Vision Feature Stories

Planting for the Future:
The Tierra Miguel Foundation

By Mae Stiles

The Tierra Miguel Foundation Farm spans 85 acres in North County, and nestles up to the border of the San Luis Ray River, in the lovely countryside of Pauma Valley. More than just a pretty view, the Tierra Miguel Farm is a California Certified Organic producer, taking their product to the mouths of folks all over San Diego and North County. They are also an education center, teaching anyone who wants to learn organic farming techniques, as well as school children who come to see where food really comes from.

Creating Community

I spoke with Charlene Orszag, who as president of the Tierra Miguel Foundation is involved with current planning and long term development, and she talked a little about the beginnings of the farm. It was a long time in the making, over eight years of planning and searching went into the project before anyone's hands even got dirty, but it was well worth the wait. When a beautiful organic farm folded and the land became available, this group of visionaries jumped on it, and with this land the project was born.

Now the farm run by Tierra Miguel Foundation is not only a bountiful organic farm producing delicious and healthy produce for local consumers, but it is also a working model of sustainability, educating those interested in healthy stewardship of their lands and communities. Tierra Miguel has been able to build a community supported agricultural program, or CSA. With a CSA, the Farm is able to share the joy and

responsibility of maintaining the farmland and its abundant resources with community members and donors, who, for a set yearly donation are able to reap the real benefits of organic farming: yummy veggies and fruits without the danger of pesticides and pollutants. A box arrives each week, filled with seasonal organic produce ready for the table. Most of the produce from the Farm goes straight from the fields, to packing and then to the table. This direct communication of product from farm to customer sets up a direct relationship between community and farmer, connecting people directly to the organization and to the land upon which the farm sits. The steady income generated by the CSA method of food distribution helps protect the farmers against seasonal fluctuations in income resulting from adverse conditions, which have plagued farms from those first plots in the Fertile Crescent to our modern fields. The CSA increased its members in 2002 to an average of 290 shareholders by serving folks in San Diego, Riverside, Los Angeles and Orange counties. The goal is to grow the CSA membership to 400. Although the majority of the farm produce is distributed to CSA members, the farm continues to encourage contracts for the sale of produce to health food stores, organic restaurants and farmers' markets through which educational and outreach opportunities are made possible.

Organic Farming

Farming is not the only connection that Tierra Miguel has to the community at large. They have begun to participate in a program with San Diego schools called LEAF, (Linking Education, Activity and Food) where they send a box of fresh produce to classrooms as a prop for an entire unit of learning. Fresh organic vegetables are used for math study, science tools and visual aids for lessons about the importance of sustainability and land use management. Teachers are encouraged to end the unit with some cooking to illustrate one of the most important functions of organic farming, to provide food that is healthy for the land and nourishing (and tasty) for the body. Anyone who has grown their own vegetables, or has bought really fresh organic produce, knows the difference between garden tomatoes and the ones that come from the grocery store. We may take this knowledge for granted, but imagine being a person who has never tasted home-grown produce! That first bite into a juicy, new tomato would surely be a revelation more powerful than any other experience.

Another way that Tierra Miguel has been able to reach out to educate is through an intern training program run on the Farm itself. Interested future farmers have come from all over the world to observe, participate and learn the in's and out's of sustainable organic farming.

Certified Organic means a lot more than we may acknowledge as shoppers and consumers. What that sticker means to us is that we're buying food that contains no pesticides and perhaps, if we're really thinking about it, that we're buying a product that is consciously grown and is beneficial for the earth. What Certified Organic means to a farmer is something much bigger. It's a whole different farming experience than growing conventional produce. The certification is not given to just anyone; the list of requirements stretches for pages and the farms are inspected regularly. In the end, you have a field that you can be sure is whole and healthy, producing food that you need only brush off the dirt to eat.

The organic farmer must not only know what is going into their soil that season, but what has been there for seasons in the past. Has there been a farm that sprayed for Hornworm in the last three years here? Have they dusted for June Bugs? These questions are just the beginning of the litany of information that an organic hopeful must answer, along with confirming their current farming practices.

Keeping the Land Healthy

At Tierra Miguel the farmers are working even a step further than making sure that the soil in which they grow is clean, they are making sure that it is fed. With this principle in mind they work to produce quality food based on the quality of the soil from which it comes. It is here that the plant is able to intake vitamins and minerals, and also here, if not cared properly for, that it will ingest along with the soil's nutrients, its pollutants. It is for this reason that Tierra Miguel has implemented elements of a program called "biodynamics" into the seasonal routine.

I spoke with Robert Farmer at Tierra Miguel about what this means for farm operations. Biodynamics is a holistic farming system, emphasizing composting and natural soil care. At Tierra Miguel compost is ÒbuiltÓ rather than just tossed in a pile for later use. The compost is treated with different preparations, consisting of various plant materials, herbs, whole plants and sometimes bark, taken through a process of microbial digestion. These treatments are put into the compost at the outset of the composting process to stimulate growth and health of the humus. ItÕs pretty amazing, only a few spoonfuls of these preparations are enough the treat many tons of compost.

Another important advantage of the biodynamic process is that is goes a long way in insuring the health of the resulting compost. In general, composts used on farms are comprised of a balance of plant materials and animal manures. At Tierra Miguel, these mixtures are treated, then either mixed or piled in a specific way to begin fermenting. The first stage of fermentation is a mesophillic process where the humus remains at an ambient air temperature. Later it is heated up to temperatures between 130 and 170 degrees farenheight and enters into a thermophillic cycle, in which the heat rids the compost of potential plant disease as well as possible pathogens that could have a harmful effect on human health. The compost is then cooled, and returns to a second mesophillic process after which the humus is cured to further wipe out any possibility of unwanted microbes. The compost is then spread on the fields to help keep the soil strong so that the plants that grow from it will also be strong. This is especially important in organic farming, because without the use of pesticides which kill bugs and fungi that potentially compete with the plant, the plant must be strong enough to keep itself healthy. Healthy soil is an important way which the plants of Tierra Miguel maintain themselves.

Individuals at Work

At its core, Tierra Miguel is about the people who are making it happen. A dedicated, creative and committed group, most of the staff and administration are female. Coming from a farm background myself, I was tickled pink to speak with so many women about things that are often assumed to be the affairs of men. One of the women mentioned, with a smile in her voice, that sometimes in meetings there is a sense from a visiting party that they are waiting for the Òreal people' that run the farm to come out, as the women running the show look on in amusement. The world is changing, men.

An Organic Lifestyle

Contrary to some people's beliefs, organic farming is not, in the big picture, a more expensive way of producing food. As executive director Beth Ann Levendoski explained, "A factor that

people don't consider in terms of non-organic commercial agriculture is that there is a clean up cost, which is usually passed onto the tax payer. If that cost was assessed to the non-organic growers, conventionally grown vegetables would be much more expensive than organic vegetables." Contamination of the soil and of the aquifer is something that we don't often credit to the peas and carrots that we eat, but the way that they are grown surely makes a great deal of difference to the rivers in which we swim, and the sand in which our children play. Buying organic produce may cost a little more at the store, but think of how much we would save if everyone made the commitment to organics and to sustainable agriculture. Tierra Miguel is just a start, and its important that we all foster these blossoming buds in the community so that change can make its way further into the world.

Support for Tierra Miguel can come in many forms, check out their website www.tierramiguel.org for more information on how you can keep Tierra Miguel thriving, and how you can help them make a difference. Reach them at 760/742-1151

There are bugs, and then there are bugs...

By Dana L. Stewart

As environmental concerns continue to increase, people want to know how they can help themselves instead of relying on others. Self-reliance is a great American tradition. As we all know, sometimes doing something yourself is the only way to get it done. It can save time and money, and provide oodles of enjoyment as well. I guess that's why I've always been attracted to simplicity, low tech, and hands-on results management.

I first contracted "bug fever" on a gorgeous island in Belize in late '89 and early '90, as I contemplated my early retirement from a lifetime in marketing and advertising. In this unique corner of the world treasured for its natural resources I was looking to explore ecological techniques for keeping soil and water clean, to remediate environmental damage, and to update infrastructure. At that time, I learned about microbial and enzymic products and set up a company. I was retired no longer.

Microbes, and the enzymes they produce, are affectionately known as "bugs" in the business. We are passionate about bugs. They are the beginning of the food chain. These Ògood bugs,Ó the beneficial microbes, are the best defense against the "bad bugs," or pathogenic bacteria, that cause all sorts of ills. Some microbes have even been shown to be effective against certain viruses. Some can be used to destroy the larvae of mosquitoes that carry malaria, encephalitis, Dengue fever and West Nile virus.

Our clients have for the most part been organic growers, including organic approaches to fish farming. Thus, we geared our attention to cleaning water and soil. What we have learned is now available to anyone that would like to use those products and processes to live a cleaner, healthier life. There are even good bugs for humans that keep bad bugs out of your intestinal tract and help you to better process your nutrients. No more irritable bowel syndrome.

Cleaning Up

According to Smithsonian Magazine (April, 1993) and National Geographic (August, 1993), microbes and enzymes can bioremediate over 90% of our most toxic organic and chemical wastes. At the time this was a big deal, the Exxon Valdez oil spill had just despoiled one of the country's most pristine wilderness breeding grounds. An aerial photograph showed where the microbes had been able to remediate, or clean up, some of the oil. The soil was transformed. The beach in Alaska was clean all the way down. Imagine how stunned we were to see the rest of the clean-up pursued with very labor-intensive hot steam and detergents, straw, and other clumsy, costly, and much less effective techniques. Ditto with the first Gulf War, when Saddam Hussein destroyed the environment of several countries for years to come. The area that had been cleaned up with the microbes looked like a tiny white postage stamp on an endless bolt of oilcloth. We were thinking, "Wow, this is a large view of the demonstration we participated in at Brown Field." Bright green grass was grown in oil-soaked soil, which had become odorless with the first applications of the amazing bugs. That is one of the greatest gifts of all. The bugs eliminate the odor to which pests and vermin are attracted to feed and breed and they begin to disappear.

After 30 to 40 closures of contaminated sites in Southern California by our affiliated company, Biotreatment, Inc., bioremediation of oil and gasoline contaminations began to catch on. It was more effective, less costly and the least intrusive method of clean-up. Lately, with rollbacks in regulations, it has all but disappeared from the bid lists.

Organic Farms and Produce

But we never left the organic farmers. We had a couple of biocomposting and vermicomposting operations in Fallbrook and Alpine. The vermiculture process utilizes the red earthworm to produce the best soil amendment there is, worm castings. We can't call it "fertilizerÓ because, technically, that designates chemicals. But boy, does it make crops thrive and produce greater yields! Citrus and avocado growers can't get enough of the stuff. We are now in the process of creating what we call "BioSoil" near a dairy we treated with microbes in Chino, with an aim to again produce worm castings as well. BioSoil is a biologically active soil amendment.

If you have any desire to assure that you have organically grown herbs, fruits and vegetables, you might consider growing a gloriously fragrant and edible garden. You can feed your neighbors as well as your own family on a plot 6 feet by 12 feet. Or, you can even have a garden of nice containers. There is nothing like the flavor of homegrown tomatoes. Gardening is a great bonding and learning experience for families to enjoy. And you'd be mighty popular with your friends. The delight in achieving some self-reliance with a delicious reward at the end has great appeal. And it's so convenient, just step outside and pick your meal.

Our store-bought produce and processed foods offer ever-diminishing taste and nutrition. The soil has been sterilized by the overuse of chemicals. It takes nine tons of petroleum to create one ton of chemical fertilizer, an awful waste of a very valuable and expensive resource, especially when we can make great soil amendment from crop residue and manure. A cost for the growers can be converted into a profit center, and it can be done in your own back yard. We even have low-cost biological pest control products for ants, termites, roaches, weevils, and fire ants that are guaranteed to work. Sure beats the three thousand dollars and the hassle of tenting with pesticides.

Solana Recyclers, in Solana Beach had composters for residents for around fifty dollars and I hope they still do, but they can be found most anywhere nowadays. However, if you donÕt use the bugs, you won't get the best compost; the good bugs have to be returned to the soil for

plants to properly process nutrients for growth and disease resistance. Compost starters and innoculaters are available in some stores, from us here at BioAlliance, and on the Internet for the savvy shopper or urban farmer.

Saving our Water

As one thing led to another, we began to further devise equipment and delivery systems for our bugs to convert waste streams into revenue streams. Contrary to popular opinion, pollution prevention and contamination controls are neither expensive nor difficult. They soon have a beneficial effect on the bottom line as well.

The Ph.D.s and expert field technicians that have worked with us for fourteen years know this. Three sitting governments in Belize have approved our systems for ecodevelopment. Trouble is, you have to bring the money as well as the technology. Our champions in the U.S. and California Trade and Commerce Departments, the federal and state EPAs, and USAID have begun to promote us in the Asia-Pacific region.

We started by promoting our biological wastewater treatment techniques (demonstrated at the Moreno Valley, Ramona, and Oceanside facilities) and organic fish farming (demonstrated in California and the four-state Mississippi delta area catfish farms). This was a big hit, as odor was always a big concern, and getting rid of odor is the first thing that the bugs do. Also, fish and shrimp production were down to 40% of previous levels. Adjacent pollution of waterways and wild fish stocks was greatly reduced as yields increased.

About the time we were on our first Gold-Key environmental trade mission in Asia, several typhoons hit. People were up to their noses in garbage, including medical wastes. They asked what we could do for this enormous health hazard. We devised a non-polluting trash system that converted everything into highly beneficial and profitable products. "BioConversion" was born.

By Christmas, 1996, we were the only company at APEC (the Asia-Pacific Economic Conference), to sign an actual contract. We celebrated with 26 heads of state, including President Clinton, and many minions of ministers. Not to be outdone, then-Governor Pete Wilson of California came early the following year to exclusively showcase our technology. We were being funded by, of all things, a large oil company in the Philippines for our clean trash-to-energy-to-food facility.

We were a hit. We were on a roll. In Asia, we had $3.4 Billion in negotiated contracts, lands dedicated, all governmental, university, engineering and environmental authority approvals. Then, the Thai stock market crashed, which began the Asian financial meltdown. We came back to California to re-group.

After a similar thing happened on another Gold-key trip to Egypt, Jordan, Israel and Dubai, in late 1999, we decided to re-devote ourselves to bringing our technologies into mainstream American life.

We broke out two of the ten processes in our trash system to treat the green and wood waste that had been banned from the landfills in 2000. This project is particularly urgent after the devastating forest fires we have recently suffered in late 2003. We can produce cleaner burning, higher BTU fireplace logs, heating and cooking "BioFuel" with the wood waste that also needs to be cleared for fire prevention. Another portion of the waste stream, along with dairy manure can be made into BioSoil. It would be terrific for promoting rapid plant growth to secure the "Wildland and Urban Interface" areas of the fires' perimeters.

These "BioLogs" and "BioSoil" products would be excellent exports for California, which will then help combat global deforestation. We intend to donate portions of the revenues to the

firefighters of the Forestry Service for equipment and to participating dairies that are struggling with the costs of disposal.

Meanwhile, bugs can be used in your drains to keep them clear. You could use biodegradable soaps, and virtually eliminate chlorine. This will go a long way in helping to keep pollution out of the ocean and off our beaches. This is our biggest tourist attraction in San Diego. Too many beaches are closed because of contamination, too often. You can do your part. There are many products we can recommend. There are clean water and clean air systems for home and business; purifiers, not filters. You can get out of the food chain, the pollution chain, and the energy chain. Solar and wind power, low-energy appliances, can keep you from suffering in grid failures. We must all keep in mind that for every contamination and source of pollution there is a solution, be it biological or mechanical, and it's up to us to find and implement these solutions.

Begin with your garden and wastewater to break the chemical habit. Then invest in clean water and air for your family. Nothing could be more important than clean water, air and food for your family's health. The time to begin is right now. You can then budget for home or business solar or wind units that will ultimately pay for themselves as well as help protect you in power outages. Remember these important truths: that health is wealth and that an ounce of prevention is worth a pound of cure. Promote and demand efficient, cost effective, biotechnologies for your communities' and cities' health. You are not alone in the effort and you will have a tremendous effect.

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