J Food Process Technol 2012, 3:10
http://dx.doi.org/10.4172/2157-7110.S1.010

OMICS Group Conferences
Accelerating Scientific Discovery

International Conference and Exhibition on
Food Processing & Technology

November 22-24, 2012 Hyderabad International Convention Centre, India

Fermented foods for improving quality of health

Meena Goswami[1], Heena Sharma[2], Pramila Umaraw[3] and Tanuja[4]
[1,3,4] DUVASU, Mathura, India
[2]Indian Veterinary Research Institute, India

Fermented foods are gaining popularity in global food market because of their nutritional value and consumer awareness. Zymurgy, the science of Fermentation includes the conversion of carbohydrates to alcohols and carbon dioxide or organic acids using yeasts, bacteria, or a combination thereof, under anaerobic conditions. Fermentation can render previously inedible or even dangerous foods ingredients edible and somewhat nutritious like lectins, gluten, and phytates. Fermented foods introduce helpful probiotics to our guts which protect body against colon cancer, relief from lactose intolerance and rotavirus diarrhea, reduction in children's cavities (more vindication for Weston Price), and prevention of reoccurrences of inflammatory bowel disease. The vitamins (like K2) in fermented foods like kefir become more concentrated and bioavailable. Fermenting transforms hard-to-digest lactose from milk to the more easily digested lactic acid. The flora in living cultured foods form a "living shield" that covers the small intestine's inner lining and helps inhibit pathogenic organisms including *E.coli, Salmonella* and an unhealthy overgrowth of *Candida* (yeast). Fermentation also generates new nutrients including omega-3 fatty acids, digestive aids and the trace mineral GTF chromium. Some ferment creates antioxidants (glutathione and superoxide dismustase) that scavenge free radicals which are a cancer precursor.

Agriculture & food security: Challenges in changing climate

Naleeni Ramawat
Amity Institute of Organic Agriculture, Amity University, India

Agriculture is a basic occupation for the survival of around 52% population of the country. In India, climate change impact could be in terms of high temperature and rise in sea levels. Agricultural productivity is sensitive not only to the increasing temperature but also to the changes in other weather parameters as rainfall, radiation etc. Even a one degree rise in temperature in areas like Uttar Pradesh, Punjab and Haryana can amount to a loss of about 6 MT of wheat annually. As crop growth is closely linked to its microclimate, all the projections in changing climate will definitely have a profound effect on agriculture and thereby Food Security. Hence, it is important to assess the impact of changing climate on crops to derive its vulnerability to climate change and suggest some contingent cropping systems to the new emerging climatic situations. Computer simulation models are alternate tools that can be effectively utilized to analyze the impact of climate change.

DSSAT (Decision Support System for Agrotechnology Transfer) are one of the crop models which highly versatile. These crop models can be used for determining the appropriate management strategies for yield maximization under different climatic scenarios and study its effect on food security eg. simulation guided management practices were worked out under potential production and resource limiting situations in Himachal Pradesh. In case of maize, best time of sowing of hybrids was worked out to be last week of April. While for early composite, first week of May proved advantageous and gave maximum yields. Similar studies can help us in developing strategies to combat or minimise Changing Climate effect on agriculture and give a futuristic scenario of Food Security.

Biography

Naleeni Ramawat has completed her PhD in Agronomy from Himachal Pradesh Agricultural University. She is currently working as the Acting Head of Amity Institute of Organic Agriculture a premier Institute of Amity University, Uttar Pradesh. She has published several papers in reputed journals and serving as a reviewer of International Journals. Her doctorate work was on validation of crop models.

nramawat@amity.edu