

## **CASE STUDY: Transitioning to organic** **Pollo Real Ranch**

### **The Real deal in organic pastured poultry**

**A sixth-generation farmer finds trial and error, observation and pig-headed persistence lead him to pasturing organic chickens in a moveable yurt system.**

By Robert Gerard  
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## Early benefit: Farms up close and personal

**Editor's note:** Staff from several departments at The Rodale Institute have been engaged in creating an online course to summarize the process of transitioning to USDA certified organic farming. We will be wrapping things up toward the end of this year.

Included in this endeavor is a series of in-depth farmer case studies that cover farms of many sizes, types and enterprises. Our goal with these extensive narratives is to show in detail how organic principles are applied by specific farmers to their specific situations.

Production, pest management, harvest, handling and marketing are always parts of the big picture. These case studies show how different farmers put these critical pieces together. Our first case study on [Tierra Wools](#) described a sheep producers' cooperative in Los Ojos, New Mexico.

Watch for more stories in the months ahead.

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**P**ollo Real Ranch is the premier organic pastured poultry operation in the world. It lies in Socorro, New Mexico, between two desert mountain ranges in the green Rio Grande Valley, and encompasses 34 acres of irrigated land divided into several sections. On these plots, clusters of yurts or small moveable pens filled with small flocks of chickens can be seen resting on fresh pasture. Also on the farm are a small processing facility and two refrigerated delivery trucks. This modest appearance and relatively small scale belies the significance of what takes place here.

Tom Delehanty, who owns Pollo Real with his wife, Tracey, has been raising pastured poultry for 20 years and doing it organically for the past 10 years. The farm's success, he says, is the product of hard work, resourcefulness and determination. "We had torrential rain, employee problems, no feed, water problems, distribution problems, shelter design problems, cash-flow problems, all of it. We could have given up but I just said, I am going to order more chicks and I am going to keep on growing these chickens until I figure this thing out. I will do this."

A sixth-generation farmer whose ancestors homesteaded in Wisconsin in the 1830s, Delehanty is given to using expressions like, "It doesn't take money to make money," and "There's no secret to hard work." Leaving home in the late 1960s, he tried different roads but eventually returned to his roots and went back to working with chickens in Wisconsin by the 1980s. Over a period of years, he tried a number of different poultry systems. Then he read an article by Joel Salatin describing how chickens could be pastured in moveable pens. "This really made sense," says Delehanty. "It really meant a lot and I tried it."

Delehanty started experimenting with pastured poultry in moveable pens in Wisconsin, but he wasn't sure how well the systems would work in a cold climate. He also discovered that state regulations would make it necessary to invest at least \$200,000 in facilities set-up. So he began searching for a place that would better meet his own criteria for a successful pastured poultry operation.

In New Mexico he found what he was after. State laws were less restrictive—largely because of a lack of big poultry operations and resulting efforts to control them. There was a well-run state

**Tom Delehanty with a group of new arrivals.** These "peepers" arrive on Thursday and are immediately introduced to brooder yurts and the pastured poultry system. For the next ten weeks they will live in small flocks in the yurts, benefitting from the nutritious pasture and organic feed.

## Farm at a glance



### Pollo Real

Tom Delehanty  
Socorro, New Mexico

**Established:** 1995

**Organic since:** 1997

**Products:** organic,  
pastured-raised chicken

**Markets:** grocery stores,  
restaurants, farmers'  
markets

organic certification agency, the New Mexico Organic Commodity Commission, with low fees and an excellent support structure for farmers transitioning to organic. The climate was dry and relatively mild, with strong sunlight that would help minimize diseases and parasites and keep the chickens healthy. The cities of Albuquerque and Santa Fe, with their flourishing grocery stores, farmers' markets and restaurants, presented excellent marketing opportunities. And last but not least, in New Mexico Delehanty found excellent employees, comfortable with traditional, small-scale systems and willing to work outside.



The central focus of the Pollo Real operation is the yurt, or moveable pen, holding small groups of chickens. As the yurts are moved over the pasture, the chickens work the soil with their feet and fertilize it with their manure. This creates a soil-based system in which the chickens create good soil that produces good pasture that nourishes high quality poultry. In Delehanty's opinion, the soil is where the true wealth of a farm lies and where the farmer's attention should be focused.

**Yurts in the field.** Moved over the field on a daily basis, the chickens within the yurts have several advantages that keep them healthy. They benefit from the good nutrition of the pasture and the organic feed they are supplied. They also flourish in the relatively uncrowded conditions of the yurt as well as in the open air and sunshine.

During the winter the yurts are moved daily over annual pastures of winter wheat, oats, triticale and rye. In the summer, the mixture shifts to white clover, millet, milo and chicory. The combination of forages is good for the birds and good for the soil.

## Building a better yurt

Delehanty's yurts are oval-shaped portable pens about 11 feet long and three feet high, welded together out of rebar and covered with chicken wire attached by pig rings. A four by five foot door in the roof allows access for feeding and watering and for adding and removing chickens. In the winter, the yurts are wrapped with a 24-mil woven plastic material (also affixed by pig rings), with a foot-square opening for ventilation. In the summer, the roofs alone are tarped and the sides are left open. The yurt also has two cables to serve as handles, one on each end. One person can move a yurt, Delehanty says, although it's faster as a two-person job.

Inside each yurt, a waterer and a feeder are hung from the roof. Their combined weight—the feeder holds 30 pounds of feed—helps to hold the yurt down against high winds and prying predators. A second waterer is placed on the ground. The yurts are built by bending the rebar around a jig. Counting materials, labor, feeders and waterers, each yurt costs about \$400.

Delehanty developed his yurt design through a process of trial and error. At first he built square frames out of PVC pipe, but he found that the plastic covering tended to slide and rip on the PVC pipe and that the entire structure was too light, so it could flip in windy conditions and dogs and other predators were able to dig their way underneath. The rebar holds the polyweave sheeting in place more firmly, and it also digs down into the pasture, foiling predators and offering greater stability in windy weather.

Delehanty began making the enclosures round (and hence referring to them as yurts) because he observed that predators tended to concentrate their efforts on the corners. Without corners, predators become confused and can't gain entry.



Delehanty also tried various types of heavy plastic sheeting before settling on the 24-mil woven plastic tarps, which he orders from a Canadian company.

The durable, rip-stop material resists photodegradation and can support up to a foot of snow without caving in. Once, Delehanty says, baseball-sized hail tore through the roofs of his older yurts with regular plastic coverings, killing about 300 chickens, but bounced off the polyweave coverings.

**The yurt is an inexpensive but very durable pen** made of welded rebar overlain with netting. Over the top is a 24-mil polywoven plastic to protect the birds from the weather. During the winter, polywoven plastic is put on the sides to help keep out the cold.

## The production cycle

Pollo Real receives 1,100 new chicks a week by mail from a hatchery in Iowa. As required by federal organic standards, the chicks are not given any antibiotics and receive organic feed from day one. At Pollo Real, they go directly out to the field in special brooder yurts equipped with lights, gas infrared heaters, food and water. Delehanty starts with 275 chicks per brooder, which gives them enough room to space themselves out if they get too warm.

Unlike the other yurts, the brooder yurts remain basically stationary on pasture, with wood shavings added regularly to keep the ground dry. Even though the chicks are not really grazing at this early age, they take an interest and begin to learn how to forage.

In warm weather, the chicks are redistributed to 180 per pen

after two weeks; in cooler conditions, they may remain in the brooder yurts for another week before being divided. At four weeks, they are moved out to yurts in the field, 60-65 birds per yurt, and remain there until they are 9 or 10 weeks, when they go to slaughter.

At any one time, there are between 5,000 and 6,000 chickens in about 100 yurts out on pasture. Each Monday, approximately 1,000 birds go to slaughter. The emptied yurts are moved back across the pasture to the starting point and replenished with four-week-old chicks.

The chickens dress out at about 4 pounds, although Pollo Real is attempting to raise slaughter weight to four and a half pounds to make the business more profitable. "Every tenth of a pound can pay somebody's salary," says Pollo Real manager Robert Iverson.

Slaughtering at 9 or 10 weeks is late compared to most conventional poultry operations, Delehanty says, which typically kill their birds at six weeks or around 3.5 pounds. Part of the reason Pollo Real's cycle takes longer is that they don't use lights to get the birds to feed around the clock. If put under 24-hour light, chickens will eat non-stop and put on weight very quickly. This puts enormous strain on the birds' internal organs, a problem which conventional producers have addressed by feeding antibiotics.

Organic strategies for accelerating weight gain include creating a better nutritional balance in the soil, adjusting the feed ration and starting the chickens on greens earlier. For the moment, Delehanty says, it's too much work to carry greens over to the brooder yurts on a regular basis.

## **Feed and nutrition**

Although the chickens are out on pasture for most of their lives, foraging accounts for only 10 percent of their total diet. Still, this small percentage is essential to maintain chicken health and create a high quality meat. As Delehanty puts it, "With greens everything just works better."

The remaining 90 percent of the chickens' diet consists of organic grain from Kansas, Nebraska and

Texas. The feed is ground on-site in an International grinder/mixer hooked up to a 1968 Farmall diesel tractor. For each ton of feed, Delehanty adds 13 pounds of phosphorous (0.6 percent), 26 pounds of calcium (1.2 percent), five pounds of premixed vitamins and micronutrients and 20 pounds of salt. After mixing, the feed is augured into a gravity wagon, pulled out to the field and transferred to 55-gallon drums located near each group of pens for daily dispersal to the chickens. The chickens go through 2,000 pounds of ration a day.



**Purchased organic soybeans and corn are ground on the farm** and mixed with calcium, phosphorous, vitamins and micronutrients. The chickens go through about a ton of the ground organic corn and soybean mixture a day. They are fed and watered morning and evening, and monitored closely each time for overall health and vigor.

Delehanty does not see growing his own feed as an option since he has limited land and feels the maintenance and improvement of his pastures has to be his first priority. He would prefer to source organic grain closer to home.

Delehanty is also keen to lower his feed bills and improve his birds' nutrition. One way to achieve both these goals, he thinks, would be to start an organic sprouting operation. The feed value of grains like wheat, rye and triticale can be multiplied severalfold by turning them into sprouts, which are high in protein, vitamins, antioxidants and micronutrients. The ranch already has a sprouting room capable of producing 14 trays— 600 pounds, of sprouts a day.

Another way feed bills could be reduced and nutrition improved is through vermicomposting. Currently, the liquid waste from the slaughtering facility goes into a 2,400-gallon septic system while

the offal is placed in barrels and sent to the landfill. Delehanty envisions a time in the not so distant future when the offal and blood will be mixed with wood chips, placed in bins and fed to worms. Surplus worms could be fed back to the chickens along with the sprouts and the vermicompost could either be sold or spread on the fields. Delehanty is waiting to acquire a loader before this part of the operation becomes a reality. "With a ton a day of sprouts, I can just about get rid of soybeans and then with worms you can create a diet for a healthier bird," he speculates. "There is so much potential."

## Scaling up

In the early years, Delehanty did most of the work at Pollo Real himself. "I did delivery, would take care of feed, move the birds, go over to West Texas and get small grain," he recalls—not to mention processing 50 birds a week. When his market expanded to 200 birds a week he realized he had to hire people, but scaling up was a challenge.

"I tried to do 400 birds a week and it was tough, then I went to 600 a week and I started processing twice a week and then everything fell apart because I had four people there with the clean up and the mess." There were similar problems in the field, where shelters were different shapes and sizes and it was hard for employees to keep in mind all the little idiosyncrasies of Delehanty's setup. "They couldn't understand; in one pen there were 70 birds and in another were 110 because nobody divided them right. It took a number of years to get straight," he says.

Ultimately, Delehanty realized his operation was a hodgepodge which only he could understand and that if he were going to employ people he had to set some standards. "When I was doing it all I was making a profit, but when I hired people they didn't have the passion and didn't care as much as me. The way I got around this was to standardize everything." He broke the whole business down into separate components and analyzed them individually. In the fields, the pens, the feeders and the waterers were all the same so that employees could operate them in the same manner. In the processing facility, inefficiencies in equipment and product flow were identified and corrected. Now, by hiring enough people and starting early in the morning, Pollo Real can process 1,000 chickens a day.





Recently Pollo Real hired a fulltime manager, Robert Iverson, in order to give Delehanty the freedom to step back and assess the business as a whole. Iverson has a degree in poultry science and a keen interest in pastured poultry production. "It is an eye opening experience," he says.

**Tom Delehanty and farm manager Robert Iverson** in front of one of the two refrigerated trucks at Pollo Real. These are the only refrigeration units at the farm. They are operated just long enough to keep the meat chilled from processing until delivery.

Altogether, Pollo Real employs four full-time and five or six part-time employees, most of whom make between \$7 and \$12 an hour. Field laborers work long days and have to be conscientious, attentive and smart—they have to understand the chickens and keep a close eye on their behavior and health. "Pastured poultry is a thinking man's game," says one Pollo Real employee, Eddie Chavez. The chickens' feed and water are replenished twice a day and the yurts are moved once a day.

Labor and organic feed are by far the highest costs at Pollo Real, with feed running about \$2,500/week and labor about \$3,000/week. Delehanty sees labor costs as a contribution to the community and believes in helping his workers as much as possible. "I want to compensate my workers; they work hard and that is where the profit and wealth are going to go. Give them a piece and then do profit sharing. In farming, we need to include people and that is my dream too," he says.

## Soil and health



Pollo Real Ranch is a soil-based system, Delehanty emphasizes, and it's easy to see that the silty, clay loam soils at Pollo Real are healthier than those on neighboring farms.

Manure, spilled feed and the scratching of the chickens' feet have boosted organic matter levels, increased fertility and improved water absorption. This increased water holding capacity is very important in a dry state like New Mexico and has saved Pollo Real time and money by reducing the need for irrigation on its pastures. The pH has dropped from the alkaline range and the salt content has been moderated.

**True wealth exists with good soil** according to Tom Delehanty. In this "soil based system," pasture is grazed by chickens in yurts, increasing organic matter and improving tilth. The simplicity of the Pollo Real system makes it easy to emulate and integrate with other organic operations.

Still, things are not perfect and much remains to be learned. Several years ago, for instance, Delehanty realized he was getting big birds off of some fields and smaller birds off of others. Curiously, the larger birds were coming from fields that were new to the system and had not been fertilized over time with manure.

After looking at an old farming book and examining his soil tests, Delehanty concluded that the smaller birds were getting too much calcium and phosphorous in their diets as an unintended consequence of the improved soil conditions. So he lowered the calcium and phosphorous in the birds' feed ration by 30 percent. This corrected the problem—but more importantly it brought home to Delehanty the need for close attention to the soil in pastured poultry systems.

Pollo Real has little trouble with diseases or parasites. Delehanty offers several explanations for this. First, his chickens are kept in small flocks in separate yurts and do not suffer from the stresses of overcrowding. Second, the birds are moved daily, keeping them out of their own waste and giving them a constant supply of fresh greens. When the yurts are moved, the sun, weather and time off kill most pathogens. Access to fresh air, sunlight and the soil itself—where they can scratch up grit, minerals and insects—also helps the birds stay healthy. Finally, the chickens are regularly monitored and sick birds are immediately culled from the flock.

## Processing

The production of high quality meat extends from the field to the processing of the birds. One of the advantages Pollo Real has over most poultry operations is that the chickens are processed in an on-farm facility. This reduces the risk of contamination and allows Pollo Real to set high standards for safe and humane handling. At slaughtering time, the chickens are removed from the yurts, placed in small pens, and carried 200 birds at a time into the processing facility, where they are placed upside down in individual cones. After a blessing is given, their jugulars are cut and they are bled to death. (Most conventional chickens are killed by electrocution, Delehanty says, which stops the heart immediately and makes proper bleeding impossible.)



The birds are then scalded, mechanically defeathered and placed in a cool water bath to lower their skin

temperature. Next they are hung by their feet on hackles suspended from the ceiling, eviscerated and cleaned. Finally, they are placed on ice in stainless steel vats, where they remain until packaging.

**The on farm slaughtering operation** has become more efficient over the years. On Monday morning an average of 1,000 chickens are processed. They are then packaged and put in the backs of the refrigerated trucks for distribution on Wednesday and Friday.

In many poultry operations, chill baths are used to cool large numbers of birds at one time after slaughter. According to Delehanty, these baths are a potential source of both contamination and loss of meat quality, since dehydrated birds can absorb as much as 15 percent of their body weight in the water. Because Pollo Real's birds are denser and healthier and are cooled on ice, they take up less than 5 percent of their weight in water. Lower water absorption means higher quality meat.

In the future, Delehanty would like to move to "cold chilling" to cool down the meat more rapidly after slaughter and cleaning. In cold chilling, each chicken is put on an individual prong on a rack in a controlled cooler. Because the birds do not touch, the potential for cross contamination is eliminated. Cold chilling can drop the temperature of the chickens down to 30°F in half an hour.

When asked about sources of contamination in conventional operations, Delehanty says that ultimately it comes down to the conditions in which the chickens are raised. At Pollo Real, the birds are kept outdoors, in a healthy environment and are fed on high quality organic grain and pasture. In addition, they are checked 10 times for healthiness during slaughtering, processing and packaging. This far exceeds what USDA regulations demand.

On Tuesdays and Thursdays, the birds are packaged, labeled and loaded onto two refrigerated three-quarter ton trucks. Each truck holds 500 to 600 chickens. At 6:00 AM on Wednesdays and Fridays, the trucks are unplugged and sent off to their delivery runs.

## **Marketing and distribution**

Pollo Real's distribution costs are less than 10 percent of it's total costs—well below the industry average of 15 to 20 percent. The difference is that Pollo Real is a producer, not an integrator like

most poultry processors. "We manufacture the product here, we process it right here, we package it right here, and we put it on the trucks the way it is going to be taken off on the order sheet," Delehanty explains.

Pollo Real receives about \$2.50/pound (or about \$10.00/bird) for its organic chicken. The average price for conventionally raised chicken is \$.80/pound. So far, Pollo Real has held to a policy of selling only whole birds; Delehanty says at their current scale offering cut-up pieces isn't economical. The hearts, gizzards and feet are sold at \$.50-1.00/pound (a quarter pound per bird) to restaurants and Asian markets. Customers are willing to pay more for Pollo Real chicken because they can taste the difference. The meat is denser, leaner and more flavorful.

Pollo Real's earliest customers were chefs. As a marketing strategy, this had both pros and cons, Delehanty says. On the up side, chefs make terrific spokespeople when it comes to spreading the word about a high-quality food product. Many of Delehanty's 15 to 20 current restaurant clients identify Pollo Real by name on their menus, which has nice impact on sales through other venues. On the down side, the size of the restaurant orders varied, leading Delehanty to conclude that a mix of different types of outlets was key. "It took years to get the right scale because the restaurants are up and down. You need the same amount at a grocery store, every week, all year long, to stabilize the whole thing." It took a while to build this store base because considerable volume was needed to fill store shelves.

Today, about 60 percent of Pollo Real's output goes to grocery stores, 30 percent to restaurants and 10 percent to farmers' markets. Delehanty is also a founding member of the New Mexico Organic Livestock Co-op, which includes producers of organic chickens, eggs, lamb, turkey, beef and goat cheese. Established in 1997, the NMOLC operates a reciprocal distribution network through which members carry one another's products to farmers' markets and shops throughout the state. The co-op also shares costs such as liability insurance. Delehanty himself attends five farmers' markets in central New Mexico, selling other NMOLC products alongside his own chickens.

Although the percentage gained from going to farmers' markets is small, Delehanty considers it to be crucially important because farmers' markets are the best place to build a loyal customer base. Even though people can just as easily buy his chicken at the grocery store or eat it in restaurants, he says, "they want to see me at farmers' markets to feel connected. Ninety percent of the farmers' market customers have 9 to 5 jobs and want to

connect with the farmer, they want to know what you are doing, they want to try your product, they want to come to your farm." Once people have made that connection—and tasted the chicken—they're more likely to look for it elsewhere and to spread the word, essentially providing the farm with free publicity.

## Future objectives

Delehanty hopes soon to be hatching his own chicks rather than buying them. Like other pastured poultry producers, he's come to believe that conventional hybrid chicks lack the necessary hardiness to really thrive in a pastured system. In early 2004, Tim Shell of Virginia sent Pollo Real 60 chickens of the Corndel line (a cross between Cornish Rock and Delaware breeds) that had been crossed back to line-bred meat chickens. After an initial set back—many of his breeder-birds were killed by dogs—Delehanty has since been working on his own breeding program, selecting five to ten chickens out of each shipment the farm receives. He looks for consistency, size, shape, vigor, hardiness and other factors, reckoning he needs one rooster for every eight hens.



The breeder chickens are raised on a limited diet of 25 to 30 pounds of feed per hundred birds per day. Iverson thinks their breeding program can produce a generation every six months, leading to a complete breeder flock

**Chickens feeding on summer pasture** of millet, kochia and bindweed. These chickens benefit from the healthy pasture, uncrowded conditions, open air, sunshine and soil under their feet. After nine to 10 weeks they will go to slaughter, and will be sold as high-quality, organic chicken under the Pollo Real label.

of 300 hens capable of producing 1,200 chicks/week within the year. In two years, Pollo Real expects to have its own line-bred chickens, acclimatized to the altitude and weather. If all goes well, the ranch may even be able to market its chicks to other pastured poultry operators around the country.

Delehanty counts Pollo Real's low overhead as one of the big reasons for its success. Most poultry operations are overcapitalized, he argues, with major investments in buildings and machinery that make it difficult for producers to respond to emerging market opportunities—such as the demand for pasture-raised organic chicken. "My whole operation will make \$500,000 a year, which is equal to 5 percent of the largest agriculture operations in the country," he points out. "[But] I couldn't get \$25,000 out of the equipment if I were to sell. That is a powerful thing and it is hard for people with money to understand."


For "start up" ventures or small-scale family farms, however, the Pollo Real system is ideal. The Pollo Real model is also "family friendly," in part because there's minimal use of heavy machinery. Delehanty's two children, Shayna and Griffin, have been active in the business from a young age and are now planning their own chicken operations.

Pollo Real's future growth is limited by land availability. "[We] would be more efficient if everything were on one whole plot" instead of on scattered parcels, Delehanty admits. "In this way, we could scale up to 2,000 or 5,000 birds." But such an expansion would also require additional capital to create a USDA-inspected facility, with a full-time USDA inspector on site (Pollo Real's current facility is inspected by the state of New Mexico but not by the USDA), and Delehanty is reluctant to take that step. "It is terribly expensive. It is another scale of production that I don't even know about. These would be some changes that I can't even conceive of yet."

For the time being, Delehanty is content with his farm's current size. "This scale supports what I am doing and it has taken a number of years to get here," he comments. "I could get bigger, but at this scale I am learning and growing and using all the resources. I am not in this to feed the world—I want to feed my community and my region."

Ultimately, the Pollo Real model is as resilient and flexible as its yurts. As Delehanty says, "The system has no secrets. . . [it's] about hard work and resourcefulness." It's also a system that could readily be integrated with other farm enterprises, he suggests, such as organic garlic or strawberry production. Delehanty believes the true wealth of a farm lies in its soil. Under

the yurts, the soil has improved remarkably and has created possibilities for other agricultural endeavors.

Delehanty constantly seeks to strengthen Pollo Real through networking, consulting and promotional events. "My biggest thing is to educate people. To build on simplicity and a passion and something that they can do well. I want other people to do this in their communities... this is how we can create culture with our food again." 

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