

Applications of Food Biotechnology

Farkhanda Haroon¹ and Mobeen Ghazanfar^{2*}

¹Department of Biology, Virtual University of Pakistan, Pakistan

²Department of Zoology, University of Gujrat, Pakistan

*Corresponding author: Ghazanfar M, Department of Zoology, University of Gujrat, Gujrat, Pakistan, Tel: 92 53 3643112; E-mail: mobimubeen56@yahoo.com

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Abstract

Recently many advances in food industry represent great role of food biotechnology. GM plants and animals are used to enhance taste, shelf life, nutrition and quality of food. On the other hand GM yeast and Bacteria are used to produce enzymes for the sake of food industry. These GM foods are produced by using biotechnological techniques specifically genetic engineering. Genetic engineering purpose is to introduce foreign gene of interest in an organism. This foreign gene introduction is for the purpose of enhancement in quality and quantity of food. So these techniques can be used to erase hunger from poor people of third world specially Africa. Besides positive aspects, there are some concerns. We are changing DNA that can be useful, harmful or neutral so it can result in any unexpected results. These results might include health problems. Due to these concerns, some people oppose food biotechnology. Naturalists are also against food biotechnology. According to them, genetic engineering is intervening in nature.

Keywords: Food industry; Biotechnology; Animals; Shell life; Bacteria; GM yeast

Genetically modified food is synthesized using biotechnological tools. Modern Biotechnology is also called as genetic engineering, genetic modification or transgenic technology. In this technology, Nuclear DNA is modified through insertion of gene of interest (gene encoding desired trait). This modified DNA is called as recombinant DNA. When recombinant DNA expresses, it encodes desired product. This technology, when implemented to enhance food quality or yield is called as food technology [1].

Modern Biotechnology is helpful in enhancing taste, yield, shelf life as well as medicinal B

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This enzyme is used in the production of high fructose corn syrup (nutritive sweetener). This enzyme provides continuous process of three steps providing higher yield. Through purification this yield can be increased up to 90%. In 1986 Grant devised a system to produce α -amylase through genetic engineering using *Bacillus subtilis*

countries Burkina Faso, South Africa and Egypt have already been benefited through adaptation of biotechnological cultivation methods.

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