

# Larry Jacobs



Photo by Tana Butler

## Jacobs Farm/Del Cabo

*Larry Jacobs is the co-founder of Jacobs Farm/Del Cabo with his wife, Sandra Belin. He was born in 1950 in the San Fernando Valley near Los Angeles, California. As a young man, he owned and managed a tree nursery. When aphids infested some of his trees, a pesticide inspector sold him Metasystox to apply with a backpack sprayer. Jacobs temporarily became very ill from pesticide exposure. Vowing never to apply pesticides again, he searched for alternatives. Jacobs was lucky to find a mentor in Everett (“Deke”) Dietrick, a pioneer in the integrated pest management field, who taught him how to control the aphid infestation through IPM methods.*

*Shortly after that, Jacobs left the nursery business to study soil science at California Polytechnic State University (Cal Poly) in San Luis Obispo. After graduation, he moved to Vermont to apprentice with Helen and Scott Nearing, world-famous grandparents of the back-to-the-land and simple-living*

*movements in the United States. In Vermont, Jacobs met his future wife, Sandra Belin. After a stint in Guatemala helping bring appropriate technology to the Western Highlands region, he and Sandra moved to Pescadero, California, a small town nestled in the rounded hills above the Pacific Ocean in San Mateo County, where in 1980 they founded Jacobs Farm. Jacobs Farm is now the largest organic culinary herb producer in the United States, growing sixty varieties of fresh culinary herbs and culinary flowers at seven farming locations on the Central Coast of California.*

*In 1986, Larry and Sandra were inspired to work with a cooperative of family farmers in Baja California, Mexico, to start the Del Cabo organic growers association. Together they created an international market for organic vegetables grown in Baja California for shipment north, especially during the winter season. Jacobs Farm became Jacobs Farm/Del Cabo.*

*Now each of Del Cabo's farmers earns between \$24,000 and \$100,000 a year and receives retirement benefits and health insurance for life. Del Cabo imports nineteen million pounds of cherry tomatoes and other vegetables into U.S. markets, and as far away as Iceland and Dubai. As of 2009, Jacobs Farm/Del Cabo farms a total of 3700 field acres, and 22 acres of greenhouses.*

*In 2008, Jacobs won a landmark pesticide drift case against pesticide application company Western Farm Service, Inc. The court found that the contamination of organic crops caused by pesticides drifting after application violated the rights of the organic crop grower. Jacobs' narration of the events surrounding that case is a critical part of his oral history.*

*This oral history, conducted by Irene Reti on March 11 and June 10, 2008, at the Jacobs Farm/Del Cabo offices in Santa Cruz, was conducted over several evenings at the end of Jacobs' busy days. He is a vivid and natural storyteller.*

*In 2009, Jacobs and Belin received the Ecological Farming Association's (Eco-Farm) "Stewards of Sustainable Agriculture" or "Sustie" award for their lifetime achievements in sustainable agriculture.*

### Additional Resources

Jacobs Farm/Del Cabo: <http://www.delcabo.com/> or <http://www.jacobsfarm.com/>

Website about Helen and Scott Nearing: <http://www.goodlife.org/wordpress>

“Santa Cruz Organic Farm Wins Pesticide Suit,” *San Francisco Chronicle*, September 30, 2008.

“Organic Farm Wins \$1 Million Drift Suit,” *Pesticide Action Network magazine* online, <http://www.panna.org/mag/spring2009/organic-farm-wins-drift-suit>

## Beginnings

**Reti:** Today is March 11<sup>th</sup>, 2008. This is Irene Reti, and I’m with Larry Jacobs of Jacobs Farm/Del Cabo. We are at Larry’s office at the Sash Mill building in Santa Cruz. So, Larry, let’s start by talking about where you were born and where you grew up.

**Jacobs:** I was born in Los Angeles, and I grew up in the San Fernando Valley. I left the Valley in the mid-sixties.

**Reti:** What year were you born?

**Jacobs:** I was born in 1950.

**Reti:** So, the San Fernando Valley was still quite agricultural at that point.

**Jacobs:** I remember it as a little boy, as citrus and chicken farms and some strawberry farms. There was a walnut orchard. I had to walk through some farms to get to elementary school, and was terrorized by the dogs. The neighborhood bought a little strip of land through the farm, or through the

boundaries of two farms, and built a walkway, a fenced walkway. It was maybe six foot wide, so the kids could walk through these farms and not be terrorized by the dogs. So now it was our turn to terrorize the dogs. (laughter)

**Reti:** And did you have any idea at that point in your life that you might become a farmer?

**Jacobs:** No, no.

**Reti:** Was anybody in your family a farmer?

**Jacobs:** My father's family had a citrus orchard in the Riverside [California] area that we used to go to when I was a kid. Back in those days that was a long drive from the San Fernando Valley on narrow, two-lane roads. I remember this citrus orchard quite well. I'm sure that made an impression on me and inclined me towards wanting to be outside and chase chickens around and that kind of thing, pick up the oranges. I thought I was being helpful. (laughs)

I don't know if you remember those old farmhouses they built in that time. They would be two-story houses, and they'd have a basement. So if you were a little kid, to go play in the basement and go up in the attics of these houses—it was really special to be able to visit those places. I don't think there're very many of them that are left anymore.

**Reti:** The whole landscape is utterly different.

**Jacobs:** Completely changed. There was one strawberry field still left in the Disneyland area that was— I think it's about to be gone, so—

**Reti:** I know that you went to Cal Poly, San Luis Obispo to study agriculture.

**Jacobs:** I had a tree nursery before that.

**Reti:** Tell me about that.

**Jacobs:** The tree nursery was somewhat successful. We were growing pine trees as living Christmas trees. And we had oaks, and cork oaks, and some citrus and other ornamentals. But really, the big thing were the *Pinus radiata* [Monterey pine] and Canary Island pines and the Aleppo pines that got pruned up for Christmas, and people would then plant them after Christmas. It was a lot of work, and it was every day, and it was tough to go on a vacation.

**Reti:** You started this business?

**Jacobs:** Started this business with a friend from high school. That business was really the leapfrog to going to Cal Poly, and that happened because the ag inspector who would inspect nurseries every six months had a really nice job. I thought I would like doing that job instead of trying to grow plants, make a living as a grower. When I talked to the ag inspector, he said, "Well, you need a degree to do this." So that was part of the impetus to go back to school, that I would be able to get a government job as an ag inspector.

**Reti:** Now, had you already gotten a BA at UC Santa Barbara before that?

**Jacobs:** No, I hadn't. I had dropped out. I quit school, and this had become a full-time job, operating this nursery. It was somewhat of a wholesale nursery, so we were selling to other retail nurseries and selling to landscapers. The nursery was in the San Fernando Valley. There were a lot of things I learned, doing that. I learned I enjoyed being outside. I enjoyed working with plants. I had an incredible, old, gray-headed Japanese nurseryman who became a mentor, who taught me about soils, and how to mix plant mixes, and how to listen to plants.

And the same county inspector was, in an odd way, the reason I got into organics. He found an infestation of aphids on the trees. I was nineteen years old. I didn't know what aphids were. He said that I would not be able to sell the trees unless we got rid of the aphids. I asked him how. He invited me to his house. He would show me some ways to control the aphids. I followed in my little green Datsun pickup over to his house. He opened a garage door. He lived in a tract home in the San Fernando Valley. And the garage was full, floor to ceiling, of ag chemicals. He had a side business selling chemicals. There's nothing wrong with it. In fact, it was quite convenient to know he could tell me what to use. So he sold me a large brown glass bottle. It had a big skull and crossbones on it. It was called Metasystox. I took that back to the nursery. The next day it was ninety degrees. I had my cut-offs on, and it was so hot I wasn't wearing a shirt.

**Reti:** Oof!

**Jacobs:** I got a backpack sprayer and sprayed this stuff. I got sick and passed out. I related it to the chemical I was spraying. I felt really ill. And when I recovered from that, I said that was it. I was never—I was not going to spray this thing, and I had to find another way to control the aphid infestation before he came back and did his next inspection.

I don't recall now how I found Everett Dietrick, the founder of Rincon-Vitova.<sup>1</sup> "Deke" was from UC Riverside, and he, at that time, was selling beneficial insects. I got Deke on the phone, and he recommended releases of lacewings that they were selling, and using soap to spray on the trees, which we did. When the county ag inspector came back a few months later, the first thing he said [was], "You haven't been back to buy any more *Metasystox*. What's up?" I said, "Well, come take a look at the trees—"

**Reti:** (laughter)

**Jacobs:** He's looking and he's looking, and he can't find any aphids. He keeps looking. Finally he says, "Okay, what'd you do?" So I explained it to him. I said, "Well, the first thing I did was I got some soap. I mixed it up in a bottle, and I sprayed all the trees down with a high-pressure hose and soap. And then I got these lacewings." He said, "What?" "Lacewings. And I planted the lacewings in different trees." He was impressed, and he invited me to take some of his classes. He was teaching classes at the local city college for people who wanted to get their pest control adviser's license. He had a class on entomology and nematology and plant diseases, and all this different stuff. So I went to his class,

and then enrolled in the college. And he encouraged me to go on. The experience with the chemicals was I was never going to use those again. He got me going back to school.

Maybe a year later, I sold all the plants in the nursery, all the trees, to an attorney. He had a 325-acre parcel up in the Malibu mountains. A week later, he called back and said, "I'd like to hire you to set up an irrigation system. You can go up there and live to do it." I did that. So I saved up some money and went back to college.

### **Studying Agriculture at California Polytechnic University, San Luis Obispo**

**Reti:** And so then you transferred from the community college to Cal Poly?

**Jacobs:** I applied for Cal Poly.

**Reti:** When you got there, this would have been when?

**Jacobs:** It must have been in the early seventies.

**Reti:** You already had some interest in organics. What did you find when you got to Cal Poly, in terms of support for studying organics?

**Jacobs:** There wasn't any support for organics because it was not on the radar. But I was a young person in the back of the class who would ask the question: "Okay, you're telling us about fertilizers. Why is the forest green? All right,



you're explaining about pest control. Who sprays the hillsides?" I always had that question in the back of my mind, always gnawing at me: Why is nature not— Why do we not have to weed, spray herbicides or pesticides, or fertilize these natural habitats? And there was never a good answer.

The other part of it—having that experience of having that nursery and then wanting to learn more—when I went to Cal Poly, I really wanted to learn. I had lots of questions about lots of things I wanted to understand. Like, this Japanese man who had taught me about soil mixes when I had the nursery and about listening to plants, he was in some ways poetic in his approach. He could make anything grow. I wanted to understand the things that he did. Why did they work? Why did he say, "Make your soil mix with so much sawdust, and so much sand, and so much soil"? And why did he say, "Prune the plants this way"? And why did he say, "Space things out this way"? I had such a curiosity at that point, that that experience of Cal Poly was—you want it to go on forever. It was so wonderful, and I couldn't get enough of it. I don't know how the professors took it, you know, if they thought I was a nuisance or what, but I had millions of questions and I was always raising my hand.

And after I finished, it wasn't clear to me what to do with it. Now I wasn't sure if I wanted to go work for the government or not. I studied soil science. I had a degree in soil science. But I was drawn towards plant pathology. There was a professor, Harry Finch, who was a very inspiring guy. I think many students were inspired by him. He taught mycology. He was into fungi. He'd show up with a tie with mushrooms on it, and he had mushrooms on his desk and fungi.

He'd bring in moldy bread. He was great. I found myself taking every class that he had, and I found that the interaction of fungi—both their beneficial interaction and how they worked as a disease—was interesting. And then all the other critters I didn't know about, like nematodes and mycorrhizas and— Somehow insects didn't, entomology didn't play a big role while I was at school, but the whole area of plant diseases and viruses was fascinating to me.

So when I left, I felt like I had a good understanding of soils, at least what they can teach you in school, and a good understanding of plant diseases and some plant physiology, and I really wasn't prepared to go out and get a job in a profession where I was either going to be testing soils or providing some kind of professional advice for growers, because I didn't feel like I had enough experience. And I still had that question about: How do you do this stuff without these chemicals, because it seems to be working fine on the forest. I never got that answer. I never got that answer from school.

**Reti:** So then what did you do?

### **Apprenticeship with Helen and Scott Nearing**

**Jacobs:** So after college, I worked for a while, pounding nails and just odd jobs. A friend of mine had read a book by Helen and Scott Nearing, and he asked if I'd be interested in joining him to go and see if we'd get a job working for them.<sup>2</sup> He had written and asked them if they would be interested in some help, if they had any job openings. And Helen had written back and said yes.

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So we went. I packed a couple of bags and tossed them— He had a camper, a little truck with a shell on the back, and we drove to Maine, drove across the corn belt. The Nearings grew some blueberries, highbush blueberries, basically to pay the taxes. They had a large garden that they lived on, and the commercial crop was the blueberries.

Scott [Nearing] spent a lot of time making compost. Scott would say, “You know, you can learn everything about the world making a compost pile.” There were many things he said that stuck. He was a man of few words at that point in his life, because I think he realized that each breath was precious. But when he was making the compost pile and you asked him, “How do you make a compost pile? How do you do this? What’s the best way, Scott?” Scott would say, “It’s like cleaning a house, cleaning a room. You clean the edges and the corners, and the middle takes care of itself. And so in making a compost pile, you make the edges and the corners, and the middle takes care of itself.” He had notebooks and notebooks and notebooks of ledgers of how he had made different compost piles, and how they’d come out, and how much do you aerate them, and how thick do you make the stacks of different materials, and what happens when you turn it every week, versus every month, versus every six months, or don’t turn it at all.

**Reti:** It’s a whole art.

**Jacobs:** There was a philosophy of a way of life that Scott and Helen lived. A lot of it revolved around, for Scott, making compost and growing food that they ate, and taking care of those blueberries.

**Reti:** Were there other people living there, too?

**Jacobs:** There was another farm next door. Scott sold to three other couples, sections of the farm that he bought, for the price that he had paid for it twenty years before. He was adamant about not making a profit on land. So if it cost him five dollars an acre, he sold it for five dollars an acre. He said, "I came into this world with nothin,' and I'm goin' out with nothin.'"

There was a farm next door, and the two farms had set aside a common campground. The farm next door had a market garden, and it was owned and run by [Eliot and Sue Coleman]. Eliot Coleman is well known in the Northeast. He's still farming and writing.<sup>3</sup> He had apprentices coming, so there was a group of apprentices who were working, helping him run that farm. They were the labor on the farm. That's where I met my wife, Sandra [Belin]. She was an apprentice on that farm. And the joke was, the apprentices said, "We have to work so hard." They had to start real early in the morning; they worked till the end of the day in the dark, and didn't get paid anything. And there was Larry and my friend Barry. We worked from eight to noon, and the Nearings paid us. (laughs) Then we got to read the rest of the day, or go to the beach. We had a pretty good life.

And what is pertinent to this conversation, is Scott and Helen and Eliot were farming organically. Scott had an incredible library, *Farmers of Forty Centuries*,<sup>4</sup> and all the Sir Albert Howard books. He had *the* library on organic farming. I read every book and learned. It was clear what the message was. It was organic

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matter. You have a problem. The answer is organic matter. If you have another problem, build your organic matter. There were some very clear messages in all the literature about organic farming. And there were answers as to why the forest is green.

**Reti:** I was going to ask you if you got your answers.

**Jacobs:** I got a sense of what those were. And I also got a sense that there was still a lot of work to be done, and a lot of things that weren't understood. I began to get an understanding of what happened, that there had been this chemical revolution that was like our information revolution, that happened in the forties and fifties, that provided growers with new tools, these incredible, marvelous new tools. The farmer could see the insects fall off the plant. It was such a great tool. So the universities got behind this, and this was the new way to farm. There were these incredible yields with these fertilizers. So the fertilizers and the pesticides and the herbicides and this whole chemical industry—you have to understand that that was like the information revolution. It was the chemical revolution, and plastics. No one was thinking that there could be any downside to it. Or there were a few people, but there weren't very many. And there was this wave of innovation around this chemistry. Now we know that there were repercussions, and there were impacts of those chemicals that weren't anticipated, and we're still living with them today. So I learned—I got part of my answer about why the forest doesn't require the pesticides and fertilizers.

**Reti:** How long did you live with the Nearings and do that apprenticeship?

**Jacobs:** A little less than a year. At the end of that stay, I got an invitation from a distant cousin to help set up an apple orchard in Costa Rica. I was also trying to figure a way to win over this new girl that I'd met.

**Reti:** (laughs.)

**Jacobs:** I thought that would be a fairly adventurous project, and that she might be interested, and she was. So we bought a couple of bicycles and decided to go to Costa Rica. But it was the winter of 1976, and it was cold. It was an unusually cold winter. In fact, the Penobscot Bay had some ice on it, and there was ice on the shore. So instead of biking— People said it was not a good idea to try to ride bicycles out of Maine in the winter—

**Reti:** You were going to ride all the way to Costa Rica?

**Jacobs:** We bought an old rusted-out car for three hundred dollars, and we drove that down to Texas. We sold it in Houston, Texas, for five hundred dollars. It didn't matter that it had a lot of rust on it in Texas, because they didn't have a rust problem there. And we both worked for a month, saved a month's worth of money, and then rode the bicycles to Costa Rica.

### **Working in the Western Highlands of Guatemala**

But we didn't get there. We only got as far as Guatemala. And in Guatemala we got involved with an appropriate technology station, a very small group of a few

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people. It was a Welshman who we met in San Cristóbal de Las Casas [Mexico], who invited us to stop and visit. They had some money from the Canadians after the '76 earthquake, to set up a soil-testing lab. There was a Canadian volunteer there who was a chemical engineer, about my age, and didn't know anything about soils, didn't know anything about soil labs. He had seen the need for doing soil testing in the western highlands of Guatemala. And the Welshman, when we were talking, had picked out that I had a degree in soil science, and invited me to come visit. When we got there, the Canadian (Don Wharton) said, "Are you interested in staying and helping set up this soil-testing lab? The pay's not very good. I'll give you three dollars a day." That was appealing. There were a lot of other projects going on. They were working on trying to develop a wood-burning cook stove for the Western Highlands. They had some soil mixture problems, how to make the soil stick together so the stoves don't fall apart and what's the best mixture— So, long story short, we stayed there for almost four years, set up the soil-testing lab and worked on fuel-saving cooking stoves.

**Reti:** And Sandra worked on that, too?

**Jacobs:** We both worked on the stoves, and Sandra worked on dehydrating fruits, and helped women create a small business dehydrating and selling tropical fruits. So she worked on the stoves and the tropical fruits, and I worked on the stoves and the soil-testing lab.

I came away from that soil-testing lab thinking, how presumptuous to be testing soils and then making recommendations to growers all over the Western

Highlands about how to deal with those soils, when I'd never grown any of the crops they were growing. I wanted [to have] the experience of growing crops.

### Starting Jacobs Farm in Pescadero, California

After Guatemala I came back to California and began looking for a place to set up a farm. My family was interested in looking for a piece of land in Northern California. My sister was living in Santa Cruz. We looked north and south of the Golden Gate. I was taken by the soils, and the town of Pescadero. This one particular valley just struck me as the right place. And so we put our stake in the ground in Pescadero (that was 1980), and began growing crops that were appropriate to that climate and that time.

**Reti:** Did you start out as an herb farm?

**Jacobs:** No, we started out looking at what other people were doing. We learned in Guatemala that local people know how to do things really well, better than the experts, and you can learn a lot from the people that are there.

So we began looking at what the crops were [in Pescadero] and what other growers were doing in that area. The crops that were being grown were artichokes and fava beans, some strawflowers and peas. So we began. We put in a crop of fava beans, and we learned how to dry-farm peas, and then we began experimenting with more intensive crops. We planted broccoli. We grew summer squashes and lettuces. We began marketing lettuces in the South San



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Francisco Market, and selling gourmet vegetables and baby lettuces. Some of these crops became popular, like the baby or spring lettuce mixes.

We had an eye for niche markets. It was Sibella Kraus at Greenleaf Produce who encouraged us to grow culinary herbs. We purchased one hundred tarragon plants from a nursery in San Diego. Those were our first herbs. We had water restraints and began looking at crops that use less water. The culinary herbs require less water. So we inclined towards more culinary herbs because they need less water. But there was an economic barrier. The market was limited. People don't use very much rosemary or oregano or thyme. And in 1981 or '82 and '83, there wasn't the interest in cooking with culinary herbs as there is today.

It started out small and gradually grew. We supplied restaurant distributors. We learned quickly that there was another big advantage to culinary herbs. We didn't need a big truck. A small box held a dozen bunches of thyme, just like a dozen beets, but a dozen bunches of thyme doesn't take up nearly as much space as a dozen bunches of beets, though a similar amount of time is needed to bunch and pack both.

**Reti:** So you were doing it yourself.

**Jacobs:** We were doing it ourselves, Sandra and I. Then we had the revolution of hiring somebody. And that was serendipity. Jack Burkhart, a neighbor, had been teaching us about how to dry-land farm. Jack had thirty men working for him, and they didn't speak English. And Jack didn't speak any Spanish. Jack asked me

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to teach him Spanish so he could communicate to his crew. I tried, but he did not learn quickly. After an hour or two I said, "Jack, I got a better idea. Why don't I come over and teach your crew to speak English?"

**Reti:** (laughs) Yes.

**Jacobs:** And Jack said, "Okay." So Sandra and I started, two days a week, to teach his crew English.

**Reti:** This was in Pescadero?

**Jacobs:** In Pescadero. He had a farm labor camp. He had about twenty to thirty men living and working there. About a week later there were more than thirty people there. And about three weeks later, the place was jammed with people. It was standing room only for this class. I had moments of wondering if I should have become a comedian or an actor, or something. I was having so much fun. I never took a class in teaching a language, but I realized from learning a second language, that the way you do it is by using it.

**Reti:** The immersion approach.

**Jacobs:** Immersion. We'd bring shovels, irrigation equipment, and tractor parts. We'd tell people the first thing you did in our class was stand up and sit down four times. (laughs) I mean, you'd raise your hands and you'd get the shovel. You'd bring the shovel over here, and you'd go dig a hole. And that was it. We

didn't speak any Spanish. We only spoke English. It was a lot of fun. The group was great. That went on for a while. At some point the classes got taken over by other people in the community. It became a bigger thing, and moved to the elementary school, which provided classroom space.

Then Jack went broke, and his farm closed down. I didn't know about that until thirty individuals showed up at our farm looking for work. All the guys from the class: "Hey, Larry, Sandra, do you have any work?" We're out there, working away, and thirty guys show up looking for work—(laughs) What are you going to do? I said, "We're barely making enough to pay the taxes here and pay ourselves. I don't want the responsibility of this big, whole crew." One guy, Enrique, stayed. We said no, but he stayed anyway pulling weeds and hoeing. I said, "What are you doing?" He said, "Hey, I'll show you, you need to hire me." So he became the crew. A friend, or his brother, came, and it grew from there. Now there're more people than I want to count working for us. Enrique today manages three farms. He's become computer literate, runs a pretty good-sized crew, and has a nice house on the farm. His son graduated from high school and is going to junior college, and does our import and export management. His daughter is planning on going to college.

**Reti:** So tell me about Jacobs Farm now. How many acres do you have, and tell me generally what you grow.

**Jacobs:** We farm 240 acres in California, in two counties—Santa Cruz County and San Mateo County. We lease land from state parks, at Wilder Ranch State

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Park and from Cal Poly [San Luis Obispo] up in Swanton Valley.<sup>5</sup> We have greenhouses in Watsonville, and the original farm in Pescadero, plus we lease land from the Peninsula Open Space Trust in Pescadero, and a small farm from Ron Duarte. The Duarte family owns Duarte's [Tavern and] Restaurant in Pescadero.

The farm in California is run and managed by a very capable manager, Kirk Jacobson, who we were fortunate to bring on the team and has been an integral part of the company and farm's success.

It started as this small little family operation, and still maintains the family aspect, but the family has grown. In order to maintain ourselves as viable and sustainable economically, we felt the need to expand and grow with the market, the increasing demand for culinary herbs, and to be able to fill the requirements of customers who said, "If you aren't able to supply us, we'll go to somebody else."

In 1985, Helen Nearing visited. She was en route to some kind of self-awareness course that she was taking through an older couple of her generation, in Barra de Navidad in Mexico. She was going to come stay with us, and we put her right to work. And then she was going on down to Mexico. It was wintertime. We were pretty much done for the season. We had harvested a crop of elephant garlic that we were marketing to Orchard Supply Hardware as a multi-use crop. You could plant the bulb as a seed; you could harvest the stock for your omelets; you could use the flower as an ornamental. We were cleaning and putting up the last bit of

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elephant garlic. We'd store it over the year and send out orders to Orchard Supply Hardware as they came in. And I said, "Helen, you want to drive? We'll drive you down there. You want some company?" She said, "Sure." So the three of us (we had a little Honda Civic) drove down to Barra de Navidad, stopping along the way. There was a little tension between us. Sandra and I were used to a sleeping bag and just parking the car, and Helen felt more comfortable in a small hotel. We accommodated Helen.

**Reti:** She must have been in her eighties by then.

**Jacobs:** She was eighty-six. But you wouldn't know it. She was a spry, tough gal. So we went all the way to Barra de Navidad. Her workshop was two weeks, but after a week of laying on your back and feeling the ground hold you up, I was ready to leave.

**Reti:** (laughs)

### **Del Cabo Farms, Baja California, Mexico**

**Jacobs:** I had always wanted to drive up the Baja California peninsula. So we took a ferry from Mazatlan to Cabo San Lucas, and drove to San Jose del Cabo, interested in farms, because we were farming. Instead of spending our time going to beaches, we walked and looked at farms. It was clear to us that there were lots of little farms, and they were good farmers, [but] that they had the classic problem of a very small, isolated market. When one person had cilantro,

they all had cilantro. When one person had mangos, they all had mangos. They would all, because of the seasons, grow the same things at the same time. The sign going into San Jose del Cabo said the population was 10,000. The farmers made up a good part of the population, so—

**Reti:** So who's going to buy the cilantro?

**Jacobs:** Who's going to buy all your stuff? We enjoyed talking to these guys. Most of them were older than us, and we listened to their stories about what they were growing and the problems they had, and we enjoyed the landscapes. It reminded us a little bit of Guatemala because they were small, postage-stamp-sized plots. They were quarter-hectare or half-hectare, or it would be a half-acre or one-acre. A two-acre farm was big.

**Reti:** Was it desert?

**Jacobs:** It was in the desert. The desert was juxtaposed on the Sea of Cortez, and a mountain range behind you, and a lot of the farms were in the main drainage. They had wells that the government had developed. Concrete canals distributed the water. The old-timers would talk about how they used to split bamboo and move the water from artesian wells, from up the arroyo down to their farm, using bamboo pipes.

When we drove back, it hit us. There was something that resonated about the previous experience we had doing community development work in the western

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highlands of Guatemala and working with farmers who farmed on a very small scale. And then we saw a sign as we were driving up Highway 1 up the peninsula that said: “Pescadero.” We were an hour and a half out of San Jose Del Cabo. And we went, “Wow, Pescadero North, Pescadero South!” That idea dominated our conversation all the way back to California.

It didn’t take us long to go back and develop a little project. We stayed at the Hotel Ceci across the street from the church. It’s still there. In that little hotel room we wrote up a project proposal, which we gave to the director of rural development in a small, dark, dingy office full of cobwebs in the municipal building. He’s the governor today. The original proposal was to introduce organic farming practices to the growers in the area and link them to winter markets to fill a void in the organic marketplace.

**Reti:** Was anybody else doing that at that point?

**Jacobs:** No, not that we knew of.

**Reti:** And how was the proposal received by the local people?

**Jacobs:** The director’s name was Narcisso Agundez. Narcisso was interested in the proposal, and he thought it was a good idea. He introduced us to some of the growers at the time. He said, “Well, the first thing, I’ll introduce you to the president of the land management group, and a community leader for the farmers.”

**Reti:** Is this the *ejido*?

**Jacobs:** And that was the *ejido*. *Ejidos* were established after the Mexican revolution to give land back to peasant farmers, to *campesinos*. Land was expropriated from large haciendas or land that was not worth very much (and much of the *ejido* lands was worthless) was given to these *ejidos*. The *ejidos* were peasant farmers or small-scale farmers, individuals in these communities, who were entrusted to manage these lands.

And there were different schemes. Some *ejidos* managed them communally, so everybody did it together. Others divided them up into little parcels and drew a name out of the hat, and you got your farm. This piece was yours as long as you farmed it. When you stopped farming it, it went back into the pot for somebody else, if your kids didn't want to use it. In many ways, it was a great system because it preserved farmland. You couldn't buy it or sell it. But you could farm it; you could use it.

The *ejido* in San Jose had set aside a large parcel of land for communal use as pasture, and then they had parcels that were broken up for individuals to farm. They had some interesting experiences with people from the United States buying their crops. There was a man with my same first name, Larry. He was introduced to Angel Salvador, the president of the *ejido*, by the town mayor or *presidente municipal*. The *presidente municipal* introduced this American produce buyer to the president of the *ejido*. This gentleman was obviously well off, because he had a gold wrist band and a gold watch and was well dressed, and a



gold ring. He just looked like he had money, according to Angel. He wanted to buy their mangos and avocados. So the *ejido* went and got a loan to buy a truck (I think that's right), or they had a truck, and Larry bought several loads of their avocados and mangos, which they drove up to the United States and delivered to him. He paid them with a check. And the check bounced, and they could not get him to honor that check. Sandra and I showed up not long after that.

**Reti:** Ay!

**Jacobs:** And here's another—

**Reti:** Guy named Larry.

**Jacobs:** —guy named Larry. Except this guy named Larry didn't have any gold watch, and spoke a little country Spanish that put them at ease. Angel said, "We don't have anything. I don't know how much we have to use. We just got burned by this guy." But they set up a meeting with ten farmers in the room, at a table, a conference table at the ministry of agriculture's office, and I presented this plan to them: "Here's a list of crops that we could grow, and the way we're going to do the crops is without any pesticides and without any chemical fertilizers." I explained to them about organics. I explained to them why the forest is green, and why the desert is green, and that there're things in the soil that help these plants grow, that there's this whole ecology in the soil, and that we could learn how to manage this ecology in an agroecology system where they are, to produce crops for a market that they don't currently have, with no chemicals.

They were very polite, and there was not a single question. They agreed to try it. While that conversation was going on (this is over a three-month period), the president of this group came to me and explained this problem of this bounced check, and how he had borrowed money personally to pay all of his relatives and friends and neighbors for all the products that they had packed up and exported, because he had made the deal, and he felt committed. He borrowed money to pay everybody, and the person he had borrowed the money from was now saying, "You gotta pay me back. If you don't— I— You're gonna go to jail if you don't pay me back." So he told me this story.

I said, "Well, give me the check. Let me see the check." So I got the check, and I said, "Let's see what we can do." I called Western Growers Association in Southern California and explained to them what had happened, and they had some suggestions. Then we got the bank on the phone. My dad was living up here in Santa Cruz. I said, "Hey, Dad, I need some help with something here. Can you go into the bank and find out if they have funds for this check?" And he said, "They don't." And he said, "But I can monitor this account. I can find out when they do. I'll keep checking."

I began calling the other Larry and hammering him to pay these guys. And then we got the attorney from Western Growers Association to be threatening this guy. At the same time, my dad was checking how much money was in the account. One evening I got a call from from my dad, "There's money in the account." I said, "Go get it!"

**Reti:** (laughs)

**Jacobs:** And he cashed the check.

**Reti:** Great!

**Jacobs:** And I got a call from Larry, “Who stole my money???” [Jacobs bangs on the table] “Larry, it wasn’t your money. Bye.” This same person who took these guys’ money and never paid them went ahead and did the same thing in Guatemala with snow peas and snap peas. He was just a scoundrel. But that had something to do with creating some trust, when I gave Angel \$10,000 in cash for the bouncing check from “the other” Larry.

Years later, I learned that those ten individuals at that first meeting never told me what they really thought. They told me years later what they really thought. What they really thought was it was absolutely a crazy idea to try to grow any of these crops without any pesticides, that I had *no concept* of how challenging and difficult pest management would be and how many different insects they had in this tropical desert.

What they didn’t know was that we were to succeed that first year. We grew squashes, and green onions, and tomatoes, and a little bit of basil, some cilantro, and some bell peppers. The squashes did well. Everything did okay. But we managed to pull off the squash crop really well. Before we had done all this, because we had been going up to the San Francisco Market, we had developed a

relationship with two distributors in the Bay Area: one in San Francisco and a small one in Santa Cruz. And my wife Sandra and I went to Veritable Vegetable before we went down to Baja and said to Bu [Nygrens] and Mary Jane [Evans], “We’ve got this nutty idea. What do you think? And by the way, if you think it’s a good idea, tell us how many boxes of green onions you would buy per week, and how many boxes of tomatoes you would buy per week, and how many boxes of zucchini you would buy per week, because we’re going to go try to do this.”

So Bu sat down with us and was incredibly helpful, and spent a lot of time with her team. Gave us a plan. “Here’s what you can grow.” That’s a grower’s dream. You know, tell us what you’ll buy. So we planned this out with Bu, and there was a local distributor in Santa Cruz, Santa Cruz Trucking.<sup>6</sup> We did the same thing with them. We really didn’t have it thought out that well. How were we going to get it all up here? We certainly weren’t going to put it in our pickup and drive it up.

**Reti:** Yes. Veritable Vegetable wasn’t going to pick it up in Mexico.

**Jacobs:** They weren’t going to send their truck down to pick it up. But if it wasn’t for them it wouldn’t have happened, because they gave us a lot of impetus and support and encouragement to do it, and the guidance of what to grow.

But what nobody knew, what the growers didn’t know, was that that first crop was going to be wildly successful. And all those guys, they made more money

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than they ever had before. They never thought they'd make money growing squash. Here was squash that they never eaten: yellow squashes and sunburst squashes and crookneck squashes and these dark green zucchinis. They didn't eat this. They never saw any of these things before. We were into gourmet vegetables.

**Reti:** I'm a little confused about something. This might be going back too far, but wasn't there an indigenous tradition of agriculture, of growing things like squash in that area?

**Jacobs:** They would grow a light green, almost a gray-green zucchini. That is what they would eat. The tradition was they would have these big hard squashes that they grew. And that area had a lot of cattle culture, and the orchards, the little *huertas*, and groves. There were market gardens. They were feeding themselves, and they would sell the extra. The little bit extra they would take "downtown" to the little county market to feed— Remember, there was a sign on the road: 10,000 people. Ten thousand people, that's what that sign said.

**Reti:** And it's a long way to another populated area.

**Jacobs:** It was a long way. In San Lucas, there was a fishing camp, a basketball court, a little place to buy some cold beer, and a fish cannery. That was it. There wasn't much there. And the ferry terminal was there, so that was it. So they didn't know— They had never seen a sunburst squash, and they'd never seen the kind of tomatoes that we were having them grow there. They'd seen cherry

tomatoes because they kind of grow wild, but they never would think of growing them as a crop. Basil? They thought of basil as a stomach tonic, as a medicinal.

It wasn't that they were wrong, that there weren't a lot of pest pressures. There were a lot of pest pressures. All these squashes are susceptible to viruses, and the viruses are vectored by piercing insects and aphids and stuff. I was seeing the aphids coming in. I'd go, "Holy Toledo! What do we do here?" We were concocting all these new kinds of things. The guys would make jokes about it. We'd put together this mixture of sugar, seaweed extract, and milk that we'd spray on the squashes, on the leaves.

**Reti:** And how'd you get the idea to do that?

**Jacobs:** I was just trying to come up with a way to bring in more beneficial insects. I had read somewhere that the milk could have some effect on inhibiting the transmission of the virus, and I was trying to come up with some kind of protein, sweet protein thing that nectar-feeding wasps and things might go to. And who knows? I don't know if it worked or not. But we got a great crop.

**Reti:** So it's not like you had an agroecologist that you were calling up for advice on how to deal with tropical pests, or something like that.

**Jacobs:** No, we were flying by the seat of our pants. I had the experience from up here. We'd make up some soap mixtures. You couldn't get stuff down there. The

road had only been built a few years back. There wasn't much truck traffic back then. So it was what we could figure out. It made more sense for me to try to control these pests by attracting— I saw lots of beneficial insects in these fields and all around, so I said, how do I get this stuff into these fields? I'll just get something sweet in there. I know they— Sweet and protein, and I knew what some of these attractants were made of, so I was trying to mimic that, and at the same time to provide the seaweed extract I knew was good for the plant. And the growers said, "Oh, here comes Larry and Sandra again with their coffee concoction."

**Reti:** Oh, because it looked like coffee, café au lait.

**Jacobs:** Café au lait. (laughs)

**Jacobs:** And the joke was, I'd say, "Now, don't drink it!" Because we'd buy these big sacks of powdered milk, and these big sacks of sugar, and the seaweed extract, and we were mixing this stuff out in the field, and spraying it on. For whatever reason, it worked.

And we didn't have enough money to buy boxes. We were borrowing money from—

**Reti:** Oh, you mean boxes to pack up the vegetables?

**Jacobs:** They had some leftover wooden boxes from mangos, but the mango boxes were too big. We wanted little [boxes for the] squashes. They had a big stack of wood, and they weren't doing mangos anymore. I asked, "What about all those wooden boxes?" "But they're too big." "C'mon!" So we started making little boxes. All the guys got together, and we all had hammers and nails, and we're hammering together these little boxes. (laughs)

Then the next big problem was how do we get it up to the Bay Area?

**Reti:** Yes, I was going to ask you.

**Jacobs:** And then we saw the airplanes. I said, "Oh, there's airplanes." We went and talked to the guys at the airlines, and they said, "Great!" So we drove thirty or forty boxes of little squashes and tomatoes in little wooden boxes nailed together to Mexicana Airlines. And Mexicana put it on their plane (it was a 727) and flew to San Francisco. It arrived all over the belly of the plane. The boxes vibrated apart. The cargo guys (we're still good friends with the guys who were the cargo guys back then), it was the night crew, and they brought all this stuff in. It was just all over the place. And my wife—I don't know, for some reason or other, they lent her a hammer. They started nailing boxes together. And the guys from Mexicana Airlines came out, and they all started helping nail the boxes together. So they put all the boxes back together, put all the stuff back in the boxes, and Veritable Vegetable picked it all up.

**Reti:** That's a miracle.



**Jacobs:** It *was* a miracle that we survived that first shipment. (laughs) There was a lot of help from a lot of people. So all the beneficial insects must have liked our milk and sugar concoction. And certainly the people from Mexicana Airlines were— The guys, they were all Latin American and Mexican or Salvadorians, and so they wanted to see it work. And nobody in Cabo had ever— Nobody remembered exporting anything from there.

So we had to go to Customs, the head of Customs. The head of Customs had this office downtown in this old building with big, thick doors with these old metal latches. The latches were six inches high and would go across the whole door with a giant lock, and the kind of Halloween keys that you remember from when you were a kid. I don't know if you're old enough to remember this, but people who would work on typewriters would stand the typewriters up when they were done to clear the desktops. These guys all had typewriters on their desks. But I could tell they didn't use them very often because they were covered with cobwebs.

**Reti:** (laughs)

**Jacobs:** The head of Customs was an elderly gentleman by the name of Don Arturo Gastelón. I sat down with him and explained, "I'm working with these farmers, and we got a problem. We're ready to harvest, and we want to export." He's listening. He didn't say anything. And I thought maybe he didn't hear it, so I repeated it a little bit louder, because he was an elderly gentleman. All of a sudden his face lit up, and both arms went up in the air, and he shouts, "Great!"

This is great!" And he told me a story that they used to grow tomatoes in the thirties down there, and they would haul them from the farms on horses and mules down to the bay, and then row them out on boats. They'd pack them right there in town in boxes three layers high, green, 'Ace' tomatoes, in wooden boxes, row them out in the bay and load them up on these boats, and they would go to San Francisco. Some people in town still had the wrapping paper. They gave us the wrapping paper. "Hey, we still have the wrapping paper." So Arturo was really excited about it. I said, "Okay, what do we have to do? What does it cost?" He said, "Just come back when you're ready. Don't worry about a thing."

So (laughs) our first shipment was really something. We had to put it on a plane. The plane had a schedule. It leaves at a certain time. So, I didn't know how long it was going to take with Arturo, but he said, "When you're ready, come back." So I came back early in the morning, before the plane was going to go. I said, "We have"— I don't remember, thirty-five, forty boxes, "and here's what it is." I had a list of everything, what it was. He said, "Well, how much does it weigh? What's the name of each thing?" So I wrote that all out for him. Then he pulled out five pieces of paper and four pieces of carbon paper, plopped down the typewriter, rolled the five pieces of paper and the four pieces of carbon paper into the typewriter. And he made a provisional export form that had borders all the way around it, and blocks for putting in all the data. It was incredible.

**Reti:** He created the form right there.

**Jacobs:** He created the form. He used the small letter “m” to make these boundaries. It was artistic. It took two hours. And he was telling me stories and asking— We were talking. It was *more* than two hours. And now it’s starting to get close— I knew I had to get back to the airport. I had to get to the cargo office, and then to the airport. I went, oh, my gosh! I thought I got here with plenty of time. I got here early in the morning. And the plane leaves— I got to be over there at noon. It was getting to be eleven o’clock. I said, “Arturo, when are we going to get done?” He said, “We’re almost done.” Finally we get done. He hands it to me, and he stamps it three or four times [Jacobs taps the table four times to mimic stamping] and signs it. I say, “How much?” He says, “Nothin.’ Get goin.’” I had to run. I grabbed the piece of paper, and I dashed out of there—

**Reti:** [Laughs.]

**Jacobs:** —down to Mexicana’s cargo office, which was down the street. I’m just running as fast as I can. I get there. The guy says, “What took you so long? We can’t hold the plane for this.” And they document the stuff, and we all race up to the airport. We had the cargo at the airport. We go out, and we put the stuff on this trailer, and we load all the boxes on the trailer, and we rode out on the trailer, on the back of the little airlines tractor out to the plane, and we all got there and loaded it into the plane. And that was it. That was the first shipment.

**Reti:** Wow. I can totally picture that.

**Jacobs:** Yes. So I can't remember if I told you this. The guys said, years later, "We never thought you could do it. We just didn't believe it was possible to grow these crops without the pesticides."

**Reti:** Yes.

**Jacobs:** I had no idea that there was such a high level of skepticism at that first meeting.

**Reti:** But they had trust in *you*.

**Jacobs:** They had trust in something.

**Reti:** They were just, like, "Okay, we're gonna try this."

**Jacobs:** "We're going to try it." I remember some of the guys said, "Look, our fathers did it without the chemicals. And we can certainly try it." They chose ten individuals who felt like if it didn't work they wouldn't suffer too much. They would give it their best shot. It turned out that ten didn't participate that first year; seven participated. One fellow had a conflict with his water and he felt like he couldn't make a commitment, but the seven who did, did very well. And on our doorstep were thirty growers and their families, who said, "We want to do this now."

**Reti:** The next year.

**Jacobs:** Yes. I went back to Pescadero, and I put together packets of seeds and sent all the seeds down there and said, "Look, now you guys know how to do this. We've taught you how to grow these crops. We showed you guys the spacing. We talked about the beneficial insects." We had compost-making classes going on, and the importance of organic matter, and how to recycle. And we had a deal going with the county about getting the waste from the slaughterhouse, and we were working on getting the garbage, and the green matter from the gardens, and all this stuff going on. We had soil tests being done, and looking at, okay, what are good cover crops? We were growing corn and black-eyed beans as cover crops, and looking at how to manage the pH to get better crop growth. It felt like, gosh, we did a pretty good job; the thing was going. We'll just send them the seeds and off they go. We sent them the seeds. And we got back this call, "No, you gotta come back down here!" [Laughs and pounds the table] "You gotta come back down here."

**Reti:** Because they didn't know enough yet?

**Jacobs:** We thought they did, and we had a farm to run. We were going to seed the idea. It was theirs. We were going to show them how to get organized. We'd show them how to divide up the receipts. We set up this little equitable thing, and we thought this would fly. And they said, "No, you gotta come back down."

So we went back down, and it became a full-time endeavor for us. For many of those beginning years, Sandra stayed up here and made the connections with the

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different companies that were buying the stuff, and made sure things got off the planes right. We had a farm to run up here.

I was sucked into that all winter long. It was a great experience, because I learned about working in sandy soils, and different kinds of irrigation, different conditions in a different climate. It was a real eye-opener from the alluvial clay soils and the Mediterranean climate we were working with here. You know, there's nothing more satisfying than learning, and I never lost that curiosity I had when I was younger. I was still soaking it up, and there was lots of new stuff to learn, lots of new insects and different pest problems to solve, and how do you manage the soil fertility here?

Then there was the question about organics. To prove the organics we wrote up a little one-paragraph declaration. The declaration said, "I, Farmer José, swear on a stack of hoes that I'm farming organically and growing things without any synthetic chemicals. Here's the date. Here's my signature, and here is the witness." My wife or I would sign as a witness. Every year, we'd walk through and look at everybody's farms, and everybody would walk through, and everybody would fill out an affidavit, or a little declaration. It was very official. But what really worked was everybody understood that if you broke the rules, you ruined it for *everybody* because the people that you were selling this food to, the people who were eating this food, were buying it because they wanted food that didn't have any of these chemicals on it. And if you broke that trust, you would destroy your business. So there was enormous social pressure to maintain the integrity of the group. And the group began to understand the importance of

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organic food and their own health, and why that was important, and would give *you* the lecture of why growing organic was important.

**Reti:** So were they eating the food, too?

**Jacobs:** Yes, they would eat the food. They'd eat the food that they liked. We were selecting crops that were not usual for there. But they understood. They owned the idea of organic farming and the importance of it, and they were teaching other people.

It began growing very quickly. We set some metrics from our days working with small-scale growers in Central America and looking at poverty issues. That poverty thing is really powerful when you're young. It really impacts you if you grow up here and you've never seen it before. The first time you see it, you see it when you're young, it drops your jaw. We saw this as a mechanism for attacking the poverty issue. We wrote that right into the program, said: This is going to improve people's standard of living, and that's the reason for doing this. The metric was: What's the income per family per year? It started out at around three thousand dollars a year. There were some people with less and some people with more. And after  $x$  number of years it was thirty thousand dollars a year. So a family making thirty thousand dollars a year— And granted, that's their own labor in there, but it's pretty good. We were paying everybody in U.S. dollars.

**Reti:** So now you've been doing this for twenty-three years?

**Jacobs:** We started in '85; '86 was the first export, so twenty-two years now.

**Reti:** So give me a sense of the size, of the number of families now.

**Jacobs:** It's something between four and five hundred families now. Two years ago, the governor identified some other poverty-stricken areas that were agricultural, and one particular area that was really hard hit because the community there had made a living making charcoal from mesquite, and the environmental agency said that's not cool, and they limited the amount of mesquite that could be cut dramatically. Their livelihood was taken away, and so this became a very hard-hit community. They were going to have to leave. And the governor said, "Look, we'd like you guys to work in this community." They had given us this list of communities. We were reluctant because we already had a lot on our plate, but when we went and met the people in the community, we decided this would be a good thing to do.

**Reti:** Can you say where it is?



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**Jacobs:** It was in the middle of the desert—in the middle of the valley, the Santa Domingo Valley. It was east of a place called Ciudad Constitución, which is a big agricultural area about ten miles east and south of there. There were a couple communities there. Today they're growing cherry tomatoes, and they're part of Del Cabo. This last Christmas they had more money than they knew what to do with for Christmas presents for their kids. We got glowing reports from the impact that this had had. And they're working hard to make it a success.

What it has evolved into is many different groups. There're now eight different farm groups up and down the peninsula—starting with San Jose del Cabo, going all the way up to Ensenada.

We've tried to select communities that had financial, economic needs and didn't have the wherewithal to do something on their own. There've been other growers that are medium or larger-sized who have expressed interest in joining the organization and being part of what we're doing. And we've seen them as complementary because they've allowed us and helped us to offer a wider selection of products to the market, and make it easier for a customer to come in with a truck and load more things, which was good for everybody.

**Reti:** So some of it's trucked now? It's not all shipped by airplanes?

**Jacobs:** Now most of it's trucked. We still fly a lot of basil. You can no longer ride with the product to the site of the plane and load it up yourself. All the new

security stuff they put in place on both sides of the border has made it much more difficult.

**Reti:** Is this since 9/11?

**Jacobs:** Since 9/11. So we're trucking. And the size of the operation, the size of the organization, I think we've got something like three or four thousand hectares. The number of hectares moves a little bit, of how much are being planted or ready for cultivation, based on the year, and if you count cover crops or don't count cover crops, and that kind of thing, but it's between three and four thousand hectares. That produces a lot of organic food, I mean, trucks and truckloads of organic food for people, and a lot of families. There are four to five hundred families directly involved in the growing, plus other families involved in packing and the shipping and the logistics. There are accounting people now, and it's— It's a business.

**Reti:** It's not you running out on the tarmac waving your piece of paper.  
(laughs)

**Jacobs:** No, if anything I've become more of a cheerleader and an orchestra conductor, and trying to become better at showing other people how to orchestrate.

**Reti:** How does organic certification work for you?

**Jacobs:** Certification is being done by Oregon Tilth in Mexico. We're having Oregon Tilth do it in California so it's all done by one organization.

**Reti:** I was wondering why you didn't use CCOF [California Certified Organic Farmers].

**Jacobs:** We wanted to use CCOF, but CCOF was reticent about working outside of the state in 1987 or when— I can't remember what year third-party certification became required. When that became required, we went to CCOF. And they, at that time, were just sticking to California. Their focus was California. So we asked Oregon Tilth. And they, being from Oregon, were excited to get out of the rain. They said, "Well, sure, why not?"

**Reti:** (laughs)

**Jacobs:** I don't think they realized that Baja California wasn't closer. (laughs) But they came down, and they did a great job. These guys came off the plane with their clipboards in hand. They went right to work, and worked from dawn to dusk, because it was a heck of a lot of work. They went to every single field, no matter how small. It could be a quarter of an acre. They went to every single field, and they scrutinized *everything*. And these guys came back covered with— I mean, they looked like they were farming. There were two of them. We realized we needed somebody on our end. When I saw how much work this was, and how much paperwork they wanted, I said, boy, we better hire someone who knows how to do this and can focus on it. And we ended up hiring one of the

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inspectors from that trip, John Graham. John lives in San Jose del Cabo. And he's been overseeing our certification ever since. He's done a great job teaching a lot of people how to do the certification, and the importance of certification, and how to do it right, and has passed a lot of that on to younger counterparts in Baja, who now do a lot of it themselves. He still oversees it, and checks it, and makes sure somebody doesn't get the paperwork wrong, or, "you forgot you need a map. That map's not good enough."

**Reti:** He did that first certification?

**Jacobs:** Yes.

**Reti:** And then you have European certification, too?

**Jacobs:** Through Oregon Tilth, we have the reciprocating certification going into Europe. Some products are flown to England.

**Reti:** Oh. So that brings up this provocative question that I have to ask you.  
(laughs)

**Jacobs:** The air freight question, right?

**Reti:** Yes. Well, you know, we're now in the middle of this big local foods movement: Buy Fresh Buy Local.

**Jacobs:** Yes.

**Reti:** How do you address people who say, “Well, I don’t want to buy my tomatoes from Mexico. People should be buying California tomatoes, or not buying tomatoes if they’re not in season.”

**Jacobs:** I empathize with that position. When we started shipping by plane, we were asked about that. The planes were going down there [anyway]. The planes were flying not to haul the tomatoes out. We were doing a pretty good job of picking and shipping. A lot of stuff was picked and shipped the same day. It would be in San Francisco that night, and be distributed that morning at three o’clock in the morning, and could be in the store the next day. That was pretty darn fresh. But what continues to happen as these planes are flying the tourists that are escaping the winter cold, those tourists aren’t taking big giant bags. Those airplanes had quite a bit more carrying space than just the tourists and their swimming suits, so we were making good use of what was already going up and back. We were carpooling. But instead of carpooling people, we’re carpooling boxes of basil and boxes of cherry tomatoes. So in a real sense, we were making better use of the jet fuel than was being done *without* the back haul, the filling up the belly of the plane with basil and cherry tomatoes. Of course, there’s an added plus in that people flying back on Alaska Airlines—today it’s Alaska Airlines; Mexicana is no longer doing that route—the Alaska Airlines passengers get a little whiff of basil on their flight.

**Reti:** (laughs) “What? I think I’m smelling basil. How can that be?”

**Jacobs:** We do a pretty good job of filling up those planes, and that's become a limiting factor because we've outgrown the space to a certain extent.

And the trucks are the same way. That whole tip of the Baja Peninsula unfortunately has become a magnet for tourism. It was targeted by the Mexican government to be developed as a tourist mecca. And it has become a tourist mecca. I forget how many thousands of people land there every day. And to supply that tourist mecca, there're trucks going south with supplies to these hotels. Those trucks look for stuff going back. So there is that part of it.

We have now gotten to the point where we're sending trucks up and down with our own loads both ways. So the other part of that question about the Buy Local is, some things you can't buy local, and you've got to make a choice. Do you give up your coffee or do you want to drink coffee? What about those local bananas? There's a whole list of things that just aren't local. The crops that we're doing in the wintertime, you can't get in New York or Boston when there's three feet of snow outside, or in the Bay Area. They just don't grow. If we make, as a society, a choice to not eat those foods, and to stay more seasonal, that will be fine. And the growers, the Cabo growers who have grown up with this thing, will be fine as well, because there is now a growing market there for their crops.

**Reti:** Oh, really.

**Jacobs:** And the world is changing. And this growth in tourism has done something. The government [in Baja California] doesn't have the same sense of

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open space preservation, or ag land preservation, and that forward thinking that we do. And there's a limited amount of water. The water that was used for the farm crops is from this very pure aquifer. It's somewhat abundant, but it's still a desert. This explosion of golf courses and hotels requires a lot of water, and they're pushing for more. I just last week reviewed a report from a young attorney who was on a committee reviewing a development project in Cabo. He handed me the report to look at. They're proposing that all the ag lands switch over to gray water and desalinated water so that the hotels and the golf courses can make full use of the fresh water. They want to marginalize the ag. The whole coast is destined, all the way up the coastline, for development, for these mega-hotel and tourist projects. It's— What can you say?

A few years back, we had gone to the ministry of agriculture and water management with a whole group of growers and their machetes and said, "No! This water is for ag, and you can't have it." And that worked. Everybody stood outside the offices, grumbling.

**Reti:** (laughs) With their machetes.

**Jacobs:** With their machetes, while a few people were inside negotiating. And then they came out, and everybody was going, "What happened?" They said, "It's okay. We've got the water." And everybody started cheering. So now it's happening again. They did some forward-thinking thing: they put in a regulation that said that the new hotels had to put in desalinators. But somewhere, that's gotten lost. And the committee that was reviewing some of this new

development stuff—there were some architects and some of the hotel guys and some community members and the ag community—so we were represented. The attorney that was showing me this was representing the ag community. He said, “Here is the committee’s recommendations. The committee’s recommendations say, “The gray water and the desalination for ag—that’s off the table. That makes the farming not work. And there’re food safety issues. This just doesn’t work. The desalination has to go to the hotels.” So, “No, take that part out unless—.”

The governor wants to designate some ground for organic. They want to create a state that’s organic. But at the same time they want all this tourism development. It just— It doesn’t jive. So we were all surprised at the recommendations from this committee that was set up by the government. When we saw the final study, the final recommendations to the state, they had tossed out all those things and had gone back to what they originally wrote. This is all in progress right now, and this fight is just beginning. I was in Cabo just a couple of days ago, and one of the last things we did was call the governor’s office, who, remember, was the first guy I met down there.

**Reti:** Yes.

**Jacobs:** I said, “Narcisso, I want to have a thirty-minute private meeting with you. It’s not about politics.” What I’d like to do is bring him up here, show him the Santa Cruz/San Mateo coastline and see if we can broaden his horizons a little bit.



**Reti:** Gosh! And we were talking earlier, before we started the interview, about how the women are involved.

**Jacobs:** Yes, not a large number, but there are several women who are growers, and who are shareholders in the growers association, and who grow cherry tomatoes, and basil, and zucchini, run their farms, and come to meetings and vote, and are articulate and participate. Just last week there was another group of women—there was some kind of a convention, a conference, and they were looking for other women who are entrepreneurial to participate. We had a meeting with them, and put them together with the women in the Del Cabo Co-op, who then put on their own exhibition at this conference of the crops that they grow.

People might think, Mexico—*machismo*. But even in the community that we were working in, there are some women who are growers, and participate, and have the same say as the men in the group.

**Reti:** I know that's true in the coffee-growing areas often as well.

**Jacobs:** Yes, that is true.

**Reti:** So I want to ask you if the recent growing of corn for biofuels in Mexico has affected Del Cabo?

**Jacobs:** The Del Cabo growers make their living growing Del Cabo basil, different kinds of cherry tomatoes—different vegetables, and mangos. They grow corn as a cover crop and they grow corn as feed for cattle. But this biofuel thing has an impact, in that the price of corn has gone up, so the price of tortillas has gone up, and there's some pressure on the price of fuel. In other parts of Mexico, the low cost of corn had pushed a lot of growers, small corn growers, out of the rural areas into the urban areas. And when they couldn't find work in the urban areas because what they predicted as large amounts of capital coming in and building an infrastructure and new businesses didn't materialize to the extent that had been hoped for, there was increased pressure northward. So it's contributed somewhat to the undocumented migrations in the United States. But the impact on corn in the Cabo region for the Baja growers has been very limited because they're not growing corn and competing with corn growers in the Midwest.

**Reti:** I see.

**Jacobs:** The Baja is somewhat of its own entity. The Baja struggle is going to be: Where is the marriage between tourists and the tourist industry, and the ag industry, and how do we preserve the integrity of the ag industry in the face of very deep-pocket investment in the tourist industry in these large, multinational development companies building mega-hotels? The pressure to develop is huge. It remains to be seen whether the ag industry will be able to argue its case well enough, to hold onto the water that it has, and the ground that it has. The ground's not so much [of an issue]. The issue is water.

**Reti:** So when you look at the future of Del Cabo, that's one of the big concerns you have?

**Jacobs:** That *is* a big concern right now. I just left it. We're right in the middle of it, and especially in that cape area, San Jose and going up a hundred miles—all the way from San Jose to La Paz. The plan that we saw is they're planning a city to eventually go from San Jose all the way to La Paz. That would be like—it's Los Angeles to San Francisco, basically, that kind of thing in their scale of things. I don't think that would be healthy for the society there. It would certainly not be good for the quality of life, and it would be detrimental to agriculture in the cape. I doubt that [ag] would survive it.

**Reti:** And it's all dependent on having cheap jet fuel for people to fly down there, forever.

**Jacobs:** Yes, if people can't fly down there or— I don't want to sound cynical or nasty, but we could use a real good recession. (laughs) Wake some people up a little bit. "Oh, we better not depend just on one industry. We better have a little diversification."

And they need to think local and have local food as well. Because if they wipe out their ag industry, they don't have anyplace else for that food to come from. For it to ship into the Baja, it has to come from mainland Mexico on a ship. It's like coming from California. When we first started, most things came down from California. If you saw canned food, it would be more likely be from the States

than from Mexico. Supplies came from California. There wasn't much to buy in Cabo when we started. It's changed fast.

**Reti:** We're not talking that long a period of time.

**Jacobs:** No. Just twenty years. And at the same time, the farm up here in San Mateo and the Santa Cruz Coast— We've been fortunate to be in a community and a society that values farming. More and more, there's an impetus to value farmland and to conserve those spaces that are required for farming. I appreciate how much we have here, and how lucky we are to live in a society that has these values, and has this forward thinking. I know that the farm that we have, that we lease from the state parks, at Wilder State Park, we don't have to worry that we will be kicked out for development. We'll always be able to farm that ground. And the ground that we have from Cal Poly up Swanton Valley, and the ranch that Jim Cochran farms from State Parks, and the land that we lease from POST in Pescadero—that land will, in all likelihood, in perpetuity be available for farming. So as new, young people are interested and motivated to grow food, there will be the natural resources for them to do it.

### **Peninsula Open Space Trust [POST]**

**Reti:** And you're part of Peninsula Open Space Trust.

**Jacobs:** Yes. I'm on their board. POST has done a phenomenal job of preserving open space and ag land in San Mateo County: 30,000 acres. Once you pave it

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over— LA Basin and Los Angeles County was once a rich agricultural area. The major production was ag. It was a huge ag county. It now grows automobiles and parking lots. It's all paved over. Silicon Valley was Santa Clara Valley. I remember in soil classes in Cal Poly they talked about how deep the soils were in the Santa Clara Valley. They were some of the deepest soils in the world. And the fruits, the stone fruits out of the Santa Clara Valley, because they were grown in climates where the fruit would ripen when it didn't rain, the fruits would ripen with high sugars and high solid contents. Their flavors were superb. Those fruits are gone.<sup>7</sup>

**Reti:** I've heard that you could drive over the summit of the Santa Cruz Mountains and you could smell the blooming fruit trees wafting up from the valley.

**Jacobs:** Oh, you can't get fruit that tastes that good. They were basically dry-land farming these fruits, so the fruits would ripen when it wasn't raining. They would ripen in the spring and the summer. When we grow tomatoes, we pull the water off of tomatoes and cherry tomatoes. Part of our secret for growing fruits that taste good is to concentrate sugars. You do that by castigating the plant as the fruits are maturing. Well, here the conditions were just happening naturally in incredibly rich, alluvial, deep, deep, deep soils. Not soils that are five or ten feet deep, but twenty, thirty, forty, fifty-foot deep. Now they grow something else, but those fruit trees are gone. Those crops are gone. And we'll never get them back.

## Mustard Biofuels Project

**Reti:** Tell me about your biofuels project that you're doing with Ken Kimes.

**Jacobs:** That started with Ken's nephew, Robert Van Buskirk. Robert's a scientist at Lawrence Berkeley Labs [University of California Lawrence Berkeley Laboratories]. Robert and a bunch of his cohorts at Lawrence Berkeley Labs came up with the idea of growing an oil crop for biodiesel in areas, and with resources, that did not compete with food crops. They were thinking of something that could grow with salt water in marshy, salty areas. They were interested in *Salicornia*, pickleweed. Pickleweed grows in marshes, saltwater, brackish water.

So Robert went and asked his uncle [Ken Kimes], who is an organic grower in Santa Cruz. He's a sprout grower.<sup>8</sup> He said, "Ken, who is the biggest organic grower in Baja? Because there's all that coastline and all that sunshine for growing *Salicornia*, and lots of salt water." And Ken suggested he talk with me.

So one nice day, Ken and Robert showed up on my doorstep in Pescadero. He lays out this idea of growing *Salicornia*. I said, "Well, let me think about it a little bit." I did a little research about *Salicornia*, and the more I looked at it, I thought, it has some merit. Here's a plant that grows in saltwater. There's lots of saltwater up and down the [Baja] peninsula, places with brackish water. There's land that can't be farmed. Okay, that makes sense.

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I made a few phone calls and I talked to some people in the state level. I called the guy who's the minister of agriculture, asked him about it, and I [ran into] the secretary of agriculture from Mexico City. And somewhere during this process, I thought about a crop that grows all up and down the coast here. It's a volunteer. It doesn't require any irrigation water. Mustard. It hit me on lots of different levels. I had this vision of golden yellow fields from San Diego to north of Marin supplying all diesel up and down the West Coast, regional biodiesel. I got a little carried away with the idea.

I called up Robert and Ken, and said, "Hey, you guys ever think about mustards? California? It's close to home. It grows with rains. Comes up wild." And then Robert, being the scientist guy, Googled it a few times and found that there's some people up at the University of Idaho who are working on mustards for biodiesel, and that Europe grows rape, thousands of hectares of it, for biodiesel. He e-mailed me back and said, "Let's talk about it."

And the focus changed to growing mustards. You drive up and down the coast in the spring, and there's lot of yellow flowers. A lot of them are mustard. The ones that aren't Oxalis up here are mustard. So we went and had a meeting with the researchers at the University of Idaho. We came back with more ideas. And we came up with the idea to get the growers together and form a little company. We were kind of thinking about what we did in Del Cabo. Our vision was to create a production base for a regionally supplied biodiesel.

We bought an oil press from China. We're growing mustard. We learned, [as] we got more and more into it, we had to create an economic incentive to grow the mustards. We went on a limb and set a price per pound for growers, so that they're motivated to grow the crop. And then we figured out it doesn't work with biodiesel, because the biodiesel only returns ten cents a pound. We had committed to twenty cents a pound.

It turns out that the byproducts from the varieties of mustard that the University of Idaho was working on have herbicidal and biocidal properties. So we have begun trials using the mustard seed byproducts to work out how to incorporate it into an agroecosystem for weed control in organic systems, and for biocidal controls. We've got ongoing trials with conventional and organic strawberry growers, to look at efficacy for control of soil diseases and yield impact.

**Reti:** Is mustard related to broccoli?

**Jacobs:** Yes. They're both Brassicas.

**Reti:** So this fumigation would work in a similar way to rotating broccoli with strawberry to control pests?<sup>9</sup>

**Jacobs:** Yes. We're looking at how to make products with the seed meal that work in an agroecosystem [to] provide organic materials and [provide] more tools for organic growers to control weeds, pests and soil diseases.



We've got the seed press set up in Pescadero at BJ Burns', a grower who is planting mustard.<sup>10</sup> And we've also been harvesting wild mustard. We combined five acres of wild mustard this last year, and are still waiting for the test results from the university. The oil quality was excellent. The advantage to the wild mustard is that it comes in a couple of months earlier, significantly earlier than the varieties bred by the University of Idaho, which is important for growers down here who want to follow the mustard with a summer crop.

**Reti:** You don't want to take your land up with mustard when you could be growing crops.

**Jacobs:** Right. A lot of it's being grown on dry-land ground. There's a winery south of Monterey; they planted a hundred acres as a dry-land crop.

We still got a lot of work to do. We've got a lot of trials going on. We're starting trials in Baja California with basil and tomatoes. There's a lot of work to do to figure out how to use this stuff, because to make it work for growing seed we need to bring more value than just the oil. So if we can add this value to the product, then the incentive will be there to turn the hills green with mustards for biodiesel [for on-farm use]. And the biodiesel burns pretty clean. As compared to corn, the energy return is good, because you don't have the high inputs of growing the corn that you do with growing the mustard. It's a very low-input crop.

**Reti:** So you're not having to spend a lot of energy to create the energy.

**Jacobs:** You're not having to spend a lot of energy to create it. You're dry-land farming it. We're trying to work on systems of doing it with no inputs. It's not very susceptible to any pests, so there're no pesticides. And the cross we did this last year, we did without any soil amendments or without any fertilizer, so we're going to have to look at that side of it as well, to make the yields work. But that's the direction we're going in.

**Reti:** Very interesting. Do you have anything you want to add before we end this interview?

**Jacobs:** That's always the last question of a good interviewer, isn't it? (laughter)

## Reflections on the Organic Farming Movement

**Reti:** "Is there something you want to add?"

**Jacobs:** And a good interviewee usually has the answer to that last question. You know, when you asked me about doing the interview, you said, "We're doing a history of organics," and in that framework of the history of organics, to reminisce about twenty years ago— We were so much a fringe of the agricultural industry. The ag adviser in San Mateo County told me, "Larry, you are nuts." The neighborhood grower said, "Oh, in few years, you'll learn. You're just young. You'll have to be spraying these pests." Noel Diaz, who must be in his nineties or late eighties and farms in Pescadero, I remember going over to his place, and we were leaning up against the fence, and he said— I wasn't sure he

knew who I was, because he was an old guy—he said, “Yes, I know who you are. You’re the young, nutty farm guy who’s doing it organic. What’s wrong with you, anyway? There’s nothing wrong with those pesticides. I can eat that DDT all day long, and it doesn’t hurt me.” Noel asked me not too long ago, “Hey, Larry. How do I get my farm certified organic? I stopped using the pesticides.” That’s how much it’s changed.

**Reti:** Why did he stop using the pesticides?

**Jacobs:** It’s just changed. One, they’ve seen— Those individuals who chose to go out on a limb and to farm organically before it was fashionable, at a time when it was considered fringe and kooky—those of us who are still doing it are doing pretty well. And many growers who stuck with the conventional—they’re still struggling. So they can see that there’s something to it. I think over the last twenty years there’s been a lot of information, education of the public. We had the Alar scare, and there’s been a lot of information in the media about organic food and the impacts of the pesticides, so that people have become better informed. So there’s been a paradigm shift in the ag community about organics. It was tough getting there. And you had to be stubborn to continue, because in the beginning you weren’t taken seriously. It wasn’t taken seriously.

I’m thankful for all of the other individuals and all the other growers and farmers that made it happen and stuck to it, because I don’t think that we would have an organic industry, and I’m not sure we would have organic food today, if there

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wasn't a committed and dedicated group of individuals who said, "We're going to grow organic food because there're a few people who want it."

**Reti:** One question that has come up a lot is: Why this area?

**Jacobs:** Why Santa Cruz?

**Reti:** Yes, why Santa Cruz? Why the Central Coast of California? Why is organic farming so strong here?

**Jacobs:** I'm just conjecturing that there was a university here, and that there were young people with new ideas. Rachel Carson's *Silent Spring* came out in the sixties. I'm sure that that was required reading in some of the classes at the time. There was the food co-op here. And the food co-ops that came out of college towns were often the basis, the beginning markets. They were the beginning market for the Santa Cruz organic food market. That became Community Foods, and that became Santa Cruz Trucking.

**Reti:** And that was one of your first markets.

**Jacobs:** That was one of our first markets. Of course, the Bay Area and Veritable Vegetable and Bu and Mary Jane—that was a bigger market and there were more people there. But some brave souls, or foolish souls, had to decide, we're going to show that this can be done, and we're going to do it. We'll figure it out. We'll figure out a way to support ourselves, and we'll figure out a way to have families

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and raise kids, but we're going to do it, and we're going to grow the food organically. That was before the word was defined, and that was before there were any regulations, and there was nobody checking. But that was because people who started it had strong convictions that they wanted food that didn't have the pesticides on it, and there had to be a better way.

So now we have it. We have an organic industry that's growing—what is it they say, twenty percent a year? On the produce side it's less [than for processed organic foods], but a significant amount of growth every year. And many of the conventional growers are looking at it seriously. My neighbors up in Pescadero, more and more of them are farming organically, and looking at it and open to it, guys that never would be before, and much of our land down in Salinas and Watsonville is growing lettuces organically. It's great.

**Reti:** Okay. Thank you so much, Larry.

### The Pesticide Drift Case

**Reti:** Today is June 10, 2008, and I'm with Larry Jacobs at the Jacobs Farm/Del Cabo offices in Santa Cruz, California. This is Irene Reti, and today Larry and I are going to focus on the pesticide drift case that began in—

**Jacobs:** In the fall of 2006.

**Reti:** So, Larry, please take me through what series of events happened where you detected organophosphate residue on the herbs at Wilder Ranch [State Park].

**Jacobs:** In October of 2006, October or November, we received a complaint from a customer that they had detected chlorpyrifos, which is an organophosphate, on a shipment of dill that was harvested in the ranch that we leased from California State Parks, at Wilder Ranch, just north of Santa Cruz, on the edge of the Pacific Ocean. And at that time, we did a recall on all the product that we'd shipped at that time. We went back and looked at where that product came from and identified that it had come from that ranch. The customer was Whole Foods, who does regular testing for incoming product.

**Reti:** I was wondering what kind of customer would be doing that sort of testing.

**Jacobs:** And they stopped ordering that product from us. It was a pretty significant customer for us for that particular item. We filed a complaint, a loss, with the County of Santa Cruz. And we immediately tested samples from the field and pulled samples from our other fields, and tested product that we had sitting in our coolers, for pesticide residues. In fact, that was the first thing we did.

Our first reaction was: Not possible. The Pacific Ocean is on our south (because the coast runs east and west there)—the Pacific Ocean is on our south; there is the Santa Cruz Mountains on our north, and there is a highway between us, and

then there is a big arroyo and lagoon on our west side, and beyond that is a Brussels sprout grower, but it's 300 meters or 300 yards. And on the Santa Cruz side, there is a pretty big wild zone that's several hundred meters or several hundred yards before another conventional grower. So it's not like a twenty-five- or fifty-foot buffer; there's hundreds of feet between us and anybody else, and then there's nobody in the direction that the ocean winds come from, and there is nobody on the north and south side of us. So, a pretty pristine spot. We leased that property ten years prior, and had fallowed it for three years. So there had been no pesticides used on it for ten years. So it was unimaginable and we thought there was a mistake. But when we pulled the samples, we picked up residues. And that's when we filed a complaint or a loss report with the county ag commissioner. And we— I'm trying to recall if we contacted the company that had been doing the spraying on the neighboring farms at that point or not.

What happened after that was the county ag commissioner came in, and they pulled some samples, and they were trying to figure out where it came from. Their samples confirmed the pesticide residues, the chlorpyrifos. There was chlorpyrifos and diazinon. Both are organophosphates. So here was another lab. So first we had the test results from the lab that's used by Whole Foods Markets, and then we had test results from the lab that we sent stuff to, which turned out to be the same lab that Whole Foods Markets was using, and the independent lab that the County of Santa Cruz used, or the state (I'm not sure who they use). And they all came up with the same results. They all had pesticide residues.

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So the county ag commissioner said, "You can't sell these crops." They did a big study, it was maybe ten, twenty pages, and the conclusion of their study was that there was pesticide residues, but there was nobody to blame for it, that there was no party that was responsible for it, and that we had to stop. They gave us the stop-harvest order, because those two organophosphates are not registered for use on dill or the other culinary herbs that we grow on that ranch.

We already had stopped harvesting those easily a month before they gave us the stop-harvest order, because our market is all in the organic market, and there was no permitted use [of these pesticides] in the organics. So we had stopped all harvest on that crop anyway, and on that farm, prior to the county giving us that notice.

At that point, we began testing every few weeks and every month to see, okay, when is this residue going to go away? Because after we checked with the organic certifier, they said, "This is a residue that came up from someplace else. When the residue is gone, you can then begin taking that product and putting it into the supply chain." And the county said the same thing. They said when there was no more residue, we could then harvest it

This was in the fall, so we did tests in November, we did tests in December, we did tests in January, we did tests in February, and all the tests were positive.

**Reti:** Wow.



**Jacobs:** We thought, well, when the rain comes, it will go away. It didn't go away. Let's water it more. Put some sprinklers on it; maybe that'll wash it off the plant. They didn't. The residues didn't go away until March. They were getting lower as time went on. And so in March, late March, we got some negative test results, and we did a few more tests and they were negative. So we began harvesting some of the crops that were still there.

**Reti:** And when you say "some of the crops," were there other crops besides dill?

**Jacobs:** There was rosemary there. And after the dill, we did our own sampling. We sampled everything on the ranch and found that everything on the ranch had pesticide residues on it, not just the dill. So it wasn't just isolated to the dill, it was just the dill was what triggered it. So when we did our own sampling, we discovered that everything was contaminated, so we stopped harvesting on everything. The county gave us a stop order a month later. And we weren't able to harvest anything off that ranch until late March. What we didn't know was, well, if we do plant that ranch again, will we ever be able to harvest anything off of it?

So we began harvesting some stuff in late March, and we continued doing some testing. We had brought in some equipment to take air samples. We got training on some equipment to take air samples, and we let the staff know that, "Hey, if you hear of any spraying that goes on (the spraying usually happens in the middle of the night, late night or early morning), let us know and let's get an air sample and see. And if we get a positive result from that, then let's test the crop

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also and see if we've now got a problem and we'll know to stop harvesting before we harvest it and put some product that shouldn't be on the marketplace, in the marketplace. Let's not do something that, one, is illegal and, two, is breaking the trust that we have with consumers and customers.

So we got a call at eleven or twelve o'clock at night from one of our field team members, and they said, "We see the spray equipment. They're spraying the Brussels sprout field on the ranch up the coast." So the next morning we took air samples. And sure enough, we got more organophosphates: diazinon and chloropyrophos. And we took plant samples. Darn if we didn't have more residues on the crop that was there. We had a short window when it was clean; now it was dirty again.

So at that point we realized we may not be able to harvest anything off this ranch. Let's plant some stuff, but let's cover ourselves and have some redundant plantings in some other places. We'll be able to sell everything if we don't have a problem. But if we do have a problem, we'll at least be able to cover all of our commitments. We won't be able to go out into our bigger sales, but the customers that we have to sell to, we'll at least be able to cover some of that. And what we won't be able to, we'll go out and be able to buy from other people. But at least we won't have the same situation we had in the fall, which was right before Thanksgiving we couldn't harvest anything on this ranch. We really had some serious problems about trying to supply people right at the time when they want the most herbs, Thanksgiving.

**Reti:** Oh, of course. Rosemary and dill and—

**Jacobs:** Thyme and sage. So we went ahead and planted. We were a little more conservative on the planting. We went heavier on our plantings on some of our other ranches, and kept testing. And we filed another complaint, and another loss, let the county know that there was another problem. And it became clear from the county— We asked the county, “Look, this had to come from somewhere. There’s not that many growers around here. It didn’t come from Monterey County. Can’t you tell somebody to stop doing this?”

**Reti:** But by this time you had known that there was spraying going on at the Brussels sprout field.

**Jacobs:** At this time we began some dialogues with the neighbors, and the neighbors were concerned about it. One neighbor had a sprout field pretty close—as close as they could be on their property, given that there was about a 300-yard distance between their closest field and our closest field to them. So it became apparent that the only way we were going to be able to farm that field was they were going to have to stop spraying on these neighboring farms and push back those organophosphates far enough so that there would be no risk of it coming on our farm.

It became pretty clear that no one was willing to— We couldn’t get anyone to commit to that in our conversations. They wouldn’t. They said, “We’re not going to do that.” At that point, we had the loss from the fall, which was a pretty big,

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six-figure number, and now we had the loss of— We still had to take care of this ranch and water this ranch. And we had gone ahead with some plantings, and we had still a lot of (because some of these crops are perennial) a large amount of potential herbs to harvest on that ranch that we would have harvested and sold if we didn't have the pesticide residues *again*.

So those pesticide residues continued throughout 2007, every month. Every time we did the test, we came up with pesticide residues. They didn't go away. They'd kind of go up and down, and they'd sort of track how much spraying was going on around us. What we learned from that is, despite the fact that we were farming in what appeared to be a very pristine environment, in the middle of a state park, on the edge of the Pacific Ocean, that we were living in a soup of pesticides—

**Reti:** Wow.

**Jacobs:** —and that all the people that are hiking on the trail in Wilder Ranch State Park—

**Reti:** Yes, that's what I'm thinking about.

**Jacobs:** —and all the pregnant women that would take their young kids on hikes on this trail were being exposed to pesticide residues. And nobody knew it. The public certainly didn't know it. State Parks' position was, well, if it's not hurting anybody, it's not an issue. But when we went back and looked at some more of

the later studies that were done on at what levels this stuff starts hurting you, what became clear was that these very low exposures do have a health impact, and they're especially alarming for women who are pregnant, for the unborn fetuses, and for young children whose nervous system is developing, because organophosphates affect your nervous system.

**Reti:** They're neurotoxins.

**Jacobs:** They're neurotoxins. Not good stuff. You don't want your kids to be exposed to it. You certainly don't want your unborn child to be exposed to it. So at that point—you know, we've got to stop this. We've got to stop this. We got to at least ratchet this up. This is a public park. And we have people working here, and we have women working here, and this is not okay. So I personally went—There's some farm labor houses there and the field teams—there's a couple of women there, some families there. I went and talked to them. I said, "This is what we found out. If they're spraying, you guys go. You take your kids, you go get a hotel room, and we'll pay for it. Don't be here. We don't want you around this when they're spraying this stuff."

Then we had some conversations with the company that was doing the applications. They were concerned about it, but there didn't seem to be the willingness to stop. There was also, well, sort of the dodging of who's responsible. And finally, from the growers' perspective, it was, "Well, how do we grow these crops? We can't grow Brussels sprouts without these materials. And it's not fair for us to try to grow these crops without these materials because

we have unfair disadvantage in the marketplace.” That was their position. Well, we could respect their position. The first thing we thought was, “We’ll go talk to these guys and ask them to switch over to organics, and if they can’t sell it, we’ll find a market for it, and we’ll do it for free. Let’s just get them off the chemicals.” We had some brainstorming about that. It turns out that one of the growers is doing some farming organically further up the coast. Then we had discussions about, can we trade some lands, and we realized that we really didn’t want to swap out the ground we had. We had quite a bit invested in it. There was some emotional attachment to that ranch because of how beautiful it was. We liked being in the middle of a state park with an organic farm. And the land that was being offered as a swap, we felt like it had some disadvantages, especially with water supply. So that wasn’t a viable option. We certainly didn’t feel like we should be penalized and have to take a piece of ground that wasn’t as good, with not as good a water [supply], so that we could be away from where these guys were spraying their pesticides. We didn’t do anything to damage what they were doing. We didn’t ask them to spray the stuff. And we certainly don’t want it to impinge on, or impede upon, or in any way infringe upon what they were doing. But at the same time, we’ve been here ten years. We’re doing something that’s not adding any more chemical load to the environment. Give us a break, you know? What do we do?

And so ultimately we decided we needed to file a lawsuit for trespass and nuisance against the company that was doing the spraying applications. I was very clear with the attorney: “We do not want to drag the neighboring farmers into this. The neighboring farmers are following the recommendations of the

company that's supplying them the materials to control these things. The decision that is being made [as to] what to spray, the recommendations are being made by this other company. The other company is doing the spraying, and we just don't want to draw— We know how hard it is to farm. We don't want to suck these guys into it!" And so there was a little bit of— You know, the attorney felt like we needed to, and I said, "Look, we're filing this lawsuit. They're not going to be included. That's it. There's no way. We're not including them in this lawsuit. We're not naming them in this lawsuit. End of story."

So that's the way we proceeded. As we're speaking, depositions are being taken. The discovery stage is going on, where we supplied the company that we filed this lawsuit against with all the lab tests that we had, all the communication we've had about this, all of our farming records and all our farming receipts, and anything else they want, how we did our sampling, how we calculated our farm losses, and gave them all the spreadsheets. And so then now they're deposing us and deposing our experts.

One interesting thing is a very bright woman who used to work for the Santa Barbara air quality control board or something like that—she did their air modeling, how materials move in the atmosphere. She's an expert in how molecules move around the air. We hired her to come out and said, "Okay, where did this stuff come from? How far away did it come?" So she was able to, with good science and using good mathematical practices and statistical stuff, say, "Ninety-nine percent of this stuff had to have been from within a mile and a half of your farm, and here's where it came from."

And it turns out that mile and a half limited it to two growers, to two other farms. So that made it really simple, where it came from, and it made really simple that it was all applied by this one company. It was pretty hard to argue with the science that she has. Her methodology is very good, and she's used it in other pesticide cases.

So that's where we're at with this thing. We don't have a date. We're expecting it to go to trial sometime in the fall, I would think, of this year.<sup>11</sup>

**Reti:** Now, what about the fog aspect of this?

**Jacobs:** So going back to why did we have drift— So let's just say a couple of good things about the company that was doing the applications. It's a very professional company. It's a very large company. It's Western Farm Services. They're owned by a big fertilizer company. These guys are professionals. They're good at what they do. We don't have any reason to believe that they applied these things during conditions that weren't appropriate, though you could always wonder about that, but we're assuming that they did everything right.

Organophosphates, the class of materials that they were spraying, vaporize after they're applied.

**Reti:** Ohhh.



**Jacobs:** So they move off the plants. And they move off the plant, and when fog moves in and out, when water droplets move in and out, water droplets can pick this stuff up. The water molecule can pick up these gases and move them with the fog, and so when conditions are right, and the fog can condense back out and dew on a plant, now you have a pesticide residue someplace else, not where you sprayed the pesticide.

**Reti:** So even though you're paying attention to the wind conditions and things like that, the fog is a whole other method of spreading it.

**Jacobs:** The fog is another medium for moving this stuff, and it can happen, you know, the next day after you've sprayed it. Today's pesticide label is pretty clear about how you spray it and the droplet size. You can't have windy conditions, or you need a little bit of wind but not too much, and what crops you can spray it on, and how you're supposed to spray it so it's safe. But it doesn't say anything about if there's foggy conditions, you shouldn't spray it because it's going to move. It doesn't say anything about the fact that these are materials that vaporize and move after they're sprayed. And our pesticide regulations, the working definition of drift, spells out, says—it's written down to exclude the movement of materials from vaporization, from gassing off, or moving with dust. So our agencies, our public agencies, exclude, don't consider chemical drift, pesticide drift, this medium of movement of organophosphates.

It turns out there's been lots of studies on this stuff. In fact, there's an old study going back to the eighties at Wilder Ranch, when the State Parks picked it up, to

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determine what the risk was. It says there's this level of organophosphates that's coming off these Brussels sprout fields.<sup>12</sup>

**Reti:** And so organophosphates, in particular, vaporize and other kinds of pesticides do not.

**Jacobs:** Not all pesticides vaporize and have the potential to move away from where they were sprayed after being applied.

**Reti:** I see.

**Jacobs:** These chlorpyrifos and diazinon are two that vaporize, that will move after they're sprayed, and they can be picked up in fog and re-deposited another place. So it raises all kinds of questions: How big a setback do you need between a place that applies organophosphates and a sensitive area? Well, a sensitive area, an organic farm— How big a setback do you need to have to have crops that the consumer is buying because the consumer is looking for crops with low pesticide loads or no pesticides, and ideally no pesticides. So how do you grow a crop with no pesticides on it, if a guy a half-mile away sprays an organophosphate, and it moves a mile and contaminates your crop? If you're going to set up setbacks for farms, who gives up that one mile of space? Is it the organic farmer that needs to give up that one mile? Or is it the conventional grower who gives up that one mile? How big should those barriers be?

It raises the question of: who has to go? At one point the judge said, “Well, I might have to decide based on who’s been there longer.” We’ve been there ten years. “Well, the conventional farmers have been there two and three generations—you’re just going to have to leave.” Well, where are you going to grow crops? How are you going to farm organically? Where are you going to find land, good ag land, if it’s not in an area that’s agricultural? In an area that’s agricultural, if the organic industry is a small percent of the overall ag industry today, it means you’re going to find ag land for farming, for growing crops organically, where there’s other ag land. That means you’re going to have people applying pesticides in your neighborhood.

**Reti:** Right. So as we see the growth of organic agriculture, we may see the increasing kinds of land use conflicts like this.

**Jacobs:** There’s going to be more and more of this bumping-up stuff. And in fact, there’s probably already a lot of it. It’s just, how many people are testing for it? We weren’t testing for it until— Now we test. Now we’re testing everything we grow on all our ranches, both in California and this Del Cabo stuff from all our different co-ops and different growers, the small growers that we work with. We’re bringing these crops up, and we’re spending a lot of money doing pesticide tests as well as doing all the food safety tests. We’ve been doing the food safety tests for almost ten years now, but now we’re also doing the pesticide tests, and the pesticide tests are expensive.

**Reti:** I bet.

So you wrote an editorial, an op-ed piece in the *Santa Cruz Sentinel*, June 10<sup>th</sup>—actually, exactly one year ago.<sup>13</sup>

**Jacobs:** Yes.

**Reti:** (laughter) That's weird timing. I didn't realize that. Okay. So what kind of reactions did you get to that editorial?

**Jacobs:** There was a flurry of e-mails from Santa Cruzans expressing their concern about the pesticides drifting in the community. Obviously if we're getting drift at Wilder State Park, there's a high likelihood that it's getting into the Westside of Santa Cruz.

**Reti:** Yes, yes.

**Jacobs:** As one individual wrote, he'd been concerned about this for a long time, and he was hopeful that something may come of this to mitigate this problem. Other people expressed similar concerns. One reaction that was interesting was a response in the editorial section by Mary-Ann Warmerdam. She's the director of the California Department of Pesticide Regulation. And she wrote a counter piece, criticizing what I wrote. She attacked it. What I wrote in my op-ed was mostly data from the Department of Pesticide Regulation. It was science stuff. I was flabbergasted at her response, but she was defending the Department of Pesticide Regulation [saying] they were doing something about it. And here, several months had gone by and nothing had happened, and now we'd had this

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fall incidence, and we had asked them to do something, and the county authorities came out and said there was nobody responsible and told us to stop harvesting, and then the problem continued. And we said, “Stop the pesticides.” We were frustrated.

**Reti:** Sure.

**Jacobs:** So out comes the op-ed piece that I write, which basically said: Here’s the facts: this stuff moves a long distance. These things move in fog, and our regulations don’t define drift to include this kind of movement so they can’t find anybody who’s responsible for it because it’s not considered chemical drift. We need a change in our regulations so that this is included. Because it’s moving. These chemicals are moving. Maybe I can’t use the word “drift” because it’s defined by the state as [having to] be blown with wind, but—

**Reti:** So “drift” has a real specific meaning.

**Jacobs:** In the context of the industry. But I’m not sure what’s a better word to use, because it’s certainly moving. Because we now have a test that was done by the county ag commissioner, we have the test that was done by our customer, and we have a whole series of tests that we’ve done by a certified lab. So you can’t tell me it’s not moving. It raises all kinds of [questions]. Who’s responsible? How do you stop it? How do you grow organic crops in proximity to conventional crops if they have to use these materials? How can the conventional

growers manage their fields to be good neighbors with the organic growers? And there're no good answers.

**Reti:** Have any legislators, like John Laird, taken an interest in this case?<sup>14</sup>

**Jacobs:** John Laird was very supportive. We wrote letters to all our legislators, and John came forward to look at the legislation and see how can we make a change in this. So all this stuff is being talked about. What I learned about it is, is that the way the labels for the chemicals are, that nobody says that this stuff moves after it's being sprayed. And nobody wants to say, "You're responsible for it if it moves after you spray it." And the reason for that is: How do you control it? So basically, the defense is, this is an act of God. And the answer to that is, excuse me, but bullshit.

**Reti:** [Laughs.]

**Jacobs:** The science has shown that this stuff moves. So you can't say it's an act of God because of your ignorance about it, because in fact, in court you said it can move fourteen miles. So let's get real. Let's either say you can't use this stuff, which would be—which is my opinion: we shouldn't be able to use this stuff because the science says that it's a risk for fetuses and for young children, and it's causing problems. In fact, there was a very interesting letter written to Director [Stephen L.] Johnson of the EPA in May of 2006. The letter was from the staff at the EPA, basically the scientists and policymakers, the guys that make the recommendations with the EPA. It was the Local Presidents of EPA Unions

[representing scientists, risk managers and related staff.]<sup>15</sup> It said, “Dear Mr. Johnson, We think that we need to look at these organophosphates. The science is showing that this stuff is hazardous to the public health and that we think it would be a breach of the public trust to renew the registration of these materials.”

**Reti:** Wow.

**Jacobs:** Johnson renewed the registration of the materials. This was a strong letter. When you read this letter, it’s like: Holy shit! And then they re-registered the stuff. So you just begin to wonder, who makes the rules, and why do they get made in such a way? Here the science is showing that the stuff is not good—these are not good materials to have floating around in our environment. And yet the director of the EPA just re-registered them. I thought the Environmental Protection Agency was the protection agency.

We sort of got the short graduate course in pesticide drifts and these organophosphates that vaporize. It was not part of what I was hoping to learn about and be part of as an organic grower, but it was a good lesson, and I’m hopeful that something positive and good will come out of it in the end.

**Reti:** So what’s been the response of your neighbors to this lawsuit?

**Jacobs:** Well, we’ve had a lot of contact with one of the farmers, to the west of us, Billy Rodoni. And Billy’s been bending over backwards to try to figure out how

to continue his farming practices, continue his farming operation, and not impact our organic farming operation. He's really worked hard to try using some other materials. He's been really open to other ideas and wants to find a way to continue doing what he's doing and not impinge upon what we're doing. It certainly was not intentional on his part, the losses that we suffered because of the pesticide drift. And we didn't want to put our neighbors and Billy in a difficult situation, either, any more than they wanted to cause us damage. But the problem that our neighbors have is how do they grow Brussels sprouts? And one of the things that I didn't understand, but I do now, is that our neighbors' primary revenue, income, is from growing Brussels sprouts. Yes, they have some other crops—because that was one of the things that we suggested, was, “Well, why don't you grow some of these other crops?” But Brussels sprouts—they're Brussels sprout growers.

**Reti:** And this is a great area for Brussels sprouts. Historically, the North Coast of Santa Cruz County has been an area for growing that crop.<sup>16</sup>

**Jacobs:** This is a great area for Brussels sprouts. So, “We make our living growing Brussels sprouts. Sure we grow some pumpkins, and sure we grow some other crops, but the big part of our crop is Brussels sprouts.” And to grow Brussels sprouts, and the specifications going into the freezers are that they have very little tolerance for any insects on them. So how do they compete? In order for them to grow their crop, they need to be able to grow their crop and harvest it with almost no insects when they take their crop to market, or they take it to the freezers. How do they do that and compete economically with everybody else in



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the North Coast and in Monterey County if they can't use the two most effective materials that they have available to them, which were these organophosphates, the diazinon and the chlorpyrifos? And when you go to the UC Davis website and [ask] "How do I grow Brussels sprouts?" and they talk about pest control, they recommend using the chlorpyrifos. That's what our University of California recommends for controlling the cabbage aphids.

There are three major pests. There's the cabbage aphid, diamondback moth and cabbage maggot. So it's a difficult situation for these guys, and as much as our neighbors want to find a different way to do it. In fact, they've agreed to stop using these materials, the ones that we've identified as being a problem that we've picked up, for 2008 within a mile and a half of our ranch.

But to be good neighbors and in the spirit of trying to help these guys make some kind of transition, we said to them, "Look, guys, don't use these materials that we know cause a problem. Why don't you guys show us lists of stuff you could use, and we'll go through it." So we went through the list of stuff that they thought they could use, and there was a couple of nasty things in there. And we looked at it and said, "Well, what's the risk of these side things vaporizing off and us detecting them and having some kind of residue on our crop?" And after we looked at that list and had some other people look at it, we thought: There's a couple of things in here that are a little bit questionable, but it's probably much less of a risk than what we have. So let's go ahead and tell them that it's okay. And so we did. So at least that was a process as of last week. So we're trying to

extend ourselves a little bit, to understand their situation, and the reciprocating thing is: Stop using those materials that we know are a problem.

**Reti:** Does anybody grow Brussels sprouts organically? I was down at Live Earth Farms [a CSA farm], and they had a very small plot.

**Jacobs:** There are some small amounts of production of Brussels sprouts organically.

**Reti:** But you would have a significant handicap in the market.

**Jacobs:** The problem the conventional guys have is, how do we grow these crops economically, given these pest pressures that we have, if we can't use these materials?

**Reti:** I understand.

**Jacobs:** Their position is: Take it away from everybody, but don't just penalize us. And our position is: Look, we're not trying to penalize you, but let us do the farming that we're doing, because we're not using any of these pesticides.

**Reti:** Well, thank you, Larry.

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<sup>1</sup>Everett Dietrick was a pioneer in the field of Integrated Pest Management and biological control. He died on December 23, 2008. For interviews with "Deke" see [http://www.rinconvitova.com/dietrick\\_interviews.htm](http://www.rinconvitova.com/dietrick_interviews.htm)

<sup>2</sup>According to the website for The Good Life Center at Forest Farm, which carries on the Nearings' legacy at the site of their last homestead: "In 1932, at the height of the Great

Depression, Helen and Scott Nearing moved from their small apartment in New York City to a dilapidated farmhouse on 65 acres in Vermont. For over 20 years, they created fertile, organic gardens, hand-crafted stone buildings, and a practice of living simply and sustainably on the land. In 1952, they moved to the Maine coast, where they later built their last stone home. Through their 60 years of living on the land in rural New England, their commitment to social and economic justice, their numerous books and articles, and the time they shared with thousands of visitors to their homestead, the Nearings embodied a philosophy that has come to be recognized as a centerpiece of America's "Back to the Land" and "Simple Living" movements." <http://www.goodlife.org/wordpress>

<sup>3</sup> Eliot Coleman is the author of *The New Organic Grower* (Chelsea Green Books 1995), *Four Season Harvest* (Chelsea Green Books 1999), among other titles. According to The Four Season Farm's website, Coleman "served for two years as the Executive Director of the International Federation of Organic Agriculture Movements and was an advisor to the US Department of Agriculture during their landmark 1979-80 study, *Report and Recommendations on Organic Farming* [http://www.fourseasonfarm.com/main/about/about\\_eliot.html](http://www.fourseasonfarm.com/main/about/about_eliot.html) Also see the oral history in this series with Nancy Vail, who apprenticed with Eliot Coleman.

<sup>4</sup> See F. H. King, *Farmers of Forty Centuries: Or Permanent Agriculture in China, Korea and Japan* (Madison, Wis., Mrs. F. H. King, 1911.), reprinted as *Farmers of Forty Centuries: Organic Farming in China, Korea, and Japan* (Dover Publications, 2004).

<sup>5</sup> The Swanton Pacific Ranch was donated to Cal Poly, San Luis Obispo 1993 by Al Smith, a Cal Poly graduate and founder of Orchard Supply Hardware. The ranch provides Cal Poly students, faculty, staff and the public "with a unique interdisciplinary environment in which to foster the 'Learn by doing' philosophy by providing educational experiences on a working ranch, supporting diversified agriculture and forest resources while maintaining the integrity of Ranch operations." See <http://www.spranch.org/about.ldml> for more on the Swanton Pacific Ranch.

<sup>6</sup> See the Ken Kimes and Heidi Skolnik oral histories for more on Santa Cruz Trucking.

<sup>7</sup> See the oral history in this series with Betty Van Dyke for more on the history of fruit farming in the Santa Clara Valley.

<sup>8</sup> See the oral history with Ken Kimes in this series.

<sup>9</sup> Broccoli is used in rotation with strawberries for the same reason the mustard meal should work to reduce disease incidence—Larry Jacobs.

<sup>10</sup> See <http://www.californiacountry.org/features/article.aspx?arID=251>

<sup>11</sup> On September 25, 2008, a Santa Cruz Superior Court jury awarded a one-million-dollar settlement to Jacobs Farm. See "Santa Cruz Organic Farm Wins Pesticide Suit," *San Francisco Chronicle*, September 30, 2008. Western Farm Services is expected to appeal the ruling. On December 1, 2009, partly as a result of Jacobs' lawsuit, the Environmental Protection Agency convened a panel of scientific experts to evaluate the hazards of pesticide drift. See <http://www.californiacountry.org/features/article.aspx?arID=251>

<sup>12</sup> See *Monitoring Pesticide Use in the Wilder Ranch State Park, Santa Cruz County, 1982*, Environmental Hazards Assessment Program, State of California, Department of Food and Agriculture, Division of Pest Management, Environmental Protection and Worker Safety, EH\_94-02 <http://www.cdpr.ca.gov/docs/emon/pubs/ehapreps/eh8402.pdf>.

<sup>13</sup> See "New Rules Needed to Protect Organic Farms from Pesticide Drift," *Santa Cruz Sentinel*, June 10, 2007.

<sup>14</sup> John Laird was representing the 27<sup>th</sup> District of California in the California State Assembly as a Democrat at the time of this interview.

<sup>15</sup> See "Letter Sent to EPA Administrator Stephen L. Johnson by Unions Representing 9000 EPA Scientists" [May 24, 2006] <http://www.mindfully.org/Pesticide/2006/EPA-Pesticides-Pandering26may06.htm#1>

<sup>16</sup> See Randall Jarrell ed., *Jack L. DeBenedetti, Jr.: Brussels Sprouts and Artichoke Growing on the North Coast* (Regional History Project, University Library, UC Santa Cruz, 1997).