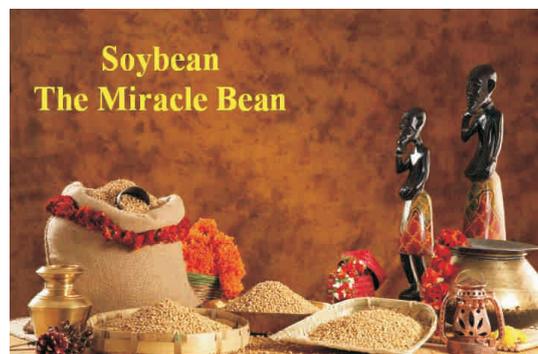


Soybean - A Miracle Bean

Soybean (*Glycine max*) is a leguminous plant. The Chinese have been cultivating and consuming soybeans for over 4000 years. Soy products have been around in India for almost 30 years. But the consumption of these products never took off well in the market till recently.

Indian population is predominantly vegetarian. Our diet is lacking in terms of quantity and quality of protein. Even the majority of non-vegetarians among us do not consume animal products on a daily basis in quantities sufficient to provide the recommended amount of protein.

Soybeans are a rich source of good quality protein and the cost too is low. Soy products can easily meet the protein requirements of a vegetarian diet. Soybean has been perceived more as poultry and cattle feed than as a good source of protein for human consumption by a lot of people. Also the misconception that soybeans are only used in feeding programs conducted by the government for malnourished children has been prevalent. Besides nutritional benefits soybeans provide several therapeutic benefits too.



Soybean is one of the very few plants that provide high quality protein. Soybeans help people feel better and live longer with an enhanced quality of life. Soybeans contain all the three macronutrients required for good nutrition, as well as fiber, vitamins, minerals. Soybean protein provides all the essential amino acids in the amounts needed for human health. Soybeans have almost 40% protein, making soybeans higher in protein than any other legumes and many animal products. Protein in just 250 grams of soybean is equivalent to protein in 3 liters of milk or 1 kg of mutton or 24 eggs. The quality of soy protein is virtually equivalent in quality to that of milk and egg protein. Unlike many other good sources of protein, soybean not only has higher percentage of oil but also quality fatty acid profile. It has low saturated fat content with high amount of essential fatty acids. Soybean oil is also a good source of omega-3 and 6 fatty acids similar to those found in fish oils and is cholesterol-free. Soybeans are an excellent source of dietary fiber with both soluble and insoluble fiber. Soluble fiber may help lower serum cholesterol and control blood sugar. Insoluble fiber increases stool bulk, may prevent colon cancer and can help relieve symptoms of some digestive disorders. Soybean has more than two times the amount of most of the minerals, especially calcium, iron, phosphorus and zinc, than any other legume and very low sodium content. Soybean has all the important vitamins and is a very good source for B complex vitamins and Vitamin E.

Soybean and Health Benefits

In addition to containing good quality nutrients, soybean has other beneficial compounds such as, phytosterols (isoflavones), lecithins, etc. Soy foods have a number of health benefits such as, cancer prevention, cholesterol reduction, combating osteoporosis and menopause regulation. Human studies suggest that as little as one serving of soy foods each day may be protective against many types of cancers. For the past 30 years, investigators have shown that consumption of soy protein selectively decreases total and LDL (bad) cholesterol and maintains HDL (good) cholesterol in individuals with elevated blood cholesterol levels. Based on the various research findings, United States Food and Drug Administration has issued a health claim for soy protein in October of 1999. The health claim states "consumption of 25gms of soy protein per day with a diet low in saturated fat may lower the risk of heart diseases".

Another important aspect of soy protein is combating osteoporosis and relieving menopause symptoms. One factor in bone health is limiting the amount of calcium lost from the body. Although protein especially animal protein contributes to calcium loss, soy protein exhibits less calcium leaching effects. The isoflavones found in soybeans may also directly stop bone deterioration. Recent research has shown that soy foods can relieve most menopausal symptoms, thus reduce risks of cardiovascular disease and osteoporosis. Soybean is considered as a natural alternate for hormone replacement therapy for treating women who are in menopause.