

# ADOPTION OF AMARANTH IN THE LOCAL CONTEXT OF OAXACA, MEXICO



ECHO CONFERENCE, November 13, 2018

## TWO QUICK QUESTIONS:

- Has anyone been to Oaxaca, Mexico? Well at least then you know how to pronounce it :)
- How many are familiar with amaranth? What about the concept of food sovereignty?

Well, if I do my job today, hopefully we will have made some headway into understanding Puentes' work over the past ten years.

# WHAT ARE MY QUALIFICATIONS AND WHAT ARE NOT?

- Journey from financial management to grassroots nonprofit work.
- Finance world to Peace Corps-Guatemala from 1997 until 2001.
- Crisis Corps-El Salvador to first experience in Oaxaca. (2001 to 2005)
- Graduate School at Heinz School
- Move to Tegucigalpa and work with the Democracy without Borders
- Return to Oaxaca and Puente a la Salud Comunitaria (last decade)



## WHAT ARE MY QUALIFICATIONS AND WHAT ARE NOT?

- I believe my real education has been in the communities.
- While I have visited 100s of farms in my 10 years at Puento, I am not a farmer. And I am not a peasant farmer, either.
- I am not a specialist in nutrition, agriculture or entrepreneurship.
- I believe that distinction is important, as I have developed a deep admiration for those people who dedicate their lives to feed their families and to feed us, non farmers.
- I believe in Robert Chamber's approach to participatory processes for development.
- I don't believe in silver bullets ... Unless we are hunting werewolves :)

**I feel very honored to have been invited by ECHO to share my experience in celebration of their 25-year, or ¼ of a century, anniversary. My respects!**

## WHY I CHOSE THIS TOPIC TO SHARE WITH YOU TODAY.

- Well, I met Dick Dugger at an Amaranth Institute conference about ten years ago.
- **“ECHO aims to “improve lives through agriculture and community development. Speakers share practical solutions to agricultural challenges, personal experiences, and strategies for improving the lives of millions who daily face the threat of starvation. Our conference offers an open exchange of information, connecting the people and ideas that can make a real and sustainable difference. “**
- While you may be working in the US, Africa or another context, I believe that the context is so critical to really having effective interventions and that is ultimately what development work is all about.
- Having just said that, I also think that amaranth can be introduced in many contexts around the world to improving lives. Kaleidoscope or Systems thinking?

# OAXACA: NUTRITIONAL AND ECONOMIC CONTEXT



# OAXACA: DIVERSITY, CULTURE, COMMUNITY AND SOCIAL VALUES



# AMARANTH IN OAXACA



## WHY AMARANTH?

**Amaranth** is recognized and a culturally appropriate, highly nutritious and adaptable crop. The production and consumption of amaranth presents a unique opportunity

- **Cultural-Historical**
- **Nutritional**
- **Environmental**
- **Agricultural-Economic**

Slam dunk, right?

# HISTORICAL-CULTURAL RELEVANCE



# NUTRITIONAL

Food pyramid in Developing countries: skip the healthy food system. Go from undernutrition to bad nutrition. Role of agro-industry?



# DUAL BURDEN



# 100 GRAMS OF AMARANTH (GRAIN)

	<b>Amaranth</b>	<b>Rice</b>	<b>Wheat</b>	<b>Corn</b>	<b>Oats</b>
<b>Protein (g)</b>	14.5	6.5	10.7	9.4	16.9
<b>Fiber (g)</b>	9.3	2.8	12.7	7.3	10.6
<b>Fat (g)</b>	6.5	0.5	2.0	4.7	6.9
<b>Carbs (g)</b>	66.2	79.2	75.4	74.3	66.3
<b>Calcium (mg)</b>	153.0	3.0	34.0	7.0	54.0
<b>Iron (mg)</b>	7.6	4.23	5.4	2.7	4.7
<b>Calories (kal)</b>	374.0	358.0	340.0	365.0	389.0
<b>Folate (mcg)</b>	49	231	41	19	56
<b>Zinc (mg)</b>	3.2	1.1	3.5	2.2	4.0

# 100 GRAMS OF AMARANTH (LEAF)

	<b>Amaranth</b>	<b>Col</b>	<b>Spinach</b>
<b>Calories (kcal)</b>	21.0	20.0	23.0
<b>Carbohydrates (g)</b>	4.1	4.1	3.8
<b>Protein (g)</b>	2.1	1.9	3.0
<b>Calcium (mg)</b>	<b>209.0</b>	58.0	136.0
<b>Phosphorous (mg)</b>	<b>72.0</b>	33.0	56.0
<b>Iron (mg)</b>	2.3	2.3	3.6
<b>Vitamin C (mg)</b>	<b>41.1</b>	18.0	9.8
<b>Fiber</b>	n/a	2.1	2.4
<b>Folate (mcg)</b>	57.0	9.0	146.0
<b>Zinc (mg)</b>	0.9	0.3	0.8

• Source: USDA ([www.nutrition.gov](http://www.nutrition.gov))



## ENVIRONMENTAL

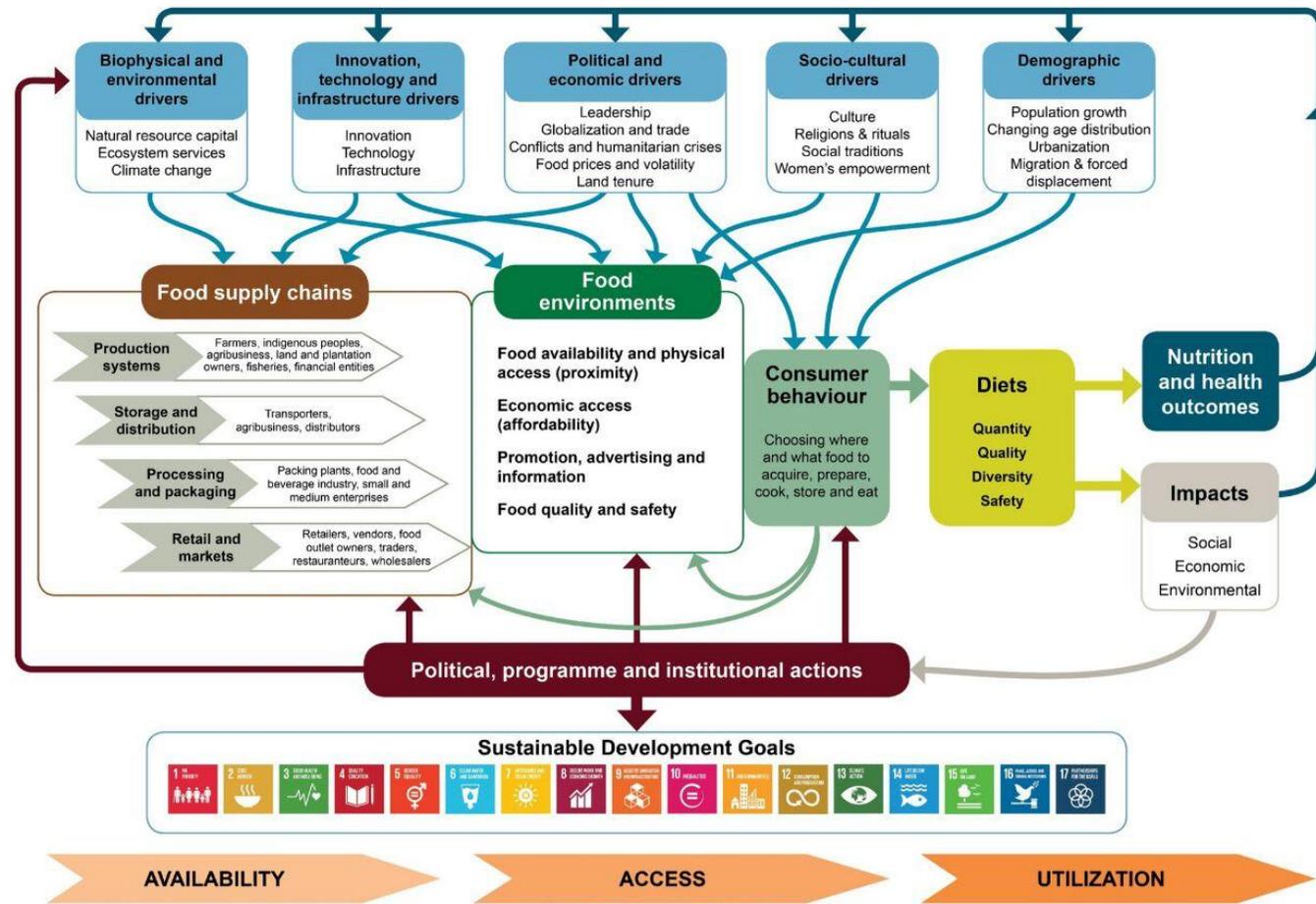
Amaranth is a C4 plant. C4 plants that have adapted to hot environments perform a modified form known as C4 photosynthesis. Again, context is important, as amaranth probably will have some limitations in wetter, colder climate conditions.

**Agro-ecology:** Integrating amaranth into the traditional milpa systems, together with maize, beans, squash, while focusing on soil health.

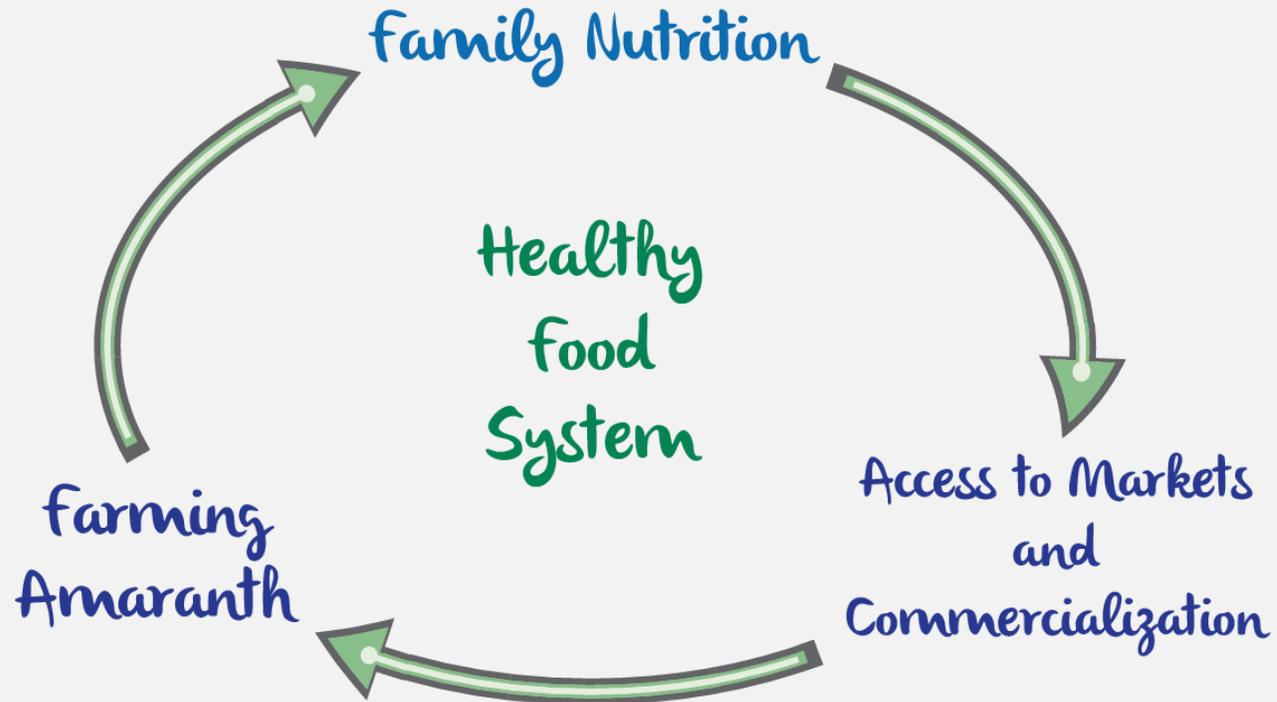
**Water conservation:** water catchment systems, soil retention and other techniques

# FARM ECONOMICS

## Food Systems: A Conceptual Framework



# PUENTE'S MODEL



## VISION, MISSION, VALUES: FOOD SOVEREIGNTY AND AMARANTH

### **Vision**

- We envision a world where families and communities live with dignity and exercise their food sovereignty through the sustainable cultivation, consumption, exchange and commercialization of local healthy food sources. We believe amaranth is a strategic crop for achieving this vision owed to its pertinence with the local customs and adaptation to the local environment.

### **Mission**

- Puente contributes to food sovereignty and advances the health and well-being of rural communities in Mexico by promoting the cultivation, consumption and commercialization of amaranth.

### **Values**

- Dignity, Equity, Integrity, Respect, Responsibility, Solidarity, Transparency, Innovation



# RIGHT TO FOOD, FOOD SECURITY AND FOOD SOVEREIGNTY

	<b>Derecho a la Alimentación</b>	<b>Seguridad Alimentaria</b>	<b>Soberanía Alimentaria</b>
<b>Origen</b>	Declaración Universal de los Derechos Humanos 40s	Organismos de Naciones Unidas 70s	Organizaciones No Gubernamentales y de la Sociedad Civil 90s
<b>Definición</b>	Legal y Multidisciplinar	Técnico y Multidisciplinar	Político y rural
<b>Enfoque</b>	Instrumento legal que establece la obligación y responsabilidad de los Estados de alimentar a la población	Define una situación de un individuo, comunidad o país y/o un objetivo. Centrado en responder a las necesidades alimentarias de la población.	Dirigida a responder a necesidades alimentarias e intereses estratégicos de los más desfavorecidos. Enfoque hacia la transformación de la distribución desigual de los recursos

Fuente: Elaboración propia

## FOOD SOVEREIGNTY V. SECURITY: WHAT'S THE DIFFERENCE?

- Presents an alternative to the existing system dominated by large scale, high input production and neo-liberal/global trade models.
- Draws attention to tensions between corporate, global and local food systems.
- Prioritizes the importance of cultural, humanistic and social dimensions.
- Grassroots movement seeking solutions to equity in the solutions to poverty and hunger
- Board constituency/inclusion: indigenous peoples, rural landless, small holder farmers.



# CHALLENGES TO FOOD SOVEREIGNTY AND LOCAL FARM ECONOMICS

- ✓ Overall discrimination of peasant or small-scale farming. It is considered backwards or stigmatized as poor peoples work
- ✓ Climate change variances.
- ✓ Small-scale farming is a lot of work and making a living is not guaranteed.
- ✓ In Mexico, subsidy studies show that most government \$ is going to large land owners.
- ✓ Many policies are lobbied by the ag-industry corporation interests.
- ✓ Inconsistent information available on local and health food alternatives
- ✓ Average age of farmers is 50 to 50 years old in Mexico and US.



**OXXOS are popping up all around Mexico, more than 12,000 stores.**

## QUESTIONS FOR REFLECTION AND DEEPER ANALYSIS

Do we still believe that the peasant and rural economies are possible in the current system and context?

What socio/political-economic system would allow us to have flourishing community life?

Those of us who live in cities, what changes would we need to make to support peasant or traditional livelihoods?

# STRATEGIC PLAN

Our 2015 - 2021 objective is to cultivate a community impact in the areas of agriculture, food consumption, and local economies by promoting integral amaranth systems through community self-organization and strategic alliances



Farm plot of Dona Lua in San Francisco Telixtlahuaca, Oaxaca.

# PUENTE'S XV ANNIVERSARY VIDEO

- <https://www.youtube.com/watch?v=nGtwe7Ulpvo&t=150s>



# AMARANTH: FARM-TO-TABLE

The small-scale production of amaranth with agro-ecological methods offers farmer families nutritional, environmental, and economic benefits. By increasing nutrition education and access to healthy, local foods, marginalized farmer families improve nutrition and health.



# FARMER-TO-FARMER EXCHANGES AND AGRO-ECOLOGICAL TRAININGS



# CHROMATOGRAPHY



Sebastio Pihniero –  
Brazilian Pioneer during  
recent trip to Mexico.

# MINERAL ROCKS AND CARBONIZATION



# SEED BANKS, BIO-FACTORIES, APPROPRIATE TECHNOLOGIES



# SUMMER NUTRITION PROGRAMS



# SOCIAL AND SOLIDARITY ECONOMICS

Farmer families are able to sell their harvest at a higher profit by organizing microenterprises and regional networks with increased access to markets and value added technology. The program aims to derive both social and economic benefits for participants.



# PUBLIC POLICY AND PARTNERSHIPS

Puente recognizes the complexity in the current food system and thus seeks out strategic partners to advance the programmatic work as well as positively influence public policy related to our priority areas. Through grassroots communications campaigns we raise awareness of the potential of amaranth at different levels of the food system.



# CREATING AWARENESS



# DO WE GROW OUR OWN FOOD? PREPARE OUR OWN MEALS? HOW DO WE CONTRIBUTE TO A HEALTHIER AND MORE JUST FOOD SYSTEM?



THANK YOU FOR YOUR ATTENTION.