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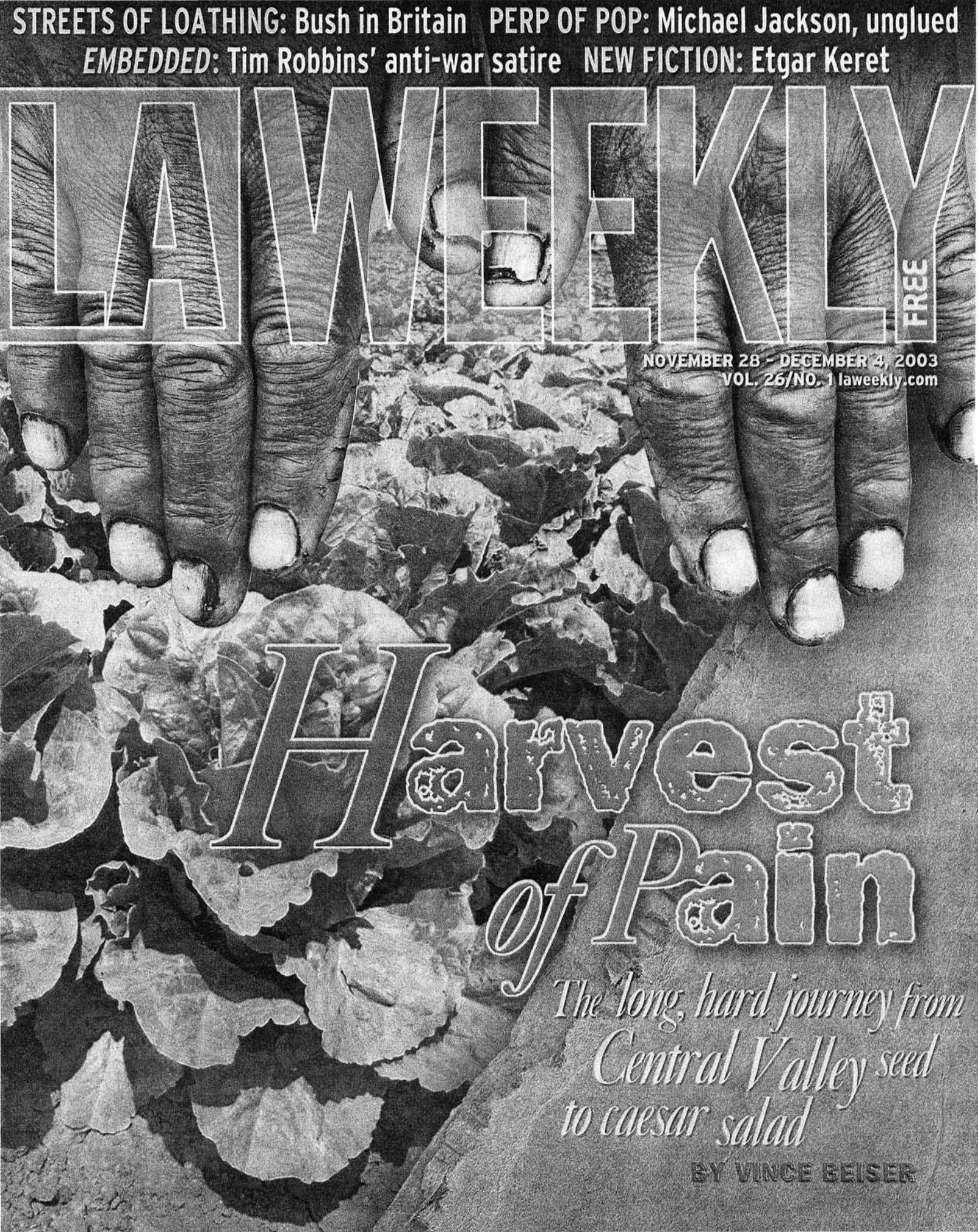


Harvest of Pain

The long, hard journey from Central Valley seed to caesar salad

BY VINCE BEISER

HARVEST OF PAIN

The long, hard journey from Central Valley seed to caesar salad

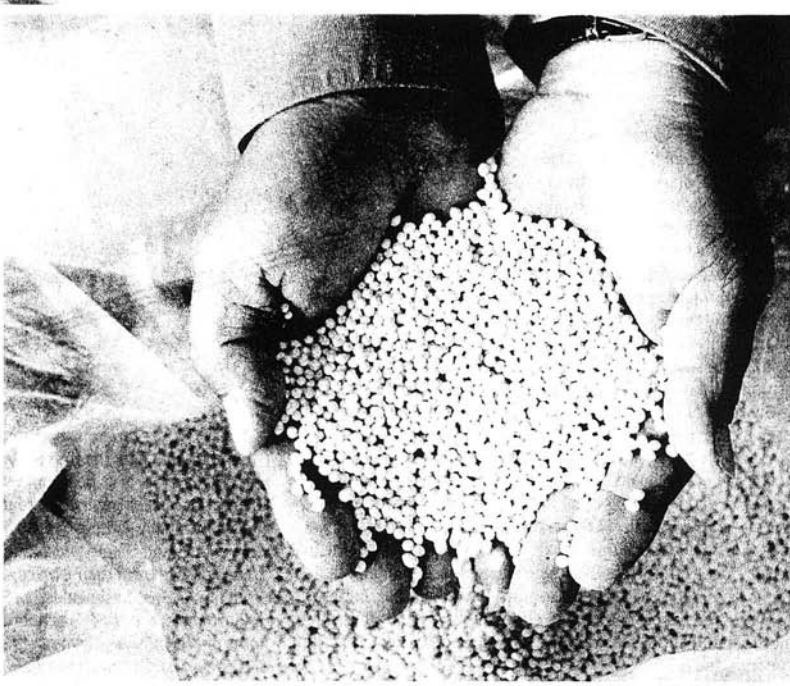
I'm staring at my Cheesecake Factory caesar salad, disconcerted. It's not the surroundings. This Cheesecake Factory in Beverly Hills seems like a fine place. The waiters are cheery, efficient and well-scrubbed. The dozens of diners around me tucking into their late-afternoon lunches seem happy. I like caesar salad. This one looks good.

Nor is it the salad itself that is throwing me off. Well, not exactly. It's what I know about what went into getting this pile of chopped romaine leaves and hearts here in front of me. By laying tooth to this salad, I will become the final link in a complex chain of events that, among other things, is helping to swell the fortunes of a Mexican billionaire, damage Alejandro Garcia's back, and leach toxins into California drinking-water wells.

While I'm sitting here, I can't help but think how Abelardo Romo is into his eighth hour of stooping over and hacking away at lettuce heads in a pesticide-drenched field near Salinas. Soon, he'll head back to his steel cot in a spartan labor camp hundreds of miles from his wife and children. Around the same time, Israel Gomez Ruiz will be returning to his tiny, unheated shack in a muddy field outside of Gilroy — if he's found work in the fields at all today.

A nice caesar is, no doubt, easier on both your body and the planet than a hamburger. That's part of the reason we Americans are eating more fresh fruits and vegetables than ever before; in particular, we are eating more salads in restaurants than at any time in history. Nonetheless, the process by which just about any chain restaurant's plate of greens is created, from seed to salad, entails startling human and environmental costs. It comprises sleek corporate offices and Third World–style shantytowns, marries the production of life-giving foods with the dispersion of lethal toxins, and combines the latest technologies of the 21st century with working conditions more like those of the 19th. All of that keeps the lettuce cheap — but at a cost that is not reflected in the price on the restaurant's menu.

I chose the Calabasas-based Cheesecake Factory as an example to illustrate how the process works, but I emphasize that it's just an example. I'm not focusing on it because the romaine lettuce in its caesar salads is produced under conditions that are particularly bad, or particularly good, nor because its salads are any worse or better than any other chain I might have picked. I'm focusing on it not because there is anything especially unusual about its supply chain, but because it is so typical.



BY VINCE BEISER

Photos by Ted Soqui

Nearly half of the world's romaine salads originate in a small, bare building crammed with sleek high-tech equipment on the outskirts of Gilroy, the California farming town best known for its garlic. This is the biotech research laboratory of Central Valley Seeds Inc. (CVS). Founder Tony Avila estimates that 45 percent of all romaine grown on the planet sprouts from CVS seeds.

Like so many other things in our increasingly fragmented world, seed production has developed into its own specialty, pursued by businesses growing fruits and vegetables that are not meant to be eaten but rather to yield seeds genetically tailored to fit the demands of growers. It's a small but significant part of the agricultural industry: In California alone, farmers bought nearly $1 billion worth of seeds in 2001.

Avila, a fleshy, middle-aged man with a thick head of wavy salt-and-pepper hair, is passionate about lettuce. "Look at those head sizes!" he marvels, bending over in the small experimental growing patch outside the lab to squeeze a husky, basketball-size head of romaine like a proud uncle greeting a favorite nephew. "Beautiful!"

His company is a small player in the overall seed business but a big one in its leafy niche. "We compete against the huge conglomerates," says Avila with satisfaction. "But they can't touch us in lettuce."

Avila's staff spends months, often years, cross-breeding different strains of romaine with one another and with other varieties of lettuce — iceberg, red leaf, green leaf, butter — to develop new strains that look better, or are more disease resistant, or that can flourish in the precise types of soil and climatic conditions found in his customers' growing areas. Avila's lab technicians mark and track the DNA of varieties with desirable qualities to expedite the passage of favorable genes into new hybrids, and run biochemical analyses to determine, say, the exact amount by which a new head's sugar level has been elevated. Using these methods, CVS has developed romaine heads that are especially dark green, heads that are especially yellowish (very popular in Chile), heads with especially large hearts, and heads with no hearts — just extra-thick leaves, "perfect for hamburgers," says Avila.

Nearly $2 billion worth of lettuce is sold in this country every year, and the industry is fiercely competitive. A hot new variety has to be protected from unscrupulous competitors. CVS keeps a database of the DNA "fingerprints" of all of its patented varieties, and frequently checks the DNA of competitors' lettuce to see if they've illegally used CVS's seeds or even crossed them with another variety. "I've caught people from other seed companies literally digging plants out of our fields," says Avila. "All you need is one head. That'll give you 35,000 seeds. From that you can sow a whole field."

CVS is not currently creating genetically modified lettuce — that is, introducing genes from entirely different life forms into its lettuce's DNA — only because Avila thinks all the bad press around genetic engineering will scare away consumers. The competition, however, doesn't share Avila's wariness. Prominent among them is Alfonso Romo Garza, a Mexican billionaire who controls the seeds from which sprout 40 percent of all the vegetables sold in U.S. supermarkets. Romo is the CEO of the $650 million, Oxnard-based Seminis Inc., a major vendor of lettuce seeds to California growers. He is also a major booster of genetically modified foods. As *The Wall Street Journal* gushed in a recent profile, Romo "envisions creating utopian vegetables: non-browning lettuce, broccoli with enhanced cancer-fighting properties, and produce of all kinds that won't wrinkle, spoil or blemish." Seminis has conducted extensive research on genetically modifying lettuce to make it resist common herbicides, although that particular program is currently on hold, according to a company spokesperson. Other companies are researching the possibility of turning off the gene that makes cut lettuce surfaces turn brown.

Salinas-based D'Arrigo Bros., one of the state's leading lettuce growers and the one that supplies the Cheesecake Factory's romaine, buys seeds from Seminis and other companies but gets a huge chunk of its romaine seeds from CVS. So the odds are good that sometime in the year before I sat down to my caesar, the seed that would produce it was plucked from a flowering romaine head in one of CVS's production fields. Loaded with thousands of other seeds into a cotton sack, it was then hauled to the Salinas warehouse of Pacific Grading Services, a company that does nothing but run millions of seeds over a giant sifter to sort them by weight and density.

This is a crucial process for modern agriculture. To grow and harvest on an industrial scale, the way my romaine head was grown and harvested, the techniques of mass manufacturing have to be applied to farming. All the seeds must sprout almost simultaneously, so that the heads will all be ready for harvest at the same time and will be the same size so that they can be harvested most efficiently. To ensure a field of uniform heads, you need to start with uniform seeds.

But just sorting seeds isn't enough to ensure lockstep growing. From Pacific Grading, my seed, now grouped with thousands of others of similar dimensions, was taken to a "seed enhancer" — most likely Salinas-based Seed Dynamics. There it was treated with chemicals to make it germinate more readily and coated with a clayish jacket of chemical compounds to make it less appetizing to worms and easier to plant. That's just the first in the dizzying parade of chemicals that will be applied to my lettuce during its short life.

Boxed up with thousands of other identical chemical balls, my seed was then trucked to D'Arrigo Bros., currently the Cheesecake Factory's exclusive supplier of romaine heads and hearts. Loaded into a mechanical planter hauled behind a tractor, it was then dropped into a furrow in one of D'Arrigo Bros.' many fields, neatly spaced two inches from its cousins on either side to minimize waste.

Most of D'Arrigo Bros.' fields are in the Salinas Valley, salad central for not just California but the entire country. With its rich soil, ocean-cooled climate and a harvesting season that lasts most of the year, the valley has been a prime lettuce-producing area since the days John Steinbeck grew up there. More than half of all the nation's romaine is produced in Monterey County, where the Salinas Valley sits.

Lettuce is a highly centralized crop. California produces most of the lettuce that Americans eat, and almost all the rest is grown in Arizona. California actually grows more than half of *all* the produce eaten in America — more than $27 billion worth of fruits, nuts and vegetables every year. Very little of that comes from the small, family-run American farm of enduring national myth. Agriculture is increasingly an enterprise run by large corporations on ever larger megafarms. Most agribusinesses don't even call themselves "farmers" anymore; the preferred term is the blunter "growers."

D'Arrigo Bros. is a bit of an oddity in the industry in that it is still a family-run business. Launched in 1924 by two Sicilian brothers, Andrew and Stephen D'Arrigo, the company is famously credited with having introduced broccoli to America. In a burst of marketing inspiration and paternal pride, Stephen made a picture of his then 2-year-old son, Andrew, into the company's logo. Produce bearing the Andy Boy label is still sold nationwide. Andy Boy grew up to take over the business, and still keeps a hand in running it, though management is now mostly in the hands of his daughter Margaret and one of his sons.

"I never even thought about doing anything else," says Margaret, a chipper, 40-year-old suburban-mom type, wearing a pink sweater and blue jeans, whom I meet at her office in a pseudo-Spanish-style office park in Salinas. She grew up in the town, but her dad always took her out to the ranches on the weekends. "Growing something wholesome makes you feel good," she says. "It's something good for your body, and good for the economy."

It's good business, too. In the last 10 years, D'Arrigo Bros. has doubled its volume and currently pulls in some $200 million in annual revenues. About half of that comes from leaf lettuce, which is a sign of the changing times. Iceberg lettuce — that nutritionless, tasteless staple of salad bars and school lunches — is still the most-eaten lettuce type in America. But as consumers grow more health conscious, and the collective palate grows more refined in this era of focaccia sandwiches and pesto pizzas, leaf lettuces — butter, red and green leaf, and especially romaine — are gaining ground fast.

TOUGH ROWS TO HOE: ALL TOLD, THE MEDIAN INCOME FOR FARM WORKERS NATIONWIDE IS JUST $7,500 A YEAR.

Alejandro Garcia is one of the hundreds of people who make a living harvesting such lettuces for D'Arrigo Bros. Garcia, 39, is a small, slightly stooped man with a broad, mustached face and calm eyes. He was born in Michoacán, Mexico, but moved to Santa Maria, California with his family when he was 5. When he was 17, about the time Margaret D'Arrigo was getting ready to go off to college at the University of California at Davis, Garcia got married and soon had his first daughter. Fatherhood impelled him out of high school and into work in the fields. He moved to Salinas in 1994, got a job with D'Arrigo Bros., and has been cutting their lettuce ever since.

Garcia lives with his wife, who also works cutting lettuce, and his two daughters in a cramped little apartment in a barracks-like housing development that is literally on the edge of town. Across the parking lot from the sullen ranks of two-story apartment blocks, lettuce fields stretch to the distant hills.

One recent morning, as he does every weekday and sometimes on Saturdays, Garcia got up a little after 5 a.m. to make his lunch and get ready for work. His wife took their car to her job site, leaving him to catch a lift with a friend down to a ➤

capacious dirt parking lot in Spreckels, the sugar town where John Steinbeck worked the fields and set some of his novels. Dressed in a track jacket, watch cap and jeans against the chilly air, with a long-handled knife in his back pocket, Garcia boarded one of the company's white school buses, each hauling two or three portable toilets, that take the workers out to the fields. Dawn was just breaking over the hills to the east as the first bus sputtered to life and lumbered out to the road, taking the workers to the lettuce fields.

D'Arrigo Bros.' acres and acres of fields are cut through with perfectly straight rows of virtually identical heads growing so densely together they almost look like a single, solid band of rippling green. Lines of men bent double scuttle along the rows in trios. The lead two briskly chop the lettuce heads from the ground at the root with a triangular knife and stack them upside-down for the packer, who crams them into pink and white cartons bearing the Andy Boy logo. It is, literally, stoop labor, relentlessly physical. There is built-in pressure to keep moving as quickly as possible, since the entire crew's pay depends in part on how many cartons it produces. The field left in the harvest's wake looks as though it was the scene of some epic battle between lettuce armies, carpeted with broken leaves and strewn with imperfect, rejected heads.

"You get home, and all you want to do is rest," says Garcia that night, sitting in his kitchen, which is lit by a single bare bulb. "Then the alarm clock goes off in the morning, and you're just as tired." His back often hurts from all the hours bent over. "This year, I don't know why, but I've been coming out real tired," he says. "Maybe it's my body telling me I've gotta find another job."

In many ways, farm work today is like an outdoor version of the sweatshop factories of a century ago: Most of the laborers are immigrants, few have union representation, and the work is poorly paid, physically strenuous and startlingly dangerous. Since César Chávez launched a national lettuce boycott 33 years ago, there have been some gains — some workers are now represented by the United Farm Workers, and more have health insurance and other benefits — but agricultural field work remains one of the lowest-paid yet highest-risk occupations in America.

Since the days of Spanish colonial rule, California agriculture has been dominated not by small family farms but by giant ranches where most of the work has been done by hired hands. Those hands were mostly Chinese and Japanese immigrants in the late 1800s, and there were the dust-bowl refugee Okies in the 1930s. But for most of the last century, Latin Americans, especially Mexicans, have been the mainstay of the field work force.

Counting both migrant workers, who move around following the harvests, and seasonal workers, who work where they live, there are about three-quarters of a million farm workers in California. Half are estimated to be undocumented. A growing number are indigenous peoples from southern Mexico — many of whom don't even speak Spanish, let alone English.

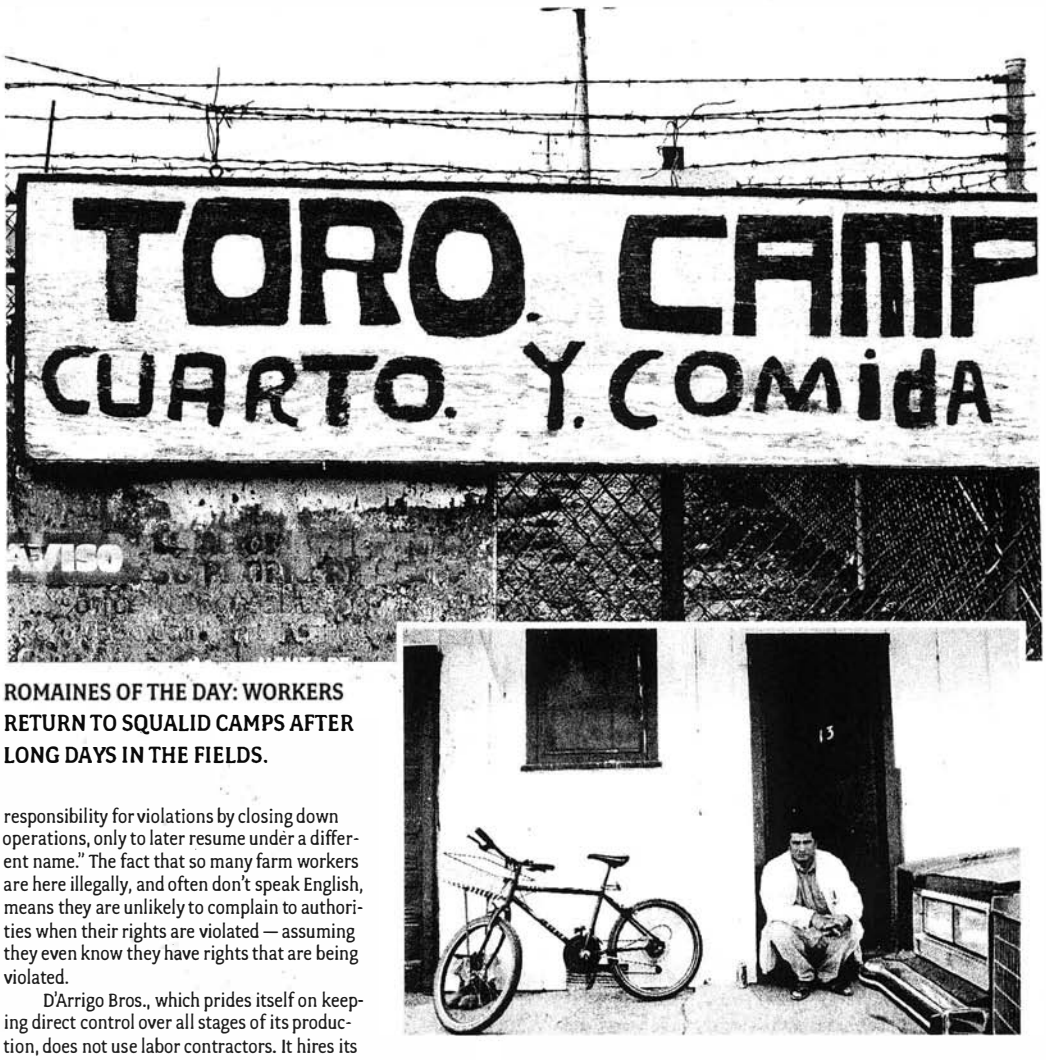
The D'Arrigo Bros. fieldworker who cut my romaine head was earning, like all D'Arrigo fieldworkers, at least $7.05 an hour — slightly higher than the legal minimum. But in some crops workers can earn more if their crew produces above a quota of cartons. When I met him in May, Garcia had pulled in $535 the previous week, but that was the height of the season; often, his wages drop down to more like $350, which is all his wife made that week. The couple has no savings to speak of, and no pension.

The thing is, with his meager apartment and few hundred bucks a week income, Garcia is actually among the elite of lettuce harvesters, and indeed of fieldworkers nationwide. D'Arrigo Bros. pays relatively well, by the industry's standards, and the work lasts most of the year. "Five hundred dollars a week is definitely the high end of the scale," says Efrain Lara, a UFW organizer and former D'Arrigo fieldworker. And wages are getting no better — in fact, the opposite. According to the federal Labor Department, average farm-worker wages dropped during the 1990s. Moreover, most farm workers are unemployed for months at a stretch, and if they're not citizens, they get no unemployment benefits. All told, the median income for farm workers nationwide is just $7,500 a year.

Worse, many don't even get paid what they're owed. Cheating workers is rampant in the industry. One spring afternoon in the parking lot of a FoodsCo grocery store in Salinas — a popular pickup point for fieldworkers — Moises Hernandez, 21, told me he was working six days a week cutting lettuce for various employers. Theoretically, he was earning between $250 and $300 a week. But several growers' checks had bounced, and he was still waiting for payment from two others. He's making a lot less than he thought he would when he left Veracruz to sneak across the border two years ago, he said. Hernandez broke off our conversation to ask Jesus Lopez, a worker with California Rural Legal Assistance who was showing me around, if he knew where to get a free meal in town because Hernandez had no money for lunch.

Many of the worst abuses — including Moises Hernandez's unpaid checks — stem from a relatively recent change in the system of agricultural employment. Since the mid-1970s, growers have become increasingly less likely to directly hire the men and women who pick their crops; they leave that to a burgeoning class of farm-labor contractors. By now, two-thirds of the state's vegetable and melon growers use labor contractors.

This system profoundly muddies the issue of who is responsible for workplace rule violations, making legal action difficult. Unscrupulous growers can easily shift the blame onto middleman contractors — and as Human Rights Watch put it in a 2000 report, "It is not unusual for farm labor contractors to evade responsibility for violations by closing down operations, only to later resume under a different name." The fact that so many farm workers are here illegally, and often don't speak English, means they are unlikely to complain to authorities when their rights are violated — assuming they even know they have rights that are being violated.



ROMAINES OF THE DAY: WORKERS RETURN TO SQUALID CAMPS AFTER LONG DAYS IN THE FIELDS.

D'Arrigo Bros., which prides itself on keeping direct control over all stages of its production, does not use labor contractors. It hires its own fieldworkers, and provides at least some health insurance and other benefits, which may explain why the company has a relatively high number of fieldworkers who have worked there for many years.

Still, D'Arrigo has its share of labor troubles. The UFW has filed a class-action suit demanding workers be paid for the time they spend in the company's buses, being taken to and from the fields, which can eat up an hour or two each day. The union has also filed a complaint with the Equal Employment Opportunity Commission, alleging that the company unfairly shunts women into lower-paying jobs. And there's the little matter of a contract. D'Arrigo employees voted way back in the 1970s to certify the UFW as their representative and to start negotiations for a contract. Those negotiations are still dragging on.

Kix Nystrom, the Cheesecake Factory vice president who oversees produce procurement, bristled a bit when I asked whether the company had any kind of policies setting worker-treatment standards for their contractors, the way some companies do for their contract workers in, say, sneaker factories in Indonesia. "We deal with reputable companies," he said. "It's hard work, but I think the workers get paid well for what they do."

"P fields south of Salinas is a collection of single-story, unheated wooden barracks surrounded by a barbed-wire-topped fence that is called Toro Camp. Abelardo Romo, a 42-year-old migrant worker originally from Sinaloa, Mexico, pays $86 a week to stay here, sleeping on a thin mattress on a metal bedstead in a room with four other men. Romo, a professorial-looking guy with glasses and a thoughtful air, leaves his wife and two daughters in El Centro every year to come up to Salinas for the season to cut lettuce for River Ranch, a big grower. Every couple of weeks, he gets in his mud-spattered old Dodge, its left taillight held in place with duct tape, and makes the trip home to visit his family. "I think very much about my family, but I can't do anything else," he says. "The pay is very low down there."

Romo stays in the cheerless camp for a simple reason: Decent housing is unaffordable for many farm workers, especially in the Salinas Valley, where residential spillover from Silicon Valley has sent costs soaring in recent years. A good number of older farm workers who have lived in the area since before the dot-com days own houses in Salinas and other towns. But for the less fortunate, especially migrants who will only be in town for a few months, the options are dire. It's common to find two or three families sharing a single apartment. Thousands of people live illegally in rented garages — often sharing them with up to a dozen others.

To Israel Gomez Ruiz, a crowded garage must sound pretty appealing some nights. Ruiz, a short, stocky 27-year-old from Oaxaca, has been living for months in an American shantytown, a squalid straggle of trailers, camper shells and shacks in a field outside of Gilroy. Ruiz pays $150 a month to stay in a tiny camper shell barely high enough to stand up inside of and literally not big enough to swing the proverbial cat in. It has electricity, but no heat or running water. Trash bags are piled up in the mud outside, full of cans Ruiz has collected to recycle for a little extra money.

I confess to being surprised that someone can be working full-time in the United States and have to live like this. "The choice is to live somewhere nice, or to have some money to ➤

send home," shrugs Ruiz. After all, it could be worse. His cousin lives in a smaller camper shell next door, which doesn't even have electricity.

Farm workers also face odds of being injured or even killed on the job that would make most Americans blanch. In California, agricultural workers are killed on the job at four times the statewide average for work-related deaths — crushed by machinery, killed in bus accidents or poisoned by toxic chemicals. In 2000, 476 farm workers nationwide were killed on the job. Tens of thousands more are injured every year — and to make matters worse, a recent report by the California Institute of Rural Studies found that nearly 70 percent of the farm workers they surveyed had no health insurance of any kind. Nearly one-third of the men had never been to a doctor in their lives.

But the most insidious danger farm workers face is from the swarm of toxic chemicals that pervade the fields they work in. Starting from before my romaine seed was even planted in the earth, a whole arsenal of chemical killers was deployed to annihilate every imaginable living thing that might interfere with its development. The soil was probably treated with fumigants to kill microbes and herbicides to kill weeds; depending on conditions in the field as it ripened, my head may have been treated further with insecticides to kill aphids, nematicides to kill worms, rodenticides to kill rats, fungicides to kill downy mildew, and on and on. It's simply far more cost-efficient to use such chemicals than it is to weed crops by hand, or risk losing them to an insect infestation.

"This year, I don't know why, but I've been coming out **real tired.** *Maybe it's my body telling me I've gotta find another job."*

These poisons are slathered on our fruits and vegetables in staggering quantities. California growers used 151 million pounds of pesticides in 2001, the most recent year for which the state Department of Pesticide Regulations has statistics. The nonprofit Californians for Pesticide Reform estimates that tens of millions more pounds are used every year without being reported.

There's no question that this stuff is hazardous — after all, it's designed expressly to kill living things. Probably the scariest thing about pesticides is how little we know about the harm they may be causing us. A 2000 report by the federal General Accounting Office cites an EPA estimate of the number of physician-diagnosed cases of pesticide poisoning at 10,000 to 20,000 per year; "however," the report notes, "EPA recognize(s) that its estimate represents serious underreporting . . . comprehensive information on the occurrence of acute and chronic health effects due to pesticide exposure does not exist — whether for farm workers, farm children, or the population in general." This is no small matter. Many pesticides are known or probable carcinogens, reproductive toxicants, neurotoxins and/or other kinds of human poisons. The effects of acute pesticide poisonings — that is, short-term, observable effects — can range from headaches and nausea to burns, paralysis and death.

D'Arrigo Bros., like any reputable grower, says they apply pesticides in accordance with state and federal regulations designed to keep farm workers and the general public safe. That's probably true, but still not necessarily comforting — neither for farm workers nor the rest of us. According to the most recent data kept by the Monterey County Agriculture Commissioners Office, in 2001, D'Arrigo Bros. applied more than 10,000 pounds of the insecticide diazinon, among many other chemicals, to its romaine fields in that county alone. The EPA recently ordered the use of diazinon banned on home lawns and sharply curtailed in agricultural operations, declaring that "without mitigation, diazinon poses unacceptable risks to agricultural workers and to birds and other wildlife species." If ingested by humans, it can cause nausea, dizziness, confusion and, at very high exposures, respiratory paralysis and death. Among many other chemicals, D'Arrigo's romaine fields were also treated with heavy doses of tralomethrin, an insecticide which the state Department of Pesticide Resources ranks among the most dangerous and a specific hazard to fish, bees and "children/humans."

Fieldworkers are obviously at the greatest risk of pesticide poisoning, but so to some extent are we all. The poisons applied in the fields have a bad habit of not staying there: They drift away on the breeze, they trickle down into groundwater, they float off into surface water, and they stick to the plants on which they have been sprayed. Even if you eat only organic produce, chances are good that at least at some point you will be drinking and breathing in pesticides.

In 1999, 21 people had to be hospitalized, vomiting and aflame with rashes, after fumes of metam-sodium, a pre-planting fumigant used to kill weeds and nematodes, drifted from a potato field into the California town of Earlimart. Metam-sodium, which is also a suspected carcinogen, is widely used throughout the state; nearly a quarter of a million pounds of the stuff were dumped on California's leaf lettuces in 2000. Several studies have found traces of other toxic pesticides in air samples around the state. Most of those have come from areas close to agricultural zones — but thanks to urban sprawl, that's a lot of the state by now. According to another Californians for Pesticide Reform study, nearly 800,000 people in Los Angeles and Orange counties live within half a mile of areas where pesticides are heavily used. "Pesticides aren't something just used way out in the sticks," says Bill Walker, director of the Environmental Working Group, another anti-pesticide outfit. "They're in the suburbs."

Dozens of pesticides have also turned up in recent years in drinking-water sources throughout the state — including Los Angeles and Orange counties. These toxins can stay in the water for years. The fumigant DBCP was banned in the U.S. in the late 1970s because it can cause sterility, but was still showing up almost 20 years later in wells throughout California, forcing authorities to close dozens of municipal drinking-water wells.

Then there's the produce itself. In 2001, one-fifth of lettuce heads the Department of Pesticide Resources sampled from random supermarkets carried traces of various pesticides. And if deliberately applied pesticides weren't enough to worry about, the Environmental Working Group announced in late April that their tests found perchlorate, a highly toxic rocket-fuel ingredient, in a substantial number of winter lettuce heads pulled from San Francisco grocery store shelves. The heads had evidently absorbed the toxin from Colorado River irrigation water, which is polluted with perchlorate leaking from a disused Nevada military facility.

If there is any residue of diazinon, tralomethrin or anything else on my salad, it's probably a very small amount. Almost all of the pesticides that turn up in the air, the water and on lettuce do so in quantities officially considered too small to be dangerous.

But what if the government standards for safety are simply wrong? DDT is only the best-known example of a chemical we thought was safe to spray all over our food that turned out to be harmful. And even if the levels of an individual pesticide ingested in a single instance are safe, who knows what damage might be caused by the gradual accumulation of small amounts of them in our bodies, or by different pesticides combining in the body?

No one, as it turns out. As the 2000 General Accounting Office report puts it, when it comes to "information on the chronic (long-term) effects of pesticide exposure . . . the studies that have been conducted to date have been limited, inconsistent, and inconclusive . . . Even less is known about the combined effects of human exposure to different pesticides."

What research has been done is hardly cheering. Studies have found links between chronic exposure to various pesticides and early-onset Parkinson's disease; neurological damage in children; elevated risks for a whole range of cancers; stillbirths and neonatal deaths; and shrunken limbs in babies. Partly as a result, since 1996 the EPA has been re-evaluating thousands of pesticide safety levels to take into account the possible effects of cumulative exposure, and children's greater sensitivity to them. As a result, hundreds of pesticides are being phased out.

"Time and again the chemical industry has produced things they've said are safe which turn out to cause harm or death and have to be taken off the market," says Walker. "They're basically conducting chemical experiments on our bodies."

But back to my head of romaine. Packed into a carton straight from the sun-warmed earth in Salinas, it was most likely trucked to a giant refrigerating chamber in the D'Arrigo Bros. cooling facility in nearby Castroville. In this sprawling industrial compound, 840 cartons at a time are loaded up on pallets and run through the chambers, which suck almost all the air out of the cartons and chill what's left down to just above freezing. (Actually freezing lettuce turns it black.)

Once cooled for transport, the pallet containing the carton containing my romaine head was forklifted into a cavernous warehouse building known as a "cold box," where the temperature is also just above freezing. Lettuce will keep at this temperature for a couple of weeks, but the company doesn't keep heads there longer than three days. "We want to get in the back door and out the front, so it stays fresh," explains Robert Tostado, the receiving supervisor.

The cold box itself is a frigid Cubist science-fiction study, a giant, white, rectangular space divided into a geometric maze by rectangular stacks of rectangular cartons. Enormous cooling fans drone steadily by the ceiling. It operates almost around the clock, and as many as 70,000 cartons a day are loaded out of this facility — half of them containing romaine.

Many of the cold-box staff are former fieldworkers — even though the job isn't much better. The pay is about the same, and the work is also seasonal. Moreover, working eight hours a day in that temperature gives a lot of workers colds, flu and arthritis, says Pete Maturino, president of the union local that represents them.

My romaine head very likely arrived in the cold box less than 24 hours before it was placed in front of me in the form of salad. A refrigerated truck backed right up to a door built into the wall of the cold box, and was loaded in under an hour. The truck probably belonged to a small local company subcontracted by food-distribution giant Sysco to make the five-hour run down to Los Angeles. Sysco is the biggest food distributor in America, delivering everything from fresh romaine hearts to paper napkins to caviar and reaping sales of some $25 billion per year.

The subcontractor would have trucked my romaine head, snug in its carton with its indistinguishable brethren, down to a Sysco warehouse on the outskirts of Los Angeles. During the night shift, workers would have loaded the carton, along with dozens of other food-service items, onto a Sysco truck for delivery to restaurants around the city. Very likely by the morning of the day I am sitting down to lunch, a Sysco driver wheeled the romaine head from which it was made into the kitchen of the Beverly Hills Cheesecake Factory. ➤

Caesar salads the story goes, Caesar Cardini, proprietor of Caesar's Palace restaurant in Tijuana, Mexico, ran low on ingredients for the July 4 holiday. In a burst of improvisational inspiration, he tossed together romaine leaves, garlic, olive oil, lemon juice, a raw egg, Worcestershire, sourdough croutons and Parmesan cheese. The movie stars who came down from Hollywood for dinner loved it, and soon restaurants all over Los Angeles copied it. (Other claims to caesar include Beatriz Santini, who may or may not have made the salad first in Austria around 1918, then shared the recipe with her son Livio, who turned up at Cardini's Tijuana restaurant and was spotted eating the salad in the kitchen by a wealthy customer who wanted one for herself.)

"The caesar is a traditional concept," says Bob Okura, the Cheesecake Factory's vice president of culinary development. Okura is a 25-year veteran of the food-service business who wears a white chef's jacket in his office, deep inside the company's grand but unmarked headquarters in an office park amid the rolling hills of Calabasas. "We think it's best left in its simplest, most authentic presentation. We've just adapted the dressing."

A full pound of romaine goes into each caesar, double what most restaurants use. "We do that deliberately so there's enough to take home, so you can have the Cheesecake Factory experience in your home as well as in our restaurants," says Okura sincerely.

The company uses a mixture of romaine leaves and hearts — even though, like most chefs, Okura believes that the hearts, crisper and sweeter than the leaves, are the choicest part of the head. "We found our guests don't want all hearts," he says. "People wanted to see green in their salad. We know it's not the best thing, but they're the boss."

Intense research is a Cheesecake Factory hallmark. Okura and other executives may spend months, even years experimenting with a new dish at their Culinary Research and Development Center — an aggressively clean, full-blown restaurant kitchen adjoining Okura's office. The chain's whole menu is reviewed every six months or so, with as many as 20 items updated or replaced.

These are good days for restaurateurs. Thanks to the ever more hectic pace of urban life and the growing numbers of working women, Americans are getting more of their meals outside the home than ever before. Thirty years ago, consumers spent about 25 percent of their total food budget at restaurants and fast-food outlets. Today, that figure is about 49 percent. The restaurant industry has become California's largest employer, with sales projected to rise this year to $45 billion.

Meanwhile, spurred by growing awareness of the health (and body-image) benefits of eating fresh fruits and vegetables, produce sales have also skyrocketed in recent years, especially in restaurants. The U.S. Agriculture Department estimates that produce sales in food-service establishments nearly tripled from 1987 to 1997, hitting a total of over $35 billion nationwide. Lettuce is one of the most consumed vegetables nationwide, along with tomatoes and potatoes.

The Cheesecake Factory, with its 1-pound salads, is riding this wave for all it's worth. Considered part of the growing "fast casual" segment of the restaurant business — chains that combine McDonald's predictability with Starbucks' more bourgeois sensibilities — the company opened its first outlet in Beverly Hills in 1978, and by now operates dozens of restaurants in 23 states, with 14 more slated to open this year alone.

Personally, I find something a bit discordant about going to a place called the Cheesecake Factory for lunch. Neither the concept of "cheesecake" nor "factory" suggests a hearty, nourishing meal to me.

The "factory" part is certainly appropriate, though. Once Okura has perfected a salad, or any other dish, the head chefs at each Cheesecake Factory across the land are trained to prepare it precisely as he directs. "They don't create, they just follow recipes," says Okura. The chefs in turn oversee the prep staff in their kitchens, ensuring the raw materials of my romaine head are processed into a product as uniform as a car part.

Every Cheesecake Factory restaurant is a fairly massive operation: On average, each employs 200 to 250 hourly workers, plus a dozen-odd managers. The menu is bloated with offerings from around the world, its gastronomy as global in makeup as the city from which the restaurant sprang. There are Tex-Mex egg rolls, Louisiana crab cakes, crispy taquitos, chicken pot stickers, pad Thai and 10 kinds of salads, including, of course, an "almost traditional" caesar.

When it comes to information on the chronic (long-term) **effects of pesticide exposure,** *the studies that have been conducted to date have been limited, inconsistent and inconclusive.*

Knowing what I'll get otherwise, I order the appetizer size, which is deposited in front of me maybe three minutes later by a smiling blond woman. Even this half-portion looks bigger than my head, a heaping mound of chopped green romaine leaves and pale hearts, dusted with needles of Parmesan and punctuated with fat croutons.

Somebody like Alejandro Garcia stooped over to cut this lettuce head, working fast in the hope of earning an extra dollar an hour. Perhaps someone like Abelardo Romo left his wife and children for months so that I could eat this salad. I try not to think about them, nor of the traces of diazinon or tralomethrin that may be on those D'Arrigo-grown leaves. I start eating.

It's pretty good — the dressing tangy and rich but somehow light. Still, I can't finish the salad — not because of any moral qualms, just because there's too much of it.

I feel responsible for wasting the fistful of romaine left on my plate. All the work that went into getting those leaves here — only to have them thrown out? It seems wrong. Especially since I know what made it possible for this lettuce to be cheap enough for the Cheesecake Factory to dole out such ludicrously oversized portions. I'm paying $7.95 for this salad, but other people are picking up the rest of the unseen tab.

I decide not to ask for a bag to enable me to have a Cheesecake Factory experience at home. On the bottom of my check is printed a motto. "Don't Worry Be Happy!" it says. "Thank You!"