



June 16, 2009

Topara Organic flours, grains, fruits and ajis

*Producer: AgroExport Topara SAC
Region: Topara Valley, Chincha, Peru
Employees: approx. 70*

Authenticity

The product or recipe is native to the producer's region and has historically been part of the regional food culture.

At the time of the Spanish conquest, the Incas cultivated almost as many species of plants as the farmers of all Asia or Europe. With the arrival of the conquerors, the Indians, their traditions and intricate agricultural system were suppressed, and the crops that had held honored positions in Indian society for thousands of years were deliberately replaced by European species (notably wheat, barley, carrots, and broad beans). Yet today the ancient influences still persist with rural peasants, who are largely pure-blooded Indian and continue to grow the crops of their forebears.

Maiz Morado - Purple corn, botanically the same species as regular table corn, has a deep purple color, and has long been used by people of the Peruvian Andes to color beverages and food. Depictions of this corn have been found at archeological sites dating 2,500 years and on ancient ceramics of the Mochica culture. Most commonly, *maiz morado* is used to make both alcoholic and non-alcoholic versions of a popular beverage called *Chicha Morado*. The dark purple color is due to natural pigments known as anthocyanins, the most abundant form being C3G, believed by researchers to be rich in antioxidants and also to have anti-inflammatory abilities. Studies also indicate that they reduce the risk of cardiovascular disease and abnormal cell growth.

Mesquite - Algarrobas trees grow wildly in large forest areas in the coastal regions of northern Peru. The algarroba (also known as mesquite) pods are dried and milled. It is used as sugar to sweeten juices and also in mixture with other meals for baking and cooking. In addition to its rich flavor, Mesquite flour is high in fiber, low in fat and has a higher antioxidant content than wheat and rice. Because of the quality of the algarroba wood, the trees have come dangerously close to extinction in Peru.

Lucuma - a subtropical fruit of Andean origin that was once known as the "Gold of the Incas". It has a delicious full-bodied, maple like flavor and has been used for both culinary and spiritual purposes since ancient times. Archeologists have found it frequently depicted on ceramics at burial sites of the indigenous people of coastal Peru. One Lucuma tree can produce about 500 fruits annually and these nutritional and uniquely flavored fruits are a staple of many Peruvians' diets. Lucuma flavored ice cream and sweets are popular treats across Peru and throughout the Andean region.

Aji - South American Indians were probably the first to use peppers - extremely hot, pea-sized fruits they found growing around them - perhaps more than 1000 years ago. By the time of Columbus, peppers were a principle seasoning of the Incas and the

Aztecs. Montezuma received them as tribute. Columbus came to the New World looking for the black pepper of Asia and stumbled upon this even more piquant spice. After Columbus, peppers quickly spread throughout the world. Topara produces three main varieties - Aji Panca (dark, mild) Aji Limo (Red, very hot) and Aji Amarillo (yellow, hot).

Yacon - Yacon is grown in the Peruvian Andes for its crisp, sweet tasting tubers. Yacon is sweet but low in sugar. It helps boost the immune system and eases digestion. It is also high in potassium and antioxidants. It is used as a syrup, flour, and tea. Excellent for baking cookies and other baked goods or flavoring syrup and other sweeteners. Ideal for diabetic cooking because of its high levels of inulin that does not elevate blood sugar levels.

Maca - Maca has been used in the Andes as a root vegetable and medicinal herb for centuries. Growing at high altitudes and cold climates, historically Maca was traded for lowland crops such as corn, rice, quinoa, and papaya. It was also used as a form of payment for Spanish imperial taxes. Incan warriors are rumored to have consumed Maca before battle because it was believed to give them strength. In addition to being ground into flour, Maca roots are often boiled to make porridge, distilled to make beverages, and used as a natural herbal remedy to fight various ailments.

Yuca - Tapioca, native to South America, is the name of the flour made from the Yuca or Cassava root. Tapioca flour is white, starchy, and slightly sweet and can be used to sweeten breads or make pie fillings. Substitute for wheat flour, yuca flour is most commonly used to bake breads.

Quinoa - Quinoa originated in the Andean region of South America, where it has been an important food for 6,000 years. The flour makes baked goods moister and contains a balance of amino acids and other vitamins and minerals. The Incas considered Quinoa sacred, referring to it as "chisaya mama" or "mother of all grains". During the European conquest of South America, quinoa was scorned as "food for Indians" and even suppressed because it was used in religious ceremonies.

Amaranth - Amaranth was one of the staple foodstuffs of the Incas, and it is known as kiwicha in the Andes today. Amaranth is often referred to as the "crop of the future" because it is easily harvest, has a high yield, grows rapidly in arid environments, and has a high quantity of proteins and essential amino acids such as lysine. In the Cusco region amaranth is used to treat toothaches and fevers. In Mexico, Amaranth was believed by the Aztecs to have supernatural powers and was used in religious ceremonies. Similarly to Quinoa, the conquistadors banned Amaranth consumption and it consequently became obscure for hundreds of years.

Kañiwa - Kañiwa is a species of goosefoot (flowering plant) similar to Quinoa and can be germinated to use in raw foods. Grown in the Andes, Kañiwa can resist low temperatures and high altitudes and, therefore, has been safety net for subsistence farmers. Kañiwa grows where wheat, rye and corn grow unreliably or not at all. It is considered more resistant than any other grain crop to a combination of frost, drought, salt, and pests—and few other food plants are as easy to grow or demand such little care. It may be used in any recipes calling for Quinoa. The flour can be

combined with other non-gluten flours to make breads, cakes, pastries, or puddings. Can also be used to make a hot beverage similar to hot chocolate.

Sweet Potato - Sweet potatoes are native to the tropical parts of South America, and were domesticated there at least 5000 years ago. Sweet potatoes, or camotes, are often found in Moche ceramics. In South America, Peruvian sweet potato remnants dating as far back as 8,000 BCE have been found.

Lima Beans - Also called “butter beans”, lima beans have many health benefits and can be cooked or ground into a flour. The Moche culture in Peru cultivated lima beans and often depicted them in their artwork. Since the beans were first exported to Europe and America from Lima, Peru, they acquired the name from the box destination label.

Huacatay - Huacatay is a dark green culinary herb that has been used in Peru since ancient times to spice up food. It’s a great condiment for all types of spicy dishes and combines well with chilies. Huacatay powder is made from dried huacatay leaves and milled into desired particle size

Board Feedback & Questions:

Point of sale and outstanding packaging will be essential to educate about these unknown treasures.

Wonderful inherent health benefits attributed to these foods!

Local Ownership

The producing company is privately or worker-owned with a majority of the owners actively participating in the company.

AgroExport Topara SAC is a limited liability company that was established in 1992 by Klaus Bederski Lehmann and his two sons Stefan Bederski Fischer and Hans Bederski Fischer, and is operated by Klaus and Stefan who live part time on the farm and part time in Lima to commercialize their products.

Klaus established the farm in 1968 when he acquired an abandoned 100-hectare estate in a valley outside of Chincha. Through creativity and perseverance he was able to establish a successful organic pecan farm and began exporting in 1994. In the early 80’s, he created a fruit tree nursery, and to this day it is the only certified organic nursery in the country. In 1992, AgroExport Topara was established as the commercial arm of the company and is directed by Stefan. Over the years they have expanded their farm to include many other traditional organic products.

Board Feedback & Questions:

Meets criteria.

Local Sourcing

A majority of all ingredients are purchased within the region in which the company is located (region is defined as bioregion or country depending on the size and geographic make up of the area), AND is either grown directly by the producing company or is purchased direct from the farmer or a farmer organization at fair prices.

Ingredients: maiz morado or purple corn (dehydrated and in flour form); lucuma, a Peruvian tree fruit (flour and frozen paste); aji panca and amarillo (dehydrated, milled, frozen paste, jarred paste with salt and citric acid); quinoa, amaranth, kañiwa (grains, flours, and puffed); mesquite, yuca, maca, yacon, sweet potato (flour); Huacatay (whole frozen, milled); lima beans (flour, whole).

The Company cultivates its own organic maiz morado, lucuma, and ajis. Upon demand, can also grow huacatay, yuca and sweet potato.

Topara also purchases certain certified organic products from the neighboring farms of Fundo Chuspa Alto (maiz morado, lucuma, aji) and Fundo Chuspa Bajo (maiz morado, aji).

The Andean grains and roots are purchased from farmers in the highlands, the natural habitat for amaranth, quinoa, and Kanigwa. The certified organic grains are purchased from EASE, a community organization in Cotahuasi, Arequipa (certified through BioLatina). The uncertified (but organically grown) come from a farmers organization in Cuzco and Puno. The certified organic yacon and maca are produced by farmers in in Junin and Union and processed by Peruvian Nature SAC in a plant in Lima (farmers and plant certified with Control Union).

The mesquite comes from Santa Maria Locuto in Tambogrande, because this is the natural habitat of the algarroba plant. Topara supports this rural community who live from the proceeds of sustainably harvesting the mesquite pods. Stefan has worked closely with this community to help them obtain organic certification.

Board Feedback & Questions:

What's the distance among all these locales? The highlands are quite a distance, considering the state of the roads in Peru. But all of these products would need to come to the coastal port for export regardless, so there is no extra shipping in the process.

Who ensures that the uncertified, but organically grown items that come from the farmer's organization in Cuzco and Puno, are consistently, organically farmed? Does Topara make frequent, or at least regular, visits to these farms. Topara has actually send workers to the other suppliers on cultural/work exchanges and this is how he keeps tabs on their organic activities. In the future, Rooted Foods would like to be able to verify this first hand.

Does Topara have criteria for companies they will work with? We are working with them to solidify their criteria.

Not only do the highland communities need sustainable businesses, but their food and medicine traditions are a vital part of their histories and must be practiced and maintained. Thought will need to be put into how transparency can be communicated for all the producers of these items (with their varied locations and particularities).

Social Responsibility

The company's social and financial practices and policies are designed to ensure maximum benefit to the company's employees and to the local community and economy.

The company's mission is to cultivate and produce products that represent the rich culinary traditions of Peru while restoring their land.

Employees: The Company has approximately 70 employees all of whom come from the local community. The number varies throughout the year depending on harvest, processing needs, and general farm maintenance. Under Peruvian law, it is obligatory to offer profit sharing to all employees. In addition, the company offers bonuses for productivity and creativity.

All employees are covered by the national health and safety program. The company also offers an additional insurance. Employees are offered seminars and training courses, and the company contributes to continued education. All employees are paid at least 10-20% above the state established minimum wage, with junior and senior management positions garnering up to 300% higher than minimum wages.

The company offers on site housing as well as communal meals every day, and aids with transportation (the town is a considerable distance over very bad roads). The employees have representatives that work on their behalf with management to ensure their needs are met.

Community: The Bederski family has made a huge positive impact on this local community, both on a personal level and through their farm. When a devastating earthquake leveled the town of Chincha, the family donated money and supplies, and raised more money internationally, to help rebuild the homes of their workers. They have acted on the community's behalf over the years in negotiations with the local mine to reduce environmental impact and to improve roads and infrastructure. The company adds a strong voice to local efforts for community development.

Topara worked with an international NGO to incorporate solar ovens on their farm and to encourage local community members to accept this new technology in their own homes (the NGO was willing to donate the ovens, but had few takers before Topara demonstrated the oven's success).

The Topara farm employs many community members and their families. They encourage all employees to fully participate in the development of the company. They also spread the word of organic farming through trainings and conferences. In 2005 they created an organic cultivation program to train their neighboring farmers in the art of organic farming, and today they purchase between 20-30% of all their products from these neighboring farms.

Board Feedback & Questions:

A role model!

Who are the representatives that work on behalf of the company's employees? The representatives are from within the worker population.

Environmental Stewardship

The company's environmental practices and policies are designed to minimize environmental impact through the elimination of chemicals and waste, and the reduction of resource use.

Cultivation: Topara is a leader in their community and throughout Peru in organic cultivation. All products that they produce are organic, and have been certified by Control Union Peru (Skal International) since 2000. They also have kosher certification. They are in the process of expanding their organic certification through GLOBALGAP, a European private sector body that sets voluntary standards for the certification of agricultural products around the globe.

When the company purchases products from neighboring farmers, they oversee all aspects of the cultivation from seedling to harvest. When they purchase from farmers or farmer associations in other regions, Topara ensures that all organic certifications are in order and often send workers for cultural and work exchanges.

Many of the items grown and elaborated by Topara are indigenous Peruvian foods. By cultivating these items, they are helping to retain and promote biodiversity, especially as more and more farms dedicate themselves to growing foreign crops under demand in a global economy.

Many of the crops allow for crop rotation twice a year. The plants are turned back into the soil at the end of the harvest or used to make organic compost for the farm.

Production & Facility Management: All of the crops cultivated on the farm and many of the raw ingredients purchased from neighboring farms are processed directly on the farm. Such items as purple corn, the ajis (peppers) and lucuma are dehydrated either in their solar dehydrators or directly in the sun, depending on the weather. The products are milled on site and packed for local or international sale. Some of the items that need more elaborate packaging are packaged through subcontractors.

For electrical needs on the farm and the production facilities, a generator is used. Water comes from the region's wells and moves through the site in underground piping. Although the farm is surrounded by very arid land (much of Peru's coast is desert), the soil is very rich, and the valley is fed from waters coming down from the Andes Mountains.

Topara has a strict traceability and inspection program in place with quality control analysis done on each lot produced. They have an extensive recycling program for organic waste (used throughout the farm as compost), plastic, glass, tin, and batteries.

The company is an active participant in the Self-Management and Environmental Supervision Committee, organized by the local mining company (MILPO), to ensure that their valley and its resources remain clean.

Packaging: The Company has a vacuum packing and sealing machine to guarantee freshness of the product. They strive to sell most items in bulk to minimize packaging. These items are packed in plastic or nylon and then into recycled carton boxes.

Board Feedback & Questions:

What other packaging are they considering for retail here in the US? Or are they targeting just the bulk bins at natural food stores and coops. Retail will be packed

here in the US for the time being until they have systems in place to be able to do this.

Great!!

When “more elaborate packaging” is required, where are the products sent? How many of their products require this? The processor Topara works with is in Lima and they have worked with them for many years. Mainly this is needed for creating the aji pastes. All mill work can be done by Topara.

Overall Board Assessment

A very worthy candidate -- with a solid commitment to preserving and sharing their indigenous culture.

A great addition. These will be GREAT for the gluten intolerant population in the US.