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### **Development and quality evaluation of commercial maize products**

The composition of maize endows it with many health benefits. Antioxidants present in it neutralize the effects of harmful free radicals that cause diseases like cancer. The high fiber content prevents constipation and colorectal cancer. It also makes it suitable for diets that are made to lose weight and those made with the aim of lowering cholesterol levels. Corn is also a good inhibitor of cholesterol and is a protector of the retina, stimulating blood circulation and also prevents the development of colorectal cancer. It promotes tissue regeneration, prevents cardiovascular diseases, retards degenerative processes in general, has anti-wrinkle action, increases blood circulation and encourages diuretic action. However, maize is naturally deficient in lysine and tryptophan, which are two of eight amino acids regarded as essential for humans and are necessarily to be part of a balanced diet. In light of the above deficiency found in traditional maize the use of Quality Protein Maize (QPM) has brought its usage more productive. QPM differs from common maize in the weight distribution of the five protein fractions. The extent of the change is variable and affected by genotype and cultural conditions. It has been found, however, that the opaque-2 gene reduces the concentration of zein by some 30 percent. As a result, lysine and tryptophan content is higher in QPM varieties than in common maize. QPM based value added products are not available in the market for the consumer, even though products developed from maize have high market potential and are most important food alternative to protein malnourished and gluten sensitive patients. Looking to the facts, vast scope of preparation of nutri-rich products of maize and entrepreneurship establishment in the Mewar-Vagad region of the southern Rajasthan where maize is cultivated the most was felt. Besides, the use of maize flour reduces the cost of raw material in comparison to Refined Wheat Flour (RWF) based food products up to 30 per cent, therefore creating scope for more profit margins to the maize growers to en-cash their crop and earn profit at maximum level. Moreover, bengal gram flour is also four times costlier than Maize flour, so this product can be good option for economically weaker sections. It can be concluded that incorporation of quality protein maize in place of refined wheat flour improved the quality of the maize products in terms of organoleptic acceptability and nutritional parameters. Hence blend of QPM flour and refined wheat flour has potential as an alternative to replace refined wheat flour intake for better health and innovative commercializable product.

### **Biography**

Nikita Wadhawan is presently working as an Assistant Professor in the Department of Dairy and Food Technology, CDFST, Udaipur. Has more than 13 years of experience in teaching UG and PG classes at the College of Dairy and Food Science Technology and College of Home Science. She carries a wide experience in the field of extension and research. She was awarded a Senior Research Fellowship from ICMR, New Delhi for pursuing PhD research. She has published more than 30 research publications including papers in journals, popular articles, manuals, folders, etc. She has worked as Co-PI in RKVY sponsored Project 'Centre of Excellence on Maize' where in about 21 commercialized recipes of maize were developed and standardized. She has also worked as Co-PI in DST sponsored project on 'Development of Designer Health Foods' and then promotion among rural women for management of non-communicable diseases.

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