Agri-2014

OMICS Group Conferences
Accelerating Scientific Discovery

2nd International Conference on
Agricultural & Horticultural Sciences

February 03-05, 2014 Hyderabad, India

Chenopods- the answer to future food security

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Abstract

Underutilized or neglected crops refer to plant species that are indigenous, rather than non-native or adapted introductions, and often form an important part of the culture and diets of the people who grow them. Chenopods (Genus: *Chenopodium*; Family: Amaranthaceae), though termed as underutilized, have been in use since centuries as a leafy vegetable and subsidiary grain crop in different parts of the world. Although only 3 species viz. *C. quinoa*, *C. pallidicaule* and *C. berlandieri* subsp. *nuttalliae* are reported to be cultivated, the leaves and tender stems of numerous other species are consumed as food and fodder. The foliage of chenopods constitutes an inexpensive and rich source of protein, carotenoids and vitamin C, while the grain has high protein content with abundance of essential amino acids, and a wide range of vitamins and minerals. Chenopods could be a key to sustainable agriculture since they are known to thrive and flourish in stress conditions, and on soils with minimum agricultural inputs. The ability of chenopods to produce high protein grains under ecologically extreme conditions makes them an important player for the diversification of future agricultural systems in many parts of the world. The last two decades has seen a surge in research on this underutilized crop and chenopods can play a vital role in the fight against hunger and are a key resource for agricultural development.

Biography

Atul Bhargava completed his Ph.D in 2005 from National Botanical Research Institute, Lucknow and postdoctoral studies from Laboratory of Cellular and Molecular Cytogenetics at the University of Delhi. He is a senior faculty at Amity Institute of Biotechnology, Lucknow and Programme Leader for the prestigious B.Sc (H)-BT programme at Amity University Uttar Pradesh (Lucknow Campus). He has more than 40 research papers in reputed journals, 2 books and numerous book chapters to his credit. Dr. Bhargava is also serving as an editorial board member of several international journals of repute.