

2013: The International Year of Quinoa

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What makes this grain-like substance so incredible that the United Nations General Assembly has officially declared 2013 the International Year of Quinoa? Well, a lot. From its rich nutritional content to its biodiversity, quinoa (pronounced keen-wah) has a lot to offer anyone who is concerned about good nutrition, including those with diabetes or other health problems.

Nutritional Content

For all intents and purposes, I consider quinoa a grain since it is most compared to other grains, and is cooked and prepared like a grain. This grain-like fruit is chock full of protein, vitamins, minerals, and healthy fats. Those with celiac disease or gluten intolerance can enjoy quinoa, since it is gluten free. In addition, it is a low glycemic index food, so your blood sugar won't peak as high as it would with grains such as pasta or rice.

Protein. Quinoa has the highest protein content among all grains (13-17% of the calories) and 37% of the proteins are high quality essential amino acids (EAA), meaning our bodies are unable to produce them, so they must be ingested from food. Without EAAs, we cannot grow, and over time will become malnourished. Here are some of the EAAs in quinoa and some of their functions:

Lysine – (most abundant EAA in quinoa) enhances immune function, gastric function, helps with calcium absorption, assists in cell repair, and is involved with fat metabolism; may delay or block the spreading of advanced cancer with vitamin C.

Glutamic Acid – helps with learning, memorization, and energy for the brain.

Aspartic Acid – enhances liver function and helps maintain the cardiovascular system.

Tyrosine – has anti-stress properties; role in relieving depression and anxiety.

Isoleucine, Leucine, and Valine – together prevents liver damage and helps balance blood sugar levels.

Vitamins and minerals. Compared to wheat, quinoa is rich in thiamin (vitamin B1), riboflavin (vitamin B2), niacin (vitamin B3), vitamin E, vitamin C, and vitamin A. Quinoa also has twice the amount of iron and zinc and about 1.5 times more calcium than wheat! In addition, the iron and calcium are highly bioavailable. Quinoa also contains copper, phosphorus, potassium, magnesium, and manganese.

Fats. Quinoa is a good source of healthy fats with about 15% of the calories coming from fat, most of which are unsaturated fatty acids. Contrary to what we were told in the 90's, a low fat and a heart healthy diet are not synonymous. We need **fats** to digest fat soluble vitamins, to stimulate our digestive systems to release digestive enzymes, and to maintain healthy cellular functioning. Fats also take longer to empty the stomach, which leaves you feeling full for longer. We now know to consume more healthy fats from nuts, seeds, legumes, wild fatty fish, and olive oil, while having less fats from animal products (saturated fats found in dairy and meat) and hydrogenated oils (trans fats).

Biodiversity

Quinoa can be grown in a variety of climates (with a wide range of temperature, humidity, and altitudes) unlike other grains which are limited to specific climates. This highly sustainable crop has the potential to not only provide nutritious and balanced food to many malnourished people around the world, but may also serve a source of export income for struggling communities.

Taste



Quinoa is both nutritious and delicious! There are many ways to prepare it: serve it hot or cold, in soup, as a side dish or a main dish. Use a crock pot to have a meal ready and waiting for you when you get home! No matter how you prepare it, always rinse your quinoa before cooking, unless you purchase it pre-rinsed. Either use a strainer or use a pot with a tight fitting lid and fill with water, and then put on lid, and turn upside down to drain off the water. This gets rid of most of the saponins, which cause a slightly bitter flavor. Saponins aren't all bad, though. They help

increase membrane permeability, making foods and/or drugs more easily absorbed. There are also some anti-fungal and antibacterial properties of saponins, which are being studied for use.