



Organic
Connections

JAN-FEB 2014

THE AWARD-WINNING MAGAZINE OF NATURAL VITALITY

CONNIE GREEN
THE **FINE ART OF**
WILD FORAGING

LOS POBLANOS
BEAUTIFUL,
ORGANIC NEW MEXICO

MICHAEL HANSEN, PhD
THE **GMO TIPPING POINT**



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Can Enthusiasm Go Viral in 2014?



Enthusiasm is contagious. I was recently checking out at Whole Foods Market and the cashier commented on something my wife and I bought. She had used it in cooking and really enjoyed it. By then, the person doing the bagging joined in and offered a recipe. For a moment the customer-employee relationship vanished, as did the fact we were in a

business transaction. There were just people having a fun conversation over a shared interest.

On a crowded airline flight, one of the Southwest crew really made an impression. It wasn't what she said, which wasn't unique, and she was not one of the clever comics who make funny announcements. It was *how* she said it. We've all heard scores of one-dimensional how-are-yous and thank-yous, which might as well be automated recordings. In *this* case, the same words took on a three-dimensional quality that made you feel there was someone in that uniform who actually wanted to know and wanted to thank **you**. This type of real interchange happens so infrequently, especially in a mass service setting, that it really makes you take notice. It also makes you feel good, like coming home and being greeted by a happy puppy who had been waiting for you so that he could share his happiness.

Apparently, happiness can be found anywhere. Maybe it isn't found. Perhaps happiness arises from within and is "found" when it's shared.

It is certainly easy to share irritation while performing tasks that we may consider uninteresting, boring, tedious or stressful; but somehow these strangers doing repetitive work ended up making me feel better. Ralph Waldo Emerson wrote, "In the order of nature we cannot render benefits to those from whom we receive them, or only seldom. But the benefit we receive must be rendered again, line for line, deed for deed, cent for cent, to somebody." Seems like good advice for a new year. Wishing you all the best.

Ken Whitman PUBLISHER



In this issue



Organic Connections magazine is an award-winning publication brought to you by Natural Vitality—a purpose-driven human nutrition company. Our core belief is that you can't be fully healthy in an unhealthy environment. We publish *Organic Connections* to help inspire and educate readers with profiles of people working to make our world healthier and more sustainable. To learn about Natural Vitality's broader mission and our Natural Revitalization environmental action initiative, visit www.naturalvitality.com.

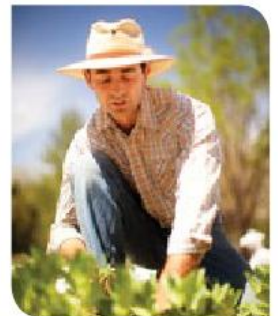
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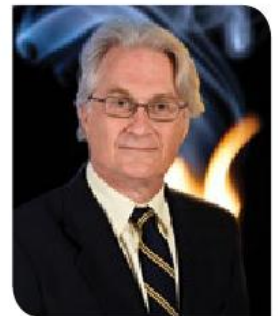
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This combination of organic farm and historic inn provides a lovingly cared for living example of authenticity in the Central Rio Grande Valley of New Mexico. See why we're enchanted by this agri-tourism gem.



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Connie Green

The Fine Art of Wild Foraging

by Bruce E. Boyers



You may never have heard of Connie Green—but some of the world's top chefs, among them Thomas Keller, certainly have. They turn to her exclusively for their gourmet mushroom requirements, and she has been meeting their needs for several decades, foraging right from the woods around her Northern California establishment, Wine Forest Wild Foods. Interestingly Connie is not only a top supplier, she helped establish the market for wild mushrooms in the first place. When California cuisine began its evolution in the 1970s with its focus on fresh, local ingredients, Connie was right there to provide the wondrous mushrooms foraged from her own virtual backyard. Suddenly delicacies such as local black trumpets, porcini and chanterelles were all the rage—and Connie has never looked back.

"Finding Things"

It seems that foraging was in Connie's blood. "I grew up around an Ice Age spring in Florida," Connie told *Organic Connections*. "Florida is pretty famous for a lot of fossils. I grew up finding fossils all over that area and knew the joy of discovering things on the ground, and that little treasure hunt."

Foraging for food was also not new to her. "On my family's farm in Florida, there were just always edible items that didn't come from the farm but came from the wilder country all around: sassafras, wild grapes and poke salad—things like that. It was part of the

reality of life. Today foraging is very fashionable, but it's nothing new. This activity has been integral to human life for a very long time and was certainly a part of my family."

But her passion for hunting wild mushrooms developed when Connie got married. "My late husband was from Estonia," she continued. "As with many Eastern Europeans he

However, in calling on chefs who she thought would certainly want to purchase her mushrooms, she discovered she was dealing with an uneducated group. "Somewhat to my horror, I found they didn't really know what they were," Connie related. "They'd heard of them in French cookbooks, yet weren't really familiar with them."

But Connie knew who *had* heard of them, and that was where she expended her initial effort. It paid off. "At that point I went directly for the French guys and for a lot of Europeans. They were cooking here in the Bay Area, and they of course knew what wild mushrooms were."

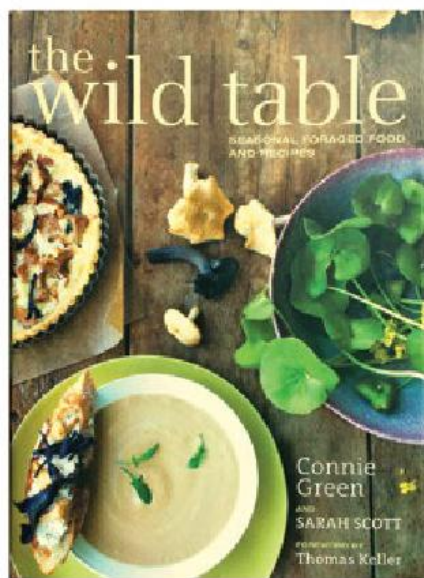
California Cuisine

Shortly after Connie's business got underway, the culinary revolution known as California cuisine began—and Connie was right at its heart. "In the late seventies and early eighties when California cuisine (as it now tends to be called) was coming into its own, I was one of the early sources of unusual ingredients that these people could go crazy with," she recalled. "There were the Jeremiah Towers and the Joyce Goldsteins, and so on, who became my customers as we all grew very excited about the food available in California."

The Expert Eye

Since Wine Forest first opened, Connie's clientele has been a culinary who's who. Why do these top chefs keep coming back to her? It's because—well, all mushrooms aren't equal.

"As you walk through the forest, you don't pick everything that you see," Connie remarked. "Many people do and they're completely indiscriminating. We may only gather half of what's growing. It isn't a conservation thing—in fact, there are many benefits



had a love of hunting wild mushrooms—it's kind of like a religion. So it was from him that I learned about picking them."

Oversupply Leads to Market

Connie didn't start out with the idea of creating a business from wild mushrooms, but she suddenly discovered that she had far too many of them for her own culinary use and consumption. "I fell in love with foraging and became very, very good at it," she said. "I was soon finding more than I could possibly eat, and so in the late 1970s I began taking them to some shops and restaurants."



to the mushrooms from picking them. You're harvesting the fruit of a fungal body that is underground, and by picking it you actually become a human vector for the fungus to help spread its spores.

"But we avoid mushrooms that are not in good condition, are too large, too small or too crappy looking. We select the mushrooms that are beautiful; something that we always have in mind is that people are going to look at, admire and eat these. We also pick them very carefully and cleanly; mushrooms picked poorly and in bad condition are very labor intensive to clean and prepare, and the texture is not as good. So it starts in the woods."

Why Can't They Be Farmed?

Given the state of science and technology today, one might wonder why foraging is still necessary; couldn't these mushrooms be commercially farmed? It turns out that for many varieties this will never be the case.

"There are two general categories of edible mushrooms," Connie explained. "One group is called saprophytes, and these are mushrooms that will grow on decaying matter. They are our grocery-store button mushrooms, shiitakes, and *Grifola frondosa*, which is the "hen of the woods." Their life cycle is such that they feed on decaying matter, and these by and large are the ones for which breakthroughs in cultivation have occurred.

"The other—and probably the sexiest—mushroom category is mycorrhiza. This means that their fungal networks grow underground in a marriage with a tree; the tree and the mushroom have a symbiotic relationship. In the case of a chanterelle, for example, the fungal body is interwoven—in my area—with the roots of an oak tree. If you are in Nova Scotia, it could be a jack pine; they have different tree hosts depending on where you are.

"But they cannot grow without a tree host. The same is true with porcini and black trumpets; these things need a tree that they depend on, and the tree actually depends on them. Foresters have learned the hard way that when they clear-cut a place, they actually kill off all the underground mycelia too. When they go back and plant trees, the trees do not thrive. It took a mycologist [a scientist specializing in the study of fungi] to show them the truth of the matter, and now they plant all of these trees with a mycorrhizal partner. That fungal body is what breaks

down a lot of nutrients that the tree cannot access on its own. The mushroom is feeding the tree and the tree is feeding the mushroom body. The tree provides carbohydrates and water from the roots deep in the ground, and the mushroom is breaking down and making various nutrients available to the tree.

“So it’s a win-win situation, and they cannot cultivate it. Perhaps forever these wild mushrooms will come only from standing forests.”

Economy of Forestry

In that forests host such a normally unseen economic boon, Connie has acted to preserve them instead of cutting them down. “We like to pose to the National Forest Service the economic benefit of leaving a forest standing,” she said. “If you have a forest over a period of, say, a hundred years, that forest is going to be of greater economic benefit to humanity being left alone and taking the mushrooms from it than harvesting the wood *once*.”

“If all of the conditions are right, mushrooms come back every single year. There are places in Europe where they’ve recorded mushrooms growing from the same tree for hundreds and hundreds of years. I’ve picked from the same trees for over thirty years.”

Seasonal Aspect

In addition to knowing *where* certain mushrooms can be found, there is also a very seasonal aspect to them. “All wild mushrooms have a particular climatic condition that they like the best and is the thing that triggers them to fruit,” Connie pointed out. “Right now in California we’re at the end of our dry phase and the beginning of the rains that will come. The mushrooms will emerge after that in a sequence. In the first drenching rains porcini are one of the first things to appear. As it gets colder and later in the season, we will have black trumpets, hedgehogs and yellowfeet.”

“In the Midwest, people have known about this and have been hunting morels for generations. They come out in the spring, so in May the woods are filled with farmers and townfolk looking for morels. It’s one of the rites of spring.”

Sharing the Love

While she highly specializes in mushrooms and probably always will, Connie has also become expert in foraging for many other edibles over the years. These include such



naturally available ingredients as purslane, sheep sorrel, burdock, stinging nettles, wild fennel, huckleberries, elderberries, and even Douglas fir branches. She sells a variety of these items alongside her mushrooms.

A few years ago Connie realized that the wealth of native bounty she was party to was not being made properly accessible to the world at large, so she took this upon herself with an amazing book entitled *The Wild Table*.

"When I started working on *The Wild Table*, there were field guides," Connie said. "Some of them had a few recipes in them that were really quite bad, and none of them had very practical information about preparing a lot of these ingredients. So I wrote this book. I broke it into five seasons: the standard four plus Indian summer. I then selected the ingredients that are the ones I love dearly and are the particularly seductive ones that come at those times of the year.

"With each ingredient I wrote an essay that's sort of a combo of a love letter and practical nitty-gritty stuff about that wild food. It's followed by specific information about washing it, storage, preparation and cleaning. It's very succinct and clear, and it's information that's not been available elsewhere.

"Then there will be a recipe or two, and they were picked specifically for complete deliciousness. There are things like corn chanterelle chowder, which is very simple and incredibly good. The persimmon trees are all ripe now in many parts of the country, and I have some very special persimmon recipes in there; but I wanted to do one that nobody does that preserves the gooey, yummy, orange, luscious tropical fruit flavor persimmons have. So I've included one that I call persimmon-praline parfait. It's persimmons, mascarpone and pralines broken up in layers.

"I hear from many people I know that they'll make a lot of these recipes over and over again—stuffed morels, for instance."

Learning It Yourself

Given this wonderful insight into wild foraging, there will likely be many readers who will wonder how to get started themselves. Connie has practical advice for them.

"In terms of mushrooms, there are mycological societies all over the country. There is a website called mykoweb.com that has links to mushroom clubs in every state. There are also native plant societies online. In addition, there are plenty of great books out there on regional foraging, such as my own.

"One really good way, of course, is to find somebody who knows. Many of these wild foods, particularly the greens, are invading species and grow all over the place. Most of them are very easy to identify, and any gardener that is worth his salt will be able to point out what they are."

Personal Passionate Mission

For Connie, following and sharing her love of foraging will always be her path.

"I love making my living this way, even though there are certainly ways I could make more money," Connie concluded, laughing. "But I am so glad to have introduced wild mushrooms and other wild foods at a time when the cuisine of the United States was changing very dramatically. Now a lot of these wild foods have a real chance of helping preserve some of the wild lands. We've already had a degree of success in stopping various logging operations and clear-cuts because of the value of the mushrooms that come from those areas.

"I love showing people that they can play a part in experiencing nature in a way that isn't like going to the gym; they're not going out just to hike. When people go out and start recognizing food in nature, it creates an intimacy that is not the same as mountain biking, for instance. One of my favorite activities is to take chefs, who are locked in kitchens and work extremely hard in very harsh conditions, out into the woods to find



things that they've never seen in their natural state. It makes the experience of nature a very, very rich one.

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It still resides in us—
some of these trigger
points of joy in discovery,
the sheer delight of it.*

"The joy and delight that comes from seeing and finding and recognizing elements in our environment is built into us. We are the descendants of hunter-gatherers and we're not that far away from it. It still resides in us—some of these trigger points of joy in discovery, the sheer delight of it. It is something that children are exceptionally good at, and it's a joyful activity to do with little kids because they're low to the ground—they see things. They feel empowered by this; they're very good at it, and it gets them away from the computer screen and out into nature." ■

RESOURCES

For more information, please visit www.wineforest.com.

Connie Green's book *The Wild Table* is available from the Organic Connections bookstore.

Los Poblanos

Beautiful, Organic New Mexico

by Bruce E. Boyers

Architectural Statement

Los Poblanos has had many visitors simply coming to view and study its architecture. The inn itself originally served as the private residence for the 800-acre rancho, and in 1932 the ranch house was renovated and redesigned by legendary architect John Gaw Meem. Meem

they really integrate all of the New Mexican cultures; you get Spanish, Spanish Colonial, Mexican, Native American and Anglo all kind of rolled up into this architecture.”

Los Poblanos Organic Farm

A prevalent theme of the Los Poblanos architecture is farming—for very good reason. “Farming is a central part of what we do,” Rembe said, “but really the architecture and the agriculture go hand in hand. The buildings only exist because of the farm; they were designed and built with the farm in mind. That’s why they have all this agricultural-themed art in them that was originally designed by the architect.”

Hence a good part of preserving the culture at Los Poblanos has meant keeping the farm alive and thriving. “All of what we have been trying to do today has been driven by preservation, and we look at sustainability and preservation as working in tandem,” Rembe continued. “Perpetuating the agricultural history meant taking care of the land and being good stewards of the land just like we were being good stewards of the architecture and the history. It was simply part of our value system and also part of the history to farm dynamically. These days, farming dynamically means being conscientious in taking care of the land and the soil.” The primary crop on the farm is lavender, planted over a decade ago by Matt’s father, Armin Rembe. The lavender is utilized in a wide array of bath and beauty products provided to inn guests, and is sold from the on-site store and distributed throughout the world.

Five years ago Rembe brought in renowned New Mexican chef Jonathan Perno as part of a project to provide his guests with a farm-to-table experience. So now, quite in addition to lavender, a wide variety of seasonal crops are grown.

“We always keep lettuce and radishes on rotation so that the kitchen can use those at all times,” Los Poblanos’ farm manager Kyle

Los Poblanos Historic Inn & Organic Farm is a fascinating mix of the intrinsic elements that comprise New Mexico. Incorporating the heritage of Mexico, Native America and the specific culture of the Middle Rio Grande Valley in which it resides, Los Poblanos has come to represent the highly unique qualities of its location with its architecture, artwork and décor. But it’s not just the look and feel of this magnificent property, it’s also the agricultural and dining experience; the Los Poblanos restaurant sources much of its fare right from the property’s own organic farm, and most of the rest from other local sources. In short, it is an immersive experience for the visitor into a singularly unique culture.

“We get people from all over the world who are blown away by the experience, because after they come here they have an idea of what New Mexico is going to look like,” Matt Rembe, Los Poblanos’ executive director, told *Organic Connections*. “Before they arrive, they’re thinking desert and very stereotypical New Mexican architecture. So they’re kind of thrown when they get here because it’s very green, very lush, and we have a pretty diverse ecosystem and an incredible foodshed.*

“At the same time it is a great metaphor for New Mexico. A lot of it has to do with our location. We’re in the Central Rio Grande Valley. The Rio Grande obviously has been an important part of New Mexican history for centuries.”



Matt Rembe

was also commissioned to design and build a second structure on the property, La Quinta Cultural Center. Both still stand proudly today as operational facilities as well as showpieces for guests, admirers and students of great building design.

“John Gaw Meem is the most important twentieth-century architect in New Mexico,” said Rembe. “He really helped preserve and perpetuate the great New Mexican architecture, and New Mexico has some of the oldest architecture in the United States. He helped restore the big churches on some of the pueblos like Acoma and did the master plan for Santa Fe. He designed our two buildings, and





Everything we grow is heirloom and/or open-pollinated seeds. We don't use any hybrid seeds or GMO seeds, obviously. We're big on saving seeds.



Johnson told OC. “We grow carrots and beets. We just pulled out some specialized eggplants; we had an Asian eggplant, a Japanese eggplant and an Italian eggplant. We recently harvested two different kinds of sweet peppers, two different kinds of spicy peppers, and kale, and we also planted broccoli and cauliflower.

“Everything we grow is heirloom and/or open-pollinated seeds. We don't use any hybrid seeds or GMO seeds, obviously. We're big on saving seeds. For example, we'll grow cilantro and when the seeds set we save some of those seeds for ourselves, and then we bring some into the kitchen and they grind that up for coriander.”

Farming and Family History

Sustainable farming has quite a history at Los Poblanos, which in modern times has translated into organic farming.

“During the 1930s and 1940s Los Poblanos was a very progressive farm,” Rembe explained. “They were introducing heritage Churro sheep back to the Navajo Nation. It was a state-of-the art dairy. They used turkeys for pest management in the fields with the crops, and they had one of the first corn harvesters in the state.”

Matt Rembe himself is part of Los Poblanos' sustainable history—it was actually Matt's father who began organic gardening on the property, which he and his wife continued into their retirement.

“My dad started farming organically, and he was going down to our local farmers' market and selling his produce,” Rembe recalled. “As I was growing up, what they did with their free time was gardening and working on the farm. In their retirement, my parents were not the type of people who liked going on cruises or playing golf. They kept on farming.”

Matt has fond memories of growing up in such an unusual place. “I have to say it was a pretty good childhood around here,” he said. “Now Albuquerque has sprawled into this

metropolis of 800,000 people. In those days we were kind of out of town in a farming district. Now Los Ranchos, where Los Poblanos is located, is a little green oasis in the middle of this big metropolitan area. But back then we rode our bikes all over the valley, had rope swings going across all the ditches—which we call *acequias*—and played football in the Rio Grande.

“We had lots of chores to do, which we look back on fondly, although at the time it was a pain. I was in charge of chickens and pigs, and my brothers were in charge of the sheep. In the summertimes we worked forty hours a week at a pretty young age, out in the fields or in the gardens or throwing hay bales into the barns.”



Kyle Johnson

Expansion of Organic Farming

The organic farming continued beyond Armin and his wife. The Rembes provided land to one of the first CSAs in New Mexico, which farmed on the property for nearly ten





It is actually the purest agri-tourism, field-to-fork experience that you can have, and it's also a visceral experience.

When you sit down for breakfast, the kids can go out and harvest their own eggs; then they get to bring them to the kitchen and be part of that immediacy that we've all gotten so far away from.



years. Another farmer came along and did the same, and his CSA expanded to such an extent (3,000 to 4,000 members) that he eventually moved on. At that point Rembe had an inspiration. "We wanted to have control of the vegetables that we were putting on all the menus for our own guests," he said. "So now we do our own farming. We're using the original 1934 greenhouses, and our farmers and our chef work very closely together, picking seeds and growing native crops."

Farm-to-Table Dining

When Chef Jonathan Perno joined Los Poblanos in 2008, he was already well versed in the many culinary pleasures available from the farm-to-table experience, having spent a good deal of his professional life in the San Francisco Bay Area before returning to his home state.

"I was cooking in the Bay Area from about 1989 to 1997," Perno related. "Using locally sourced ingredients was common practice that wasn't discussed—you just did it, especially in the higher-end restaurants. The flavor is overall better and such ingredients are simply easier to work with. You don't have to do too much with fresh local food to make it taste really good."

While the cuisine definitely has a specific intent, it is constantly being approached from an endless variety of new directions. "Everything we create is embracing of Middle Rio Grande cuisine," said Perno. "We try to bring chilies in everywhere; we try to bring in different spice blends. But it's really embracing everything—old, new,

and having no boundaries. Matt is very good about allowing me and my team to create and move forward and continue to push our own envelope versus just the envelope of the cuisine that we're presenting to people. In return, I'm hoping that I'm pushing other chefs and establishments that are in our area as well."

Perno described some of the dishes he has recently produced, based on what is seasonally available from the Los Poblanos farm or otherwise locally. "We just did a lunch with all our own herbs that we grow. It's real simple, with shallots and Japanese-style eggplant with a house-made garganelli noodle, which is the original rigatoni. This one has lemon zest and pecorino cheese incorporated into the dough; then we hand-rolled them and we did a little baked version of that dish with cream and pesto and cheeses.

"I'm doing a squash broth for a house-made ricotta tortellini, with leeks that are grown locally. We have seared rib-eye with a cascabel brown butter beef sauce and marconi pepper, stuffed with a ricotta-herb mixture and vegetables.

"We made pancakes out of a blue corn meal that comes from the Tamaya Pueblo, and they mill it themselves. We also made some sweet potato pancakes from sweet potatoes that we got from a farmer down south of us."

"It is actually the purest agri-tourism, field-to-fork experience that you can have, and it's also a visceral experience," Rembe pointed out. "When you sit down for breakfast, the kids can go out and harvest their own eggs; then they get to bring them to the kitchen

and be part of that immediacy that we've all gotten so far away from. People don't know where their food comes from. Seeing it while you're here and then knowing that it just came out of those fields is pretty powerful.



Chef Jonathan Perno

I think 50 percent of our guests are return guests because they really get it, they really love it.”

Visitor Reaction

Rembe's holistic vision has certainly found its mark. “We have this little comment book that is in the breakfast area,” he concluded. “It looks and sounds as though we hired

some writer to go in there and invent and enhance a bunch of comments, because our guests are truly blown away. And these are people that have stayed in authentic places throughout Latin America or Europe. It's certainly not just a high-end traveler, it's a *discerning* traveler. It's people who are wanting an authentic and unique experience.

“One thing we hear again and again is the word *authenticity*—that it's coming here and meeting real people, observing our farmers, and seeing that the food is true and earnest and that we're making the products ourselves in small batches. The architecture is authentic and New Mexico herself is an authentic state.

“There is so much duplication of what we experience these days; you stay in a W hotel in Chicago, then go all the way around the other side of the world and stay in another W hotel. So our customers certainly are looking for an experience that is unique and different, and when they come here they say it can't be compared to any other place.” ■

*foodshed: The geographic and agricultural region that produces food for a particular population.

RESOURCES

For more information, please visit www.lospoblanos.com.

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Michael Hansen, PhD

The GMO Tipping Point

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Michael Hansen, PhD, has been following the GMO scene since the 1980s—before there actually were GMO crops. He is a Senior Staff Scientist with Consumers Union, the policy and action division of Consumer Reports, and through that group he has for over twenty years tightly focused on the evolving science of genetic engineering of foods, its politics and labeling. He has testified at hearings in Washington, DC, in several states and in Canada, and has prepared comments on many proposed US governmental rules and regulations concerning food safety issues.

Hansen's long experience brings considerable insight into the GMO battle, and sheds quite a bit of light on why the US has been so woefully behind the rest of the world, in which some thirty nations have banned GMOs or at the least have enacted mandatory labeling. He also sees us now at a tipping point—at which industrial agriculture's long-term influence is considerably weakening.

In the Beginning

“When I first came to Consumers Union back in 1985, I knew that genetic engineering was going to be an issue,” Hansen told *Organic Connections*. “It took quite a while to get Consumers Union interested. I guess in the US the first big thing we did here at Consumers Union would have been in 1989 or 1990, when we published a little book called *Biotech: Benefit or Threat?* It was about recombinant bovine growth hormone (rBGH) and the issues it was raising, which had to

do with, besides health impacts on the cow, the potential health impacts of drinking milk from cows that had been treated with rBGH.”

One motivation for Hansen's concern over genetic modification at the time was the opinions of some very leading scientific minds. “Nobel Prize winner George Wald was very concerned about this in the late seventies and early eighties,” Hansen continued. “Erwin Chargaff, one of the giants of biochemistry, also expressed concern; and in Penang, Malaysia, there was a meeting in 1985 that was in fact getting the scientists to talk about potential concerns with this new technology of genetic engineering. This was way before there were even any crops on the market.

“Author Pat Mooney was concerned, not only about seed patenting, but in the late seventies and early eighties he was predicting that this technology would be used for designing plants that would require a company's proprietary chemicals—plants designed to be used with pesticides. I and several others did a paper around the same time, quoting him; and one of the reviewers of that paper actually recommended that our paper not be published if it continued to contain a reference to Pat Mooney's work, since his claims, they said, were so over the top and wrong it would be crazy to refer to them.”

Mooney's predictions turned out to be 100 percent correct. “We now know that if you look globally, 85 percent of the global acreage in transgenic [genetically modified] crops has been bred for herbicide tolerance,” Hansen said. “In the United States it is 93 or 94 percent of the soybeans, 90 percent of canola, and 95 percent of sugar beets. In corn we have 88 percent genetically modified, and 40–50 percent of that has the herbicide tolerant trait in it. A large percentage of GE cotton is herbicide tolerant as well.”

Attempted Preventive Actions

At the time, Hansen and a few others tried to prevent these predictions from coming



to pass. “Some of us said, ‘Look, there's this new technology coming down the pike at us: biotechnology—genetic engineering,’” Hansen related. “‘Maybe we can get some regulations in place so that thirty years from now we're not dealing with having to clean up all of these messes.’ But that ran kind of counter to the way grassroots movements normally work. If you look at most of the environmental movements in the twentieth century, they've all been about cleaning things up *after* the fact. We couldn't get any traction or action at the grassroots level because it's hard to tell people about things that *might* happen when you don't have anything in reality to point to.”

Public Awareness

While GMOs are getting a lot of attention in the US currently—and much of that in the organic and natural food space—this is only *after* a significant portion of our food supply is either GMO or GMO linked. Hansen explains this late reaction as culture related.

“There *has* been attention on genetic engineering from time to time in the US media,” Hansen remarked, “but nothing as sustained as in other countries. I think that's in part because people in the US up until more recently haven't cared as much about the food they eat and how it's grown, compared to Europe and elsewhere. In Europe twenty

or thirty years ago, food was important; for example, you could be in a small town in Italy and the food you would get would be fresh and tasty. Here in the United States twenty or thirty years ago, people would eat a tomato and it didn't matter if it was one of those mechanically harvested ones that are like golf balls and have virtually no flavor. Over in Europe people wouldn't buy that kind of stuff.

"I can remember thirty years ago trying to get interest in agri-ecology and similar issues, and the mainstream people looked at me as if I were crazy. People were busy eating hot dogs and all these other things."

It's Just Good Business

Meantime, while the public was in the dark, genetic engineering of foods became the darling of the investment community. "A lot of industrial monoculture is based in short-term economics," said Hansen. "Supposing you had a system that was sustainable, had slightly lower yield but could replace itself for a thousand years; since in economics we discount future gains, if you could make a *higher* profit and destroy that system within fifteen years, the economic logic might tell you to actually do that."

There was an additional, less obvious factor that made industrial agriculture appear more attractive in the US than it really was. "Another part of the problem in the US as to why industrial ag has worked so well is because of an action of geography," Hansen explained. "We had some of the best soils in the world—topsoils that were two to three feet deep. No other place in the world had soils like we had in our Midwest, so we were able to do all this industrial farming and it looked incredible. Over the years we've been losing that topsoil."

International Viewpoint

But while the powers that be have managed to keep the GE economic ball rolling in the US, the international community has taken quite a different tack. "The US has tried to convince the rest of the world of the viewpoint that 'there is no difference between GE and traditionally grown crops,' and the world has not agreed," Hansen said. "Codex Alimentarius is the global-food-standard-setting organization of the United Nations. There was an eighteen-year fight at the Codex committee on food labeling, and we finally got a document in 2011 on labeling of GE foods: there is

now global agreement that genetic engineering *is* different from conventional breeding. They said there should be testing of GE foods, and they even laid out what some of the tests should look like."

Codex recommendations are voluntary—meaning a nation can adhere to them or not if they so choose. But nations *can* refuse to buy goods from a country (such as the US) that are genetically engineered; and because of the written Codex recommendations, the World Trade Organization—the UN body that deals with global rules of fair trade—will stand behind such refusals. In short, the US "official stance" on GMOs is causing it to be squeezed into an international trade corner.

Additionally, an international agricultural panel has drawn similar conclusions. "There was an international panel called the IAASTD—International Assessment of Agricultural Knowledge, Science and Technology for Development—a global meeting of four hundred scientists. Their document came out in 2009 and it basically said, 'The answer for agriculture isn't high tech, it isn't genetic engineering, it's not monoculture, it's not nanotechnology; it's a focus on agri-ecological approaches, looking at diversity, things on local scales.' What's interesting is the US and some of its allies in the industry walked away from this document toward the end because they didn't like what it was saying."

Changing Public Consciousness

Another major backlash against genetic engineering is coming from the public itself—thanks to rising consciousness. "Compared to ten or twenty years ago, people are paying a lot more attention to where their food comes from," Hansen observed. "There's a lot more concern as to what's in our food, and it's in that climate that you've seen both this move toward labeling and a backlash against GE.

"Eco-labels have exploded; farmers' markets are everywhere. If you look at the state of agriculture, the economic problems are with the midsized farms growing genetically engineered crops. Folks doing organic and the small-scale farms doing fruits and vegetables are not at a loss; they're making money. In fact the demand for fresh foods has outstripped the supply.

"Right here in New York City we now see all these farmers' markets, even in the South Bronx, even in poor neighborhoods. They've managed to work it so that food assistance programs for the underprivileged, such as

WIC and SNAP, are today being accepted at farmers' markets. I think that's a good thing."

Labeling

As with food consumption trends, the public outcry for labeling has also changed dramatically in recent years. "There's an enormous difference compared to ten or fifteen years ago, or even five years ago," Hansen pointed out. "The labeling bills of the various states have been there for at least ten years. None of them have ever been able to move significantly—but this year they have. Those bills could never go anywhere in the past and they're going somewhere now."

Many experts agree that general public awareness on the labeling issue began with the publicity surrounding California's Proposition 37 GMO Labeling Initiative in 2012. "That clearly did fire folks up, because even though they lost, they came awfully close, in spite of being outspent almost five to one," Hansen said. "The ironic thing is that when surveys were done of the people who voted no, it turns out 20 percent of them did so because they didn't think it was strong enough—but they wanted more things to be labeled."

On the heels of the California initiative have come similar measures from other states. "We've seen the law pass and then get signed in Connecticut," Hansen reported. "The law has been passed in Maine, although it's not going to be signed until January; but even if the governor doesn't sign it in January, there were enough House and Senate votes to override his veto. Then in Vermont it has already passed the House and it goes to the Senate in January. If any of these states gets close to passing a bill that would then go into effect, I think what you'll see is a move toward the federal level; you'll see people come together to get national legislation."

Big agriculture with its GMO mandate is now finally being beaten back. "The industry sees this and they're starting to freak out," Hansen concluded. "They can't control things like they used to be able to. I even notice a difference when I go to all the hearings—that industry is not getting the kind of deference they used to get."

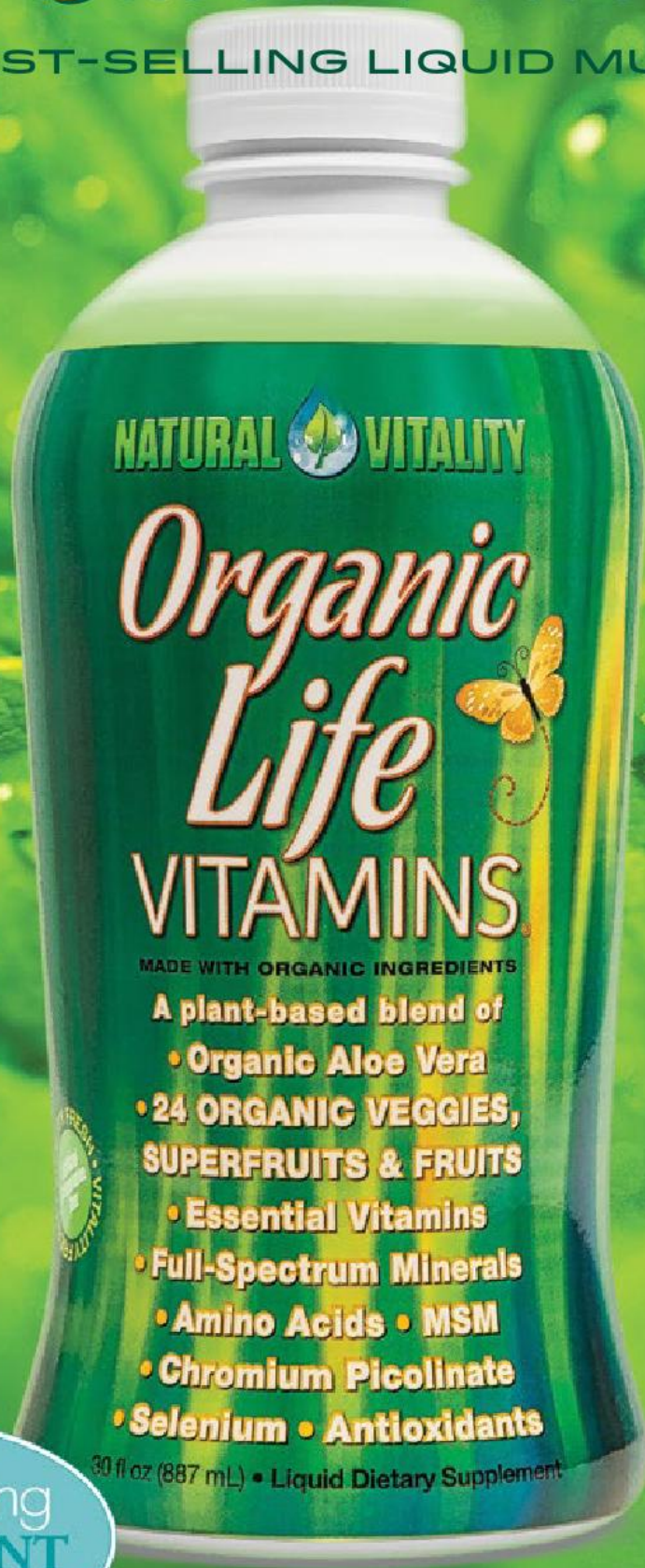
For genetic modification, the tipping point has definitely arrived. ■

RESOURCES

For more information on Consumers Union, please visit www.consumersunion.org.

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