

ost of us are used to instant drinks, powders added to water to turn it into a beverage to quench your thirst, refresh you, or simply offer a pleasant taste. In our time, being self-conscious about our weight, cholesterol levels or overall health, we also want these beverages to have as few calories as possible.

But we would not hesitate to consider these drinks one of the most ingenious and useful inventions of our times. How wrong we are! The Indians from Southern Mesoamerica, including the region that we know today as Chiapas, invented a few of them long before Europeans made contact with the New World.

Their origin is rooted in the way ancient Mexicans got to know and exploited their staple food: maize or corn. This remarkable plant yields more food per hectare than other grains, and its biochemical make-up and physical characteristics give it some interesting properties.

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Unless otherwise specified, photos courtesy of Chiapas State Ministry of Tourism.

A good example is popcorn, made with a variety of seed with a hard, waterproof shell. When the grain is heated, the water inside is converted to vapor and, at a certain moment, the pressure overcomes the resistance of the shell and the grain bursts, extruding the cooked inside, that turns white and fluffy, making the seeds look like what ancient Mexicans saw as stars.

Many people today do not know the basic history of our everyday foods. We think of popcorn as something you prepare at home in the microwave or buy in a movie theater, but few know that it started in ancient Mexico, and that we have archaeological proof of its very old history and uses.

For instance, during the last century, ethnographers still found indigenous groups that prepared popcorn with what may have been its oldest culinary technique. They simply placed the seeds in the ashes near the open fire. The heat was enough to make the grains pop, and probably children would catch the popped corn with their hands and eat it happily before it fell on the ground and got dirty.

We also have good ethno-historical data that shows that grains of popped corn were strung together and worn as necklaces during certain festivities. It is certain that this very popular way of preparing corn was at least as appreciated by our ancestors as it is by our contemporaries.

Another useful characteristic of maize grains is that they can be toasted, draining them of most of their humidity. Then they can be ground on the Mexican grinding stones known by their ancient Nahuatl name as *metates* to get a very fine powder which, if kept dry, can last for a long time. This powder is known as *pinole*.

Pinole nowadays is sweetened with sugar, but in the past honey from native Mesoamerican wasps may have been used to make it taste better. It can be eaten as is, but this requires a lot of saliva to moisten it. A Mexican saying says that whoever has more sali-



Mexicans found the way to prepare a very tasty beverage called *taxcalate*, made with *pinole*, a sweetener, powdered cacao and *achiote* mixed with water.

va can eat more *pinole*, which means that those with the gift of gab go further in life.

But there is an easier way to have pinole: by diluting it in water. But this way it does not taste very good and certainly does not dissolve completely, and the beverage turns grainy. But Mexicans found the way to prepare a very tasty beverage called taxcalate. The other two ingredients, in addition to a sweetener are powdered cacao, the basic component of chocolate, and achiote, a fruit which vields an intense, bright red color still used by several Indian tribes in South America to dye their hair and paint their skin with traditional patterns. It also has a pleasant taste and is one of the main ingredients of

cochinita pibil, a special Yucatan dish of pork roasted in a pit.

The mixture of *pinole*, cacao and *achiote*, plus sugar or honey produces a very unusual and tasty beverage that is at the same time nutritious and refreshing. This is a good example of a group of beverages that are also food, since they provide a good amount of nutriments and energy that makes them very suitable for children or undernourished communities.

But the most interesting example of these instant and nutritious beverages is *atole*. This is the result of another very old Mexican discovery from the distant past, known as *nixtamalización*, a procedure used to soften the grain to be able to grind it and turn it into *masa* or corn dough, the preparation needed to prepare tortillas, tamales and many more delicacies.

*Masa* is also used to brew the beverage known as *atole*. In its simplest version, a small ball of *masa* is boiled in water and sweetened, but fruit or spices may be added for flavor. This way, *atoles* acquire many interesting tastes and are never boring. In some cases herbs are added to make them medicinal.

In Chiapas and other regions of Mexico *masa* is diluted directly in water to prepare *pozol*, another instant beverage. People who work far from home or who travel carry balls of *masa* with them and when

they are hungry and thirsty, they simply dilute one of them in water.

A variant is to leave the balls of *masa* out in the air for a little while and then wrap them up in leaves and carry them until they are needed. This allows microorganisms to penetrate the ball of *masa* and reproduce by consuming the ground corn.

The microorganisms that do this have a very interesting trait: they are able to fix nitrogen from the air and synthesize amino acids, the constituents of proteins. At the same time *pozol* becomes acidic and is known as *pozol agrio*, or sour *pozol*, which

has better nutritional qualities than simple corn or even *masa* corn dough. The microorganisms that play a role in this process have been studied in our university. In a true sense, this means that Mesoamericans discovered a way to eat air, albeit with the intervention of microorganisms.

In addition, we must not forget that *nixtamaliza-ción* is a simple technique that also enriches corn nutritionally. It starts by soaking raw kernels of maize in very hot water to which lime or some other form of



In Chiapas, people who work far from home or who travel carry balls of *masa* with them, when they are hungry and thirsty they simply dilute one of them in water. calcium carbonate is added, making it alkaline. A very complex biochemical process begins through which the corn changes profoundly. First, calcium is added, a mineral found naturally in very few products, like milk. But inside the kernel other things are changing. Precursors of the vitamin niacin are converted; this means that people who consume "nixtamalized" corn do not have a niacin deficiency, a common condition among maize eaters who do not use this process, such as poor slaves in the southern United States or poor Italian peasants who ate

mostly polenta.

Corn's protein content is also enhanced by this technique, making it more easily absorbed by the human body, although its amount decreases. These two changes have made it a most important resource for Mexican people down through the ages.

Whenever you prepare yourself another of our modern instant drinks, probably to go along with popcorn on the side, consider their deep roots in the history of Chiapas and the rest of Mesoamerica.

