GRAINS FOR LIFE

Information kindly provided by
Dr John Radcliffe AM FTSE,
RA&HSSA Grain and Fodder Committee

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ROYAL AGRICULTURAL & HORTICULTURAL SOCIETY OF SOUTH AUSTRALIA INCORPORATED

Grains are a significant part of a balanced diet. South Australian farmers have progressively broadened the range of grains that they grow. Grain crops include wheat, barley, oats, triticale, rye, beans, peas, lentils and chickpeas. Used in rotations, they can maximise the yield of each year's crop. Plantings of cereals can be rotated with grain legumes which can add nitrogen to the soil while ensuring plant diseases do not build up with continuous cropping of one grain. Wheat is currently second to rice as the main human food crop. All can be stored for long periods to ensure food security.

Cereal grains are used to make flour for breads, biscuits, cakes, pasta, noodles, couscous, breakfast cereals, porridge, muesli, and fermented to make beer and other beverages.

Foods containing grains - USDA

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Whole grains are rich in nutrients and plant chemicals with known health benefits. Whole grains have high concentrations of dietary fibre, resistant starch, and oligosaccharides. Whole grains are rich in antioxidants including trace minerals and compounds which have been linked to disease prevention. Epidemiological studies find that whole-grain intake is protective against cancer, cardio-vascular diseases, diabetes, and obesity. Despite recommendations to consume three servings of whole grains daily, usual intake in Western countries is only about one serving/day.

[Joanne Salvin, Nutrition Research Reviews (2004)]

A few people have problems with cereals. Wheat, barley, oats and rye may contain gluten, a class of proteins. For most people, consumption of gluten has no detrimental effects. However, coeliacs and those with gluten intolerance avoid gluten products. But gluten free diets often have a high fat content and are poor in minerals, vitamins and fibre. Scientists are developing a low gluten barley. This will be used as a first step towards producing a range of novel low gluten foods and beverages for the Australian public.

Cereal scientist at work – Australian Centre for Plant Functional Genomics

Grain legumes include beans, peas, lentils, and chickpeas. Protein is main component of human tissues. The range of protein in legumes is upwards from 20% in peas and beans, so legume seeds are a good protein source in human diet. Legume seeds also contain high levels of dietary fibre. Fibre, the indigestible material of plant cell walls, plays an important role in the human digestive system.