

Community Farming in Times of Need

The effects of community agriculture on a population are much more impactful than just providing a place to grow food. My name is Joe Montoya and I am a student at Utah State University studying agricultural education with an emphasis on sustainable agriculture. During the summer of 2017 I had the incredible opportunity to visit Huanchaco, Peru and learn about the current agricultural practices there. My opinion has been particularly impacted by the experiences I had with a group of people living just outside of Trujillo, who lost almost everything during the floods earlier the same year. While working with these people I developed questions about the impacts of community gardening, particularly on communities affected by natural disaster, extreme poverty, or other social and environmental issues that may cause duress and strain on human health and happiness. My overall purpose with the research I did was to understand the needs of the people I was working with and learn if a community farm would be beneficial to them. To understand this I researched sustainable agriculture in the areas around Trujillo, the history of agriculture in Peru and the growing organic and sustainable agricultural practices, which I have compared to the history of agriculture in the US. I believe that community agriculture will be a benefit to the people I worked with, and to many other people in need throughout the world. These are my reasons why.

I travelled to Peru with my wife, a professor at USU named Michelle Grocke, and a group of anthropology students with varying backgrounds. We were informed during the first day of classes that we each would be writing a short ethnography and that the area of focus was to be the medicinal plant usage of people in a community called the Olla Comun, which consisted of migrant workers from the surrounding areas who had relocated to Trujillo. In early 2017, devastating floods ripped through much of Peru, destroying much in their wake. El Milagro was heavily damaged by the floods. Michelle's main contact in Peru, an anthropologist from Trujillo

named Rafael, had made contact with a group of people in El Milagro, and had asked us if we could put together a humanitarian aid fund. A few thousand dollars were donated via a fundraiser started by Utah State University professors and students, and the Olla Comun, or “community pot”, was established. Because of this foot in the door, after her first visit to the Olla Comun, Michelle made the decision that the information we gathered should be highly focused on the people there whom we’d had the privilege of already starting to build good relations with.

Background/Site Description

The first time I made it to El Milagro, I was astounded by the amount of damage. To get to the Olla Comun it is necessary to drive down a dirt road that branches off of the Pan American Highway outside of Trujillo. We drove the 15 or so kilometers from Huanchaco in a large van, and as we turned down the dirt road the devastating effects of the floods were clear to see through the side windows. Dark horizontal lines painted by the dirt indicated the level of where the water had been, marking the few walls in the area that still stood. Huge dirt fields scattered with rubble were all that remained in the blocks between narrow streets. Here and there a few structures had partially survived, but everything was covered in dirt and rubble. As we pulled up to the shared patio that served as the kitchen for the families that made up the community and stepped out onto the sandy lot to greet the people who had so looked forward to meeting us, my mind began to work on what we could do as ethnographers to help these people. Bonnie Glass-Coffin, a professor at USU who has spent much of her life in Huanchaco sat down the members of the Olla Comun who were able to attend our first meeting and asked them to list the things they wish they had. A lot of the people listed similar things: they wished that they had jobs that provided steady incomes, they wished that their houses could be fixed and that they would have comfortable places to sleep. One woman in particular, as she looked into space and tried to think of the things she wished she could have, said with some emotion that she missed her garden. Others joined in with her, stating that when the time came, they would like that gardens to work in.

Because of my interest in sustainable and community gardens, this experience caused me to ask myself what the effects of agriculture would be on a community such as this, and the

communities around it that were not as dramatically affected by the flooding? Would those areas be more, equally, or less benefited by community and sustainable agriculture? Also, was there already some of this type of agriculture going on in the area? If so, what were the effects of it? During the rest of my time in Peru, I became interested in finding out if others had had these same questions and if I could see practical applications and how such incidents worked in the locations they were implemented.

Literature Review

For a people who were so concerned about rebuilding their homes and finding places to work, a big question I had was whether or not suggesting to add a garden to their communal responsibilities of cooking and cleaning the area would be a good thing, even if it was determined that it was something that many of them wanted. According to an article entitled “Urgent Biophilia: Human-Nature Interactions and Biological Attractions in Disaster Resilience” (Tidball, 2012), biophilia referring to the theory that humans are programmed to seek out connections with other living things—particularly plants and humans after a natural disaster—a people’s ability to recover from trauma is directly proportional to the opportunities to interact with people and plants directly around them. Therefore the idea is not rebuild first, then have a community garden, but build a community garden so that the people could recover and rebuild faster. The community would have to be on board, but according to this reasoning, would be attracted to the idea of having additional plants to interact with. This desire may be strengthened by giving those community members who would hold major responsibilities the chance to see other community gardens, or to be given a ‘sampling’ of potted plants to pique the interests of involved parties. To further strengthen this viewpoint, in a book titled “Sowing Seeds of

Resilience: Community Gardening in a Post-Disaster Context” (Okvat, Zautra, 2014) the authors state that:

“Resilience is a natural capacity to recover from adversity, sustain well-being, and grow from the experience. To enhance resilience in a high-stress, post-disaster context, we argue that it is vital to introduce positive stimuli to buffer the effects of negative stimuli. We review empirical evidence for the positive effects of various forms of contact with green space and contend that community gardening has considerable potential for bolstering individual and community resilience in disaster zones. We propose that creating an extensive network of community gardens as part of a disaster preparedness plan would yield multi-level benefits and bolster resilience capacity before it is acutely needed, and we suggest that community gardens established after a disaster has occurred adopt targeted aims in order to maximize benefits.” (p.2)

As an additional and important source of evidence, it was necessary for me to look at as many actual implications of these ideas as possible to see how they worked in real world situations. In a study of the effects of community gardens in a very economically deprived neighborhood called Mantua, in West Philadelphia, author Autumn K. Hannah tells about how she entered the project with the hopes that her research about the area would draw attention and therefore aid, but left feeling like Mantua had much more to offer her than she ever would to it. During her study of the community and its revolution around community gardens, Hannah stated that her project forced her to rethink her ideas about success and to look at Mantua not for what it was missing but for the many things it had to offer. She stated that “resources abound” and that for her, the inner city became a place of “community, tranquility, and hope” (Hannah, Oh, 2000).

Methods

I performed my research using a mixed methods approach, which included unobtrusive observation, formal interviewing, and participant observation. I began with an investigation about the plants that are most common in the area of northern Peru near Trujillo and how they are used through the interviewing efforts of all of the students involved with the field school.

Peru has a wealth of medicinal and culinary plants, and each plant can fit into a set of roles or beneficial uses for the people. To understand how agriculture worked in the lives of the people everywhere in Peru, I knew I would need to not only become acquainted with the plants themselves, but with how people went about obtaining these plants, particularly why and how they did so.

Relying on unobtrusive observation, I gathered as much data as I possibly could about farming in Peru. Everywhere I went I did my best to observe the farming practices there. This included the massively large sugarcane fields surrounding Trujillo, some of the open air markets in Trujillo and Huanchaco, and several organic and permaculture gardens located close by. I was fortunate to usually be accompanied by informants who I was able to perform informal interviews with and gain important insight. As a group of students, we also performed a formal assessment of the needs and assets of the people in El Milagro. I have drawn data from certain sections of these surveys.

Other experiences I had learning about agriculture were more randomly providential. In one instance, while enjoying a meal in a hostel restaurant in Huanchaco I met George and Ada. George was a twenty-six-year-old, red haired and bearded English teacher from England. He had moved to Peru to volunteer and ended up making a career of it. His wife, Ada, was born and raised in Trujillo. They had met while volunteering. Ada told me that she had worked at an organic farm in the area that I'd heard mention of, but had left to start her own small, sustainable, organic farm with her brother in Trujillo. They rent a few blocks of land next door to another farmer and are in their second year of production. According to Ada, they are still working out all of the fine tuning. I was later able to visit Ada's farm and learn more about organic farming in Peru.

In another instance I encountered a woman named Ketty who runs a local permaculture business. My wife and I had been talking with friends we had encountered on the street who were dropping off coconuts when she stepped outside her door. As she bid our mutual friends adieu she said the Spanish word “permacultura”. I told Ketty that I worked with permaculture in the United States. She invited us in to see her garden and told us about an upcoming conference about permaculture and sustainable agriculture on a local farm. In the end I was able to participate as the keynote speaker in that conference, sharing ideas with about 25 farmers and gardeners from the area. I was able to use my time before and after the conference to observe the realities of sustainable farming in Peru.

Data Analysis

Conventional agriculture, that is to say big farms driven largely by capitalistic principles have a strong hold on in Peru. I do not think that conventional farms of this type are inherently evil. The facts state that, due to the economy of scale that most often, large farms are able to produce much more of a good for much less monetary cost. They produce jobs and products that can be exported or sold locally. But on the other hand, there are perceivable downside to large industrialized farms. The grand majority rely heavily on pesticides and chemical fertilizers that usually consist of toxic or otherwise dangerous chemicals that affect wildlife and can easily end up in groundwater. In addition, it is much more difficult to pay attention to soil health and natural productivity or nutrient levels of plants. As for the sugarcane farms in and around Trujillo, most of the sugar is processed and exported. The sugar cane seems to be the major cash crop grown in northern Peru. I observed many acres of sugarcane stretching up and down the coast, some of which are owned by Coca-Cola and used to produce sugar for the many sodas the company sells.

Many small farms with focuses on sustainability have been popping up in Peru, but the growth of sustainable agriculture has been very different than in the US. To understand it's growth in Peru, it is beneficial to look at the sustainable agricultural movement in the United States. Previous to the mid 1900's almost all of agriculture would have been 'organic' as we term it today. In 1837 the steel plow began to be mass produced which opened the door to farming in the Midwest (Finegan, 2017). Much larger areas of land were able to be tilled and planted with domestic seed, drastically changing the possibilities of farming. Due to the over tilling and loosening of the topsoil in the 1920's, an event infamously known as the dust bowl swept up the top few inches of topsoil on an area over 400,000 kilometers. During World War II chemical industries began producing high amounts of Nitrogen to be used in various weapons. To aid struggling farmers trying to grow crops without any topsoil and to make a profit on excess goods, chemical fertilizers began to be sold in large quantities and modern conventional agriculture was born. However, there were some who believed that the new conventional practices led to less healthy produce that lacked nutrients and were laden with dangerous chemicals. In addition, many people expressed unhappiness concerning the amount of fossil fuels consumed and the amount of waste produced by conventional farms. For these reasons, a counter culture of smaller farms requiring less monetary input into fossil fuels and heavy machinery, and more into plant and environmental health, emerged from the seeds sown by traditional farming practices. This movement was greatly urged forward by the organic agricultural movement in California that played such an important role in establishing the stringent rules proposed by the USDA for organic agriculture certification. Independent of this, but undoubtedly benefitted by its progression and emergence into the public eye, there have been a number of other important branches of sustainable agriculture in the US, including

permaculture, biodiverse farming, heirloom seed saving, and many other facets of sustainable agriculture.

Brief History of Peruvian Farming

The history of Peru's agriculture has been very different than that of the US. Whereas in the US, fertilizer companies have been able to market to most regions, there are areas of Peru that have never been, or only very slightly influenced by the big agriculture companies. So, for some growers the guiding principles of sustainable agriculture are one and the same as those that traditional growers have used. This is true also in the United States, but not to the degree that it is in Peru. During my time in Peru I saw many instances of very traditional and even old fashioned farming practices. At one farm, an older farmer walked passed us with a wooden plow over his shoulder and the reigns of a donkey in his other hand, heading to go plow a field.

Medicinal Herbs in Peru

Medicinal plants play an important role in the lives of many Peruvians. Traditional medical customs in Peru treat most sickness, from teething pains, the common cold, cramping, inflammation, hangover, and even susto, or "fright" with medicinal herbs. For a Peruvian who grew up in a home where medicinal plants were used, their first encounters might have occurred before they could recollect, and it didn't seem like this trend was going away. Although some of the people interviewed about their usage of medicinal plants stated that their parents knew more about the uses of these plants than they did, others said that they knew more than their parents did, and almost all of the participants who said they either used or used to use medicinal plants said they either were or were planning to teach their own children about these same remedies.

In El Milagro, several participants said that they used to use medicinal plants but did not as much as they did before the flooding, or at all, because they did not have access to these

plants any more. If a community garden were to be established in El Milagro, medicinal plants could be planted there, increasing the availability of these plants for community members.

My introduction to medicinal plants in Peru was provided by Carmen Diaz, a curandera, or traditional healer. She had arranged to perform a cleansing on one of the faculty on board with the field school. Most of the students showed up to witness the work that Carmen was doing, and after watching her perform an aura cleansing ritual using burning palo santo, or “sacred wood”, we asked her a few questions about her knowledge of plants and spiritual healing. Because of our enthusiasm and with some encouragement from Michelle, Carmen arranged a time to return and teach us about her work. When she returned, she came with many of the plants she uses every day, which included not only herbs and flowers, but fruits and vegetables as well. Some of the plants she brought were the same as those grown in the US, like anise and chamomile, among others, but many more were tropical varieties native to Peru. So far, scientist have identified 512 medicinal plants with various uses in Peru, over 100 of which are not sold in any market, but must be gathered from the mountains or jungle by curanderos themselves (Bussman, 2007). After Carmen’s presentation many of us had additional questions. Carmen arranged with Michelle to take a small group of students with her to the market to learn more about the plants she had brought, as well as a number of others, and see how a person could acquire them.

Peru’s Outdoor Markets

The outdoor market seemed to be a good way for farmers in Peru to sell their products. The main market in Trujillo is astoundingly large, covering several city blocks in a crowded maze of stands that include fruits, vegetables, herbs, flowers, and cut meat, as well as a wealth of other items like clothes and electronics. From the informal interviews with many different vendors at the market I was able to learn much more about agriculture in Peru. Most of the

vendors we interviewed said that their produce was grown in Peru within 6 to 8 hours from Trujillo by car. Vendors travelled to or received deliveries from farms twice a week and then were resellers at the market during the other five days of the week. At one vendor's stand an entire table was covered with garlic and onions. I visited this particular table the day before a pickup day, and the girl and her brother manning the stand told us that we should come back in two days because what remained was the last of the produce that had already been picked through for the previous three. She did however have a box of avocados she had grown on a tree in her own garden in Trujillo that she picked from to supplement her purchased produce. In this way local agriculture mingles with larger scale farm purchases, sharing the same space on a table. This instance was not isolated.

After one particular trip to the market as I rode in a taxi back to Huanchaco with Camren, I found out that that many people buy most if not all of their groceries at the open air markets. Our taxi driver was excited to join into our conversation, sharing that some people have adopted the practice of buying their groceries at the relatively new supermarkets in Trujillo, but the majority of these people are from the wealthier class. The open air market is sometimes looked down upon by locals because it is not as clean, but the prices are much lower, and although sellers still buy from farms and then sell the produce for a marked up sale price, those who shop at the open air market are not as far distant from the farms that their produce is grown at. During our conversation I learned also that the some of the supermarkets have processes for disbursing older expired produce to local schools and food banks. The open air market does not seem to have any such mechanisms in place and throw most of the old produce away.

In the end I realized it would be entirely fruitless to ask all of these questions and never ask the people of the Olla Comun straight out whether or not they would like a community garden. As several people had expressed the desire to have a garden and I would likely get

different answers from different people, I decided to ask Nelly, the elected president of the Olla Comun. I asked her on our last night in El Milagro. I entered her house, which was better preserved than almost all of the others on her street, and found her cutting the hair of one of the students. I had been looking for a place to get my hair cut before leaving Peru and asked her if she would give me a trim. She was happy to and was done after only a few minutes. Afterwards, after briefly explaining what I meant by 'community garden' I asked her, with the help of a translator, if she thought the community would be benefitted by such a garden. She thought for a moment, her dark eyes looking into the distance, she said that some people would use it, and some people wouldn't. That seemed to me a fair answer. I never would suppose that all of the members of the community would want an equal share in the garden. Only that those who would like to grow plants for their own consumption and, if they liked, for contribution to the rest of the community, would have the space to do so.

Recommendations

It is clear that the benefits of a community garden are present, but it is important to contemplate whether or not a community garden in El Milagro be helpful for the people there at this point in time. From our findings we knew that there were items that stood higher priority list for the people of El Milagro than a space to grow things, first and foremost food, water, shelter, and medical needs. A community garden could be used to produce food that could be used to supplement the needs of the people of the Olla Comun, but it would need to be determined whether or not the food produced would be of economic value, or would be more of a drain of resources than an aid. Furthermore, the people of El Milagro are currently rebuilding in the same flood zone they were in when their houses were destroyed. Would it be wise to encourage a group of people in such obvious danger to put down more roots, both literally and figuratively?

The answers to these questions would not only apply to this group but to others in difficult circumstances who may or may not be helped by such aid.

One of the difficulties that has been repeated to me a few times by farmers in Peru was the difficulty of obtaining organic seeds. When I asked one farmer if they grew kale in Peru, a staple of organic farming in the US, I was told “we can’t get seeds”. Many heirloom varieties of certain produce and any kinds of seeds of others are simply unobtainable. A few people even mentioned to me that they are seeking “connections” in the US or other countries to bring seeds in for them under the radar. I am curious to know if a door could be opened legally to allow the seeds that are unobtainable through legal methods to go to those who would like to grow them. The reason this is difficult may be that the Peruvian government is not keen on having foreign seeds flooding Peru, partially due to scars left when, during American colonization, while white cotton was becoming popularized in the Southern cotton belt of North America, Spanish rulers in Peru imposed seeds from the plants on the local growers. For centuries, cotton growers in Northern Peru had cultivated many beautiful different varieties of cotton that hadn’t been available anywhere else in the world. These cotton plants produced different colors of cotton, which were used to produce some of the green, blue, and purple textiles that have been recovered and preserved in ancient Moche burial sites. After the importation of white cotton and the inundation of this foreign plant into the fields of Peruvian cotton growers, many of the local varieties were lost. Seeds were destroyed or became no longer viable. Thankfully, a handful here and there were preserved, saved in clay pots or tucked away secretly, and an heirloom market emerged with farmers and artists working together to produce textiles the same way their ancient ancestors did. This is not a story we would want to reproduce, so much care would need to be taken to not drown out local produce. Wherever possible, locally occurring varieties should be sought out and used in community gardens in any area. Some of the plants grown by

those in the Olla Comun were gathered from the countryside and transplanted into sparse growing areas, a practiced that could be encouraged.

The beauty of small scale sustainable agriculture is that it beautifies the land without needing to ingrain itself. If a community garden needs to be abandoned or moved to make room for another purpose, it can be. Most annual and biennial herbaceous plants and many perennials can be easily dug up and moved or composted. Although it would take manpower to get a community garden up and running, it would not take a considerable amount of help to maintain and close down if the time came. This would be useful for the people of El Milagro if they determined that it was time to migrate elsewhere, out of the floodplain.

In this and any project, education with a focus on empowering sustainable local traditions would need to play an early role. A small class may need to be taught to help those who would like to be involved to learn the basics of effective farm planning, field preparation, seed planting, transplanting, care before, during, and after harvest, seed saving, and other basics. It may be good to establish a system of recurring visits used to answer questions, evaluate current interests, and offer help with problems.

To close with, in a study titled “What Good are Positive Emotions in Crisis?” (Fredrickson, et al, 2003) the author states:

“Positive emotions do not disappear in times of acute and chronic stress but rather are present and functional during crisis” and that “efforts to cultivate and nurture positive emotions in the aftermath of crisis pay off both in the short-term, by improving subjective experiences, undoing physiological arousal, and enhancing broadminded coping, and in the long-term, by minimizing depression and building enduring resources, the hallmark of thriving.”

On my first day in El Milagro I noticed that a few of the people had restored their small gardens and were growing fruits and herbs. One woman in the Comun later told us that when

the floods came she had to act quickly to protect the few plants she had growing in a cluster near the front of her house, in an area that was already inundated with water. She said that after the floodwater subsided, she had to go and find some of the plants that had washed away to start over. She was already “building enduring resources”, moving forward on a difficult and sometimes depressing road. In the end we weren’t able to start a community garden in El Milagro in the course of this trip. The idea was bounced around but we simply did not have the resources prepared to get things going. Because of this, El Milagro has become a case study for me to observe and try to convince others that such a garden really could help meet the needs of many people who are overcoming difficult trials. I have seen how such a garden can bring people together into a community and increase their joy. Going forward in El Milagro and in other areas of the world where disaster has struck or an area is otherwise affected by poverty or calamity of some sort, we can help people to have the strength to have joy as they move forward with their lives. The choice to help is ours.

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