

## 7<sup>th</sup> Indo-Global Summit and Expo on **Food & Beverages**

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#### **Protected cultivation technology for safe fresh food production**

Agriculture is highly dependent on environment and it is very difficult to get favorable climatic conditions for crop growth and development as per crop need. Agriculture is basically climate/season based; a hot and humid climatic conditions characterized in rainy and post rainy season is most favorable for both crop and crop enemies. To raise a healthy disease free crop spring-summer seasons was counted as most suitable. But, fast climatic changes happening across the globe has changed climatic characteristics of a season which has resulted in untimely rains and other fluctuations in the spring-summer season raising the challenge to develop climate resilient technologies. Not even that, with time extreme hot and cold temperature stresses have been noticed in geographically varied locations where it was not supposed to be earlier based on various geographical factors deciding the climatic conditions of that area. Therefore, there is need to develop suitable varieties and technologies to sustain these challenges which may come up in form of various biotic and abiotic factors. Vegetable cultivation is an awesome business in India but under open field conditions by following traditional cultivation practices it is difficult to manage various abiotic and biotic stresses. These stresses not only reduce productivity levels but they are also responsible for poor quality specifically during rainy and post rainy season. Mostly to manage biotic stresses farmers spray large amount of different chemicals, this not only enhances the cost of cultivation but it also increases residual toxicity in the freshly produced vegetables which is ultimately hazardous to human health. How to address these issues, can we manipulate the climatic conditions or can we provide protection to the crops against climatic fluctuations and various other related stresses. Yes, protected cultivation technology has the answer to this but it is a tricky technology highly depending upon intelligent implementation of protected structures for vegetable cultivation by having a knowhow on “What, When, Where and Why” to implement. Every protected structure has its own limitations and advantages but the basic benefit is its extra protective shelter restricting or minimizing the exposure of the crops to various adverse factors which are high in open conditions. Even though the application of chemicals for controlling biotic stresses is also low under protected structures which gives a high quality safe vegetables for human consumption.

#### **Biography**

Balraj Singh is presently working as the Director of the National Research Centre on Seed Spices, Ajmer. He is the Founder Secretary of the Indian Society for Protected Cultivation and President of the Indian Society of Seed Spices. Among the few Indian Scientist he is the one who initiated R&D work on protected cultivation in the country under the Indo-Israel Collaborative Project at IARI, New Delhi. Being the Head of the Centre for Protected Cultivation Technology (CPCT), IARI, New Delhi, he has standardized numerous low cost and energy efficient protected cultivation technologies suitable for different agro-climatic conditions for Indian farmers to bring up vegetable production at new heights. He has been the Vice President of Indian Society of Seed Technology and he is a Fellow Member of Academy of Sciences, Engineering and Technology; Indian Society of Seed Technology; Horticulture Society of India, Indian Society of Seed Spices. He has more than 115 research papers to his credit and around 35 book chapters published at national or international levels. He has also written more than 110 technical and popular articles to disseminate the developed technologies more among farmers and stakeholders.

#### **Notes:**

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