



Characteristics of Food Nutrition and Dietary Fibers in Unconditional Plant

Azmeraw Alemu*

Department of Food Nutrition Technology, University of Pretoria, Pretoria, South Africa

DESCRIPTION

The market has been under pressure to provide alternative food sources to fulfill the nutritional demands and new consumption habits of an increasingly food conscious, healthy, and sustainable population. Population forecasts indicate that there will be roughly 10 billion people on the planet in 2050. In this situation, agricultural expansion will be required to boost production in order to fulfill the demands of the food chain. As a result, certain adverse effects will worsen, including increasing deforestation, greenhouse gas emissions, and water use. Climate change and global ecological collapse are exacerbated by these developments [1].

Food production from animal sources has frequently been linked to dangers to human health, including cardiovascular illnesses, freshwater depletion, biodiversity loss, and climate change. The excessive use of water, energy, and agricultural inputs has also raised the cost of getting raw materials of animal origin. These facts have sparked the growth of organizations looking for food that is more environmentally friendly and sustainable. The market has also been influenced by ethnic/moral, cultural, and religious problems to increase the proportion of vegans, vegetarians, and flexitarians.

They develop products that satisfy this new market demand and give them essential nutrition. Unconventional Food Plants (UFPs) have become a viable source for the food chain in this context, particularly when it comes to their usage to raise the nutritional standards of the populace in underdeveloped nations. Unconventional Food Plants (UFPs) are food species that have one or more portions with food potential. Since these plants can be providers of a wide variety of nutrients, including proteins, carbohydrates, minerals, vitamins, dietary fibers, and phenolic compounds [2].

Proteins in unconventional plants

The struggle against hunger, malnutrition, and the inadequate consumption of critical nutrients has received a lot of attention

recently, especially in developing nations. Proteins, among these nutrients, are particularly important for the human diet because of their bio functional qualities. In this regard, investigating other sources of protein becomes essential. Since they provide an alternative to animal proteins and satisfy the dietary needs of new customers like vegans, vegetarians, and flexitarians, vegetable proteins are appreciated more and more. These proteins also offer the benefits of flexibility, cheap cost, and minimal environmental effect [3].

Legumes (soybeans, peas, beans, chickpeas), cereals (rice, wheat, maize), and seeds (chia, flaxseed, sesame) are a few examples of plant based protein sources that have undergone extensive research. The most stable sources to utilize in various food formulations, allowing the creation of novel products with significant added value, are soy, wheat, and rice. To take advantage of their nutritional worth and technological functionality, these plant based protein sources have been included to dietary supplements, baked foods, and many other items [4].

Dietary fibers in unconventional food plants (UFPs)

The existence of Unconventional Food Plants (UFPs) as a source of dietary fiber is also recognized. Complex carbohydrates are fibers. These chemicals have physiological and functional effects, such as lowering the risk of various illnesses, modifying the metabolism of cholesterol and its fractions, regulating blood sugar levels, enhancing satiety, and managing weight. They can be soluble or insoluble in water. Pseudo cereals and grains can be cited as sources of dietary fibers amaranth, for instance, has 2.2 to 5.8 percent of fibers in its composition (e.g., *Amaranthus caudatus*, *Amaranthus cruentus*). Aside from other useful chemicals, amaranth has the greatest concentration of dietary fiber when compared to other grains. Another Unconventional Food Plants (UFP) regarded source of substances responsible for metabolic regulation and health enhancement is sorghum, which also contains insoluble dietary fibers [5].

Correspondence to: Azmeraw Alemu, Department of Food Nutrition Technology, University of Pretoria, Pretoria, South Africa, E-mail: Azmeraw769@gmail.com

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