



SUCCESS STORY

Radishes, Lettuce, Avocados, and Pitahaya for All

School Gardens & Reforestation to Help Adapt to Climate Change



1) Preschool student Arantza planting seeds.

2) Preschool students looking to see if anything has sprouted in the garden.

3) The water tank on the Elementary School parcel.

Photos: Hannah Wells / Peace Corps Mexico

Mexico is facing serious threats from climate change, including changing weather patterns, extended droughts, and increased wildfires in some areas; with flash floods and increased hurricane activity in others. The small town of Caltepec, in the southern part of the state of Puebla, is already suffering droughts and rain patterns inconsistent with historical trends. As a lower-income community who practice subsistence farming that includes maize, beans, and squash; the droughts and changes in rains also pose a grave threat to residents' economic livelihoods and food security.

At the national level much is being done to combat climate change, but some rural areas are still in need of adaption and mitigation practices to ensure that they continue to thrive. The USAID funded School Gardens & Reforestation project aims to assist with some previously planned projects, while introducing new green practices that will help residents adapt to the shifting environment. The project consists of three parts:

- 1) The construction of five key-hole gardens with integrated composts, an irrigation system, a fence surrounding the garden beds, the purchasing of seeds and tools, and an educational workshop on compost, and the benefits of using compost in garden beds at the Valentin Gomez Farias Preschool. Vegetables and herbs harvested from the garden beds will be shared amongst the families and provide improved nutrition.
- 2) The construction of a 10x5x1.5m (19,813 US gallons) water tank on the farming parcel of the Ignacio Zaragoza Elementary School. The water will be used to ensure the growth of 150 avocado trees (some of which died during the last drought in 2016) that parents of students have planted. When the trees begin producing fruit, the sales from the avocados will be used to fund school improvements and reduce school fees. Students, teachers, and parents attended one of three educational workshops on-site at the farming parcel where they learned about soil science, ecosystems, and how the two are affected by, and in turn affect farming practices.
- 3) The construction of 110 cement posts, planting of 220 pitahaya (dragon fruit) plants, an irrigation system, purchas-

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4) Elementary School students Barbara, Samuel, and Rubicela learning how to use a compass.

5) President of the Parents of the School committee, Mr. Virgilio Ramirez Tenorio speaking about the pitahaya plants and posts at the Middle School to visitors.

Photos: Hannah Wells / Peace Corps Mexico

ing of tools, and educational workshops on the care, cultivation, and harvesting of pitahaya; as well as, how to make a bokashi style compost at the Juan Gutemberg Middle School. When the plants begin producing fruit, the sales from the fruit will be used to fund school improvements.

The key-hole gardens are now growing lettuce, carrots, cilantro, radishes, and swiss chard. Students are bringing in their fruit and vegetable scraps for the composts. In a few months the preschoolers and their families are going to enjoy an excellent salad, and some pico-de-gallo salsa. But the garden beds will be there for many school years to come, providing an outdoor hands-on learning area for all the students and their parents.

The avocado trees on the elementary school’s parcel won’t be producing for another year or two, but even if there is another drought, the water from the tank will help keep the trees alive. For many of the students, their visit was the first time they had ever seen the parcel. And it was the first time they had ever learned about the different parts of soil, or how to use a compass to measure wind speed, and the direction of a river. The lessons learned there will stay with them, and continue to provide a place for students in the future to come and learn about the environment and agriculture.

The pitahaya plants still need to grow another two to three years before and fruit can be harvested. In the meantime, students and teachers are caring for the plants, and looking for ways to improve their growth. Fortunately, pitahaya is a drought resistant species, so even if there is another drought, the plants will survive. Additionally, there is an emerging market for the fruit in Mexico, and in the USA. One hopes that this will benefit the school, and eventually the larger community: if students and parents see that drought resistant species are economically viable, they may move to plant pitahaya on their own properties, providing food and a steady source of income for themselves and their families, while also effectively adapting to the changing climate.

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