Food System Assessment for Yolo & Sacramento County Delta Communities





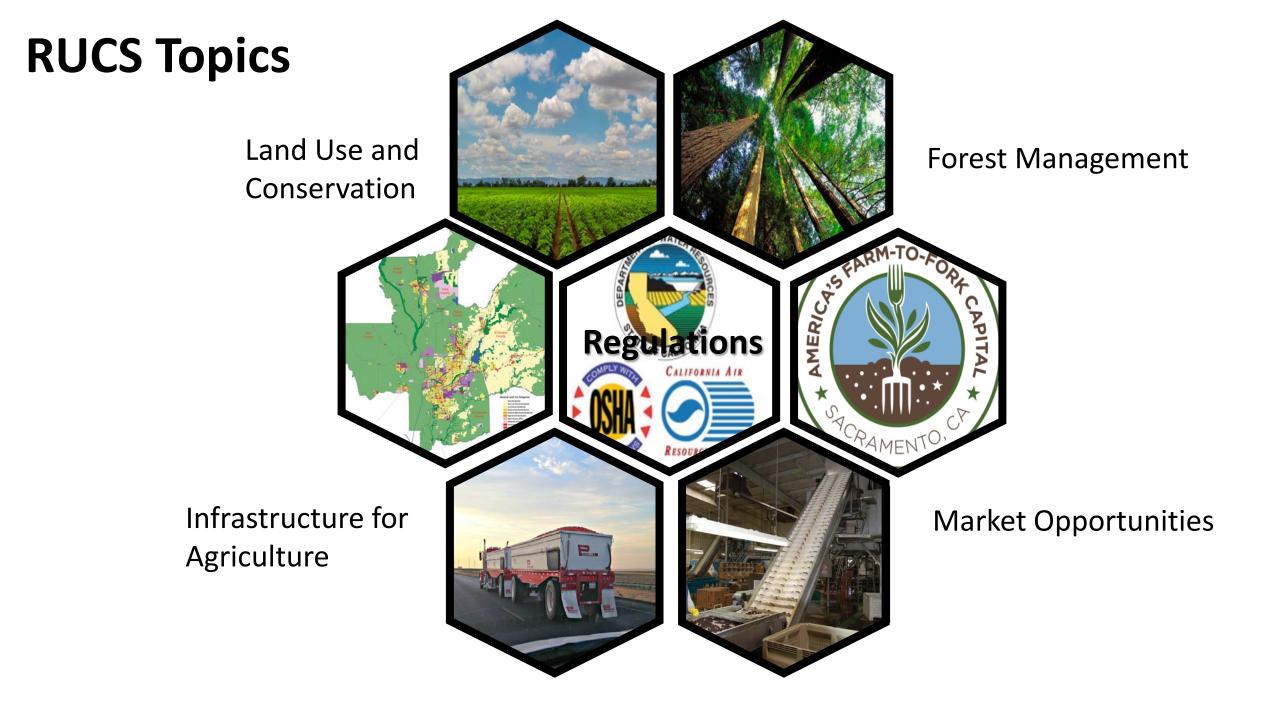


Rural-Urban Connections Strategy

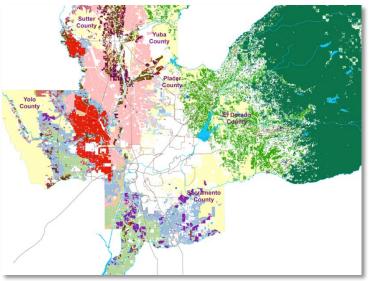


Enhancing rural economic viability and environmental sustainability





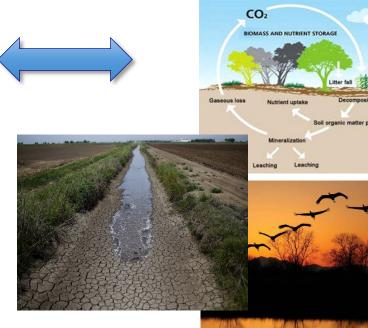
RUCS Crop Map



RUCS Scenario Analysis Tool

Partie de la construction de la

Ecosystem Services



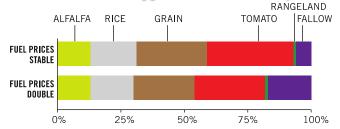
The state

Food System Multiplier Study



Modules Informing Scenarios

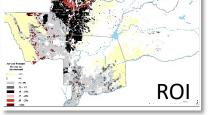


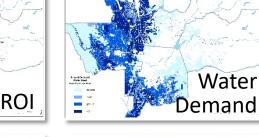


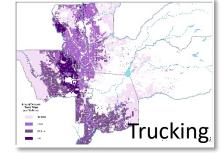
Local Market Food Production

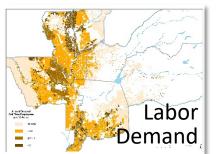


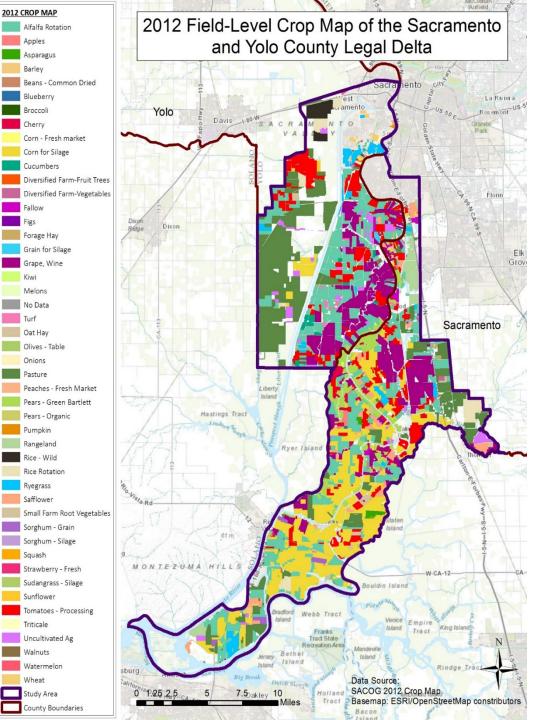
Scenario Results











Study Objectives

- Generate new data specific to study area
- Update/customize models
- Examine new market opportunities

- Assess production conditions
- Model "food hub" feasibility
- Run scenarios to gauge economic viability





- 10 million residents between Sacramento and Bay Area regions
- Together consume 12.5 billion pounds of food each year

- Demand for locally grown food increasing 9% year over year
- Price premiums of around 20% for local food



Assessing Opportunities

BAY AREA CONSUMPTION OF TARGET LOCAL CROPS FOR DELTA AGRICULTURE, 2014

	Pounds Consumed per	Tons Consumed Across Bay Area
Target Crop	Individual	Region
Apples	13.6	50,915
Cherries	1.2	4,327
Pears	2.5	9,497
Peaches	3.8	14,136
Blueberries	1.1	4,124
Strawberries	6.1	23,025
Iceberg Lettuce	13.2	49,474
Green leaf Lettuce		
Red Leaf Lettuce	8.6	32,233
Romaine Lettuce		
Spinach	1.4	5,215
Broccoli	5.6	21,019
Kale	0.2	667
Tomatoes	15.5	58,381
Bell Peppers	9.0	33,682
Celery	5.2	19,533
Carrots	7.0	26,092
Potatoes	30.6	114,824
Sweet Potatoes	5.5	20,619
Onions	16.1	60,612
TOTAL		548,375

Source: SACOG Regional Food Consumption Calculator analysis of USDA's FICRCD and LAFA data bases.

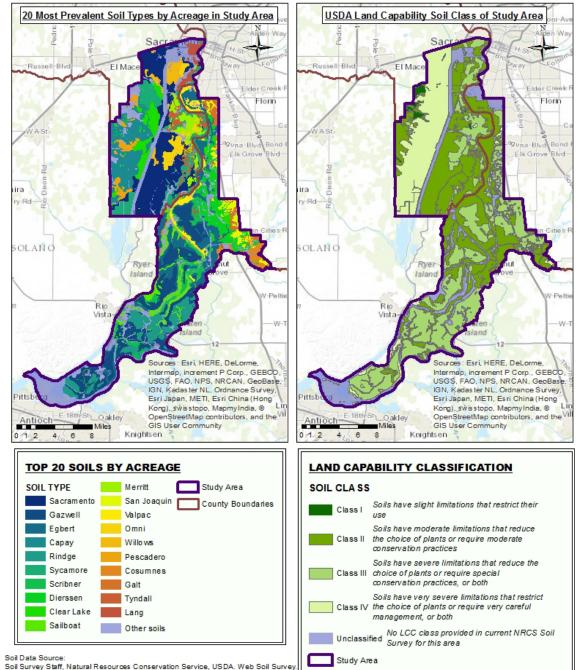
These soils can grow these crops

- Water availability OK
- Labor supply??
- Scenarios determine how much and where inputs are needed
- Modeled small changes in cropping patterns to replicate:
 - 1. Current trends

Available online at http://websoilsurvey.nrcs.usda.gov/

Accessed 23 September 2015

- 2. Food hub
- 3. Agritourism



County Boundaries



Trend Scenario Continue recent cropping shifts

- Crop changes on 1,075 acres
- \$6 million increase in farmgate value
- Small increases in costs and labor
- ROI increases; supporting trend

Food Hub Scenario Scaling the local food system

- Crop changes on 503 acres
- \$6.3 million increase in farmgate value
- Target crops based on market assessment
- ROI doubles; supports food hub concept

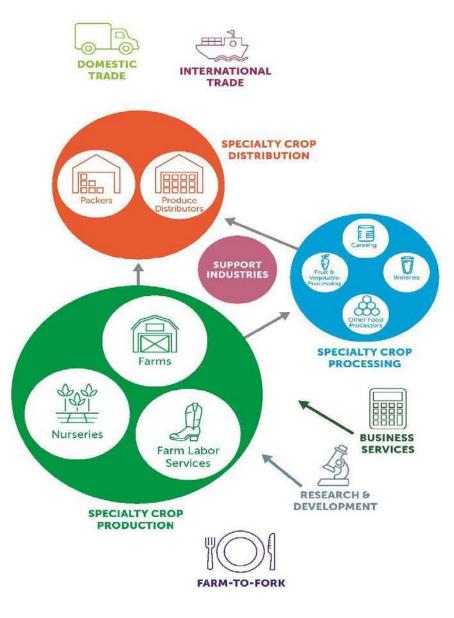
Food Hub Customized Pro Forma

10 Year Annual Operations

	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Revenue		\$500,500	\$825,000	\$1,200,000	\$4,053,130	\$8,775,962	\$10,454,038	\$16,061,469	\$16,061,469	\$16,061,469	\$16,061,469
Processing Lines		\$500,500	\$825,000	\$1,200,000	\$4,053,130	\$8,775,962	\$10,454,038	\$16,061,469	\$16,061,469	\$16,061,469	\$16,061,469
Add'l Services Revenue											
Expenditures		\$746,868	\$1,090,950	\$1,468,337	\$4,525,479	\$8,823,262	\$9,999,059	\$13,850,977	\$13,850,977	\$13,850,977	\$13,850,977
COGS (w/packaging)		\$423,926	\$712,448	\$1,036,288	\$2,890,908	\$6,087,914	\$6,898,591	\$9,733,142	\$9,733,142	\$9,733,142	\$9,733,142
Labor		\$270,952	\$324,643	\$368,368	\$1,024,167	\$1,534,788	\$1,699,605	\$2,097,656	\$2,097,656	\$2,097,656	\$2,097,656
Operating Costs		\$51,989	\$53,859	\$63,681	\$610,405	\$1,200,559	\$1,400,863	\$2,020,179	\$2,020,179	\$2,020,179	\$2,020,179
Net Op. Inc. (EBITDA)		(\$246,368)	(\$265,950)	(\$268,337)	(\$472,349)	(\$47,299)	\$454,979	\$2,210,493	\$2,210,493	\$2,210,493	\$2,210,493
Percent of Sales		-49%	-32%	-22%	-12%	-1%	4%	14%	14%	14%	14%
Debt Serv. on Capital Costs			(\$103,578)	(\$484,660)	(\$541,354)	(\$601,457)	(\$698,523)	(\$744,935)	(\$744,466)	(\$744,466)	(\$744,466)
Annual Equity Investments	(\$373,434)	(\$265,950)	(\$710,908)	(\$664,297)	(\$105,140)	(\$105,531)	(\$169,796)	(\$93,369)	\$0	\$0	\$0
Net Cash Flow	(\$373,434)	(\$512,318)	(\$1,080,437)	(\$1,417,294)	(\$1,118,843)	(\$754,286)	(\$413,340)	\$1,383,189	\$1,466,027	\$1,466,027	\$1,466,027
Internal Rate of Return									-15%	-5%	0%
Operating Characteristics								\sim			
Total Tons Processed		300	550	800	2,577	5,154	5,930	7,804	7,804	7,804	7,804
Revenue per lbs.		\$0.74	\$0.75	\$0.75	\$0.79	\$0.85	\$0.88	\$1.03	\$1.03	\$1.03	\$1.03
COGS per lbs.		\$0.61	\$0.50	\$0.50	\$0.56	\$0.59	\$0.58	\$0.62	\$0.62	\$0.62	\$0.62
Gross Margin		\$0.12	\$0.25	\$0.25	\$0.23	\$0.26	\$0.30	\$0.41	\$0.41	\$0.41	\$0.41
Percent of Sales		14%	33%	33%	29%	31%	34%	39%	39%	39%	39%
Total Cash Investment	\$4,502,325										
Operating Capital	\$3,290,316										

Capital Investments \$1,212,009

Specialty Crop Cluster Multiplier Study



Cluster	EMPLOYMENT MULTIPLIER	VALUE ADD MULTIPLIER
Manufacturing	2.3	2.06
Construction	1.98	1.93
Specialty Crop Cluster	1.82	1.9
Professional & Scientific Services	1.75	1.82
Finance, Insurance, & Real Estate (F.I.R.E)	1.7	1.52
Health	1.67	1.63
Legal	1.63	1.41
Retail	1.34	1.55



Agritourism Scenario Bringing the fork to the farm

- Tourism crop changes on 1,000 acres
- \$9.4 million increase in farmgate value
- ROI increases; supports tourism
- Access to roads; activity clusters, zoning

WORKING LANDSCAPES PILOT STUDY: AGRICULTURE AND HABITAT

in the Sacramento & Yolo County Delta

