

Tucson, Arizona

AN INTERNATIONAL CULINARY DESTINATION



Application for UNESCO
Designation as a
City of Gastronomy
2014



Santa Cruz Valley
HERITAGE ALLIANCE



COLLEGE OF SOCIAL AND BEHAVIORAL SCIENCES
The Southwest Center



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"Prickly Pear Fruit" courtesy of City of Tucson

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"Downtown Tucson Looking West" courtesy of City of Tucson

3rd row (left to right):

"Janos in Garden" courtesy of Janos Wilder

"Heirloom Corn" Vanessa Bechtol

"People in Greenhouse" Vanessa Bechtol

Bottom row (left to right):

"Squash" Katherine Roberts, City of Tucson

"Farm Field" Vanessa Bechtol

"Jalapeño" Katherine Roberts, City of Tucson

BACK COVER:

Top row (left to right):

"Figs" Katherine Roberts, City of Tucson

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"Mercado Courtyard" Katherine Roberts, City of Tucson

2nd row (left to right):

"Produce, Time Market" Katherine Roberts, City of Tucson

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3rd row (left to right):

"Wine Glass" Vanessa Bechtol

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FOREWORD

To the UNESCO Committee,

It is my honor to support Tucson's nomination as a UNESCO City of Gastronomy. Our city is recognized internationally for the food traditions of our Sonoran Desert, traditions shaped by the cultural diversity of our modern community and the knowledge of our ancient ancestors. The UNESCO Creative Cities Network presents an opportunity for Tucson's chefs, farmers, and ranchers, as well as our businesses, academic institutions, and nonprofits, to be represented on the world stage. For our community, it is an opportunity to leverage the talents of these individuals and organizations to expand our global notoriety as a destination for food and the culinary arts.

Tucson's application to become a City of Gastronomy has been a true community effort and could not have been achieved without the support and collaboration of a wide range of partners. This partnership includes the University of Arizona Southwest Center, the Santa Cruz Valley Heritage Alliance, Edible Baja Arizona, many local and national nonprofits and professional associations, local government agencies, the U.S. National Commission for UNESCO, and other UNESCO Creative Cities representing five continents. Their support is a great honor for Tucson, and I extend my deepest gratitude on our city's behalf.

Sincerely,

Jonathan Rothschild
Mayor of Tucson



PHOTO BY JEFF SMITH



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JOINING THE CREATIVE CITIES NETWORK AS A CITY OF GASTRONOMY

The City of Tucson, Santa Cruz Valley Heritage Alliance, University of Arizona Southwest Center, our media partner Edible Baja Arizona, and many other community partners are actively seeking recognition of our region's rich agricultural heritage, thriving food traditions, and culinary distinctiveness through a City of Gastronomy designation by the United Nations Educational, Scientific and Cultural Organization (UNESCO). This designation will make Tucson part of UNESCO's network of "Creative Cities," allowing us to more widely and deeply share experiences, ideas, and best practices for cultural, agricultural, social, and economic development.

Joining the Creative Cities Network as a City of Gastronomy will highlight Tucson's distinctive heritage and cultural products on a global platform. It will also promote Tucson as a culinary tourism destination in national and international markets by drawing

attention to the numerous food and culinary assets of this city and its region, including:

- An agricultural heritage extending back more than 4,000 years, and a 300-year tradition of vineyards, orchards, and livestock ranching.
- A unique blend of foods and culinary traditions resulting from a multicultural history and an exchange of Old World and New World foods.
- A well-developed gastronomy that is a defining characteristic of the city and this region of the southwestern United States.
- Numerous restaurants and chefs innovatively using indigenous ingredients in both traditional and contemporary recipes.
- Traditional recipes and culinary techniques continuing to be passed from generation to generation.
- A multitude of farmers' markets selling locally produced foods and food products.
- Historic food industries being revived or sustained.
- Hosting of gastronomic festivals, awards, and contests.
- Respect for the environment and promotion of sustainable local foods and food products.
- Fostering of public understanding of nutrition through educational institutions and government programs.
- Innovative food biodiversity conservation programs.

Tucson and its surrounding foodshed have received recognition in the international media as a hearth of heritage foods. It is also a hotbed of contemporary innovations in desert farming, foraging, and creative food elaboration. We wish to formalize such recognition and create new connections for cultural exchanges through the Creative Cities Network. We will galvanize the talents found in our resident cultures, chefs, farmers, ranchers, educational institutions, non-profit organizations, and businesses to make Tucson the cultural center and tourism destination for Southwest Borderlands cuisine.



PHOTO BY VANESSA BECHTOL

Culinary tourists are an emerging and lucrative niche in the travel market. Through the promotion of Tucson's rich food traditions and culinary scene as a City of Gastronomy, we can tap into the culinary and agricultural tourism markets and reach visitors seeking unique food experiences. The distinctive cuisines that residents and visitors can explore in Tucson are largely based on the heritage foods produced in the city's local foodshed—the Santa Cruz Valley. Our designation as a City of Gastronomy will boost recognition for the rich agricultural history and food traditions of the proposed Santa Cruz Valley National Heritage Area.

As the ancient hearth of Southwestern agriculture and cuisine, the Santa Cruz Valley continues to produce a diversity of local foods that provide a direct link to the region's history and cultural identity. Our agricultural heritage can still be experienced today through these locally produced heritage foods. By nominating Tucson and its surrounding foodshed as a UNESCO City of

Gastronomy, we wish to celebrate the living food traditions and culinary innovations of this world-renowned center of desert gastronomy in the Americas.



PHOTO BY KATHERINE ROBERTS, CITY OF TUCSON



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The Proposed Santa Cruz Valley National Heritage Area

Southern Arizona's Santa Cruz River Valley, with its long and complex cultural past, is blessed with a rich historic legacy in a unique natural environment. Here in the Santa Cruz Valley, Native American, Spanish Colonial, Mexican, and American Territorial heritages and traditions intersect with the natural landscape in ways unique to the American story.

These traditions remain a source of identity and vitality for the people who live here, and also attract national and international tourists seeking authentic place-based experiences.

One local effort to share these unique heritage experiences with residents and visitors alike is the proposed Santa Cruz Valley National Heritage Area, spear-headed by the Tucson-based non-profit Santa Cruz Valley Heritage Alliance. In 2003, a handful of foresighted individuals came together to shape the concept of the Santa Cruz Valley National Heritage Area and organized as a working group that would later become the Santa Cruz Valley Heritage Alliance.

The Santa Cruz Valley National Heritage Area Act is a non-regulatory designation made by Congress to honor and celebrate the region's contribution to America's history, while also stimulating heritage-based economic development, geo-tourism, and culinary tourism. The designation does not impose any federal, state, or local land use restrictions or zoning and does not impact private property rights.

National Heritage Areas are designated by Congress as places where natural, cultural, historic and recreational resources combine to form cohesive, nationally distinctive landscapes arising from patterns of past and present human activities,

and shaped by geography. The regions are representative of the national experience through the physical features that remain and the cultural traditions that have evolved in the areas. There are currently 49 National Heritage Areas in the country.

Interest in National Heritage Areas has grown due to their proven success as an economic development strategy through increased heritage tourism, and related increases in jobs, business incomes, and tax revenues. A 2004 study found that visiting a National Heritage Area was the primary purpose of 57% of visitors to seven heritage areas studied.

A similar increase in tourism for Pima County and the great Santa Cruz River Valley can mean big business. In 2011, tourism had a \$2.4 billion annual economic impact on Pima County and supported nearly 22,000 tourism-related jobs. In 2011, Pima County collected \$135.7 million in direct taxes from tourism.

With the rich diversity of cultural, historic, natural, and recreational resources available in the Santa Cruz Valley, we have a tremendous opportunity to promote these resources and educate the community about our shared heritage. In doing so, we can stimulate regional economic development by not only attracting tourists dollars to the region, but also by encouraging residents to visit, enjoy, and preserve these heritage destinations.

For more information visit www.santacruzheritage.org.

By Vanessa Bechtol, Executive Director, Santa Cruz Valley Heritage Alliance, Inc.

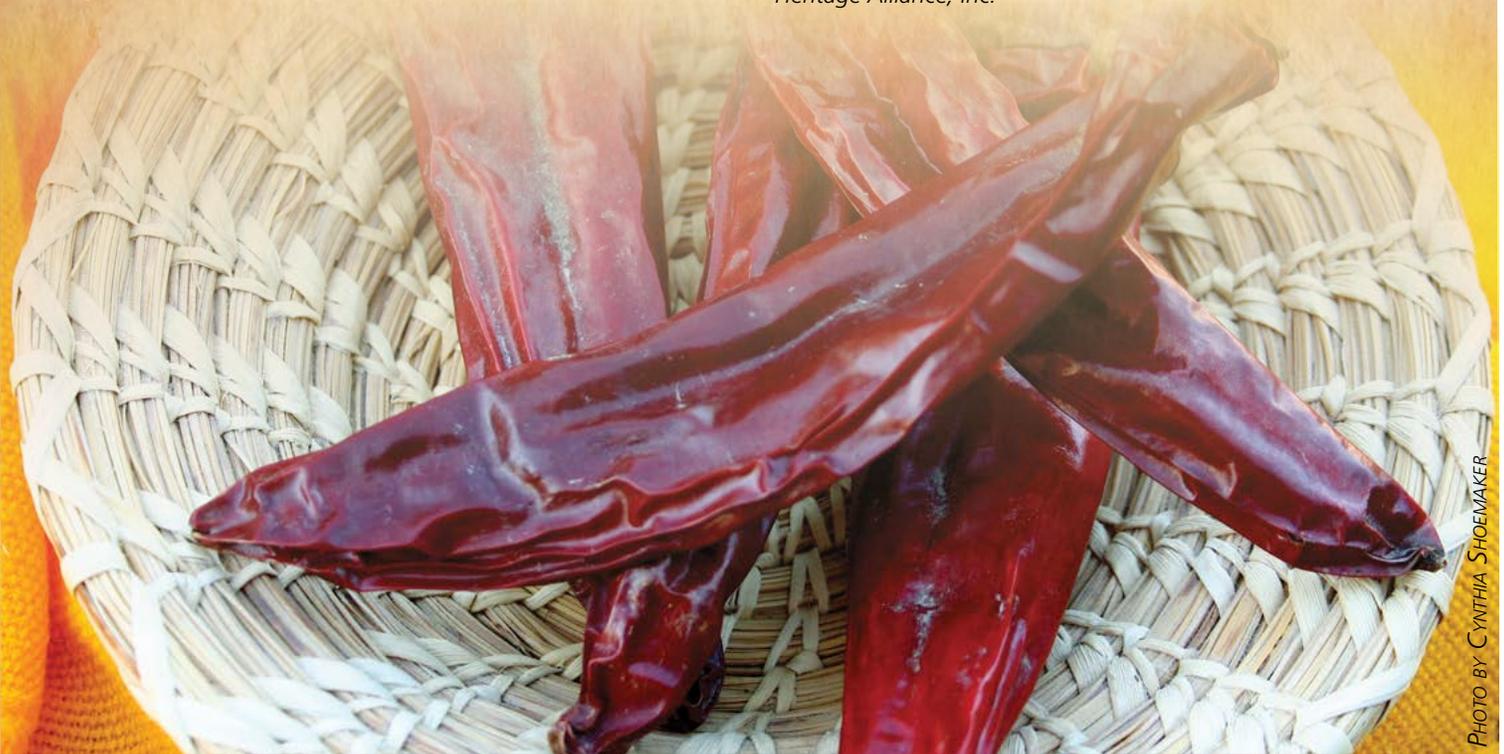


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TUCSON'S GASTRONOMIC GEOGRAPHY

Located just north of the U.S.-Mexico border, Tucson, Arizona is the epicenter of the trans-national desert food traditions in North America. The western Tucson Basin is likely the oldest-continuously inhabited metropolitan area in North America. A continuous history of 4,100 years of habitation and crop cultivation has been documented in the archaeological record of downtown Tucson. In a stunning setting, which juxtaposes desert cactus forests with snow-capped mountains, Tucson cuisine blends the influences of Native American, Northern Mexican or Sonoran, Mission-era Mediterranean, and American Ranch-Style Cowboy food traditions, among others. Key ingredients of this unique blend of cuisines include dozens of native desert plants and animals listed on the Slow Food International Ark of Taste—perhaps more than for any other North American landscape—not found in other regional cuisines. Most importantly, Tucson food traditions retain ancient food preparation practices and cooking techniques unique to the Southwest, as part of our intangible heritage.

The City of Tucson is nicknamed “the Old Pueblo” because it is widely-recognized as one of the oldest settlements in North America. Tucson is the county seat of Pima County in the southern part of the state of Arizona. Tucson is the 33rd largest city and

the 52nd largest metropolitan area in the United States, and the third largest city in the binational Sonoran Desert that spans the U.S. and Mexico border. The geographic area of Metro Tucson forms part of the larger Tucson-Nogales combined statistical area, the greater Santa Cruz Valley, with a total population of 980,263 as of 2010. Tucson is the second-largest populated city in Arizona, after Phoenix. Unlike many modern American cities, there are neighborhoods and cultural enclaves within Tucson’s limits and surrounding area that maintain continuity with the historic architectural, horticultural, and landscape identity that has persisted for centuries; the fragrances and flavors of its foods do much the same to maintain gastronomic continuity.

The City of Tucson is nestled against high mountains in the arid Santa Cruz River Valley, 108 miles (174 km) southeast of Phoenix and 60 mi (97 km) north of the U.S.-Mexico border. This unique borderlands region has a rich cultural heritage and exceptional biodiversity. The region lies ecologically at the nexus of the Sonoran and Chihuahuan Deserts and the Madrean Sky Islands. Politically, the region is within the borderlands of the United States and Mexico and four Native Nations. Culturally, the region has long been called home by Native American, Hispanic, and Anglo-American groups. It now has residents that arrived from a hundred different nations.

Tucson’s unique geography allows for a nearly continuous growing season and makes the city a vibrant center of a blend of agricultural and gastronomic traditions from around the world. The elevation gradients of the surrounding Santa Catalina, Rincon, and Tucson Mountains, which rise up to 7,000 feet above the valley floor, have enabled indigenous cultures to both forage and cultivate diverse food resources year-round. Their agriculture was developed by domesticating arid-adapted plants, and adopting tropical Mesoamerican crop introductions. A suite of Spanish-introduced annual and perennial crops and livestock species also thrive along the climatic gradient from the valley to mountain ridges, similar to their Mediterranean origins. Likewise, immigrants and refugee communities of many nationalities have also found spaces and microclimates to tend their own heritage food crops and maintain their culinary practices and recipes.



Tucson spreads from the flanks of the Tucson Mountains to the west, across the basin floor below the snow-capped Santa Catalina and Rincon Mountains to the north and east. The oldest and most densely populated portion of the city is in the western Tucson Basin along the banks of the Santa Cruz River. Neighborhoods near the Santa Cruz River date back to the City's pre-American period, with historic homes, gardens, and shrines.

Tucson has 34 National Register Historic Districts where its unique architectural heritage is visually complemented by historic landscaping and gardens. On the east bank of the river, Barrio Viejo is comprised of early Sonoran Style adobe rowhouses with rear courtyards containing gardens and fruit trees—including rare heirloom varieties maintained for multiple generations.

As Tucson grew in population, the city expanded east of the river, incorporating the University of Arizona campus, established in the late 1800s, and surrounding historic neighborhoods such as Iron Horse, Pie Allen, West University, Rincon Heights, Sam Hughes, and Blenman-Elm.

The City of Tucson now includes an array of historic neighborhoods and ethnic enclaves, from the south-side Hispanic neighborhoods to the Moorish-style mosques and community centers rising into the mountain foothills.

Downtown holds Tucson's few sky-scrapers. Its recent revitalization has included a surge in new restaurants and markets that locally-source produce and meats from the city's foodshed. To the west, Menlo Park lies between the Santa Cruz River and Tumamoc Hill, and was once the location of irrigated fields for the mission visita of San Agustín, established during the Spanish Colonial period.

Metro Tucson residents are 41% Hispanic or Latino in origin, and 59% non-Hispanic, including between 2% and 6% Native American, 4% African-American, and 3% Asian origin. More than 40 different ethnic groups emigrated from all continents celebrate their foods at the annual Tucson Meet Yourself Festival. They range from recent refugees and migrant workers, to indigenous groups that resided in the Santa Cruz Valley prior to the establishment of the United States.



PHOTO BY KATHERINE ROBERTS, CITY OF TUCSON

Food Economy Facts

Metro Tucson serves as the hub for food production and exchange in five Southern Arizona counties, but it also integrates these production activities with an economy fueled by year-round tourism and higher education. This area includes 2,350 farms (one-sixth of all the farms in the state of Arizona) in a region roughly the size of Italy. The five Southern Arizona counties around Tucson now have at least 16% more farms and ranches than in 2002. They sold at least \$122 million of crops and \$73 million of livestock and products. Of these farms and ranches, 297 (13%) are 1,000 acres or more in size, and 1,178 (50%) are less than 50 acres. Average farm size is 1,351 acres, less than the state average of 1,670 acres.

Collectively, the farms and ranches surrounding Tucson in five Southern Arizona counties cover 2.3 million acres of land, including 122,000 acres of irrigated cropland harvested for food and fiber. Its primary food products include \$25 million/year of fruits, tree nuts, and berries; \$17 million of maize; \$14 million of cattle, sheep and goats; and an unknown amount of vegetables. The 43 community gardens, more than 12 school gardens, and 500 new home gardens in Tucson also play roles in the informal food economy. Restaurants and other independently owned food businesses provide one of Tucson's largest and fastest-growing economic sectors. Altogether, agriculture and water management jobs comprise one-fourth of the Arizona economy.



PHOTO BY VANESSA BECHTOL



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PHOTO COURTESY OF CITY OF TUCSON



PHOTO BY VANESSA BECHTOL

A MULTICULTURAL FOOD HERITAGE

Tucson has inarguably the longest agricultural history of any city in North America. It offers more heritage foods on the Slow Food International Ark of Taste grown within 100 miles of it than any other city on the continent. These heritage foods are representative of the many living traditions that thrive today. They are perceived as a source of identity and vitality for the people who live here.

Tucson has a well-developed gastronomy that is linked to the very identity of the city itself, and its surrounding region. Tucson's heritage foods include wild desert food products, historically cultivated crops, fermented foods, roasted and baked goods, meats, and cheeses unique to the region. Wild harvested specialties include pods of mesquite trees; wild greens; cactus fruits, buds, and pads; the spinach-like greens of desert amaranths; and non-bitter acorns. Among the most celebrated wild food resources, the giant saguaro cactus has provided fruit for the indigenous peoples of the region for thousands of years. The native Tohono O'odham people of Tucson consider the

saguaro cactus to be an honored relative; they harvest the ripe fruit, called bahidaj, in the hot months of summer for use in rituals to encourage the arrival of monsoon rains.

“Maize, beans, and squash are a tropical Mesoamerican crop complex known collectively as ‘the three sisters’...”

Maize, beans, and squash are a tropical Mesoamerican crop complex known collectively as “the three sisters,” and have generated immense varietal diversity through a co-evolutionary history with their human caretakers. They provide nutritional and agro-ecological balances throughout the Americas and especially in the greater Santa Cruz Valley where Tucson is located. The first maize arrived in the Santa Cruz Valley from Mexico by 2100 B.C. (4,100 years ago), marking the beginning of a cultural transition from foraging to agrarian societies in southwestern North America.

Mesquite Facts

Mesquite is the most common tree of the Desert Southwest. Native Americans relied on the mesquite pod as a dietary staple from which they made tea, syrup, and ground meal called pinole. They also used the bark for basketry, fabrics, and medicine. A favorite of bees and other insects, mesquite flowers produce a fragrant honey.

Medical studies of mesquite show that despite its sweetness, mesquite flour is extremely effective in controlling blood sugar levels in people with diabetes. The sweetness comes from fructose, which the body can process without insulin. In addition, soluble fibers, such as galactomannin gum in the seeds and pods slow absorption of nutrients, resulting in a flattened blood sugar curve, unlike the peaks that follow consumption of wheat flour, corn meal and other common staples.

The sweet pods are a good source of calcium, manganese, iron and zinc. The seeds within are 40% protein. The gel-forming fiber allows foods to be slowly digested and absorbed over a 4 to 6 hour period, rather than 1 or 2 hours, which produces a rapid rise in blood sugar.

Mesquite pods ripen for harvesting throughout the summer. The season in Tucson typically begins in late June and stretches into late September. The harvest can extend into October in cooler areas such as Sahuarita, Sonoita, or Patagonia. Native trees are adapted to our two rainy seasons (winter and summer), and typically go through two flowering phases, one in the spring (April/May) and the other after the monsoon (August). This results in two fruiting phases. Ripe pods may range in color from yellowish tan to reddish (not green), and are dry and brittle.

Mesquite facts courtesy of www.DesertHarvesters.org

Table 1. Heritage Food Crops of the Tucson Basin

Common Name	Scientific Name	Dates Encouraged, First Cultivated, and/or Introduced	X=Species in Slow Food Ark of Taste
NATIVE SEMI-CULTIGENS			
Herbs/Forbs			
Amaranth	<i>Amaranthus</i> spp.	3500-2100 B.C.	X
Goosefoot	<i>Chenopodium</i> spp.	3500-2100 B.C.	
Tansy mustard	<i>Descurainia</i> spp.	3500-2100 B.C.	
Grasses			
Dropseed grass	<i>Sporobolus</i> spp.	3500-2100 B.C.	
Indian rice grass	<i>Oryzopsis hymenoides</i>	3500-2100 B.C.	
Woolly Indian wheat	<i>Plantago</i> sp.	3500-2100 B.C.	
Cacti			
Cholla	<i>Cylindropuntia</i> spp.	3500-2100 B.C.	X
Hedgehog cactus	<i>Echinocereus</i> spp.	3500-2100 B.C.	
Prickly pear	<i>Opuntia</i> sp.	3500-2100 B.C.	
Trees/shrubs			
Mesquite	<i>Prosopis velutina</i>	3500-2100 B.C.	X
Wolfberry	<i>Lycium</i> spp.	3500-2100 B.C.	
Wright's saltbrush	<i>Atriplex wrightii</i>	3500-2100 B.C.	
EARLY AGRICULTURE			
Mesoamerican Introductions			
Common bean	<i>Phaseolus vulgaris</i>	1200 B.C.?	X
Lima bean	<i>Phaseolus lunatus</i>	A.D. 700	X
Maize	<i>Zea mays</i>	2100 B.C.	X
Pepo squash	<i>Cucurbita pepo</i>	2100 B.C.	
Cushaw squash	<i>Cucurbita argyrosperma</i>	A.D. 900-1100-	X
Butternut squash	<i>Cucurbita moschata</i>	A.D. 900-1100-	
Jackbean	<i>Canavalia ensiformis</i>	A.D. 900-1100-	
Native Domesticates			
Agave	<i>Agave</i> spp.	A.D. 500 – 1100	
Chiltepin	<i>Capsicum annuum</i> var. <i>aviculare</i>	A.D. 1450-1694	X
Devil's claw	<i>Proboscidea parviflora</i>	A.D. 500 – 1450	
Little barley	<i>Hordeum pusillum</i>	A.D. 500 – 1100	
Sonoran panic grass	<i>Panicum hirticaule</i>	A.D. 900 – 1400	
Tepary bean	<i>Phaseolus acutifolius</i>	A.D. 500 –	X
SPANISH/ MEXICAN AGRICULTURE			
Grains			
Barley	<i>Hordeum vulgare</i>	A.D. 1690s	
Oats	<i>Avena sativa</i>	A.D. 1694-1856	
Wheat	<i>Triticum</i> spp.	A.D. 1690s	
Legumes			
Black-eyed pea	<i>Vigna unguiculata</i> subsp. <i>unguiculata</i>	A.D. 1690s	
Chickpeas	<i>Cicer arietinum</i>	A.D. 1690s	
Fava bean	<i>Vicia faba</i>	A.D. 1690s	
Lentils	<i>Lens culinaris</i>	A.D. 1690s	
Vegetables			
Cabbage	<i>Brassica oleracea</i>	A.D. 1690s	
Chili pepper	<i>Capsicum annuum</i>	A.D. early 1800s	
Garlic	<i>Allium sativum</i>	A.D. 1690s	
Leeks	<i>Allium ampeloprasum</i>	A.D. 1690s	
Lettuce	<i>Lactuca sativa</i>	A.D. 1690s	
Melons	<i>Cucumis melo</i>	A.D. mid-1600s	X
Onions	<i>Allium cepa</i>	A.D. 1690s	
Tomatillo	<i>Physalis philadelphica</i>	A.D. 1694-1856	
Watermelon	<i>Citrullus lanatus</i>	A.D. mid-1600s	X
Herbs and Spices			
Anise	<i>Pimpinella anisum</i>	A.D. 1690s	
Cilantro/Coriander	<i>Coriandrum sativum</i>	A.D. 1690s	
Cumin	<i>Cuminum cyminum</i>	A.D. mid-1700s	
Fennel	<i>Foeniculum vulgare</i>	A.D. mid-1700s	
Marjoram	<i>Origanum majorana</i>	A.D. mid-1700s	
Mint	<i>Mentha</i> sp.	A.D. 1690s	
Mustard, black	<i>Brassica nigra</i>	A.D. 1690s	
Mustard, white	<i>Sinapis alba</i>	A.D. 1694-1856	
Oregano	<i>Origanum vulgare</i>	A.D. mid-1700s	
Parsley	<i>Petroselinum crispum</i>	A.D. mid-1700s	
Rosemary	<i>Rosmarinus officinalis</i>	A.D. mid-1700s	
Orchard Fruits			
Apple	<i>Malus ×domestica</i>	A.D. 1690s	X
Apricot	<i>Prunus armeniaca</i>	A.D. 1694-1856	X
Banana	<i>Musa ×paradisiaca</i>	A.D. mid-1700s	
Citrus: Citron	<i>Citrus medica</i>	A.D. mid-1700s	
Citrus: Lemon	<i>Citrus ×aurantifolia</i>	A.D. mid-1700s	
Citrus: Lime	<i>Citrus limettioides</i>	A.D. 1700s	
Citrus: Orange, sweet	<i>Citrus sinensis</i>	A.D. 1690s	X
Citrus: Orange, sour	<i>Citrus aurantium</i>	A.D. mid-1700s	
Date palm	<i>Phoenix dactylifera</i>	A.D. 1700s	X
Fig	<i>Ficus carica</i>	A.D. early 1700s	
Mission grape	<i>Vitis vinifera</i>	A.D. early 1700s	X
Olive	<i>Olea europaea</i>	A.D. mid-1700s	X
Peach	<i>Prunus persica</i>	A.D. 1694-1856	X
Pear	<i>Pyrus communis</i>	A.D. early 1700s	X
Plum	<i>Prunus domestica</i>	A.D. 1694-1856	X
Pomegranate	<i>Punica granatum</i>	A.D. 1694-1856	
Quince	<i>Cydonia oblonga</i>	A.D. late 1680s	X
Raspberry	<i>Rubus</i> sp.	A.D. ?	
Walnut	<i>Jugland regia</i>	A.D. 1750s	
EARLY AMERICAN AGRICULTURE			
Old World Introductions			
Artichoke	<i>Cynara scolymus</i>	1889	
Beet	<i>Beta vulgaris</i>	1896	
Cantaloupe	<i>Cucumis melo</i>	1898	
Carrot	<i>Daucus carota</i> subsp. <i>sativus</i>	1856 – 1890	
Green bean	<i>Phaseolus vulgaris</i>	1856 – 1890	
Pea	<i>Pisum sativum</i>	1856 – 1890	
Parsnip	<i>Pastinaca sativa</i>	1896	
Potato	<i>Solanum tuberosum</i>	1870	
Radish	<i>Raphanus sativus</i>	1882	
Strawberry	<i>Fragaria ananassa</i>	1893	X
Sweet potato	<i>Ipomoea batatas</i>	1870	
Tomato	<i>Solanum lycopersicum</i>	1898	
Turnip	<i>Brassica rapa</i>	1882	



PHOTO BY VANESSA BECHTOL

Historically, in the Pimería Alta region surrounding Tucson, several native peoples cultivated and selected for a vast genetic diversity of these crops, including the ancient chapalote flint corn; the desert-adapted tepary bean; the large, green-and-white striped cushaw squash; orange cheese pumpkin; and other cereal varieties.

The largely Catholic Spanish, but also including crypto-Muslims and crypto-Jews escaping the Spanish Inquisition, introduced other desert-adapted crops from arid regions in the Old World beginning around A.D. 1690.



PHOTO BY JESUS GARCIA

Table 2. Old World crops and domesticated livestock introduced during the Spanish Colonial period

lentils	fig	apple
wheat	date palm	pear trees
barley	sour orange	cattle
chickpeas	sweet lime	horses
onions	pomegranate	burros
garlic	quince	sheep
mission grape	peach	goats
olive	apricot	

Unique fruit stocks introduced during the Spanish Colonial period continue to grow in private gardens and orchards in the oldest areas of Tucson and throughout the Santa Cruz Valley. They are currently being inventoried, propagated, and used to re-establish historic orchards by the Kino Heritage Fruit Trees Project, and are available for sale in plant nurseries. Dried and ground chiles, cumin, oregano, and other Mexican spices are also locally produced and packaged.

Ranching was established more than 300 years ago, with sheep and goats originally comprising half of the livestock numbers. Cattle production of a dozen or more breeds continues to be the major rural land use in the Santa Cruz Valley. While most ranches raise cattle to ship to feedlots in other states, many local ranches sell beef to local markets. Range-fed, natural beef (raised on native forage, and using no hormones or antibiotics) is increasing in importance and popularity in Tucson and the greater Santa Cruz Valley.

In many ways, Tucson is the tri-cultural hub for the Sonoran Desert borderlands, where Native American, Hispanic, and Anglo cultures (among others) have co-settled and feasted together with indigenous and introduced ingredients from its landscape. Its traditional cuisine is so well-known that when presidents, prime ministers, religious leaders, or celebrities arrive in Tucson, as U.S. President Bill Clinton did, many of them immediately go to one of the Sonoran-style restaurants to sample and celebrate the region's lasting but intangible heritage—one altogether different from Tex-Mex or Santa Fe cuisine.

THE KINO HERITAGE FRUIT TREES PROJECT

The Kino Heritage Fruit Trees Project began in 2003 as a creative effort between researchers at the Arizona-Sonora Desert Museum, University of Arizona, National Park Service, and Desert Survivors Nursery. Their goal was to identify, locate, collect, propagate and replant the Old World fruit tree stocks (cultivars) first introduced in the 17th through 19th centuries by Jesuit and later Franciscan missionaries, including Father Eusebio Francisco Kino. By historical accounts, these trees included peach, quince, pear, apple, pecan, walnut, fig, and pomegranate.

Thus far, fruit tree stocks from the Spanish era and later historic periods have been identified in mission orchard communities in Sonora, Mexico, at historic ranches and abandoned mining towns, in backyards of historic house museums and barrio residences in Tucson, on the campus of the University of Arizona, and at Quitobaquito Springs in Organ Pipe Cactus National Monument. The impetus of the project was to use these cultivars to re-establish the historic orchards at Tumacacori National Historical Park and the Mission Garden at Tucson Origins Heritage Park. These rare heirloom tree stocks, some of which were nearing extinction prior to this project, are now available in area nurseries for sale to the public.



Cholla Buds

The Buckhorn or Staghorn cholla cactus, a spiny plant with cylindrical joints of the genus *Cylindropuntia*, has been used by the Tohono O'odham as a food source for generations. The buds were among the few wild foods available in the early spring, often a time of scarcity. Cholla buds are delicious sautéed with other vegetables such as squash, or added to salads or salsa.

PHOTO BY CYNTHIA SHOEMAKER

Ranching Traditions

Rafael de Grenade, Ph.D.

The ranching traditions in Tucson and the Santa Cruz Valley, first introduced during the Spanish Colonial period, have preserved and shaped the cultural landscape of the region. Ranching, along with the more intensive practices of farming, provided a mainstay of the economy for the last 300 years.

The earliest ranches were centered around the Spanish missions and presidios, the first of which was established by Padre Eusebio Kino in 1687. Among these early Spanish establishments were Tumacacori and San Xavier del Bac Missions, the visita of San Agustín along the Santa Cruz River, and the Tubac and Tucson presidios.

A key component of the Columbian Exchange, new breeds of crops and livestock arrived with the colonizers and adapted to the region over ensuing centuries. The production of crops and livestock was an instrumental part of the mission of the Spanish Crown, to incorporate the remote wilds of the New World into the economy of Spain. The cattle, called “criollos,” were desert born and bred—a tough, wiry breed adapted to sparse vegetation, rugged terrain and intense summer heat—and they dominated ranges in northern Mexico and the southwestern U.S. until the late nineteenth century.

As the West opened after the Gadsden Purchase and the Civil War, American and Mexican cattlemen established many new ranches along the Santa Cruz River and its tributaries, adopting desert-adapted practices and livestock from the

Mexican vaquero tradition, and introducing European breeds and ranching practices. The gradual replacement of the criollo cattle by less resistant but higher yielding European livestock breeds led to the virtual disappearance of the original Spanish genetics, though strains of the original Spanish Barb horse and the criollo cattle still exist on a few southeastern Arizona ranches.

Ranching is a rich tradition in the Santa Cruz Valley. Many cattlemen use the same practices of managing cattle and training horses as the first vaqueros. Cattle graze open rangelands, and local stockmen gather them throughout the year to check the herd and brand, vaccinate and wean the calves. Horses are an integral part of ranch operations in the rugged terrain of the Sonoran Desert where most of the landscape is inaccessible by motorized vehicle. Ranchers use a mosaic of private land and federal, state, Bureau of Land Management and Tribal lands to raise cattle.

Today, ranching continues in the region as a living and historical tradition. Many ranching communities have formed coalitions to manage their ranches as open space, to increase the health of their livestock and rangelands, to preserve ranching traditions, and to protect habitat for plants and wildlife. Conservation easements on many ranches in the Santa Cruz and San Pedro River valleys ensure that they will remain open space in the future.



PHOTO COURTESY OF CITY OF TUCSON

A typical gastronomic presentation of the heritage foods of the region might include the nutty O’odham tepary beans topped with a hot sauce from the fiery native chiltepin; translucent white Sonora wheat tortillas the size of bicycle wheels; a hot, ground-corn porridge called atole; an alcohol made from local agave varieties known as bacanora; wine made from mission grapes; and a sweet preserve made of quince fruit.

Even a food as commonplace as the tortilla has two variants in Tucson that are hardly found elsewhere in the world: the giant, wheat flour tortilla de las aguas or sobaquera which is more like a Palestinian or Bedouin saj than like most Mexican tortillas; and the Sonoran-style gordita made of nixtamalized corn masa blended with queso fresco, deep-fried and smothered in red chile pepper sauce to make enchiladas chatas Sonorenses. The preparation of these tortilla variants must be taught from grandmother to granddaughter to accomplish elegantly, much like the preparation of baklava from filo dough in Greece or Lebanon. The latter non-GMO corn tortilla, and the Sonoran enchiladas made from it, have recently been recommended for inclusion in the Slow Food International Ark of Taste.

Tucson has a vibrant gastronomic community, with well-known and award-winning chefs, restaurants, food writers, publications, media venues, tourist destinations, and annual events. With James Beard Award-winning chefs such as Janos Wilder, Melissa Kelly, and Chris Bianco, Tucson’s chefs and restaurateurs have received both national and international recognition. Exemplifying the dynamic nature of its culinary heritage, Tucson chefs, home cooks, and festivals have continued to improvise, revitalize, and embellish the regional cuisine. It is also a dynamic rather than static or moribund suite of traditions.

Tucson’s gastronomic scene honors many deep cultural influences and sustains a unique set of foods unlike that of any other city in North America. But it also supports a contemporary food community with many nationally and internationally-

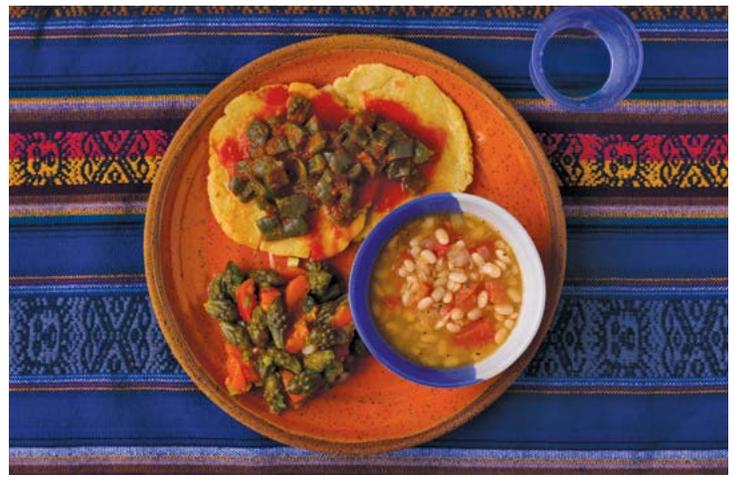


PHOTO BY NICK HENRY

recognized leaders, from chefs to best-selling food writers and desert farming advocates. Tucson’s cuisine honors its past while continually fostering culinary innovations using unique regional ingredients. A Tucson Downtown Food Renaissance has helped the community recover from the recent global economic downturn, as dozens of new locally-owned restaurants, charcuteries, cheese shops, bakeries, markets, and bars featuring regional ingredients have opened and flourished.

Businesses, non-profit organizations, and government agencies have all played significant roles in fostering and celebrating these innovations. Tucson now has as many or more street food carts and wagons than any other U.S. city except Los Angeles, as well as more heritage foods on the Slow Food International Ark of Taste grown within 100 miles of it than any other city in North America. A 2005 publication from the Center for Sustainable Environments, introduced and endorsed by then-Arizona Governor Janet Napolitano, listed 86 grains and vegetables unique to the region, 75 heirloom varieties of heirloom fruit and nut trees, 29 native wild foods still in the marketplace, three rare breeds of livestock, and nine historically-important wild game animals unique to the borderlands region.

Slow Food Ark of Taste

The Ark of Taste, a vision of the Slow Food Foundation for Biodiversity, is a celebration and living catalog of regionally distinctive foods facing extinction. These small-scale quality nominations represent an extraordinary heritage of fruits, vegetables, animal breeds, cheeses, breads, sweets, and cured meats from cultures around the world. The Ark of Taste was born in Turin, Italy in 1996, with a manifesto, “to protect the small purveyors of fine food” by identifying and championing these foods to keep them in production and on our plates.

Nominated foods may be domestic species, including plant varieties and animal breeds, or wild species with specific methods of harvesting, processing and traditional uses, and processed products. Each nomination must be rare or endangered, regionally or historically unique, sustainably produced or

harvested, and have distinctive flavor, texture, and culinary uses. Regional committees approve of local nominations, which then must pass national and international ratification. These foods are listed on the international Slow Food Ark of Taste website by country (www.slowfoodfoundation.com/ark).

Over 1,700 products from 50 countries have been placed on the Ark of Taste, with 174 in the United States. For southern Arizona, a diversity of desert specialties are included:

- black sphinx date palm
- brown and white tepary bean
- chapalote flint corn
- chiltepin chile
- cholla cactus buds
- l’itoni onion
- mesquite pod flour
- Mexican oregano
- Mission grape
- O’odham pink bean
- Sonoran pomegranate
- white Sonora wheat

Flour Tortillas of the Pimería Alta

Adapted from "Flour Tortillas of the Pimería Alta," by Jim Griffith,
in *Local & Heritage Foods Directory*, Santa Cruz Valley Heritage Alliance, 2009

An elderly Anglo couple ordered a meal at a Mexican restaurant on Sixth Street, just south of the University of Arizona campus. The waitress placed a basket containing two large flour tortillas in front of them. The man unfolded one of the tortillas and looked it over, apparently puzzled as to what to do with it. Finally, he tucked it into his shirt collar, under his chin and started to eat. The anonymous improviser had just encountered one of the defining foods of our region – the large flour tortilla.

Tortillas of corn are, of course, found all over Mexico, and are a direct legacy from pre-Hispanic days. But here on New Spain's Northwest Frontier, there is another kind of tortilla, and has been ever since the 1680s, when Father Kino rode into this country with wheat seeds in his saddlebags. Flour tortillas come in all sizes, from a couple of inches across to huge things measuring as much as thirty inches. The common name is "*tortillas de harina*" or "*tortillas de agua*." (Tortillas made with oil –*de aceite* – also exist, but they don't get as large. Small, thick tortillas are called *gorditas* – "little fat ones.")

The truly big Sonoran tortillas are stretched to size over the maker's forearm, and are also called *tortillas de jalón* or "stretched tortillas". (They can also be called *tortillas sobaqueras* or "armpit tortillas," but this is complementary neither to the cook nor to the food, and would not be used in polite company.) Once the tortilla is formed, it is cooked on a comal or griddle, often made from the top of an old gasoline drum, placed over a mesquite fire. The tortilla is flipped over once, and only for a few seconds.

Flour tortillas may be torn into bits and used as spoons or pushers. If food is wrapped in them, they become burros. Why burros? Possibly in reference to their size, but most probably, according to Sonoran lexicographer Horacio Sobarzo, because many were originally filled with burro meat. In recent years some yuppie restaurants have taken to referring to burros, especially when tightly rolled and then sliced, as "wraps." Not in my house.

If you cook a burro in deep fat, it becomes a chimichanga. One other popular way to serve flour tortillas is to cover them with grated or sliced cheese and put them in the oven to crisp and melt. These are called "large cheese tostadas" or "cheese crisps," but never "Mexican Pizzas." At least not in my hearing! They may be topped with strips of green chile, or even bits of chorizo.

There, all too briefly, you have the large flour tortillas of the Pimería Alta. But you can't have them all – save some for me.

*"I love to hold them, tenderly unfold them;
Oh how I dread to live on bread, believe me!"*

From "There's No Tortillas," by Tucson-born songwriter Lalo Guerrero.



As one of the earliest missions with gardens, fields, and orchards established in the Southwest by Padre Kino, San Xavier del Bac Mission also represents an important part of the culinary history of Native Americans of this region, who offered their native foods to visitors there.

HERITAGE FOOD DESTINATIONS

Among the natural and cultural wealth of Tucson and the Santa Cruz Valley are places designated as nationally significant resources that highlight the prehistoric, historic, and living agricultural and foodways stories of the region. Each year, this unique landscape and its special places attract millions of visitors from countries around the world to Tucson and Southern Arizona.

Tumamoc Hill is part of an 860-acre preserve within the City of Tucson with official recognition as a United States National Historic Landmark, a National Register of Historic Places Archaeological District, a National Environmental Study Site, and an Arizona Natural Area. Over 150 scientists from eight different nations have conducted archaeological and ecological research within the preserve, and as many as 7,000 naturalists and hikers climb Tumamoc Hill each week to engage with the desert landscape or attend educational programs. **The Desert Laboratory National Historic Landmark** on Tumamoc Hill is the oldest desert plant research station in the world. The hill also has archaeological evidence of 3,500 years of crop cultivation on built terraces, including charred fragments of 2,000-year old maize kernels.

Archaeological excavations along the Santa Cruz River corridor have revealed evidence of the highest known density of archaeological remains of early farming settlements, fields, and canals in the Sonoran Desert. For over 4,000 years, indigenous cultures living along the Santa Cruz River grew Mesoamerican crops of maize, squash, beans, and cotton. Their fields and canal systems are the oldest irrigated agricultural systems known in North America. A sequence of buried canals, the earliest built 3,500 years ago, was identified at the **Clearwater site** at

Tucson's birthplace below Sentinel Peak ('A' Mountain) near downtown Tucson. At the site of **Las Capas** northwest of Tucson, archaeologists uncovered extensive 3,200-year old irrigated field systems, contemporaneous with the oldest known in Mexico. Las Capas was heralded as one of the top ten discoveries in the world in 2009 by Archaeology magazine. Following the first farmers, the later Hohokam people built villages and canals along the middle Santa Cruz River and its tributaries between 1500 and 500 years ago.

The descendants of these ancient agrarian peoples were farming along the Santa Cruz River when the Jesuit missionary Padre Eusebio Francisco Kino first arrived in the area in the late A.D. 1600s. The Spanish missionaries, soldiers, and colonists developed their own canals (called acequias), sometimes following the same alignments as the prehistoric canals, and introduced Old and New World crops, livestock species, and agricultural practices to the region. The legacy of the Spanish Colonial and Mexican periods in the history and cultural development of the U.S. Southwest are exemplified by **San Xavier del Bac Mission** (a National Historic Landmark), and Tumacácori National Historical Park, including the Guevavi and Calabazas mission sites.

At **Tumacácori National Historical Park**, ground-penetrating radar has revealed the design of the historic farming and irrigation systems, and a section of the original canal built with locally quarried stone and lime plaster. Tumacácori is also the site of the restored Mission Orchard, featuring historic fruit and vine varieties cultivated through the Kino Heritage Fruit Trees Project. The annual Fiesta de Tumacácori celebrates the region's diverse cultures and hosts over 50 food and craft booths.

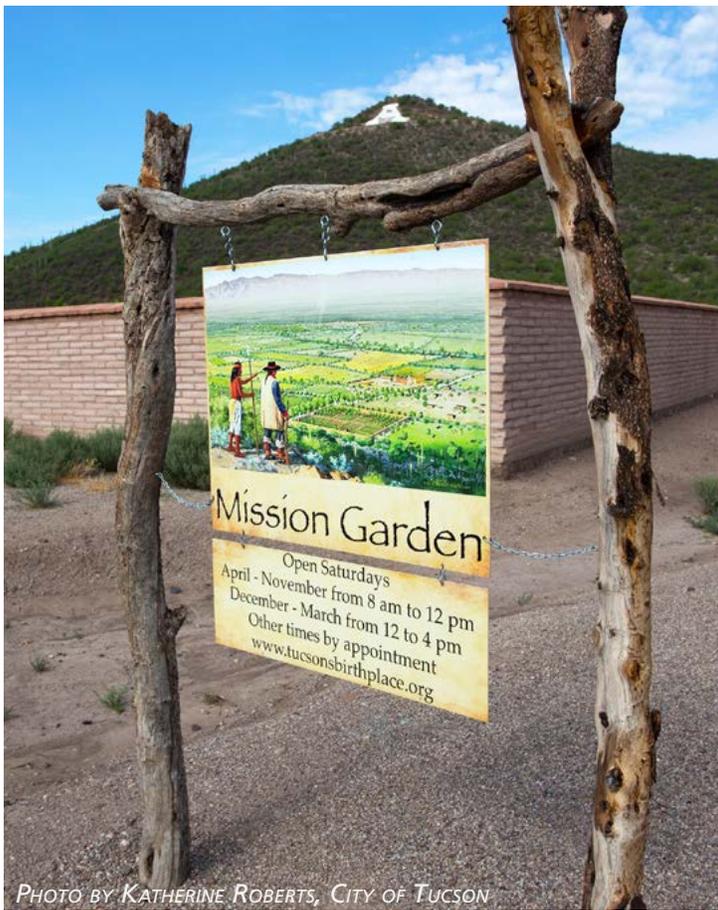


PHOTO BY KATHERINE ROBERTS, CITY OF TUCSON

The **Mission Garden** near downtown Tucson, managed by the Friends of Tucson's Birthplace, features a reconstruction of the original adobe wall surrounding four acres of educational and food producing gardens with over 50 kinds of traditionally harvested native plants, rare heirloom varieties of fruit trees and grape vines, and other Tohono O'odham, Spanish, Mexican, and American food crops that were historically grown in Tucson. This living museum interpreting Tucson's 4,100-year agricultural history and the local experience of the "Columbian exchange" of plants between the Old World and New World is open to the public and is a destination for school groups and international visitors.

The rarity and importance of flowing water to food security in the desert has been recognized by the designations of **Las Cienegas National Conservation Area**, the **Patagonia-Sonoita Creek National Natural Landmark**, and the **Canelo Hills National Natural Landmark**, lands managed for conservation, recreation, and livestock production in the area surrounding Tucson. The **Agua Caliente Regional Park**, operated by Pima County, includes an historic ranch house, springs, and old fruit trees, and offers educational and recreational opportunities to visitors. The **Pennington and Binghampton National Rural Historic Landscapes** and the **Canoa Ranch Conservation Park** were designated to recognize the historical roots of American ranching and farming in the desert southwest. These nationally significant resources are centerpieces of the **proposed Santa Cruz Valley National Heritage Area** centered on Tucson, and are linked by gastronomic themes to related resources in the region.

Other Santa Cruz Valley ranches, such as the Babacomari Ranch, Empire Ranch, King's Anvil Ranch, La Posta Quemada Ranch, Lazy J-2, O-O Ranch, San Rafael Ranch, Sands Ranch, Santa Lucia/Rancho Seco, and Walking J Ranch, practice conservation livestock management practices for the long-term sustainability of regional food production.

Saguaro National Park, located on both the east and west flanks of Tucson, facilitates the traditional Tohono O'odham Ha:sañ Bak, or saguaro fruit harvest, which marks the beginning of the rainmaking ceremony and the Tohono O'odham New Year.

The **Wild Chile Botanical Area**, located south of Tucson near the U.S./Mexico border, consists of 2,500 acres where the northernmost population of wild chiltepin chile peppers grows in North America. The chiltepin pepper is a native and endemic species of the Sonoran Desert region. The U.S. Forest Service, Native Seeds/SEARCH, and the Center for Sustainable Environments collaboratively manage the area. This is the first botanical area set aside to protect wild relatives of domesticated crops in North America, including chiles, beans, walnuts, grapes, prickly pear, agave, cassava, potatoes, and plums.

In northwest Tucson, **Tohono Chul Park** is a botanical garden featuring ethnobotanical displays, a bistro, and native foods sales in its gift shop. **Tucson Botanical Gardens**, located in central Tucson, features similar food, native plant, and agricultural species, and programs and exhibits in a fully urban setting.



PHOTO BY KATHERINE ROBERTS, CITY OF TUCSON

CULTURAL CENTERS, MUSEUMS, AND ASSOCIATIONS

Founded in 1999, **Slow Food Southern Arizona**, which is affiliated with Slow Food USA and Slow Food International, offers food demonstrations, outings, film festivals, and dinners that celebrate the foods of the Sonoran Desert. Its nationally recognized film festival has raised well over one hundred thousand dollars for local food initiatives. Slow Food USA and Chefs Collaborative USA have each had one of their annual national meetings in Arizona, and collaborate with Tucson non-profits, universities, and restaurants on a number of national programs.

Also formed in 1999, **Tucson Originals** is a coalition of more than 30 restaurants that “exemplify the independent spirit and the rich culinary heritage that is Tucson” and work to preserve the culinary spirit of their communities.

On the western edge of Tucson, the **Arizona-Sonora Desert Museum** has been an international center for desert ethnobotany and new food crop research since 1975, and includes several ethnobotanical gardens and reconstructions of prehistoric agricultural fields of food crops. The museum hosted the first-ever National Conference of Native American Culinary Professionals in 2013. Museum staff directs the Kino Heritage Fruit Trees project, which is conserving and curating the oldest heirloom varieties of fruit trees in southern Arizona, and their oral and cultural histories, to ensure their continued propagation and availability to current and future generations of residents.



PHOTO BY KATHERINE ROBERTS, CITY OF TUCSON

The **Arizona State Museum** at the University of Arizona has hosted in-door exhibits related to Tucson’s food history for 80 years, and has provided laboratories and collections storage for archeologists, palynologists, paleo-nutritionists, and ethno-zoologists who have contributed to documenting Tucson’s more than 4,000 years of food history. The UA College of Science’s **Biosphere Two**, an internationally-renowned research center, has been the site of agricultural experiments for extra-terrestrial and arid lands farming, and recently hosted the first-ever Arizona Food and Farm Finance Forum of 160 farmers, chefs, and food bank and hunger relief professionals.

The Chiltepin

The chiltepin is a tiny but very hot chile (8 on a scale of 10 on the scoville scale) that is a significant marker of the regional culture of the Arizona-Sonora borderlands. It is thought to be the oldest known species of the chili genus, it is sometimes called “the mother of all chiles.”

The word “chiltepin” is of Aztec origin: “chili” for pepper and “tepin” for flea. Some believe it is a reference to the size of the pepper; others claim it has to do with the “bite.” The chiltepin is sometimes called “tepin”, chile mosquito or bird’s eye pepper.

Chiltepinés grow on rocky surfaces, steep slopes, and are difficult to find because they are usually protected by shrubs. The chiltepin grows wild in Texas, New Mexico, and Arizona (north of the border) and all across Mexico and Central America. The Sonoran and Chihuahuan deserts, however, are preferred spots.

The first mention of the chiltepin by a non-native of the borderlands was in 1584, when Baltasar de Obregón wrote about finding the little devil among thick bushes in Sonora. By 1756, a local priest named Ignacio Pfefferkorn noted in his chronicles the extensive use of the chiltepin in the culinary habits of the people of northern New Spain. The natives of the Sierra Madre he wrote, made a “sauce with this chile that they serve and eat with everything.”

In Sonora, entire communities participate in the wild-harvesting of chiltepin from late September through early December. Prices can reach \$72/lb. In northern Mexico, people eat the chiltepin in a variety of ways: fresh off the plants, cured in vinegar, in salsa, in jelly, and crushed --- out of a shaker and mixed with salt. But one of the most celebrated ways to consume this tiny pepper is by pulverizing the small bulb with one’s fingers and sprinkling at will over food.

Adapted from “The Chiltepin,” by Maribel Alvarez, Ph.D. (U of A Southwest Center), in *Local & Heritage Foods Directory*, Santa Cruz Valley Heritage Alliance, 2009.



PHOTO BY VANESSA BECHTOL

FESTIVALS AND CELEBRATIONS

Tucson's Museum of Contemporary Art inspires new ways of thinking through the cultivation, interpretation, and exhibition of cutting-edge art of our time, including contemporary food art associated with the Tucson Food Truck Roundup, and a lectures series with presentations on dreaming and redesigning Arizona's foodsheds.

The **Tucson Chinese Cultural Center** features monthly Chinese cooking classes and hosts several cultural events with traditional Chinese foods. The **Arabian Oasis Cultural Center** offers a place for religious holiday celebrations, birthday parties and special events, women's meetings, and general gathering space, always accompanied by traditional Arabic tea. The **Tohono O'odham Cultural Center and Museum** and the **Pascua Yaqui Community Education Cultural Center** support events and cultural food practices of the local indigenous groups. Several faith-based institutions such as the **Tucson Jewish Community Center** and the **Islamic Center of Tucson** host religious events that feature traditional foods, while many other religious, cultural, and community centers offer food services to low-income members of the Tucson community.

Tucson is home to numerous urban agriculture, sustainability, and foodways associations and non-profit organizations. **Sustainable Tucson** is a non-profit organization that builds regional resilience and sustainability through awareness raising, community engagement, and public-private partnerships, with a specific focus on producing and consuming local foods. **Desert Harvesters** is a non-profit, grassroots effort to promote, celebrate, and enhance local food security and production by encouraging the planting of indigenous, food-bearing trees around the city and offering workshops on harvesting and cooking with local foods. **Linking Arizona's Edible Forests (LEAF)** is a collaborative effort of University of Arizona Office of Sustainability and Campus Arboretum, Iskashitaa Refugee Network, and the Arizona State Forestry Division to plant, harvest, and promote urban food forests.

Sabores Sin Fronteras/Flavors without Borders, based at the University of Arizona Southwest Center, is a regional, bi-national, multicultural alliance created to document, celebrate, and conserve farming and food folkways that span the U.S.-Mexico borderlands. The **Southwest Center** publishes the newsletter *Borderlore*, with articles featuring the cultural foodways of the borderlands.

Community Gardens of Tucson is a volunteer non-profit group devoted to promoting health, knowledge, joyfulness, and a sense of community by helping Tucson residents establish and maintain neighborhood vegetable and flower gardens. **Tucson Organic Gardeners** and the **Sonoran Permaculture Guild** offer events, lectures, and classes to promote sustainable urban food production.

Tucson Meet Yourself is a 40-year-old music, dance, craft, and food festival that now attracts 150,000 participants each year. Participants include food vendors from over 60 different ethnic groups—from recent refugees from Iraq, the Congo, Laos, and the Sudan, to migrants from Europe, Asia, and Latin America, to long-term residents of the borderlands (Mexicans and Native Americans). The festival has been coined "Tucson Eat Yourself" and the current tag line, "Come for the Food, Stay for the Culture," offers a snapshot of the community's vital link to our gastronomic heritage. It is but one of more than two dozen food festivals, fairs, and tastings that occur year-round in Tucson, including the **World Margarita Championship**. The new **Viva La Local Food Festival** celebrates the joyous local flavors of Baja Arizona through food and drink tastings and an heirloom vegetable and fruit farmers market.

Envision Tucson Sustainable Festival offers solar cooking, green house and aquaponics demonstrations, and tips and techniques for home food gardening and creating backyard oases and food forests. The **Pima County Fair, Southwest Indian Arts Fair, Autumn Harvest Festival, and Ha:san Bak: Saguaro Harvest Celebration** offer visitors and residents alike a taste of the region's local foods and foodways traditions. Events such as the **Cinco de Mayo Festival, Día de San Juan Celebration, Fiesta de los Vaqueros Rodeo and Parade, Fiesta de San Agustín, San Ysidro Festival, and Mexican Independence Day** feature the blend of Native, Spanish, and Mexican foods unique to Tucson and the borderlands region.



PHOTO BY DENA COWEN

BUSINESS SECTOR HONORING FOOD TRADITIONS

A few examples of the many restaurants and markets that showcase Tucson's culinary commitment to local food and culture include Café Poca Cosa, Agustín Kitchen, Proper Restaurant, Diablo Burger, Pizzeria Bianco, Time Market, Zona 78, and Downtown Kitchen & Cocktails.



PHOTO COURTESY OF CITY OF TUCSON

Profiled in publications ranging from the New York Times to Gourmet Magazine, **Café Poca Cosa** is a true gem of Tucson. Chef and owner Suzana Davila has been crafting and collecting southwestern flavors from her native Guaymas, Mexico for two decades. A menu featuring authentic regional flavors and the freshest ingredients, purchased daily, define Suzana Davila's cooking at Cafe Poca Cosa, one of Tucson's most celebrated Mexican restaurant.



PHOTO BY KATHERINE ROBERTS

Ryan Clark, the chef of **Agustín Kitchen** located at the Mercado San Agustín, is three-time Tucson Iron Chef champion and two-time World Margarita Champion. His menu features his own special brand of local New American Cuisine, focusing on ingredients made and grown in Southern Arizona, including beef, produce, olive oils, breads and flour, cheese, wines, artisan brews, spirits and more.



PHOTO BY KATHERINE ROBERTS

Mercado San Agustín features sit-down and carry-out restaurants, a bakery, a coffee shop, a community kitchen, a weekly farmers' market, and the SABOR incubator for new food businesses. The Mercado's Community Kitchen is a small business, commercial kitchen incubator and is fully licensed. It offers space and equipment for over 30 food micro-enterprises, including prep stations, wash stations, cooking stations, baking stations, dry storage, and cold/frozen storage to support small food businesses. Its SABOR business incubator is expanding to "The Cannery," which will feature additional resources to help start small food businesses and promote innovative food processing activities.

As a key site for cultural gatherings and community events, in 2013 the Mercado hosted the banquet for the national "Closing the Hunger Gap" conference of food banks and soup kitchens, featuring Chef Michel Nischan of the Wholesome Wave Foundation using locally-sourced produce.

Paul Moir opened **Proper Restaurant** in 2013, and it immediately became a staple in the downtown community. Moir is no newcomer to the restaurant game and the logistics of sourcing locally. Proper is the latest endeavor from SLO Restaurant Concepts, which began in Flagstaff, Arizona, with the award-winning Brix Restaurant and Wine Bar and Criollo Latin Kitchen. Proper focuses their food and business practices on the sustainable, local, and organic, and has forged partnerships with a number of local and regional farmers, ranchers, brewers, winemakers, and vendors.



PHOTO BY STACEY HALPER

Proper Butchery—featuring all locally sourced and processed meats—will open next door to Proper Restaurant in September 2014, adjacent to Derrick Widmark's **Diablo Burger**, which serves up heritage-breed Criollo beef patties. A block away, James Beard Award winning chef Chris Bianco has opened **Pizzeria Bianco**, featuring local produce and cheeses on oven-roasted flat breads.

Time Market originally opened its doors nearly a century ago as a corner-store market. It has since morphed and matured over the years to become a hub in the community, offering an eclectic mix of dry-good market products, fresh produce, bread baked in-house fresh daily, affordable wood-fired pizza, and an ever-changing menu with produce and meat sourced from local producers.



PHOTO BY KATHERINE ROBERTS

Zona 78 is casual fine dining with a local twist. Chef Kevin Fink worked with the Pima County Health Department to allow him to butcher and cure meats in-house. As the first restaurant in Pima County to legally operate charcuterie processing on site, Fink sets a precedent for other local purveyors to dry-age locally sourced meats in-house. He also works with Sleeping Frog Farm, offering free use of the restaurant's kitchen for canning or preserving, in exchange for some of the farm's produce.



PHOTO COURTESY OF JANOS WILDER

Award-winning chef Janos Wilder has been operating restaurants in Tucson since 1983, combining French cooking technique and local ingredients. In 1999 he was the subject of an episode of the Public Broadcast Service TV series "Great Chefs of

America." The James Beard Foundation named Wilder as the top chef in the Southwest in 2000. In Fall 2012 he opened his current restaurant, **Downtown Kitchen & Cocktails** (DKC), which features locally-sourced produce and has a small kitchen garden on the grounds. In partnership with the Children's Museum Tucson, located across the street, chef Janos planted an urban garden near the museum entry, where he harvests seasonal herbs and vegetables for use in the DKC menu. In 2013 Janos was named one of America's Best Chefs, based on voting by more than 5,000 chefs and other culinary professionals. A longtime promoter of heritage ingredients and local heirloom plant varieties, he also serves on the board of directors of the non-profit Native Seeds/SEARCH seed bank.

Edible Baja Arizona, with its launch in June of 2013, became the media epicenter of the local foods movement in southern Arizona. This locally produced and freely-distributed food and culture magazine connects passionate and informed readers with the burgeoning local foods movement in our region. Edible Baja Arizona tells compelling stories that support and promote the growers, producers and purveyors, innovative chefs, food and beverage artisans, non-profit organizations, community leaders, and food justice advocates in this region.

The magazine celebrates the joys of eating and drinking locally, explores the rich food heritages of this region called Baja Arizona (south of the Gila River and into Sonora), and advocates for the importance of rebuilding the local foodshed in this arid land. Supported entirely by local advertisers, Edible Baja Arizona currently publishes 25,000 copies six times each year, reaching nearly 600,000 readers annually. Part of a network of 80 Edible publications nationwide, Edible Baja Arizona is the largest Edible magazine ever printed. This growth from the 76-page inaugural issue is a physical testament to the growing support of businesses and consumers alike for the local food movement in Tucson and its surrounding area.

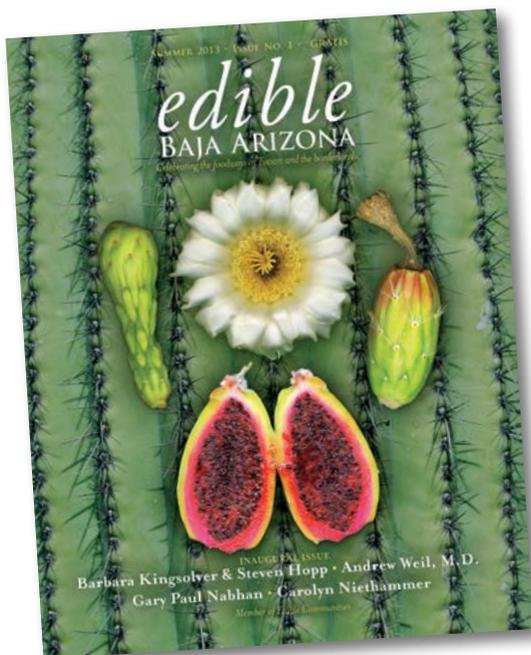


PHOTO BY PAUL MIROCHA

Farmers' Markets

Metro Tucson and the surrounding area also support more than a dozen outdoor farmers markets where local farmers and ranchers directly market their products to residents in open-air settings, accompanied by music and delicious food tastings. The region is also home to numerous Community Supported Agriculture (CSA) and pick-your-own farms, which offer weekly delivery of produce boxes to Tucson and surrounding area residents or opportunities for people to visit the farm to pick produce.

MONDAY

El Pueblo Farmers Market

TUESDAY

Community Food Bank Farmer Stand

WEDNESDAY

Downtown Farmers Market Arts and Crafts Mercado

Green Valley Farmers' Market

Our Garden Produce

THURSDAY

Santa Cruz River Farmers' Market

FRIDAY

Broadway Village Farmers Market

Catalina Farmers Market, Artworks & More

Heirloom Farmers at Jesse Owens Park

SATURDAY

Elderberry Edibles Farm Stand

Heirloom Farmers at Oro Valley

Loft Cinema Farmers' Market

Marana Farmers' Market

Our Garden Produce

Plaza Palomino Saturday Market

Rincon Valley Farmers & Artisans Market

St. Philip's Farmers' Market

SUNDAY

Heirloom Farmers at Rillito Park

St. Philip's Farmers' Market



PHOTO BY STACEY HALPER

SOUTH 12TH AVENUE

A Cultural and Culinary Destination

James MacAdam

South 12th Avenue, a commercial district on Tucson's south side, is a hidden gem in the region's culinary and cultural landscape. This two-mile corridor, running through the heart of several Latino neighborhoods, is lined with schools, churches, shops, and restaurants that have traditionally been owned by and cater to generations of Mexican American and native families.

12th Avenue is home to several establishments that help define the region's gastronomical identity. More than a few 12th Ave. culinary entrepreneurs started by selling Sonoran hot dogs and carne asada from mobile stands and have since grown into full-size restaurants with regional franchises. On 12th Avenue, you can have cooked-to-order fresh fish flown in from the Sea of Cortez, sample unique Sonoran pastries and handmade tortillas from local panaderías, and visit los elteros, food trucks selling fresh roasted corn. All of this takes place in a lively scene of Latino-owned small businesses selling jewelry, haircuts, tires, party supplies, clothing, and all manner of daily essentials and uniquely Mexican products.

12th Avenue hosts popular "Best of the Barrio" bus tours, has been featured for its Sonoran hot dogs on the Travel Channel's "Food Wars" program, and forms the heart of the local visitors' bureau's enormously successful "Best 23 Miles of Mexican Food" tourism brand. It is the kind of authentic, gritty place that people equally hope will be further developed and marketed as a culinary destination for tourists and locals, and wish that it will stay just like it is.



PHOTOS BY KATHERINE ROBERTS, CITY OF TUCSON



PHOTO BY MARIA GAYASSO

EDUCATION, RESEARCH, AND CAPACITY BUILDING INSTITUTIONS

Tucson is home to an unprecedented number of institutions that foster cultural creativity in gastronomy, and we list these under six categories: 1) the University of Arizona; 2) community college programs and other University branches in Tucson; 3) school garden and garden-kitchen programs; 4) community gardens and educational programs; 5) community for-profit and non-profit educational institutions; and 6) regional foodways initiatives.

THE UNIVERSITY OF ARIZONA (UA):

The **UA College of Agriculture and Life Sciences (CALs)** offers degrees in ten departments on campus, and hosts cooperative extension offices and research farms across Arizona. CALs departments include Agricultural and Biosystems Engineering; Agricultural and Resource Economics; Agricultural Education; Entomology; Norton School of Family and Consumer Sciences; Nutritional Sciences; School of Animal and Comparative Biomedical Sciences; School of Natural Resources and the Environment; School of Plant Sciences; and Soil, Water and Environmental Science.

The College also runs programs such as the **Garden Kitchen**, a partnership among CALs, UA Pima County Cooperative Extension, the City of South Tucson, and Pima County. The Garden Kitchen is a seed-to-table health education program that demonstrates how to grow, buy, store, and cook nutritious food.

The College's **Campus Agricultural Center** is a 160-acre research, teaching, and extension facility that supports programs such as Agricultural Education and Technology, the Agricultural Research Center, the Animal Science Teaching Farm, Controlled Environment Agricultural Center, Food Product and Safety Laboratory, greenhouses, and Pima County Cooperative Extension. An outreach arm of CALs, the **Cooperative Exten-**

sion program serves as a statewide network of knowledgeable faculty and staff that provides lifelong educational programs, among them workshops, publications, and personnel that provide water, agricultural, urban horticulture and nutritional information.

The **CALs Underwood Family Sonoran Landscape Laboratory** is a desert oasis that integrates both the built and natural environment, and the guiding principles of sustainable landscape architecture: water conservation, reduction of urban flooding, reduction of urban heat island effect, and on-site demonstration and education.

A program of the UA-Pima County Cooperative Extension, **Tucson Village Farm** is a seed-to-table program designed to reconnect young people to a healthy food system, teach them how to grow and prepare fresh food, and empower them to make healthy life choices. Tucson Village Farm offers year-round, instructional, hands-on programs for youth of all ages, and of all ethnic and socio-economic backgrounds.

UA-Pima County Cooperative Extension also runs the **Arizona State 4-H Program**, a youth development initiative started to connect new agricultural technologies and higher education with country life by engaging children. Now, teaching children ages 5 to 19 skills from raising livestock to photography to building robots, the program continues to provide valuable opportunities for youth from all backgrounds.

The **Pima County Master Gardening Program** trains members of the local community interested in gardening by offering a specialized 50-hour training course and internship in low-desert home gardening and landscaping. Master Gardeners contribute time as volunteers to provide education programs and workshops in home gardening and demonstration gardens throughout Pima County.

The **Water Resources Research Center** sponsors several food related initiatives, including the UA Food Systems Network, a four-college team of scientists that engage UA faculty, students, and staff across the disciplines and departments to collaborate on research related to four related areas: food systems, water use and conservation, community engagement, and food security.

The **UA College of Social and Behavioral Sciences** hosts 21 departments and research institutions, has over 5,400 students, and offers an annual community "Downtown" lecture series. The 2014 lectures are centered on food and begin in October. In this College, the School of Geography and Development offers Bachelor's, Master's, and Doctoral degrees in fields of geography that include agricultural geography and agro-biodiversity, food justice and food sovereignty, cultural and political ecology of food systems, and climate mitigation and adaptation. School faculty member Sallie Marston directs the **Community and School Garden Program**, aimed at connecting Tucson educators with university students and faculty eager to participate in the school garden movement occurring throughout the country. Each semester, 60 - 70 university students work at up to 12 different elementary and high schools to engage interns, create and maintain gardens, and educate students and teachers in sustainable food systems.



PHOTO BY GINA CHOROVER

The study of food and nutrition, agriculture and food systems (markets, trade, farming systems, food policy), and foodways is central to the **School of Anthropology**. Faculty and students within the four subfields - archaeology, biological anthropology, linguistic anthropology, and sociocultural anthropology - study all aspects of humans' relationships with food, agriculture, and nutrition. From bioarchaeologists who use markings on animal bones found in middens to determine ancient diets, to the sociocultural anthropologists who study food security to dieting (Mimi Nichter's book- *Fat Talk: What Girls and their Parents Say about Dieting*), UA Anthropology faculty are well-known for their contributions on food practices, food and identity, sustainable food production, food sovereignty, indigenous relations to food, ethnobotany, and food insecurity.

Faculty in the **Bureau of Applied Research in Anthropology** (BARA) work from the local to the global level to address food insecurity, food heritage, and food waste. Tim Finan and Mamadou Baro work in Latin America and Africa to develop programs that help local and national governments and NGOs understand and address food insecurity. Through BARA's internship program, students work with the Community Food Bank to assess programs such as the Emergency Food Assistance Program and their Community Food Resource Center's farm and garden programs. In the past, BARA operated a USAID Farmer-to-Farmer program, housed Tucson Urban Gardens, and helped guide assessments of backyard and schoolyard gardens and habitats.

Scholars in the **American Indian Studies Department** (AIS) research topics such as indigenous food sovereignty and food and poverty on the reservations. The mission of American Indian Studies Department is to develop a strong understanding of the languages, history, lands and cultures of American Indians and Alaska Natives.

The **Southwest Center** hosts many esteemed research scholars, including ethnobotanist and food cultural geographer Gary Paul Nabhan, who is the W.K. Kellogg Endowed Chair in Southwest Food and Water Security. Nabhan is nationally known for his work on food chain restoration, food history, and promoting the conservation of rare breeds and varieties. Southwest Center faculty also include renowned folklorist Maribel Alvarez who co-developed **Sabores Sin Fronteras**, the regional, bi-national, and multicultural alliance to document, celebrate, and conserve farming and food folkways that span the U.S./ Mexico borderlands. Historian Tom Sheridan has published extensively on the Mexican-American history of Tucson and the borderlands, including farming and food practices and on the ranching traditions of the Southwest.

The University of Arizona has recently initiated plans to develop a cross-college food systems program, focused on public health. The **UA Zuckerman College of Public Health**, with its 1,000 undergraduate pre-majors, majors, and minors, and 300 graduate students, integrates research and teaching on several aspects of food and nutrition, and hosts institutions within its network of academic units and various research and service centers. The **Canyon Ranch Center for Prevention and Health Promotion**, the **Arizona Prevention Research Center**, the **Arizona Public Health Training Center**, the **Center for American Indian Resilience** all focus on healthy eating in one form or another and the integration of sociocultural behaviors that promote healthy lifestyles.

Research conducted by faculty members focuses on the role that food has on the prevention and treatment of chronic diseases, food security, and environmental factors that affect food safety and sustainable food systems. Faculty in the College have led studies on the role of fruit and vegetable consumption on cancer prevention and control, social network studies on increasing

fruit and vegetable consumption, and taken the lead on analysis from the National Women's Health Study. The College of Public Health is the only accredited school of public health in Arizona. It consistently ranks among the top five in American Indian and Hispanic graduates and students enrolled among accredited schools of public health.

Multi-disciplinary research institutes such as the **Institute of the Environment's Translational Environmental Research** and **Environment and Sustainability Portal**, provide links to courses, research, and outreach opportunities in sustainable food, water and energy, and climate change adaptation and mitigation strategies for agricultural producers. Likewise, **Climate Assessment for the Southwest and Southwest Climate Change Assessment Report** provide land managers and stakeholders with resources to adapt to future climatic uncertainty.

COMMUNITY COLLEGE PROGRAMS AND UNIVERSITY BRANCHES IN TUCSON

Pima Community College offers certificates and associate degrees in several food industry and culinary programs, including courses in recipe and menu planning, preparing and cooking foods, supervising and training kitchen assistants, managing food supplies and kitchen resources, food presentation, and a variety of cuisines and culinary techniques. Pima Community College is a two-year college serving the greater Tucson metropolitan area at six locations throughout Pima County. **Prescott College Tucson Center's Social Justice Program** trains many young food justice advocates.



PHOTO COURTESY OF CITY OF TUCSON

SCHOOL GARDEN PROGRAMS

The **UA School of Geography and Development's Community and School Garden Program** in collaboration with the **Tucson Community Food Bank**, **Las Milpitas Farm**, and **Tucson Village Farm**, assists teachers and school leaders across Tucson to develop and maintain school gardens as an integral part of education and health. The **UA Cooperative Extension** also works with teachers to implement agricultural and food related curricula in the classrooms.

Tucson schools with active gardens and related education programs include:

- Borton Elementary
- Davis Bi-lingual Elementary
- Doolen Middle School
- Drachman Montessori
- JB Wright Elementary
- Manzo Elementary
- Ochoa Elementary
- Roskrige Middle School
- Tucson High School
- Whitmore Elementary

COMMUNITY GARDENS AND EDUCATIONAL PROGRAMS

The all-volunteer non-profit **Community Gardens of Tucson** establishes and maintains community gardens and provides ongoing education that enables Tucson residents to grow food successfully and sustainably in garden communities within their neighborhoods. They offer gardening workshops, irrigation system design, implementation and maintenance, a planting guide, a monthly newsletter, and a support and information network for gardeners. The **University of Arizona Cooperative Extension** office trains Master Gardeners that assist community members in urban gardening, and the **Community Food Bank of Southern Arizona** also offers training for gardeners and farmers.

Tucson's many urban community gardens include:

- Apollo Garden
- Arizona's Children Association Garden
- Benedictine Monastery Garden
- Blue Moon Garden
- Challenger Garden
- Chaverim Garden
- Davidson Garden
- Doolen Garden
- GD2
- Highland Vista Garden
- Homer Davis Garden
- Keeling Garden
- L7K Gin Family Garden
- Mansfield Garden
- Mary Meredith Garden
- Mountain Vista UU Garden
- New Spirit Garden
- Nottinghill Garden
- Presidio Garden
- Pueblo Garden
- Rincon Mountain Garden
- Sabino Vista Garden
- St. Demetrios Garden
- St. Gregory Garden
- Sewell Garden
- S.A.R.G. Garden
- Sunrise Garden
- Ventana Vista Garden
- Verdugo Garden



PHOTO BY MARIA GAYASSO

COMMUNITY FOR-PROFIT AND NON-PROFIT EDUCATIONAL INSTITUTIONS

Tucson supports numerous institutions that address issues across the food system. In the areas of prehistoric and historic agricultural research, **Archaeology Southwest** has revealed and interpreted information on the four millennia-old agricultural history of the Tucson basin. The **Arizona Historical Society**, **City of Tucson Historic Preservation Office**, **Pima County Office of Sustainability and Conservation**, and the **Santa Cruz Valley Heritage Alliance** also support efforts to document, preserve, and celebrate the foodways histories of the region.

Several non-profit organizations support Native American nutrition, health, and agriculture training programs. Specializing in food systems, wellness, and cultural revitalization, the **Tohono O'odham Community Action** offers a comprehensive set of programs aimed at creating a healthy, culturally vital and sustainable Tohono O'odham community, and also publishes the *Native Foodways Magazine*. The **Tucson Indian Center** provides health education to Indigenous peoples of all tribes, including cooking and nutrition classes.

Local organizations also educate Tucson residents in water conservation and urban desert agriculture. These include **Watershed Management Group**, which helps people install small-scale water-harvesting infrastructures. The **Sonoran Permaculture Guild** teaches workshops and classes on sustainable landscape design, and on topics ranging from bee keeping to water harvesting to growing food at home. The **Friends of Tucson's Birthplace**, working together with the **Arizona-Sonora Desert Museum**, train docents in heritage garden varieties and fruit tree cultivation at the **Mission Garden**.

Edible Baja Arizona offers workshops in urban gardening and cooking. Internationally renowned seed-saving non-profit

Native Seeds/SEARCH offers free heirloom seed varieties to Native Nations, as well as seed schools and a monthly lecture series at the Conservation Center, Conservation Farm, and retail store in Tucson. The **Santa Cruz Valley Heritage Alliance's Heritage Foods Program** is increasing community awareness of the region's rich agricultural heritage and food traditions through community festivals, workshops, presentations, a local and heritage foods directory, and development of a regional food brand.

The **Community Food Bank of Southern Arizona** provides programs to develop home gardens, supports a community garden, offers garden workshops, and provides food assistance programs to those in need. Local non-profit **Iskashitaa Refugee Network** works with refugees to harvest food resources around Tucson and southeastern Arizona, and then process these in certified community kitchens into jams, syrups, sauces, and pickles to sell at local markets. Gathering unused fruit and vegetables, called gleaning, has enabled refugee families to earn a small living and engage in their new community. Through cooking and management programs, *Dishes and Stories* trains refugee women to start their own small food businesses.

REGIONAL FOODWAYS INITIATIVES

The **Pima County Public Library** system of 27 branches now offers of the most extensive interlibrary loan system for heirloom seeds and heritage food starts of any of the 230 community (free) seed libraries in North America.

Pima County has established innovative measures in water management for wildlife, recreation and agriculture (through the *Kino Environmental Restoration Project*, *Sweetwater Wetlands*, and the *Marana High Plains Effluent Recharge Project*) and conservation initiatives that include working agricultural landscapes such as the award-winning, comprehensive *Sonoran Desert Conservation Plan*.

Pima County, in collaboration with the City of Tucson, and a network of for-profit, non-profit, and educational institutions, including the Western National Parks Association, Visit Tucson, and the University of Arizona, is proposing a Southern Arizona Regional Orientation Center as one of the proposed 2015 County bond projects. This Center is planned to be located near Sentinel Peak on the Santa Cruz River will showcase the region's unique natural landscapes, rich cultural heritage, innovative scientific research, and sustainable desert living initiatives, to be a source of education and information, to promote economic development through tourism. This pivotal facility will evoke a sense of place and regional identity, and direct residents and tourists to the constellation of place-based heritage and natural attractions throughout Southern Arizona, including its diverse food, agriculture, and sustainability sites, festivals, institutions and other educational opportunities and experiences.

Santa Cruz Valley Harvest: *A Heritage Food Brand Program*

The Santa Cruz Valley Heritage Alliance has created a regional food brand to increase awareness and availability of locally grown food and heritage food products. The Santa Cruz Valley Harvest food brand will help foster economic growth and promote the biodiversity of heritage foods from the Santa Cruz Valley by increasing consumer awareness of our regional heritage foods, and preserving traditional native crops and food traditions that are an important part of Tohono O'odham, Spanish, and Mexican cultures.

The Santa Cruz Valley Harvest food brand will also raise regional awareness of heritage foods by marketing them through local grocery stores, farmers' markets, and restaurants, and by educating the community about their availability, health benefits, and cultural significance in the region. The brand will become a logo that consumers can recognize as a trademark for local, fresh, heritage foods.

Heritage foods are "locally produced foods tied to the region's history and cultural identity." These include wild desert food products, traditional Native American and historically cultivated crops, cuisines that are culturally unique to the region, and modern crops that continue the agricultural traditions of the Santa Cruz Valley.



The Santa Cruz Valley includes the watershed of the Santa Cruz River in Pima and Santa Cruz counties. Between 2008–2011, the Heritage Alliance conducted public workshops and a series of stakeholder input meetings to gather feedback on the need, benefits, and interest in creating a regional food brand. The result of these facilitated meetings was the brand Santa Cruz Valley Harvest: The fresh taste of our heritage.

The brand logo will be used to mark local food packages, grocery displays, farm stands, and restaurant menus that feature traditional native crops and other locally grown foods and their history in the region.

To participate in the Heritage Food Brand Program and benefit from the marketing materials on which the brand logo is featured, members will be committed to purchasing local ingredients directly from local sustainable producers throughout the region. This helps preserve the agricultural varieties native to the region, supports a healthy local economy, and reduces the environmental costs of long distance transportation of foods.

The Canyon Country Fresh Network, Vermont Fresh Network, and Buy Fresh Buy Local are just a few of the successful branding initiatives that serve as models for the development of the Santa Cruz Valley Harvest food brand program.

Visit www.santacruzheritage.org for more information.

PHOTO BY VANESSA BECHTOL

POLICY SUPPORT

In November 2013, Tucson voters ratified *Plan Tucson*, the City's new, ten-year general and sustainability plan. Plan Tucson includes goals and policies developed through an intensive public participation effort conducted over several years. While many of the Plan's elements are legislated, such as housing, transportation, water resources, and infrastructure, one element - Urban Agriculture - grew directly out of the public process, championed by a rapidly growing segment of the population concerned with sustainable food sources, broader access to fresh produce, and general health.

Urban agriculture policies presented in the Plan promote reducing barriers to food production, adopting regulations supporting the production of local foods, fostering an equitable, healthy local and regional food system, and collaborating with partners in facilitating new opportunities for urban-scale gardens and farms. Community gardens located in neighborhoods, schools, and housing projects have proliferated in recent years, and the City has been working to address zoning and regulatory barriers as part of its Sustainable Land Use Code Integration Project.

Along with strategies to enhance food security through local production and distribution, the Plan also addresses the ongoing challenges of making the community more economically sustainable. To that end it offers economic policies focusing on both expanding opportunities to fulfill local needs with locally produced goods and services and promoting the use of desert adapted technologies, while also seeking ways to share the assets of the area with the world. An example of the latter is a policy included in the Plan's element on "Tourism & Quality of Life," which reads, "Promote Tucson as a destination for epicurean adventure capitalizing on the diversity of locally-owned restaurants, authentic Mexican food, local wineries and breweries, farmers markets, and culinary expertise and events."

The **Pima County Food Alliance** (PCFA) has been a key organization in promoting the inter-organizational collaborations, community events, and policy changes necessary to strengthen Southern Arizona's flourishing local food movement. Active since 2011, the PCFA brings together representatives from dozens of food-related organizations, farms, and institutions, including Pima Community College, the Community Food Bank, Native Seeds/SEARCH, Baja Arizona Sustainable Agriculture, Iskashitaa Refugee Network, Community Gardens of Tucson, Pima County Cooperative Extension, Tucson Meet Yourself, and various colleges and departments of the University of Arizona.

PCFA engages community partners to understand and develop our food system through education, networking, outreach, and policy change. In 2011 the PCFA organized the *Leap What You Sow Conference*, bringing together over 100 food activists and farmers from throughout Southern Arizona to discuss strategies for increasing local food access and addressing marketing issues for local producers. Other conferences organized with PCFA's



PHOTO BY MARIA GAYASSO

support include the *2012 Border Food Summit*, the *2013 Closing the Hunger Gap Food Bank Conference*, and the *2014 Food and Farm Finance Forum*.

Each of these events have facilitated critical dialog across stakeholder groups and institutions on the strengths and challenges of the border food system; identified practical business tools and alternative financing models for food producers and entrepreneurs; and have encouraged active civic engagement on issues relating to food policy.

The PCFA has also played a central role in shifting both local and regional food policy to be more amiable to local food production and consumption. In 2013, PCFA successfully advocated for the inclusion of an Urban Agriculture section within City of Tucson's general plan, thereby clarifying the city's intention to foster urban agriculture. The PCFA was also integral to convincing the Arizona Department of Health Services to institute policies that encourage, rather than hinder, school gardening programs. As a result, compost and rainwater are now allowable for growing food in school gardens and food produced in these gardens is permitted to form part of the school lunch program.

The PCFA is actively involved in the process of amending the City's Sustainable Zoning Code to include practical guidelines for expanding urban food production. The PCFA is also initiating an "Eat 5, Buy 5" campaign in partnership with the Mayor of Tucson to encourage residents to eat five fresh fruits and vegetables a day per USDA advisement and buy five dollars of locally-produced food a week. If successful, this campaign will redirect \$287 million dollars back to local farmers and into the local economy of Southern Arizona.

TUCSON'S CONTRIBUTION TO THE CREATIVE CITIES NETWORK

The greater metro Tucson region has myriad best practices in the field of gastronomy that can be shared with other metropolitan areas in the Creative Cities Network. From cultural exchanges, training workshops, and publications, to international conferences, Tucson's food scene demonstrates how communities can advance communications and capacity building to strengthen local food systems, reduce nutrition-related diseases, and conserve heritage crops and their intangible cultural heritage.

Five ways in which Tucson will contribute to the Creative Cities Network as a City of Gastronomy:

- i. **Provide tangible examples of how creative, cutting-edge communications strategies can be used specifically to advance a local food system for health and prosperity.** In particular Tucson has strengths in both gastronomy and literature, including but not limited to the publications of Native Foodways magazine and Edible Baja Arizona magazine, reaching 600,000 annually; popular non-fiction books on food issues such as Barbara Kingsolver's best-selling *Animal, Vegetable and Miracle* and Gary Nabhan's *Coming Home to Eat*; food poetry, dance, and drama in public spaces such as New ARTiculations Dance Theatre's "You Are What You Eat" performances and the Food Poetry Co-op public poem displays for buses and kiosks. These popular formats for communication can become models for both Cities of Gastronomy and Cities of Literature.
- ii. **Train public health and nutrition professionals from other cities and nations on how to promote and document the use of culturally-appropriate, nutritious regional foods.** These trainings can help combat diabetes and other nutrition-related "diseases of Western civilization" through case studies and success stories from the Pima County Childhood Obesity and Diabetes project, Center for Integrative Medicine, Native Seeds/SEARCH, San Xavier Coop Farm initiatives, the Garden Kitchen program of the UA College of Agriculture and Life Sciences, the Village Farm program of the UA-Pima County Cooperative Extension, and other programs. Tucson will create opportunities for international exchange programs with other Cities of Gastronomy to train visiting health and nutrition professionals, using these programs as models.
- iii. **Assist other cities wishing to lower regulatory barriers and promote urban food production.** Through revised zoning ordinances and policies at the city level, the Pima County Food Alliance and Sustainable Tucson have begun to address the regulatory barriers that prohibit urban food production. This can serve as a successful case study for other cities wanting to reduce their regulatory barriers to urban food production, as well as the use of this produce in restaurants and schools. A new webpage created for Tucson's City of Gastronomy designation will provide other

Cities of Gastronomy with information on these ordinances and policy changes.

- iv. **Provide international interns and professionals access to training by Tucson's food festival managers.** Tucson has demonstrated internationally-acclaimed success in hosting, programming, and promoting food festivals, such as Tucson Meet Yourself, which attracts 170,000 people per year and features foods from over 40 ethnicities over three days. Best practices from these festivals can be shared with interns and professionals from other countries to implement in their own community.
- v. **Serve as the North American hub for "Oasis Cities" associated with UNESCO's affiliate organization, the International Traditional Knowledge Institute (ITKI).** In 2011, the University of Arizona College of Behavioral Sciences hosted an international conference with ITKI involving Mexican, Italian, Chilean, and American participants to explore the concept of re-creating the ancient Tucson oasis. Currently, the City of Tucson is partnering with Pima County to restore a native riparian forest on the banks of the Santa Cruz River near downtown, as the first step in re-creating the natural and agricultural oasis that existed in this location for 4,100 years. Pima County and many community partners are also developing the concept for a regional visitor's orientation center in this location. In addition to introducing visitors to Tucson area tourism attractions, this orientation center will also serve as a knowledge bank and educational outreach institution for traditional knowledge about Tucson's agricultural heritage, water conservation, and sustainable living in a desert environment. In the long-term vision of Tucson as the North American hub of ITKI, the City and its University of Arizona and nonprofit organization partners will document and provide training in traditional irrigation technologies, heritage crop preservation through seed curator schools, and food preservation in desert environments, with the goals of conserving water and providing food security, nutritional health, and resilience in the face of climate change.



PHOTO BY KATHERINE ROBERTS, CITY OF TUCSON

AREAS OF ACTION

As a City of Gastronomy, Tucson will use creative collaborations to initiate new efforts to support local food production and connect residents and visitors to our living food traditions and unique cuisine, and will also work to strengthen existing efforts. The following areas of action summarize this strategy:

- ***Strengthen the creation, production, distribution, and enjoyment of healthy, culturally significant and diverse foods and their associated cultural goods and services at the local level.***

In the Tucson region, neighborhood-based food-producing activity has been expanding rapidly in recent years. According to the Pima County Health Department, from 2010 to 2012, 49 school and community gardens were installed, more than 500 new home and container gardens were created, 3,500 residents enrolled in gardening classes, and 600 people joined the Pima County Food Bank's gardening cooperative. These are aided and supported by the community seed library network managed by the Pima County Public Library system.

Judging from participation in the Food Bank's chicken-raising classes and attendance at the Food Conspiracy Co-op's annual Chicken Coop Tour, interest in keeping small animals like chickens or miniature goats for food production is also on the rise. In addition, the Mercado San Agustín's SABOR food micro-enterprise incubator has helped train and finance 30 new food businesses in Tucson in less than two years.

The Santa Cruz Valley Heritage Alliance's (SCVHA) regional food brand, Santa Cruz Valley Harvest, will link producers, grocers, chefs, and the broader public through a public campaign to increase awareness of the cultural context of Tucson's place-based foods. SCVHA conducted a series of stakeholder input meetings to gather feedback on the need and benefits of creating a regional food brand. As a result of these meetings, the SCVHA developed a strong partnership with local producers, restaurants, food-related non-profits, and other locally-owned businesses. Coordinated by SCVHA, the brand Santa Cruz Valley Harvest will promote locally-grown food and support the traditional farming and ranching economy of the region by building community connections between growers, retailers, and consumers. The brand logo will be used to mark local food packages, grocery displays, farm stands, and restaurant menu items, which will increase consumer awareness of traditional native crops and other locally grown foods and their history in the region. Use of the food brand will assist local producers with their marketing needs and help Tucson consumers know they are getting local, fresh foods.

- ***Promote creativity, especially among vulnerable groups, including women and youth.***

Tucson has several organizations that promote culinary creativity among women and youth such as Dishes & Stories, the Garden Kitchen, and the Iskashitaa Refugee Network.

Dishes & Stories is a culinary enterprise which will grow from a home bakery, food truck, and expanded specialty Sonoran food production into a restaurant and job training center. This initiative will catalyze opportunities for livable wage employment, education, and entrepreneurship for refugee families, primarily women. In addition, the Borderlands Earth Care Youth Corps hires high school students from low-income families to learn work skills on farms and ranches in the Santa Cruz Valley.

Iskashitaa's harvesters are an inter-generational group of refugees from Africa, Asia, and the Middle East who partner with local Tucson volunteers to harvest approximately 75,000 lbs. of fruits and vegetables each year from backyards and local farms. These nutritious foods are then redistributed to refugee families from many countries and other Tucson organizations that assist families in need.

The USDA has awarded a grant to the Community Food Bank of Southern Arizona to ensure that local food starts making it into school cafeterias. This Farm- to-School grant will provide the Food Bank with funds to partner with Tucson Unified School District to work on getting fresh, local food into schools.

- ***Enhance access to and participation in cultural life and the enjoyment of heritage foods as cultural goods.***

Tucson's hosting of the Closing the Hunger Gap national conference for food banks in September 2013 resulted in new strategies now being implemented to produce healthy foods locally and to create new jobs. The results will be that nutritionally at-risk members of low income households can receive livable wages and purchase or grow healthy foods associated with their cultural origins for health and enjoyment.



PHOTO BY LIORA K.

Heritage foods workshops offered by the San Xavier Coop Farm on the San Xavier District of the Tohono O’odham Nation are reintroducing cultural food traditions to young tribal members. Workshops focus on topics such as how to bake with mesquite meal, which has been a staple to O’odham diets for millennia. The Santa Cruz Valley Heritage Alliance also offers heritage foods workshops both for general public participation and to connect traditional knowledge of place-based foods with Tucson’s chefs.

- ***Integrate cultural and creative industries into local development plans implemented through partnerships.***

The Arizona Food and Farm Finance Forum held at Biosphere Two in January 2014 brought together 16 co-sponsors and 160 cultural creatives to design, plan, promote, and sustainably finance from local investors a variety of organic farming, animal welfare certified ranching, healthy food processing and low-carbon food distribution enterprises that forge creative solutions to persistent problems. The Pima County Food Alliance has also successfully advocated for inclusion of an Urban Agriculture section within the City of Tucson’s general plan, Plan Tucson in 2013. This is a positive step in integrating creative industries, such as gastronomy, into local development plans. New food micro-enterprises and a food distribution hub have emerged from it already.

- ***Pilot projects and initiatives that demonstrate the importance of creativity.***

The Green Fund and Kellogg Program in Sustainable Food Systems at the University of Arizona are funding young student entrepreneurs to develop food pilot projects including worm composting (vermiculture), mushroom production, food forest planting, food-cart construction, youth summer garden programming, and olive oil pressing. Through out-of-the-box, innovative management and advertising strategies, these pilot projects can serve as models for other communities.



PHOTO COURTESY OF CITY OF TUCSON

The Santa Cruz Valley Heritage Alliance’s regional food brand, Santa Cruz Valley Harvest, is a regional initiative that creatively connects producers, grocers, chefs, and consumers to increase community awareness of Tucson’s rich agricultural heritage and food traditions.

- ***Promoting the open exchange of best practices.***

A Sustainable Agriculture, Research and Education grant to farmers and the University of Arizona Southwest Center allowed beekeepers, farmers, wildlife habitat restorationists, and nurserymen to share best practices for keeping honey bees, native bees, and monarch butterflies on bee-friendly certified farms, orchards, ranches, and public gardens. This grant project facilitated the establishment of hedgerows and pollinator-friendly fruit tree belts on demonstration sites and conservation farms where they can continue to inspire and inform students, scholars, research scientists, orchardists, farmers, and other visitors to the region.

- ***Studies, research analysis, and assessment of the Creative Cities experience.***

The new UA Food Systems Program will creatively integrate public health, nutrition, social science, and agricultural science for college students. Participating students are required to volunteer in food-related non-profits or grassroots alliances in Tucson.

The Sabores Sin Fronteras Foodways Alliance has held conferences and prepared research publications which document, analyze, and promote how cities, their chefs, and their markets are conserving, increasing production of, and providing economic benefits from heritage foods such as those listed on the Slow Food Ark of Taste. Other institutions such as the Santa Cruz Valley Heritage Alliance and Pima County Food Alliance have also engaged in quantifying and documenting the importance of local food production to landscape and cultural conservation, the regional economy, and the Tucson community.

- ***Meetings, consultations, gatherings, and virtual conventions.***

Pima County Ranchlands Conservation Program, Arizona Land and Water Trust, Southwest Grass-fed Livestock Alliance, and the University of Arizona hosted a meeting on the future of meat production, processing, and distribution, involving ranchers, butchers, range managers, and chefs from four states, and local partners are helping plan the first international Slow Meat meeting in Denver, Colorado on the basis of this experience.

Outcomes from the meeting included identifying weak links in the supply chain of livestock production to consumption, specifically related to developing mobile meat processing facilities, and strengthening rancher-to-consumer relations. Future actions identified at the meeting included finding ways to support ranchers to mitigate and adapt to climate change across the Southwest from livestock production, to

niche marketing, to diversifying income streams for ranch and farm families.

The Food and Farm Finance Forum, hosted by the University of Arizona at the Biosphere 2, attracted producers, chefs, and distributors as well as the non-profit, food business, government, and philanthropic sectors to promote local food production and reduce food insecurity in Arizona's food deserts. The conference focused on strategies and funding plans to support food and farming micro-enterprises to alleviate poverty. The forum is now managed by the non-profit Local First Arizona, who is planning a statewide conference in 2015.

The Santa Cruz Valley Heritage Alliance hosts an annual fundraiser dinner that focuses on local and heritage foods. The goal of the annual dinner is for guests to experience diverse aspects of the region's history and culture through food.

- **Cooperative programs and initiatives to support member cities in the Creative Cities network.**

Tucson's Native Seeds/SEARCH has offered over a dozen Seed Schools and Heritage Grain Schools to over 220 professionals interested in propagation, farmer selection, and promotion of heritage vegetables, grains, and fruits, and is willing to provide such trainings in other member cities with high food biodiversity.

- **Exchange of interns, trainees and educational modules.**

The University of Arizona has fostered exchanges of interns, professors, and professional staff from Mexico, Chile, Guatemala, Colombia, Oman, Australia, Somalia, Mauritania, Senegal, Israel, Palestine, and Egypt interested in arid lands agriculture, water conservation, and food security through its Office of Arid Land Studies and other programs.

- **Quality, quantity, and diversity of international cooperation in gastronomy.**

Sabores Sin Fronteras/Flavors Without Borders Foodways Alliance has held three conferences and workshops featuring the procurement, processing, culinary elaboration, and folklore documentation of desert foods among Mexico, the U.S., and Native Nations. Iskashitaa Refugee Network works with political and economic refugees from a half dozen countries in elaborating value-added food products from gleaned fruits and vegetables. Slow Food International and UNESCO affiliate International Traditional Knowledge Institute (ITKI) have come to Tucson from Italy to learn from its desert food recovery programs and to visit its oases farming and foraging communities. As a result, Arizonans and Tucsonans in particular aided the Seri Indians of Mexico in establishing a Slow Food International Presidium fire-roasted mesquite recovery initiative, and did the same for the Navajo (Diné) and their churro sheep. Friends of Tucson's Birthplace has established a sister garden and ethnobotanical research exchange with the Jardin Botanico de Oaxaca, Mexico.

- **Present and future development of recognized centers on creation in the city and their promotion.**

The University of Arizona WEES-funded Food Scholars Network has facilitated 12 university and community workgroup meetings and one conference to plan a Center for Food Systems Change focused on the U.S./Mexico borderlands, but relevant to other arid regions around the world as well. The overall goals of the Network and Center are to share new knowledge, improve practices and policies that conserve water, and strengthen our local food system to decrease food insecurity.

- **Experience and commitment to hosting festivals and events at the national and international levels.**

The non-profit Tucson Meet Yourself organization regularly hosts and meets with other regional foodways alliances which are hosting and promoting major food festivals and is willing to consult with festival directors in other creative cities.



PHOTO BY VANESSA BECHTOL



PHOTO COURTESY OF CITY OF TUCSON

TUCSON'S SUPPORT AS A CITY OF GASTRONOMY

INTERNATIONAL

Dr. Ossama A. W. Abdel Meguid,
representing Mayor Mostafa Yousry, Aswan, Egypt
Mayor Francisco Fuentes Meneses, Popayan, Columbia
Jiao Hui, Deputy Division Chief of Catering Industry, Chengdu
Municipal Bureau of Commerce, Chengdu, China
Mayor AnnSofie Andersson, Ostersund, Sweden

NATIONAL

Allison Wright,
Executive Director of U.S. Commission for UNESCO
Mayor David Coss, Santa Fe, New Mexico
Chef's Collaborative
Western Folklife Center
Slow Food USA

REGIONAL BUSINESSES AND ORGANIZATIONS

Community Food Bank
Dishes & Stories
Edible Baja Arizona
Farm Education Resource Network (FERN)
Iskashitaa Refugee Network
Linking Arizona's Edible Forests (LEAF)
Local First Arizona
Pima Association of Governments
Pima County Food Alliance
Pima County Supervisor Sharon Bronson
Santa Cruz Valley Heritage Alliance
Sonoran Permaculture Guild
Sustainable Tucson
Tucson Meet Yourself
University of Arizona Global Initiatives
University of Arizona Southwest Center
University of Arizona Water, Environmental, and Energy Solutions (WEES)

