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Painting the Town Green: Realities, Challenges, and Possibilities in Mexico City's Budding Urban Agriculture Movement

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PAINTING THE TOWN GREEN

REALITIES, CHALLENGES, AND POSSIBILITIES IN MEXICO CITY'S BUDDING
URBAN AGRICULTURE MOVEMENT

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SIT WORLD LEARNING: MEXICO

SPRING 2010

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ABSTRACT

This paper explores the Urban Agriculture movement in Mexico City. It investigates who is practicing Urban Agriculture, how, and why. It looks the benefits of Urban Agriculture, and Urban Agriculture's role in a potential future food system that does not rely on transnational corporations for supply. The paper begins by discussing the significance of food as nutrition, and how the individual's right to food has been transformed into the corporation's right to make a profit off of food. The concept of food security and food sovereignty and their place in the organic Urban Agriculture movement are then explained. Three Urban Agriculture projects in Mexico City are explored: a traditional farm, a government-funded community project, and an organization that promotes Urban Agriculture on the individual household level. The conclusion discusses the movement's impact on economics, community, and the environment, and Urban Agriculture's connection to the future necessity of food sovereignty.

RESUMEN

Esta investigación explora el movimiento de la Agricultura Urbana en la Ciudad de México. Se investiga quién está practicando Agricultura Urbana, cómo, y por qué. Se ven los beneficios de la Agricultura Urbana, y el rol potencial que la Agricultura Urbana pueda tener dentro de un sistema alimentario que no dependa de las empresas transnacionales para el suministro. Se inicia discutiendo de la importancia de comida con la nutrición, y cómo el derecho a la comida de cada persona se ha transformado en el derecho de las corporaciones para lucrar. Se explica el concepto de la seguridad alimentaría, y la soberanía alimentaría, y su lugar en el movimiento de la Agricultura Urbana y orgánica. Posteriormente, se explora varios proyectos de Agricultura Urbana

en la Ciudad de México: una granja tradicional, un proyecto comunitario financiado por el gobierno, y una organización que promueve la Agricultura Urbana a nivel individual. Para concluir, se discute el impacto del movimiento de la Agricultura Urbana en la Ciudad de México en la economía, la comunidad, y el ambiente, y la necesidad de alcanzar la soberanía alimentaria.

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DO YOU KNOW WHERE YOUR FOOD COMES FROM? AN INITIAL REFLECTION

Let's think, for a moment, about how we eat. We do it every day; most of us do it three times a day. We eat for health, for strength, for pleasure. We eat so we won't be hungry, so we can focus, so we can perform our daily tasks with efficiency and clarity. Often, we eat on the run: we grab our food. We eat out. Sometimes we take out, so we can eat in. Other times we even cook. Every so often we treat ourselves to dessert, to another glass of wine, to an extra slice of bread. But we *always* eat. Every single person on this earth eats. Some do not eat enough; others eat too much. But we all eat, because we all need to eat. To *live* is to eat.

Now, think about where our food comes from. I'm not talking about the restaurant, or the supermarket, or even the factory. I'm talking about the actual, physical ingredients, the *food* in our food. What are we really eating? And how did it get to us?

At first, the answers to these questions seem straightforward, obvious even, or perhaps just unnecessary. As long as we have access to food, does it really matter where it comes from? Or what it consists of? But when we think a bit deeper, the answers grow simultaneously murkier and ever more important. Food comes from the earth, from nature. Yet somehow, food production and consumption have shifted from basic, natural processes to a complex, transnational business complicated by trade agreements, chemical fertilizers, environmental concerns, and unpronounceable ingredients.

Around the world, citizens are fighting to re-gain control over the food that goes into their bodies. From vegetarians to locavores to organic enthusiasts, people are constructing movements that respond to different food crises. One such movement is Urban Agriculture (UA), which entails growing food in a city. UA gives urban residents

access to, and control over a food source. It deems them independent from political and business cycles; it affords them both nutrition and autonomy.

Mexico City is one of the largest cities in the world, and has a unique tradition of UA that dates back to pre-Hispanic times. While food production in Mexico City was gradually forgotten as the capital expanded past mega-city status, UA is returning to urban life. UA is taking root in Mexico City, establishing itself as a viable solution to the economic, social, and environmental problems with which capitalinos contend.

METHODOLOGY

My project started with books—lots of technical, 300-page, black-and-white books with long-winded titles and at least one subtitle. I wanted to spend about a week researching Urban Agriculture to understand the technicalities and realities of the movement in Mexico City and around the world. I read a lot of facts and statistics that week, but the most important thing I learned from my primary research is that UA is not about reading; it's about doing.

As soon as I started talking to Mexico City residents and visiting UA projects, I began to understand those how's, why's, and who's of the movement that I had been fruitlessly searching for in published writing. Urban Agriculture is about people. It is about interacting with people and interacting with nature.

My first visit was to the Feria Ambiental (Environmental Fair) in Parque de los Periodistas Ilustres on Earth Day. I spoke with families selling their produce from their Mexico City UA projects. I spoke with organizations (both governmental and NGOs)

seeking to protect the environment in Mexico City. I also spoke with people selling “green” everything, from recycled jewelry to spirulina. I got a lot of flyers (printed on recycled paper, of course), and made some great contacts.

Then began the visits to actual UA projects, and interviews with people organizing them. As I said before, the UA movement, especially the organic UA movement, is about people. It’s about people recognizing the economic, social and environmental problems in our society and doing something to change them. The people I met while visiting UA projects showed me their vegetables, compost, and water catchment systems, and told me that they did not use pesticides. They did not talk change in so many words, and never preached that I, nor everyone else, follow in their footsteps. But the writing was on the wall. Through subtle statements hidden in expository answers, they made it clear that change is in the air. Economic change, social change, and environmental change are all being achieved by private individuals, a bit of space, some soil, and a couple of seeds.

I thought, at the beginning of the project, that I would be able to visit more homes of typical Mexico City residents that decided to put some plants on their roofs. I soon learned this intention was neither realistic nor feasible, and shifted my focus to look at more public, community organizations and spaces. The result, I feel, enriched my paper as it allowed me to meet a wide range of UA workers, and to gain a more holistic understanding of the UA movement in Mexico City.

My biggest obstacle in this project was time. I would have loved to visit more projects, to meet more people, and to really get my hands in the dirt. But now that I have been introduced to UA, I can take this desire back with me to New York, where I will

create my own, modest UA project, some tomatoes on the windowsill, perhaps, and some compost to start.

SETTING THE STAGE: FOOD SOVEREIGNTY, URBAN AGRICULTURE, ORGANICS, AND MEXICO CITY

FOOD SECURITY AND FOOD SOVEREIGNTY

The United Nations has declared that everyone has the right to freedom from hunger. Article 25 of the Universal Declaration of Human Rights, which states that “Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food,”ⁱ guarantees access to food as a human right. The World Bank defines Food Security as a person’s right to have access to “enough food for an active and healthy life.”ⁱⁱ Taking this notion even further, the Food Sovereignty movement declares that people should have the right to “define their own viable policies and strategies for sustainable food production, distribution, and consumption of food; to guarantee the right to food for the entire population, based on small and medium-size production and respecting their own culture and diversity.”ⁱⁱⁱ The human right to food, the movement contends, must take precedence over World Trade Organization (WTO) regulations that protect an investor’s right to profit.^{iv}

Vía Campesina, an international farmers’ organization, introduced the world to the concept of Food Sovereignty at the 1996 World Food Summit. Vía Campesina was founded in 1993 and works to promote “gender parity and social justice in fair economic relations; the preservation of land, water, seeds and other natural resources; food

sovereignty; sustainable agricultural production based on small and medium-sized producers.”^v The movement has since been promoted by a series of international networks and alliances of farmers and NGOs that work to develop alternatives to the WTO’s Agreement on Agriculture.^{vi}

The rationale behind the Food Sovereignty movement is effectively demonstrated by considering Mexican corn farmers’ experience under the North American Free Trade Agreement (NAFTA). After NAFTA came into effect in 1994, import quotas were eliminated and subsidized, genetically modified corn from the United States began flooding the Mexican corn market, forcing prices so artificially low that corn production was no longer profitable or even sustainable for Mexican farmers. Neo-liberal economics would instruct the corn farmers of Mexico to switch their specialty, to leave corn production behind in search of a more lucrative market, such as production of fruit that could be exported to the United States.^{vii}

However, the equations and graphs of neo-liberal economists fail to account for the cultural significance of corn and corn production in Mexico. Corn and other milpa crops have been part of Mexican society since pre-Hispanic times. Mexican corn farmers can hardly just get up and start growing, say, apples. In fact, the only reason more corn farmers did not go out of business after NAFTA came into effect is precisely because corn is such a culturally significant crop.^{viii}

NAFTA took away Mexicans’ ability to locally control food policy and food sources, essentially placing control in the hands of large international corporations based in the United States. It also undermines families’ ability to control the type of corn they consume. With local farmers run out of business, families must consume imported corn

without knowing whether it has been genetically modified or not. Lastly, the farmers themselves are left without control over their food source, as they can no longer afford to produce it.

The key to Food Sovereignty is individual control over the food that a person puts in his or her body. For such a feat to be achieved on a global level, a complete overhaul of our food system would be necessary. Food would have to be de-internationalized, and, most significantly, it would have to be de-commoditized. Every citizen would need to have access to, and control over a food source. This begs many questions, one of which is how to get food sources to city residents. Urban Agriculture, already a growing social movement throughout the world, is a necessary tool for food sovereignty.

WHAT IS URBAN AGRICULTURE?

Urban Agriculture (UA), most simply, is the process of growing produce or raising animals within the confines of a city. An official definition of UA, according to Universidad Autónoma de Chapingo professor Dr. Pedro Ponce Javana, is “the production of flora and fauna in the urban and semi-urban sphere.”¹ For the nuclear family, UA projects can be located on a patio, windowsill, outside garden, terrace, balcony, or roof.^{ix} However, UA can range from growing rosemary in an apartment windowsill to garnish a salad in Colonia Roma, to farming acres of land in Xochimilco and selling the produce at local markets. More than a science, UA can be a business, a political statement, a form of therapy, or even a hobby.

¹ Original Spanish: Dr. Pedro C. Ponce Javana, “La producción de flora y fauna en el ámbito urbano y semi-urbano.”

Havana, Cuba's capital city, is often heralded as a success story of Urban Agriculture. Cuba found Urban Agriculture through necessity. In the early 1990s, after the collapse of the Soviet Union and due to the trade blockade by the United States, the island nation was left with limited import options. "Almost overnight, diesel fuel, gasoline, trucks, agriculture machinery, as well as petro-chemical based fertilizers and pesticides, all became very scarce" in Cuba, making organic urban agriculture a natural solution. Urban Agriculture would limit the fuel needed to provide citizens with food, and small-scale production would reduce the need for agro-industry machinery. Organic production was necessary, considering the lack of available fertilizers and pesticides.^x

When peak oil hits, the rest of the world will experience what Cuba went through in the 1990s. The global food system is dominated by agro-industry, large-scale production that uses pesticides and fertilizers, and ships food across the world. For every calorie of food eaten in the United States, 10 calories of fossil fuels are needed for production and transportation.^{xi} When oil is in short supply and high demand, maintaining this eating system will be impossible. Local, organic production, which includes UA, will be paramount in constructing a sustainable food supply system.

ORGANIC URBAN AGRICULTURE

Agriculture is classified as "organic" if the producer uses only natural inputs when growing. Natural inputs include compost, green manure, and natural repellents (such as plants). Organic production does not use chemical fertilizers or pesticides.^{xii} The UA movement in Mexico City (like UA movements in most other cities) has embraced organic techniques. First of all, it is not safe for chemicals to be used in such

proximity to the living spaces of residents. Additionally, the UA movement is about more than just growing food; it is a socially, politically, and environmentally conscious movement that does not aim to perpetuate a consumption-dependent practice (such as buying industrial chemicals), and understands the detrimental effects that chemicals have on nature.^{xiii}

WELCOME TO MEXICO CITY

La Ciudad de México. Mexico City. DF. La Capital. The Big Enchilada. Whatever you want to call it, México, Distrito Federal, Estados Unidos Mexicanos, is the largest city in the western hemisphere. It is one of the oldest cities in the world.

Mexico City dates back to 1325 when the wandering Aztecs saw the prophecy of an eagle perched on a cactus eating a snake realized, and formed their capital on that very spot. They called it Tenochtitlán. For almost two hundred years, Tenochtitlán was the capital of the Aztec empire. Under the Aztecs, it grew to be one of the largest cities of its time. Spanish conquerors arrived in 1519, destroyed much of the urban center's impressive pyramids and palaces and constructed their own city in the image those back home in Europe on top of the destruction. Mexico City quickly became Spain's capital of the New World, and held this position until Mexico gained independence in 1810, at which point Mexico City officially became the nascent country's capital.^{xiv}

During the first half of the twentieth century, Mexico City was known as the refined cultural capital of former Spanish America. By the second half of the twentieth century, however, Mexico City became associated more often with "urban chaos and overdevelopment" than with sophistication. In 1950, Mexico City had three million

residents. Soon after, “the city expanded horizontally in all four directions, swallowing and engulfing other towns, villages, and municipalities ... what passed for urban planning allowed for no more than catch-up, reactive measures.” By 2000, 20 million individuals lived in Mexico City.^{xv} Today, over 21 million people call Mexico City home.

Understanding Mexico City’s identity as a political unit is almost as confusing as navigating its 85,000 streets. Mexico City is made up of the Distrito Federal (D.F.), where 40% of its residents live, and 60 municipalities to the east, west, and north of D.F., where the other 60% reside; the municipalities are technically part of Mexico State. The Distrito Federal is divided into 16 delegations. Less officially, these 16 delegations are further divided into colonias. As its name indicates, D.F. “belongs” to the entire country; it is a district of the federal government, and it relies on the federal government for its budget.^{xvi}

Along with crime, the Mexico City of today is often associated with smog. Smog is often grey. Or brown. In extreme cases it can be green, but it is never “green.” Despite “green” city planning efforts such as parks and tree-lined streets, and environmentally conscious city government efforts such as Ecobici, an extensive bicycle sharing project, Mexico City is known for its pollution. In fact, pollution levels in Mexico City are among the highest in North America, and merely living in Mexico’s capital city can increase the incidence of heart inflammation in younger generations, and heart disease for the older members of the population.^{xvii}

Mexico City has a history of UA that began long before pollution was a concern, or even a concept. For the Aztecs, food production in Tenochtitlán was part of everyday life. While techniques changed after the arrival of the Spanish, food production

continued to be integral to life in Mexico City. As time passed, and the city expanded in size and population, making time and space for UA became less of a priority for capitalinos. In recent years, the UA movement has returned to Mexico City as a traditional answer to modern problems that the city faces. The UA movement is combating poverty and malnutrition. It is building communities, and promoting environmental consciousness in one of the largest cities in the world.^{xviii}

ORGANIC URBAN AGRICULTURE IN MEXICO CITY: AN INVESTIGATION

TRADITIONAL AGRICULTURE IN MEXICO CITY: XOCHIMILCO CHINAMPAS, COMPOST, AND THE LÓPEZ FAMILY'S ORGANIC FARM

Xochimilco is known as a particularly un-urban delegation of Mexico City. However, it is actually one of the oldest delegations of the capital, and has a long history of providing the rest of the city with produce. Xochimilco's chinampas are essentially floating gardens; they are beds of soil used to grow vegetables on top of Lake Xochimilco. Today, the site is a well-known tourist destination for those wishing to escape the concrete and traffic characteristic of rest of the urban center. However, the amount of chinampa production is nowhere near its former level, and the number of producers is diminishing by the year. Also, producers in Xochimilco cannot be certified as organic because the canal water is not clean enough for organic standards.^{xix}

The nascent organic agriculture movement in Mexico City's more urban neighborhoods has looked to Xochimilco for inspiration, as well as technical guidance. capitalinos often visit Xochimilco on weekends to take a leisurely boat ride through the

canals, and take advantage of the freshness of their air without even leaving the city. The UA movement points to Xochimilco as an example of UA that has withstood the test of time, and to show capitalinos that incorporating vegetation into their daily lives can be both rewarding and relaxing.

Xochimilco is the birthplace of an award-winning compost system originally developed by the Aztecs, and now used in cities all over the world. The Compostero Chinampero SIRDO, saleswoman Patricia Quijano Ferrer explains at an Earth Day Fair in Mexico City's Parque de los Periodistas Ilustres, uses bacteria called termofilica to produce compost that does not smell, and does not attract bugs.^{xx}

As she sells compost kits, Patricia talks change. Starting with her compost, Patricia hopes to “break the capitalist consumption paradigm.”² She explains that “one of the main problems that humans have in their relationship with the planet is the irresponsibility with which we generate and simply dispose of trash, without bothering to care that trash contaminates the air, water, and land.”³ Her compost system both raises awareness of such wasteful habits, and directly helps the environment by turning waste into earth. Another important argument for compost in Mexico City is the dog population. Patricia notes that there are “seven dogs for every ten people. Just imagine the amount poop they produce!”⁴ Instead of dirtying the streets, dog excrements could be used to perpetuate nature, to create earth.^{xxi}

² Patricia Quijano Ferrer, “Romper así el paradigma capitalista del consumo.”

³ Patricia Quijano Ferrer, “Uno de los principales problemas del ser humano en su relación con el planeta es la inconciencia con la que generamos y simplemente nos deshacemos de la basura sin importarnos que estos desechos contaminen el aire, el agua, y la tierra.”

⁴ Patricia Quijano Ferrer, “Siete perros cada diez personas. Imagínate la caca que hay!”

By composting, “you give back to the earth for what the earth gives to you. You connect with the earth’s positive energy and the creation of life.”⁵ City dwellers should pay even more attention to such techniques than their suburban and country-residing counterparts, Patricia believes. Since people in Mexico City are so removed from nature, they must work even harder to find and protect it.^{xxii}



Patricia explaining the CC SIRDO

⁵Patricia Quijano Ferrer, “Devuelves a la tierra lo que ella te da. Conectas con su energía positiva y creadora de vida.”



This picture was taken in the Distrito Federal of Mexico City, in the San Mateo Xalpa colonia of Xochimilco. Regardless of any interest in UA, Mexico City residents (even most chinampa producers) would be surprised to learn that the land shown in the picture above is located in Mexico City, Itzel de María López Ceja says. (San Mateo Xalpa is, in fact, geographically closer to the city center than are the traditional chinampas of Xochimilco.) The land belongs to Itzel's parents, and has been in her father's family for as long as anyone has kept track. Despite a French manicure and slick wavy hair that flows down the length of her back, Itzel is a self-described farmer. Her father may speak like a chilango⁶, she adds, but he is a traditional campesino⁷ at heart, complete with donkey and a seemingly innate understanding of the land on which he lives and works. Itzel's sister Xitlali lives and works on her family's land as well.

⁶ "Chilango" is a popular slang term for Mexico City resident.

⁷ A "campesino" is someone from the countryside. The term is often used to describe poor farmers.

Victoria, Xitlali's one-year-old daughter, is developing an intimate relationship with the nature that she knows as home.^{xxiii}

On three hectares of land, the López family has their house, two greenhouses, a dozen sheep, hens, and a couple of donkeys, horses, and dogs. Their farm is located in the mountains, and the air is much cooler and infinitely fresher than the air in Mexico City's center. Itzel calls her neighborhood a "small town, and below, in the rest of D.F., they have neighborhoods."⁸ Itzel and Xitlali go into the center of D.F. to drop off their produce about twice a week, but otherwise the sisters prefer the tranquility and nature of their own small corner of Mexico City to the center's crowds and pollution.^{xxiv}

In the greenhouses, the López family grows kale, carrots, beans, tomatoes and onions; in the field, they also grow corn. Behind the greenhouses is an extensive compost area, where they turn weeds, old vegetables, remnants from meals, and excrements from the farm animals into fertilizer for vegetable production. They do not use chemical fertilizer or pesticides on their crops; "we get everything we use from here,"⁹ Itzel explains. The López family also uses a water catchment system.^{xxv}

All of their vegetable production is certified organic. The family made the transition to organic farming just under 10 years ago by attending courses on organic farming and researching the topic in books and on the internet. At first, saying goodbye to chemical pesticides and fertilizers was challenging; when crop disease would come, it was frustrating and confusing. But they soon learned how to farm without pesticides. For example, they now grow certain insect-repelling plants alongside their crops. They recognize that organic farming is more natural, and kinder to mother earth.^{xxvi}

⁸ Itzel de María López Ceja. "Pueblo, y abajo en el resto del D.F. tienen barrios."

⁹ Itzel de María López Ceja. "Todo lo sacamos de aquí,"

In addition to the immediate family members, there are nine other women that work in the greenhouses, depending on the time of year. The women come from the neighborhood, and when there is a lot of work, Itzel hires neighborhood teenagers from underprivileged families for temporary work. While they all live in the capital city, the kids from the neighborhood are used to the nature that the area provides; they understand the process of food production and know that vegetables come from the ground and not the market. Itzel would like to start a program to bring kids from the city center out to her farm so that they can spend time with nature and get to know the process of growing food.^{xxvii}

Itzel and her family sell their produce at a small Mexico City chain of organic markets called The Green Corner. However, due to an overall drop in demand from customers, The Green Corner recently stopped buying as much produce from Itzel as they used to. Before, she explained, almost everything they produced could be sold to The Green Corner. Itzel says that she and her family are in a unique position due to the size of their farm. Their level of production is high for merely selling to markets around Mexico City, but a low for exporting.^{xxviii}

There has been some international interest in the farm's produce. In 2002, their farm participated in a competition in D.F. for organic produce, and they won first place for organic production in Mexico City. Since the competition, businesses in Japan and Canada have sought to purchase the López's produce to export and sell in their countries. However, Itzel is hesitant to enter the export market. As previously noted, the López farm production is not as high as most farms that export. More personally, Itzel

expressed concern over the detrimental impact that sending her produce so far would have on the environment.^{xxix}

The López family lives off of the proceeds from their produce, which is currently sufficient to sustain the farm and their livelihood. Itzel does note, however, that support from the government would be useful. They thought that after the 2002 competition the government would take note of their project and their organic initiatives and offer some financial help, but none came. She would like to find other markets for her produce, but is frustrated by the exorbitant prices that many stores charge for organic vegetables. If a store pays a producer five pesos for a kilo of carrots, and then charges the customer 30 pesos per kilo for the carrots simply because they are labeled “organic,” that store is taking advantage of both the producer and the customer. It is also perpetuating a false sentiment that organic food is inherently expensive—a luxury—in a city where many citizens struggle to have vegetables on the table at all. Itzel does not want to be part of that dishonesty. Despite her frustration, it is important to Itzel that her farm remain organic.^{xxx}

The López family used to own more land than they do now, but Itzel’s grandfather sold over half of his holdings. He wanted to urbanize, and was tempted by the high price that buyers were willing to pay for his land. Now there are houses and small stores surrounding the López’s property, a real shame, says Itzel, considering that before all you could see was green.^{xxxi}

Itzel’s father instilled in her a true appreciation for the earth, and for the land she is lucky enough to live and work on. “Because of him,” she explains as we sit in her kitchen and eat the richest, freshest huveos mexicanos I have ever tasted, “we have a love

for the earth, and we want to return something to the earth for everything we've gotten from it.”¹⁰ Itzel knows she will never sell her land, despite any pressure to urbanize or financial incentive. Her profound appreciation for nature also convinced Itzel that organic production is her only option. She already sees a budding love of nature in her young niece, Victoria. Itzel knows that her sister Xitlali will encourage this innate appreciation for the earth in her daughter, just as their father did in his.^{xxxii}



Crops growing inside the greenhouse

¹⁰ Itzel de María López Ceja, “Por él tenemos el amor a la tierra, y queremos regresarle algo por lo que hemos quitado de ella.”



Sheep



Grandfather and granddaughter inside of the chicken coup



The López Family

Agriculture in Xochimilco is technically urban, considering that Xochimilco is one of Mexico City's 16 delegations. While the traditional, land-based style of food production in Xochimilco is the exception rather than the rule of UA, it shows the rest of Mexico City that there is a place for agriculture in urban areas, and serves as an example for capitalinos in other delegations that wish to incorporate food growing into their city lives.

SEDEREC: GOVERNMENT-FUNDED, COMMUNITY-REALIZED ORGANIC URBAN AGRICULTURE

The Mexico City government has recognized the importance of UA by supporting a series of UA initiatives throughout the city. The Distrito Federal's Secretaría de Desarrollo Rural y Equidad para las Comunidades (SEDEREC) works to promote rural development, and to support indigenous, ethnic and migrant families that live in capital city. SEDEREC aims to provide "equality, equity, and social justice"¹¹ for underprivileged and underrepresented residents.^{xxxiii}

In 2007, SEDEREC started focusing on UA as a way to combat poverty, and as a tool for rehabilitation and recreation programs. SEDEREC funds local projects throughout the city to promote its goal of increasing self-sufficiency. The program's organizers recognize that food sovereignty is not a feasible possibility right now, and as such is not one of their immediate goals. However, the program recognizes the benefit of being able to produce food for self-consumption, of not having to rely (as much, for now at least) on the business and politics of the international food industry.^{xxxiv}

Throughout the city, urban gardens are springing up in abandoned lots and otherwise rejected corners. The infrastructure for such projects is provided by the city government, but the initiative, the labor, and the care, are provided by city residents. SEDEREC projects either have a rehab-based focus, or a community-based focus. Urban Agriculture projects have proved effective as an approach to therapy. Groups currently practicing UA include women, children, the elderly, fathers, as well as

¹¹ Guadalupe González Rivas, "La igualdad, la equidad y la justicia social."

individuals struggling with addiction (including, in the words of Dr. Pedro Ponce's TA Marcario Cruz, "people of all sorts: the lazy, the drunk, the potheads, etc. etc."^{12xxxv}).^{xxxvi}

Children, Dr. Ponce explains, are of particular interest to him and to SEDEREC. Many Mexico City children do not even see vegetables on their breakfast and dinner plates (apart from the essential tomato-based salsa and a few green chili peppers, of course). Those that are exposed to vegetables think that food comes from the market, or even the "super." The UA projects supported by SEDEREC meet weekly after school or on weekends, and allow children to see the process of food growth from start to finish, to be able to say "oh, that's where those come from"¹³ and take the vegetables home to eat. Children's relationship with agriculture and nature is of utmost importance of agriculture because they form the next generation; their understanding of the environment will prove crucial in an era when climate change must take center stage.^{xxxvii}

Urban Agriculture has proved especially effective for the elder generation, and for people with physical handicap. Many people become less mobile as they grow older, as a result of both physical restrictions and mental fatigue. Dr. Ponce explains that "with respect to the elderly and those with physical handicap, society thinks they're not useful in any way, that they're not productive."¹⁴ Growing food is revitalizing. The ability to produce something, especially something as paramount as food, makes people feel capable and empowered. Dr. Ponce tells of several elderly participants who used wheelchairs when they started the project and regained the ability to walk on their own after a few weeks with their hands in the dirt.^{xxxviii}

¹² Marcario Cruz, "Gentes de todo: vagos, borrachos, marihuanos, etc. etc."

¹³ Dr. Pedro C. Ponce Javana, "Ah, este se produce así,"

¹⁴ Dr. Pedro C. Ponce Javana, "Con gente de la tercer edad y discapacidades, la sociedad piensa que no sirven para otra cosa, que no son productivos."

Hoping to combine UA's capabilities of empowerment with its more direct ability to reduce the amount of money a family spends on food, SEDEREC initiates UA projects in low-income neighborhoods throughout Mexico City. Since the government provides only training and resources, however, the members of the low-income neighborhoods must organize themselves in order to take advantage of the program. The largest SEDEREC-funded site is located in the colonia El Molino, in the delegation Iztapalapa. It was built on a former car park/dump area.^{xxxix}

The site now consists of 32 stone "camas largas" (long beds) used to grow vegetables and medicinal plants. This approach is intended to control the spread of plant disease and insect infestation, instead of using chemicals to do so. "The idea is not to eliminate crop disease," explains site organizer and worker Enrique Miguel Pazos, "it is to control it. Biodiversity is natural, and we don't use any pesticides."¹⁵ The individual long bed approach also facilitates division of work among the community. Each "compañero/a" is responsible for his or her own long bed. Each compañero decides what he would like to plant, sets up the bed with soil and fertilizer, plants the seeds, and cares for the vegetables as they grow.^{xl}

There are 26 growers at the site, all of which live in the surrounding neighborhood. The majority (20) are women, and compañeros often bring their children to help tend to their bed. None of the members receive a salary; they work to nourish their "love for the earth."¹⁶ Instead of financial compensation, the garden's produce is divided evenly among the growers, and the surplus is sold at the local market. On

¹⁵ Enrique Miguel Pazos, "La idea no es eliminar la plaga, sino controlarla. La biodiversidad es natural, y no usamos nada de pesticida."

¹⁶ Enrique Miguel Pazos, "Amor de la tierra."

average, about 75% of the yield goes towards self-consumption, and 25% is sold. While the site does receive funding from SEDEREC, any profit is invested back into the project. Crops include lettuce, tomato, pepper and squash.^{xli}

In addition to the long beds, the site also has an extensive water catchment system, and rabbits. Both water catchment and the rabbits are essential tools in the site's goal of "closing cycles,"¹⁷ of ensuring that as little is gained or lost as is possible.^{xlii} Water is captured during rainfall and used to water the vegetables and quench the rabbits' thirst. The rabbits, says Enrique, provide both meat and compost, and are highly efficient at reproducing. They eat leftover vegetables from the garden. "It's important that everything be a cycle,"¹⁸ Enrique explains. Furthering the goal of closed cycles, compost also comes from weeds and from branches from local trees that have fallen or were cut down by city gardeners, as well as from the on-site compost toilet. The compost, Enrique stresses, does not smell.^{xliii}

The lack of unpleasant odor (the compost, in fact, smells like the forest does after rainfall) is especially important because the *compañeros* are building a *temascal* right in front of the compost area. A *temascal* is a pre-Hispanic steam room that looks like a small white hut. The healing potential is great; ailments ranging from stress to muscle ache to internal organ trouble can be treated by time spent in the *temascal*. Such healing power is intensified by the spiritual experience that the *temascal* offers. The interior of the *temascal* is completely dark; sitting in the steam with no visual indication of the surroundings can be both disorienting and calming. *Temascals* were originally used as part of religious rituals. Surrounding the *temascal* is a variety of medicinal plants that

¹⁷ Enrique Miguel Pazos, "Cerrando ciclos."

¹⁸ Enrique Miguel Pazos, "Es importante que todo sea un ciclo."

were also used by pre-Hispanic civilizations. The community recognizes the connection between nature and physical wellbeing that their ancestors considered paramount, and is looking to further integrate nature into as many aspects of their urban lives as possible.^{xliv}



Enrique in front of the long beds



Squash growing in one of the long beds



Rabbits



Temascal

Mexico City's government has recognized the potential of UA as a tool to combat poverty, built communities, and increase social awareness. However, it is truly the initiative, hard work, and dedication of Mexico City's residents that have made SEDEREC's programs a success. Government-funded, community-realized UA projects throughout the city are reconnecting capitalinos to the environment. They are teaching children where food really comes from, providing older generations with a sense of accomplishment, rehabilitating individuals struggling with a range of matters, and allowing under-privileged residents to create their own food source. UA in Mexico City is connecting residents to nature, and to the past. It is allowing them to reconsider and re-appreciate natural, nutritious food.

SEMBRADORES URBANOS: ORGANIC URBAN AGRICULTURE FOR THE INDIVIDUAL HOUSEHOLD

Private residents throughout Mexico City are beginning to recognize the importance of UA, and are incorporating compost and gardens into their homes. Sembradores Urbanos (SU) has responded to (and promoted) this interest by holding workshops on UA techniques and offering the service of installing projects in homes, schools and office buildings. SU was founded in 2007. As Lily Foster, one of the three young founders explains, the organization aims to “atomize urban agriculture for Mexico City residents.”^{xlv}

In the United States, Lily explains, community gardens in big cities have been highly successful. In Mexico City, however, it is harder for residents to get used to the concept of shared space. Sembradores Urbanos primarily promotes UA projects that can

be incorporated into individual private spaces, but also uses UA to foster a sense of community among neighborhood residents. The group opened up a show garden on a quiet corner in the Romita area of Colonia Roma where they hold workshops and talks, and open the garden for public visits and viewings a few afternoons each week.^{xlvi}

The garden is an open, sunny space with bright UA-themed designs painted on the walls. It displays various growing techniques that can easily be translated into a capitalino's home. On the walls hang wooden boxes filled with carrots. Tires have been converted into growing areas for tomatoes. Container gardening on top of concrete accounts for 80% of their installations. The idea, says Lily, is that "x persona can come in from the street and be like 'I can do that in my house, on my roof, in my windowsill.'" SU wants people to re-think their space, and the possibilities within their space. Setting up an UA project is about "production, but it's also about aesthetics. It's edible landscaping, edible decorating."^{xlvii}

Instead of using chemical fertilizers, SU focuses on enriching the soil. "If you feed the soil, if the soil has nutrients, it will produce in abundance. Bugs will come too, but that's natural; it's part of the process." The Romita garden uses no pesticides, and SU promotes organic production. Not using pesticides can prove problematic at times. "It's truly amazing the biodiversity that comes out when you plant a food source in what's basically a desert," Lily says, referring to the snails and slugs that have become regular visitors to Romita. But SU has learned (and teaches) plenty of techniques to reduce the presence of bugs, such as planting certain herbs and flowers that repel them. They promote prevention over treatment.^{xlviii}

In the United States, there is a lot of talk about “food deserts.” In Mexico, with the culture of the neighborhood market, the current question is less about access to food and more about access to good quality, organic food. For example, when visitors come into the garden and find deep green, red and yellow kale, they are surprised to learn that it is the same vegetable as the white, bland industrial kale they are accustomed to seeing. SU seeks to cultivate a “reinvention of food, a revaluation of food production.” Home-scale UA projects provides residents with fresh, nutritious vegetables that they otherwise would not be able to find.^{xlix}

Those attending SU workshops know they will not end up producing all of their diet with a small UA project, and most are not aiming to. Depending on the time and space each individual or family has, producing about 30% of their diet with UA is a realistic goal. However, they are looking to make a difference in their consumption habits: about 80% of capitalinos that attend SU workshops do cite increased “self-sustainability” as their motivation. Attendees often say that they are concerned about the state of trash or pollution in the city. “They come in, sit down,” relays Lily, “and in their own words, they say, ‘I want to *do* something.’”^l



La Romita show garden



La Romita show garden, opposite corner



“Little store” at La Romita show garden

One Mexico City resident who is doing something is Carolina Lukac. Caro works for Sembradores Urbanos, and lives in Colonia Roma about ten blocks from their Romita show garden. She shares a house with other young, environmentally conscious professionals, and has set up a garden on her roof. Most of her plants are potted in tires turned inside out. The tires, she explains, are used racecar tires, which do not even last the length of a race (“imagine the carbon footprint there!” she adds). With the intense green of tomato, carrot, beet, lettuce, Swiss chard, and cucumber leaves sprouting out, the tires do not look like tires at all. They seem fitting, natural almost, amid the nature and serenity of the space.^{li}

Caro is lucky, she explains, to have access to the rooftop, and to have so much sun. The garden is a work in progress. She started the project a year ago, and is happy with the results so far. She is completely self-sufficient for salads, but would like to plant some fruit trees. Caro is currently working on a rainwater catchment system, and aims to eventually install a dry toilet. “It’s about time and money,” she says. “Bit by bit it’s coming along.”^{lii}

The rooftop garden is more than just a source of fruits and vegetables. Caro and her friends use the space for everything from Sunday breakfasts, to sleepovers, to vegetarian barbecues. The garden is a space for friends and for community. In another community-building effort, Caro has supplied her neighbors with containers for compost, and gathers the containers once they are full to add to her larger compost bins.^{liii}

Caro got involved with SU and initiated her UA project after studying Environmental Science in college, and spending a few years working on farms in the United States. A Mexico City native, Caro wanted to return to the culture and vibrancy of her hometown. She wanted to live near her family and friends, but she also wanted to incorporate her love of nature and of agriculture with her love of Mexico City. Caro does not take her passion of city gardening for granted; through her work with SU, she spreads the word, and shares her knowledge with Mexico City residents lacking the link between their urban lives and nature.^{liv}



Caro's rooftop garden
(Note that most of the potting is done in used tires)



Caro with friend and fellow UA enthusiast Vincente



Caro's compost worms

The average Mexico City resident's environment consists of taxis, stoplights, buildings and sidewalks. Those who wish to reconnect to nature often are so far removed from it that it is challenging to know where to start. That said, in these critical times of pollution and climate change, capitalinos are beginning to take interest in protecting their environment, in incorporating nature into their city lives. Sembradores Urbanos helps interested residents set up their own UA projects; the group links city dwellers to nature and to food sources by teaching them how to build and maintain rooftop gardens, composts, and water catchment systems. Capitalinos take their sense of urgency, their desire to *do* something, and with SU's support, translate their sentiments into actions. From their homes in one of the world's largest, most polluted cities, they help protect the environment, and help secure food for themselves and their community.

CONCLUSION: THE SIGNIFICANCE OF URBAN AGRICULTURE

The most important question that all of this information raises is “why?” Why should I, or you, or our neighbor, or the random person walking down the street, start an organic UA project? The answer is simple: city dwellers should get their hands in the dirt because UA is an easy, straightforward, rewarding way to make a difference.

In our capitalist world, a universally understandable argument for starting an UA project is the economic impact it has on consumption expenditures. After initial startup costs, a modest rooftop garden can provide 30% of the food a family would otherwise purchase. Food grown at home is also guaranteed to be nutritious and chemical-free, which is not always the case for food purchased at the (super)market.

Most ideal is when the government takes notice of UA’s economic impact, as SEDEREC has by funding community UA projects in Mexico City. Keeping with the “teach a man to fish” philosophy, SEDEREC provides the necessary tools for residents to start their own UA project, a project that promotes a proactive, effective alternative to food stamps and food banks.

SEDEREC gardens have also been instrumental in building communities. When neighbors get together to work for a common goal, they get to know each other; they learn from one another, and learn to depend on one another. UA projects provide Mexico City residents with a sense of accomplishment, the knowledge that they created something, and add to their financial and physical wellbeing.

Home UA projects can also build communities. Caro, for example, has met many of her otherwise anonymous neighbors by inviting them to join her compost project, and she often holds get-togethers on her rooftop garden. Even the López family’s profit-

oriented UA project has helped bring the neighborhood together, and Itzel hopes that she can expand her farm's social impact by bringing in students and other groups from other Mexico City neighborhoods to learn about nature and food.

The most natural result of UA is the environmental protection that it helps promote. By consuming food that is grown locally and not shipped from far off villages and countries, Mexico City residents are reducing their carbon footprint. Their projects are "closing cycles" by reusing rainwater and organic waste (including animal excrements!) and turning them into food. In the era of visible, conceivable climate change, incorporating appreciation for and protection of the environment into otherwise concrete and car-dominated urban spaces is more than ideal; it is necessary.

Urban Agriculture teaches capitalinos where their food comes from. Mexico City residents reconnect with the environment, which, in a densely populated, smog-filled city is often all but elusive. By composting, reusing rainwater, and growing vegetables, capitalinos learn about environmental processes. They develop a relationship with nature, and grow conscious about waste.

There is, however, one question that remains: when will UA change from a strong but fragmented social movement to a universally practiced reality? For Cuba, it took an import crisis for the government and the public to mobilize and incorporate UA into their economy and onto their rooftops. SEDEREC and Sembradores Urbanos are sparking interest in UA by letting capitalinos know that it's an option, and providing them with the resources to get started. But what will make this movement take off? Will Mexico City wait for crisis to hit before it fully embraces UA? If not, what will the ultimate catalyst be?

Although UA is not a necessity today, someday it will be. The threat of peak oil is real, and when that threat is realized, food sovereignty will be a matter of survival. Now, the economic, social and environmental benefits of UA have been enough to get people's attention, to form a vibrant and growing UA movement throughout Mexico City. The impact so far has been great—life changing for some. As time passes, UA will prove to be an expanding movement, used at first as an effective answer to everyday problems facing urban residents, and eventually as a universal necessity for city life.

Urban Agriculture, as I've stressed all along, is about people. The people practicing UA today are socially conscious and politically minded, without being overtly, imposingly so. They are forward thinking, but their work connects them to the past, to the Aztecs of Teotihuacán and their capitalino ancestors that incorporated agriculture into their lives years ago. UA today is also about cycles: closing environmental cycles, creating social circles, and cycling back to the past. It is about eliminating dependency on economic and oil cycles, and not waiting for crisis to cycle in to act. UA is as empowering and liberating as it is natural.

Residents of Mexico City, and fellow urban dwellers throughout the world: what are you waiting for? Start composting; grow some lettuce on your roof. Take some initiative and get started. Urban Agriculture, in the end, is really about you.

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- ^{xvii} Anon. "Endotoxins; Mexico City Air Pollution Adversely Affects the Hearts of Young People." *Ecology, Environment & Conservation*. Atlanta: 14 May, 2010, 730.
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