

## **Benefits of consuming legumes**

### **Environmental and health impacts of legumes**

Lea, Crawford and Worsley (2006) defined the 'plant-based diet' as an eating pattern dominated by fresh or minimally processed plant foods and decreased consumption of meat, eggs and dairy products. The advantages of eating a plant-based diet include health benefits and much lower environmental and social costs, compared with meat-based diets (Goodland 1997). As illustrated by Frey and Barrett (2007), a vegetarian diet that includes moderate amounts of milk and eggs can reduce carbon footprint by 40%; a diet that is low in meat products has an overall reduction of 22%. A diet that is healthy, can meet nutritional requirements and is made up of local and organic foods has the lowest overall carbon footprint reduction of 44%.

From an environmental point of view, legumes are important as they add vital nutrients (particularly nitrogen) back into the soil as they grow. Legume crops are able to raise soil nitrogen content and play a major role in improving yield and protein content of the next wheat crop, by breaking the cycle of cereal root disease while maintaining soil fertility, thus reducing the need for nitrogen fertiliser. (Douglas 2007)

A meat based diet requires more energy, land and water resources to produce than a plant-based diet. Producing one calorie of plant protein requires an average input of about 2.2 calories of fossil energy. The average energy input of animal protein is more than 11 times greater (Pimentel & Pimentel 2003). The land requirement is approximately a factor of 6-17 times larger for meat protein production. In addition, water consumption is 26 times greater for meat protein production (Reijnders and Soret 2003) than for plant protein production.

Legumes are an excellent source of iron: one serving provides around 2mg. However, because the iron is in the non-heme form, the bioavailability is poor. In several studies, the addition of Vitamin C to meals markedly increased non-heme iron absorption (Messina 1999).

For some general information on the health benefits of consuming legumes visit the following site by Pulse Australia:

Pulses Australia - *Health benefit of pulses* (Poster)

<http://www.pulseaus.com.au/publications/general/524/PA%202008%2004.pdf>

### **Further reading**

#### **Legume Research: Perspectives from the European Union**

Tabled and discussed at the 6<sup>th</sup> European Grain Legumes Conference, Lisbon, November 2007

[http://www.eugrainlegumes.org/documents/documents/Legumes\\_v7.pdf](http://www.eugrainlegumes.org/documents/documents/Legumes_v7.pdf)