

Green Scene: Quinoa – the wonder food from the Incas

by *Elaine Golds*

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An early sign of the emergence of any great civilization will be evidence of the development of agriculture and the domestication of wild plants to feed a burgeoning population. In the Middle East, for example, wheat and barley were developed as food crops thousands of years ago. Today, wheat and barley are grown around the world and we continue to be sustained by the intake of “our daily bread”. Civilization also emerged early in China where rice was developed as a mainstay crop. Even in these contemporary times, we remain utterly dependent on these three crops of grains.

When the Spanish invaded the Americas in the early 1500s, they discovered corn growing in Central America and, a few years later, potatoes in the high Andes of South America. These important food crops, developed by the great civilizations of the Americas, were quickly added to Europe’s bread basket. It didn’t take long for the potato, especially, to become an extremely popular food. In fact, in Ireland, poor peasants came to utterly rely on potatoes for sustenance such that, when their potato crops failed in the 1840s, a million people starved while a million more decided to migrate to North America to seek a better life. There is little doubt that the development of important food crops has had enduring impacts on the history of civilization.

The grains of the world provide a vital source of carbohydrate in our diets which supply us with the energy to undertake our daily tasks. Verification of where a food crop was first domesticated is usually based on finding where the “wild” ancestor of the plant still grows. Early signs of domestication of cereals are the appearance of plants in the archeological record in which the seeds all ripen at the same time and do not “shatter”, i.e., spontaneously drop their seeds. Disadvantages of most cereal crops are that they are low in protein content (wheat is about 12% protein) and do not contain a good “balance” of the essential amino acids needed by our body to synthesize proteins. Man cannot live by bread alone.

**On the shores of Lake Titicaca, an indigenous couple prepare a traditional meal for tourists which included quinoa soup.
B. Brandhorst photo.**

While the Spanish made significant additions to diet of people in Europe by bringing back corn, potatoes, chocolate, tomatoes, squash, chili peppers, beans, vanilla and other culinary



delights from the Americas, there was one that grew in the high Andes next to the potato that they apparently overlooked. In fact, even today, this important source of carbohydrate remains under-appreciated. This crop is quinoa (pronounced “keen-wah”). A member of the so-called goosefoot family for the shape of its leaf (more correctly, the Chenopod family), it is related to lambs-quarters, a common weed in North America which appears early in the spring and is sometimes used as a green herb in soups.

Ancient civilizations in the Andes which preceded the Incas are believed to have developed this important seed crop. Like the potato, it grows well at extremely high elevations (in the case of quinoa, up to an amazing 4000 meters). Archeological evidence suggests that quinoa was being cultivated as a plant as early as 5800-4500 BC in Peru near Lake Titicaca where it is still a common crop. When we were travelling recently in Peru, we found that meals in restaurants often started with a delicious quinoa soup. Quinoa has several advantages over traditional cereals. For example, it is relatively protein-rich (as high as 22%) and unlike most grains (as it is not a member of the grass family, it is not actually a true grain) it contains a balance of all the essential amino acids. More importantly for people with intolerance to gluten in their diet, it is gluten-free. This may have explained why the Spanish ignored quinoa as they could not use it for making bread which depends on the gluten in grains for rising. Quinoa has other desirable qualities because, as a crop, it can be grown in areas with only 12-25 cm of rainfall and it will tolerate alkaline soils. Truly, it is thanks to the indigenous farmers of the Andes who have worked their crops by hand for thousands of years, that we have this valuable plant. The Incas called quinoa, the “mother grain” and held it sacred. It is easy to see why.

In recent years, quinoa has, without a doubt, been discovered as a new food in North America – it has finally made the leap from health food stores into general grocery stores. While there are concerns that an increasing demand for quinoa is limiting its availability in poorer areas of Peru, Bolivia and Chile, strains have now been developed which will grow in Canada and Colorado. Have you had your daily quinoa?