Summary

Legumes are members of the family Fabaceae. These highly nutritious seeds are valued for their high protein content next to the cereal grains. The high protein content of many legumes is due to their association with nitrogen-fixing bacteria in their roots. Nitrogen fixation converts the unusable nitrogen (N2) gas into ammonium (NH4+), which plants incorporate in the synthesis of proteins. Grain legumes (pulses) are recognized as a poor man's meat, showing their importance for people of developing countries, where the consumption of animal protein is limited by non-availability or is self-imposed because of religious or cultural habits. The growing research on various health benefits of legumes has thus stimulated interest in expanding their use in food products. Furthermore, apart from protein, legume seeds also contain many bioactive and/or antinutritional compounds, such as phytate, oligosaccharides, phenolic compounds, non-protein amino acids, lectins and enzyme inhibitors that play metabolic roles in humans or animals that frequently consume these seeds. These effects may be regarded as negative or positive or both. However, negative effects may be eliminated by detoxification.