Nutritional Values of Chenopodium Quinoa

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Abstract—Chenopodium quinoa is a dicotyledonous annual plant and is native to the Andes Mountains of Bolivia, Chile, and Peru. Faced with the challenge of increasing the production of quality food to feed the world's population in the context of climate change, quinoa offers an alternative for those countries suffering from food insecurity. The objective was to draw the world's attention to the role that quinoa could play role in providing food security, nutrition and poverty eradication in support of achieving Sustainable Development Goals. The United Nations General Assembly has therefore declared 2013 as the "International Year of Quinoa" at UN headquarter. Quinoa is non-GMO, gluten-free and good for people with gluten intolerance. Even though technically not a cereal grain, it still counts as a whole-grain food. NASA scientists have been looking at it as a suitable crop to be grown in outer space, mostly based on its high nutrient content, ease of use and simplicity of growing it and due to presence of 11 essential amino acids like isoleucine, leucine, lysine, phenylalanine, tyrosine, cysteine, methionine, threonine, histidine, tryptophan and valine. Not only amino acids, but it is also rich in Vitamin B1, B2, B6 and B3, Vitamin E and small amount of omega-3-fatty acids. Quinoa has a glycemic index of 53, which is considered low. Quinoa is rich in oxalates, which reduce the absorption of calcium and can cause problems for certain individuals with recurring kidney stones and also act as antioxidants that neutralize free radicals and are believed to help fight aging and many diseases.