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Appraisal of maize as a nutraceutical: Prospects and Challenges

The world is facing multiple challenges of production and quality, including the need for diversification in cetain areas. Maize is a promising crop that can cater to such multiple needs. Maize is an important crop in many parts of the world, and is suitable for cultivation in many agro-ecological zones. Understanding of maize biology over the years has led to directed efforts in developing varieties that are nutritionally as well as agronomically superior. Breeding efforts have resulted in newer varieties of maize, that are richer in nutritional quality. Emphasis has been given on traits like high protein quality, low phytic acid, enhanced levels of provitamins etc. There is also a need to link growers and industry, including consumer awareness for increased use of maize as food. To harness the full potential of maize, sustainable value chains that are remunerative to diverse range of range and industry are needed. The increasing use of advanced technologies offers new dimensions in combining the desired features in one cultivar. In this context, revent scientific developments in the area will be discussed.

Keywords: Maize, High nutrition, Quality Protein Maize, Low phytic acid, Advanced breeding technologies

Biography:

Alla Singh is working as a Scientist (Agricultural Biotechnology) at the ICAR-Indian Institute of Maize Research, Ludhiana. He is currently working on the evaluation of potential of maize in the bio-based industry. He is also working to develop rapid tests for differentiating quality protein maize (QPM) from normal maize, to integrate it into the market chain for increased farmer remuneration. He has worked on the computational prioritization of gene targets for low phytate maize, which is expected to deliver low phyate phenotype without negative pleiotrpoic effects, known in case of natural null mutants.

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