised plan whose objective is to ensure that an adequate amount of each type of food is produced at the provincial and State level to meet provincial and national needs, rather than an over-production of some foods in some areas and an under-production of others. After the State Plan is finished it is passed down through the channels to the local level, which ultimately decides whether or not the plan will actually be followed. The state, however, can influence the production team's decision because it controls supplies of such items as fertilizer and large machinery. The actual process of production (how the crops are grown) is left up to the production team.

In addition to helping make the State Plan, the peasants also have an input into the type of agricultural research that is being done via a recently developed aspect of the science research infrastructure, the four level agro-science network. The main functions of this network are to popularize scientific farming methods and involve peasants in designing and executing research projects. The network consists of a team of agricultural technicians and trained peasants at the county, commune, brigade, and production team level who are engaged in agricultural research, education and popularization. We studied the network in detail in Wu County, Kiangsu Province, where we learned that 80% of the counties in China and approximately 8% of the rural labor force are involved in these networks, which were formally set up in 1972.

The four levels in the network are county, commune, production brigade and production team. At the county level is an Institute with a research staff of approximately 70, which conducts short term research for immediate needs, plans for long term research, de-

velops new seed strains, popularizes new technology, and helps organize and evaluate the research topics and results of the lower levels. They stress integration of professional technicians with the masses in carrying out research. Associated with the Institute are popularization stations which demonstrate advanced cropping systems as well as conduct experiments. They also train agricultural technicians for the brigade and production team levels.

At the commune level there are stations which provide seeds for brigade and team research, train agricultural technicians, run experimental plots, and administer the observation posts. These observation posts are located all over the commune; they collect data on weather, crop growth, and pest numbers and send them to the commune station and county Institute where they are integrated and used for better production administration.

At the brigade level are several teams which develop and provide new seed strains for production teams, instruct team research groups, provide prompt pest information and concrete control measures, and run night courses for popularization of new technological advances.

At the most local level, the production team, there are groups which provide instructions for field management and coordinate with team members and leaders in running high-yield experimental seed plots for demonstration and further experimentation. Since the establishment of this network, Wu County has changed from growing two crops a year to three crops a year. The network has helped solve many of the problems associated with this transition by means such as introducing higher yielding strains produced by irradiation, haploid culture, and cross-breeding, and controlling the pests in the triple cropping system. The county Institute has introduced 440 strains of rice and 498 strains of wheat by placing them in commune stations for experimentation under different conditions and in different cropping systems. In this way, both the production team and brigade will get the best yielding strains for their particular level. Thus it can be seen that the four level network, which involves 8% of the agricultural labor pool, serves to insure that the peasants themselves have an active input into deciding what type of scientific research is done as well as doing some of it themselves.

As can be seen, the people who actually grow the food, the peasants, have a significant input into deciding both what is grown and how it will be grown. The situation is very different in the U.S. where most agricultural workers have very little input into these kinds of decisions. For example, the vast majority of people who actually perform agricultural labor are migrant farmworkers who have absolutely no say at all in deciding what to grow or how to grow it. Even the farmers themselves have very little input into the decision-making

process as many food items are controlled either directly or via contracting by large corporations such as Tencoco, Castle and Cooke, United Brands, or Del Monte. These large corporations are interested in food production for one reason only: profits. In a free market system, by creating a monopoly (i.e. controlling supply) a company can get higher prices and therefore a higher profit margin on their investment if there is a constant demand for a product, which is true for food. Since most of these companies have vertically integrated food systems whereby they control the transportation, processing, and marketing (predominantly wholesale) of their own products, control over food production means a steady flow of supplies for their vertical systems and a higher profit margin. As of 1970, 22% of the American food supply was produced under vertical integration by corporations.(1) The Federal Trade Commission found in 1972 that, as a result of monopoly power in 13 food industries, consumers were overcharged, in the sense that prices were higher than they would have been if the industry was more competitive, by at least \$2.1 billion.(2)

Depending on how you define it, there is monopoly control in 50-80% of all food industries.(3) Table I lists the amount of control corporations exhibit over production of various food items. Notice the predominance of contract farming, in which a farmer signs a contract agreeing to grow a given amount of produce under a given set of conditions. The American Agricultural Marketing Association has estimated that by 1980 50% of the American food supply will be produced by contracts; by 1985 the figure is predicted to be 75%.(4) These contracts explicitly state how much is to be produced, how it will be produced and when it will be delivered. Once a farmer signs one of these contracts s/he has virtually no more control in the production process.

Take the tomato industry, for example, where large corporations control 95% of all production, primarily via contracts.(5) The corporation will often supply the farmer with tomato seedlings grown on the company's farms in the south, tell her/him how they should be grown, and even send an inspector to supervise the production process (planting and application of herbicides, pesticides, and fertilizers) in order to ensure the production of a product which meets the company's standards.(6) The result of these contracts is a system in which the farmer, for a small fee, allows the corporation to use her/his land to grow crops on except that the farmer is responsible for anything that might go wrong, a system where the farmer is in economic servitude to the large corporation. The farmer, moreover, often has no choice but to sign the contract; refusal on the part of the farmer to cooperate usually results in them having a hard time selling their tomatoes as there are normally only one or two buyers in any area.

TABLE 1.

CORPORATE CONTROL OF SOME FOOD ITEMS, 1970

<i>Crop</i>	<i>% farmed by Corp.</i>	<i>% Corp. Contract</i>	<i>Total % Corp. Control</i>	<i>Corporate Farmers</i>
fresh vegetables	30	21	51	Tenneco, United Brands
processed vegetables	10	78	88	Del Monte, Campbell Soup, General Foods
citrus fruits	30	17	47	Coca-Cola, Royal Crown Cola, Tropicana
chicken (broilers)	7	85	92	Greyhound, Pillsbury, Continental Grain

SOURCE: Hightower, Jim (1975), *Eat Your Heart Out*. Random House, Inc., New York, p.200.

Food Production

Specific aspects of agricultural production in China, in addition to the decision-making process, contrast sharply with those in the United States. The three general observations that most impressed us were: 1) the extensive use of intercropping in all the agricultural zones we visited, 2) the emphasis placed on organic fertilizers, and 3) widespread use of biological and cultural control of insects. These same observations have been made by other people studying Chinese agriculture as well (see for example the reports of the National Academy of Sciences Insect and Plant Delegations (7)).

It is important to point out at the outset that these unusual characteristics of Chinese agriculture do not result from especially sophisticated technology or recently discovered biological principles. The Chinese are not more advanced in these respects than the U.S. The theoretical basis and the technological aspects of agriculture in China are all well understood in the West and have been for some time. As we will see, the reason that the Chinese make especially good use of these production techniques is related in part to their social/economic system — a system which results in a commitment to long-term stable yields with minimal harmful effects on people.

Intercropping

While traveling from southern Hainan Island to as far North as Peking, we noticed that everywhere we went we frequently saw crops grown in polycultures as opposed to monocultures (polycultures are plots with two more crops planted in them simultaneously). Both agricultural biologists and ecologists have long known that there are frequently important benefits to growing crops in these intercropped arrangements, so that if a

person plants, say, two fields of crops X and Y as a polyculture, the total yield per area will be greater than if one field was planted to crop X and the other to crop Y.(8)

These benefits result from several considerations. First, growing several crops in a polyculture can make better use of the entire spectrum of resources available (light, soil nutrients, time, etc.). For instance, growing a relatively shade-tolerant crop under a taller crop allows one to fit more plants into a given area and make more complete use of all the available light. Growing crops that require slightly different combinations of nutrients is another example. Secondly, interplanting a low cover crop with other plants can significantly reduce soil erosion, and if the crop is a legume, it can add nitrogen to the soil at the same time. Third, there are often reduced populations of pest insects in polycultures. This occurs because pests have greater difficulty finding host plants in polycultures, tend to emigrate more once they have arrived, or suffer greater predation by insect enemies in the polycultures.

We observed a great number of polycultures that demonstrated these advantages: peanuts interplanted with pineapple or bean; soybeans interplanted with corn and winter wheat, or corn and a variety of fruit trees; sorghum with beans and fruit trees; squash with corn; sweet potatoes with corn or fruit trees; corn with winter wheat; young rubber trees with vegetables, and others. One temperate system that especially intrigued us was the winter wheat-apple combination. We learned that its development had resulted from peasant experiments aimed at solving several agricultural problems such as the apparent underutilization of land underneath apple trees in orchards and the damage to winter wheat resulting from heavy winds accompanying late spring/early summer storms, just as the wheat is ripening. The peasants discovered that when they grew the two crops

together, the apple trees did not seriously shade the wheat since the wheat does most of its growing when the trees do not have all their leaves (fall and spring). Yet the apple trees provided significant protection for the wheat against wind damage, in late spring/early summer.

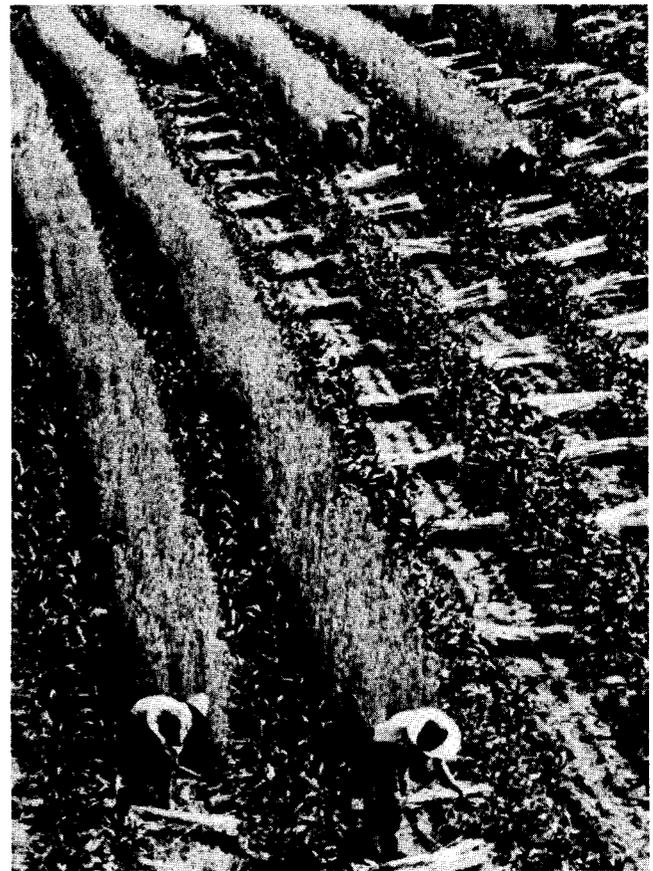
A second polyculture system we found instructive was the corn-winter wheat mixture. Winter wheat is sown in the fall in strips approximately 1.5m wide and spaced about 2m apart. In the spring, corn is planted in the bare rows and when the wheat is harvested in late spring, either more corn or soybeans are planted in their place. We asked our hosts if they would have to replace this system with monocultures during their drive to mechanize agriculture (the Chinese hope to mechanize 85% of all the basic agriculture processes by 1985). They replied that they had developed a machine capable of harvesting two meter wide swaths of wheat or corn and that tests showed that the polyculture system could be successfully mechanized, and thus preserved. In discussions with our hosts we learned that some of the polyculture systems would probably be shifted to monocultures to make mechanization more easy while many of the polyculture systems would be preserved, either by developing special machinery or by restricting mechanization to only part of the production process.

In the U.S., by contrast, there is extremely little intercropping practiced. Large farm machinery manufacturers claim it is not "economically feasible" or that it is technically impossible to develop machinery for working polycultures. Yet one of the most important reasons for the virtual lack of intercropping in the U.S. seems more tied to the increasingly large average farm size. The growth in farm size is itself due to the natural accumulation process which occurs in any capital-intensive sector of a market economy. Farmers with more access to assured financing, high inputs of fertilizers and herbicides, the best seeds, and money in the bank to tide them through difficult periods will show an average profit higher than the smaller farms and eventually they will be able to buy many of them out. As farm size increases, it becomes more profitable to farm the land with the huge machines characteristic of agriculture. And large machines provide an incentive to increase farm size yet further, and so on. Experience in China and other countries has shown that the kind of farm machines best able to work polycultures tend to be smaller than the giant combines we are familiar with. And so with the increase in farm size, these smaller machines become "economically unattractive." Another factor probably contributing to the above trend is the general incentive to replace human labor with machines. The smaller machines needed for polycultures would probably require more labor input per acre farmed.

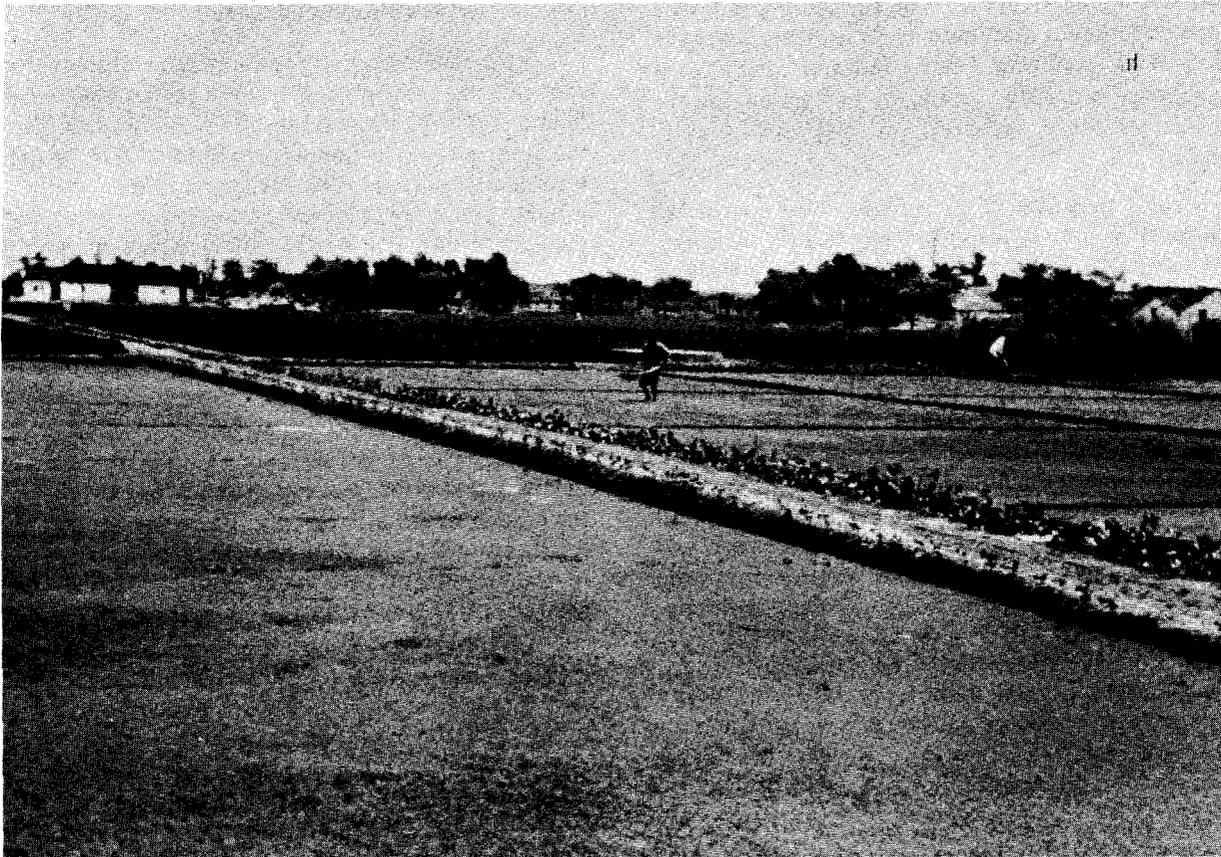
Organic versus Chemical Fertilizers

A second aspect of the Chinese production process that contrasts sharply with that in the U.S. is their heavy reliance on organic as opposed to chemical fertilizers. It has been estimated that approximately 70% of the total nitrogen input in Chinese agriculture comes from organic sources(8) (animal and green manure, garbage, etc.) while only about 63% of the nitrogen input in the U.S. comes from similar sources.(9) These figures are remarkable considering that the U.S. produces far more animal manure per acre cultivated and per capita than China (The U.S. produces approximately 1.53 billion metric tons annually).

Everywhere we went in China we learned of detailed efforts to make maximum use of all possible sources of organic fertilizers. There are several reasons for this effort. First, Chinese agronomists are well aware of the important benefits of organic versus chemical fertilizers. These include preservation of better soil structure, the provision of more trace nutrients, and decreased leaching of soluble nutrients. The latter benefit is particularly important in areas of sporadic but intense rains, and porous soils, in which case most of the



Harvesting wheat by hand in a corn-wheat intercrop.



Use of green manure in rice paddies. The flooded paddy is filled with the water fern, Azolla, and the canals are filled with water hyacinth.

inorganic nitrogen can be leached out of the soil before the plants can absorb it. On the other hand, organic fertilizers decay relatively slowly and provide a slow, steady nitrogen input even under conditions of extremely high rainfall. An additional incentive for the extensive use of organic fertilizers is the "re-cycle" ethic which is such a dominant theme in China. One constantly hears the exhortation, apparently originating during the Cultural Revolution, "turn a waste into a treasure." Finally, China's abundant labor supply provides the third important ingredient encouraging large-scale use of organic fertilizers.

The situation in China, however, is changing. For instance, it is predicted that as agricultural mechanization proceeds that the percent of people in the agricultural sector will decrease significantly from the approximately 85% that it is today. In addition, production of chemical fertilizer is sharply rising. A number of extremely large chemical fertilizer plants are now under construction and the Chinese hope to increase production of chemical fertilizer 60% by next year.(10) A strong incentive to increase chemical fertilizer use exists since nearly all the organic fertilizer that can be produced, is, and most of the crops still respond dramatically to increased amounts of nitrogen or phosphorous.

Considering these changing circumstances, we were thus curious if there were plans to decrease organic fertilizer production. We were familiar with the common argument heard in the U.S. that chemical fertilizer is relatively inexpensive and freely available, organic fertilizer use is frequently uneconomical due to the expense of transportation and spreading.

Yet the Chinese said they had no plans to reduce the amount of organic fertilizer used and in fact wanted to increase it, while mechanizing the processes of transportation and spreading to the extent possible. It became clear to us that one of the main reasons that extensive use of animal manure has often been uneconomical in the U.S., is due to very large farm size and separation of animal crop production sites. These latter characteristics have little to do with increasing production efficiency per se but instead primarily result from patterns of accumulation inherent in our type of market economy.(11) The Chinese agricultural development plan, however, is proceeding differently and will guarantee maintenance of farm size and spatial patterns of animal and plant production that allow for continued use of animal organic fertilizers.

In addition to animal manures, China makes extensive use of green manure, including both the familiar legume varieties, and other more exotic examples of

special relevance to paddy rice production. For example, water hyacinth (*Eichhornia*) is frequently grown in the canals used to drain rice paddies. Rice paddy production necessarily involves the loss of a considerable amount of soluble nutrients as the fields are drained and flooded several times during one growing cycle. The extensive root system of the water hyacinth traps soluble nutrients and the plants are then composted and later used as fertilizer in the paddies, thus returning the nutrients to the land. Since water hyacinth cannot overwinter in the temperate areas of North China, plants are brought North each spring, thereby making use of this plant available throughout the area where paddy rice is grown.

Another unusual example of green manure is the water fern, *Azolla*. These plants have blue-green algae living inside them that can fix free nitrogen. After the

rice is harvested, the paddy is flooded and approximately 10% of the area of the paddy is "seeded" with small pieces of the fern. During warm weather, the entire paddy becomes filled with the fern in about seven days. The water is then drained and the fern is plowed under. The fern growing cycle is repeated two more times in succession so that after about 20 days, all the nitrogen removed from the previous rice harvest has been replaced.

The second part of this article will appear in the July/August issue of SftP., and includes a comparison of pest control and food distribution methods in China and the U.S. The article concludes with a brief discussion of the possible effects of recent changes in China on the food and agriculture system.

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Which Way for the Food Movement?

by the Editorial Collective, Ann Arbor SftP

Remember the environmental movement? It actually began quite early with the publication of *Silent Spring*, in which Rachel Carson publicized the dramatic ecological consequences of the use and misuse of pesticides. But it did not gain any significant momentum until we realized that not only sparrows and condors were being killed, but our own personal environment was being made unfit for life. It was a true emergency. We would have to clean up the environment or perish. But, it became scary for certain elements in society when people began realizing that the cause of environmental degradation was internal to the basic structure of our society. The problems of pollution in the workplace, collectively known as problems of occupational safety and health, brought working class struggles directly in line with the environmental movement, and underlined the sweeping changes that would have to come about if we were to "save our environment."

But, as you recall, it got coopted. The capitalist propaganda machines churned out "reality" for us and we were supposed to believe that "people cause pollution" and each individual simply had to do his or her part to clean up the environment. The root causes of the environmental crisis were ignored, and folks reverted to individualistic attempts at changing their own lifestyles to be more in accord with what *Time* magazine thought was environmentally sound. The revolutionary potential of the environmental crisis was lost in the mindless rhetoric of individual solutions.

Remember the food movement? It too began quite a while ago. It picked up momentum in the mid-seventies when we realized that not only were Third World babies starving, but the additives and preservatives routinely added to our food frequently were poisoning a very personal environment, our own bodies. Suddenly the food issue was no longer just the moral issue of people starving in a world of plenty, but also a question of our own health. And it even became clear that the reason that Third World babies starved was intimately related to the reason that our food was filled with sometimes dangerous chemicals. It all had something to do with corporations and profits.

The food issue is now coming to a head. The various pieces of the issue are being brought together and analyzed as one problem. Concern about producing healthy food for our bodies is being coupled with concern for the Honduran baby who died because exported bananas were produced by a U.S. corporation on land that could have produced food for the people. Rapid expansion of junk food concessions is seen as part of the same problem that caused U.S.-sponsored military dictatorships in places like Guatemala and the Dominican Republic, making the world safe for the production of Chiquita bananas and Gulf and Western sugar. Consumer concerns over rapidly rising food prices are being coupled with farmers' demands for parity. The struggles of migrant workers are seen to be against the same enemy that creates over-processed, sometimes nutritionally worthless food. The food issue is turning into one that could unite large numbers of people from many walks of life. It is the issue that could wake people up to the systematic problems of a decaying social structure. It could be the most revolutionizing force since the presence of British troops in Boston.

Or could it? The above paragraph represents the optimistic view. To be frank, we could have written a quite pessimistic account, given past history. Will the food issue go the way of the environmental crisis? Isn't the propaganda machine already at work, convincing us that we should not look for radical solutions? Have we already been isolated from one another? Do some of us march with Oxfam and others organize the local health food coop? When we

lobby for reasonable food pricing, do we also demand justice for farm workers? When we work for parity for farmers do we work for human rights for undocumented workers? Or are we all isolated, working as individuals and small collectives, easily partitioned by government guardians and even more easily swayed and coopted by the lure of legal reform?

It is our opinion that the food issue is, or could be, a revolutionary issue, that we should take the initiative in tying together the various strands of the issue and struggle against the fragmentation that inevitably leads to weakness and cooptation. If we work at a continual synthesis of the various currents in the food movement we may avoid seeing another potential revolutionary issue stagnate in the empty promise of reform.

But a true synthesis is much more than comradely support for each others' activities. It must be an analysis of the interrelationships among the various activities, how each activity relates to each other activity, and ultimately how each contributes to the total movement. Inevitably, if such an analysis is done honestly and responsibly it will raise questions about which activities contribute most significantly to the overall struggle. Whether we call it searching out the primary contradiction or just deciding where it makes most sense to put our energies, a detailed synthetic analysis of the food issue as a whole may force some of us into changing our focus. We may find ourselves writing less about health foods and walking picket lines with migrant farmworkers more. We may spend less time in community canning and more time at union meetings of cannery workers. We may do less organic gardening and more serious fighting against the power of agribusiness.

But one thing is clear. Unless we can meaningfully unite all of the current fragments of the food movement, the movement itself is likely to remain fragmented, reformist and thus ultimately powerless. □



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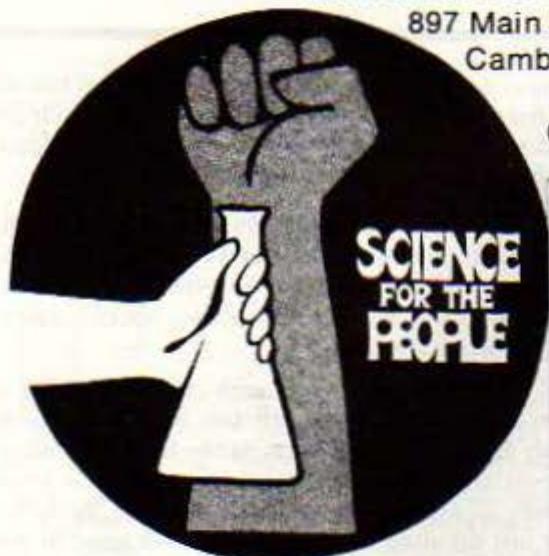
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