

Value Chain: corn and amaranth at local level

Issue	Hypothesis	Analysis	Data Source	End Product	Progress	Due
How are decisions made?	<p>We assume they consider these when switching:</p> <ul style="list-style-type: none"> -economics -eating amaranth -community pressure -what are other factors we aren't considering? <p>Who makes the switching decision?</p>	Brainstorming, interviews		Decision framework or interview protocol	<p>Diversification of crops Coffee Rust COCODE</p> <p>Cash Crop concerns: man Women for consumption of crops. Amaranth is good for women.</p>	
For local farmers, what are the basic economics of corn ?	-	-	-	-	-	-
-quantity grown	<p>How much corn is grown by rural farmers in SM Guatemala?</p> <p>How much does an average farmer grow?</p> <p>How much production is lost (spoilage, spillage...)</p> <p>What % of production is sold vs. consumed?</p>	Internet search, interviews	CRS, Puente, other co-ops, In Country interviews	spreadsheet of our hypothesis, + inputs to interview protocol		
-inputs	<p>What inputs are required to grow corn?</p> <ul style="list-style-type: none"> -land -seed -fertilizer -water -labor -storage -tools (planting, harvesting, processing) 	Brainstorming, interviews, internet	CRS, Puente, other co-ops, In Country interviews	Table of inputs		

	-transport -other...?					
-cost & price	How much do inputs cost? How are inputs financed? What does the cash flow look like (cost spacing)? What is the selling price at the local market if sold?	Internet, interviews	CRS, Puente, other co-ops, In Country interviews	Column of costs on input table		
For local farmers, what are the basic economics of amaranth ?	-	-	-	-	-	-
-quantity grown	<i>Not how much is now grown, but capacity?</i> How much amaranth is grown by rural farmers in SM Guatemala? How much does an average farmer grow? How much production is lost (spoilage, spillage...) What % of production is sold vs. consumed?	Internet search, interviews	CRS, Puente, other co-ops, In Country interviews	quick answers		
-cost & price	What inputs are required to grow amaranth? -land -seed -fertilizer -water -labor -storage	Internet, interviews	CRS, Puente, other co-ops, In Country interviews	Column of costs on input table	Kerri	2/24/14

	-tools (planting, harvesting, processing) -transport -other...?					
-inputs	How much do inputs cost? How are inputs financed? What does the cash flow look like (cost spacing)? What is the selling price at the local market if sold?	Brainstorming, interviews, internet	CRS, Puente, other co-ops, In Country interviews	Table of inputs		
How difficult is switching?	Farmers will switch if switching costs not too high: -don't lose current food production, or \$ -doesn't cost most, require more processing, tools, techniques -are convinced of a benefit from switching	A comparison of corn vs amaranth costs and prices	Answer from the above questions	Chart comparing amaranth to corn		

Value Chain: amaranth in domestic and international markets

Issue	Hypothesis	Analysis	Data Source	End Product	Responsible	Due
What are realistic creative partnerships? Schools, Hospitals, Churches, Baby Formula manufacturers, tortilla makers	Can we generate supply by creating demand among partnerships	In country interviews	Interview	List of potential parties in word doc	Team	
Which method of post harvest processing creates the most value? Popping, grinding.	Popped amaranth is more valuable.	Compare pricing of raw, popped, and ground amaranth	Phone call with Puente/ review in country	Value chain analysis in word doc		
What is the price of Amaranth in Guatemala City? And what price did the farmers sell it for?	\$4.50 a half kilo		Discussion with farmers and stores; www.olx.com.gt www.guateganga.com	Couldn't find prices online.		
Is there a Guatemalan FDA? Are there regulations that could affect the sale of Amaranth?	Yes. Probably not too many legal barriers.	Internet Search	Wikipedia, Law for Food Safety, Intro to Food Regulation (Uni)	Ministerio de Agricultura, Ganadería y Alimentación has the most potential oversight. Should be maintaining a system that supervises, inspects, and certifies establishments that produce unprocessed food. Hard to know how effective it is until on the ground.	Alan	
Are there currently any exports of Guatemalan Amaranth?	Possibly very small scale	Contact Exporters	Exporters confirmation	Quantity exported and average price	Alan	
What is the price	More	Internet Search	US: www.nutsinbulk.com	Prices are of seeds	Alan and anyone who	

of Amaranth in key international markets? How has that changed over time.	expensive than in Guatemala. Price has increased.		(verified with other sources) Mex: www.mercadolibre.com.mx EU: http://www.biomanantial.com/amaranto-cultivo-biologico-p-70-es.html (Spain) http://www.healthysupplies.co.uk/amaranth.html (UK), www.amazon.co.uk (UK)	unless otherwise specified. US : ~\$3/lb. Significant discounts in bulk (~\$2.15/lb for 25lb) Mex : \$2.11/250g (flour), \$2.71/250g (popped), \$3.70/500g (~1lb) EU : \$3.37/500g (Spain), \$4.81/500g (UK), \$6.24/1kg (UK), \$3.22/100g (UK popped). Was unsuccessful in finding how the price has changed over time.	can find out how price has changed over time. I'm stumped.	
Regulations (FDA) that could inhibit the exportation of Amaranth to US.	Some, but nothing too restrictive.	Internet Search	Multiple sites. http://www.ers.usda.gov/publications/eib-economic-information-bulletin/eib39.aspx http://www.foodsafetynews.com/2013/07/last-big-cyclospora-outbreak-was-traced-to-guatemalan-raspberries/#.UwpmNUJdVcl	Unlikely to cause a violation. Over 50% of violations are fresh produce or seafood.	Alan	

How will we get people to eat amaranth?

Issue	Hypothesis	Analysis	Data Source	End Product	Responsible	Due
What is the current diet?	Corn, Tortillas with beans, tomatoes, sugar, oil, onions, junk food/Coke when possible	Quick Research	Internet search	Daily menu	Carolyn	http://www.foodbycountry.com/Germany-to-Japan/Guatemala.html
What are the challenges to diet behavior (and also switching what you grow)? Examples of switching efforts (failure/ success)	Cultural associations of amaranth, awareness of amaranth, habits, traditions associated with diet, cost, risk-aversion, availability of amaranth, level of education re: nutrition	Talking to groups who have done similar things Read government reports	Talk to: <ul style="list-style-type: none"> MTA Puente Women's group in Quetzal Carolyn's other source? Read: <ul style="list-style-type: none"> Government nutrition agency of some sort 	Best and worst practices; knowledge of basic dietary landscape	Carolyn	
Will consumers value the benefits of amaranth?	They might view this as an imposed outsider idea. They might not care about nutrition or understand it They might prefer their traditional diet	Talking to above groups Interviews with citizens, to understand how food choices are made, what's important etc: 1. How do people make decisions about food? 2. What are the cultural implications of food? 3. What are the barriers to adoption? 4. Why current diet? 5. What methods of production are	See above Primary research, in country, design thinking style.	Enough information from which to think about a marketing/ product positioning/ demand generating solution	Jess	

		most palatable? 6. Other				
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Are there any issues with the implementation of the CRS Title II (USAID) amaranth program that we are overlooking?

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What are the other economic activities of an average farming family?	They don't leave their homes - they work the land all year	Internet research Talk to above people	Internet See above	Knowledge of basic day-in-a-life for various points in the year	Jess	
Other partners, creative solutions, etc.						