

BIOTECHNOLOGY AND NUTRITION: PERTINENT ISSUES

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Food and nutrition quality and quantity is a major problem in Africa and other developing countries. It is therefore a prerequisite that major actions have to be taken by government and non-governmental organizations to alleviate these problems. Some of the actions that I believe need to be taken into consideration include among others, training of nutritionists who from early studies could target major problems and with consultation with other organizations and individuals minimize these problems.

Populations are increasing rapidly world wide, yet the amount of arable land available for production of food is diminishing. Population increase and the need to produce more food go hand in hand. According to a joint report by World Conservation Union (IUCN) and the Washington based agriculture organization, Future Harvest, more than 1.1 billion people - 20 percent of the world's population - live within the 25 most threatened, species-rich areas, named "biodiversity hotspots". Extreme malnutrition and hunger are prevalent among people living in at least 16 of the world's 25 key biodiversity hotspots. In these hotspots population is growing more rapidly than in the world as a whole. New technologies, therefore, that sustain the environment, reduce costs, increase yields and provide more nutritious food are needed. Because biotechnology enables researchers to provide plants with new, beneficial traits not possible before, it can significantly increase the variety of plants farmers grow, while reducing the costs of production and in the long run alleviate problems of malnutrition.

The study of nutrition in conjunction with

biotechnology is an important aspect of improving the nutritional status and standards of world population. Genetic modifications of plants now under cultivation have been directed towards agronomic enhancement. Nutritional changes may have a more profound impact on the health of the population. At present there are no foods derived from genetically modified plants modified to enhance nutrition in the commercial market. However, there are several plants with altered nutrient composition being developed using recombinant DNA technology. These have been designed to modify nutrient composition and levels or change the functionality of a product. An example of the latter is potato tubers containing increased amounts of starch that is distributed more uniformly, resulting in a more efficient processing, lower fat absorption and improved texture. Another example is the recently reported "golden rice" which was specially designed to target vitamin A deficiency blindness among people living in developing countries. These examples highlight the potential of foods with modified nutritional profiles to reduce the incidences of nutrition-related conditions or diseases.

I do have an inspiration that we young people as much as we have a great task ahead of us, have great minds capable of coalescing with others to work together and improve the livelihoods of our country men/women and especially to increase the awareness of nutrition and nutrition related diseases. In as much as food quality is important, food quantity is also of concern especially due to increasing world population.

It is my hope that just born African Journal of Food and Nutritional Sciences will create an enormous awareness to the readers on the importance of nutrition and diet to the health of individuals. I would also hope that more contributors will come in to make the journal a success.

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