

SOYBEAN (*GLYCINE MAX* L. MERR.) – IMPORTANT DIETARY AND MEDICAL INGREDIENT

Summary

Soybean (*Glycine max* L. Merr) consumed for more than 5000 year and is one of the most valuable crop plants. Seeds of this plant contain about 40% protein of the best amino acid composition among plants, about 20% fat of the high content of essential polyunsaturated fatty acids, mineral elements and isoflavones, i.e. genistein and daidzein. Daizin and genistin occur in soy as β -D-glycosides. These glycoside forms are biologically inactive and in the intestine are hydrolyzed to bioactive aglycone – genistein and daidzein. Isoflavones are natural plant estrogens and are structurally similar to estradiol and bind to estrogen receptors on cell different organs in human body. Soy isoflavones positively

help in postmenopausal problems i.e. bone mass, hot flushes, high body mass index. Phytoestrogens intake by postmenopausal women correlated with lower body mass index and higher bone mass. Regular consumption of isoflavones may play a role for lowering risk for cardiovascular disease because a modulation of lipoprotein metabolism by increasing HDL cholesterol and reducing VLDL and LDL cholesterol. Phytoestrogens have an effect on cell growth, cell proliferation and have antioxidant properties and reduced incidence of breast cancer and prostate cancer. Soybean seeds are used, among others, for the production of diet supplements, as well as animal protein substitute.