

Bioethics and Genetically Modified Foods

Bioética y alimentos transgénicos

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Abstract:

Currently, the genetic modification of plants, animals and other organisms has intensified and has allowed the development of increasingly advanced methods. The creation of transgenic foods, their use and distribution have generated various positions, since there is no certainty about their effects on human health or the environment. The objective of bioethics is then to question what is the best environment for the development of new food technologies and balances the ideas of the sectors that support or reject the production and use of genetically modified organisms, and in this way promotes clear and free knowledge of the information contained in these products.

Keywords:

Genetically Modified, foods, production, development

Resumen:

En la actualidad la modificación genética de plantas, animales y otros organismos se ha intensificado, permitiendo desarrollar métodos cada vez más avanzados. La creación de alimentos transgénicos, su uso y su distribución han generado diversas posturas, pues no se tiene certeza sobre sus efectos en la salud humana o el medio ambiente. La bioética viene, entonces, a cuestionar ¿cuál es el mejor ambiente para el desarrollo de nuevas tecnologías en alimentos? y pone en la balanza las ideas de los sectores que apoyan o rechazan la producción y el uso de organismos genéticamente modificados, y de esta forma promueve el conocimiento claro y libre de la información que encierran estos productos.

Palabras Clave:

Transgénico, alimentos, producción, desarrollo

INTRODUCTION

Since a few years ago, common language has introduced terms like, “transgenic” or “transgenic foods”, which convey suspicion by only mentioning them, and frequently they lead to a social debate with controversial opinions¹. There is no doubt that any scientific advance that takes humankind to produce more food with better quality, always with safety conditions, must be well taken, as we should not forget that today, millions are suffering and starving in very large regions of the world. According to Food and Agriculture Organization (FAO), it is expected that agriculture allows feeding humankind (constantly increasing) increasing approximately 8 million people by 2020. Among these, more than 840 million people are starving and about 1.300 million have no clean water, same number of people earning less than 1 dollar per day². Biotechnology, science that generates genetically modified foods, other organisms, and microorganisms, influence directly and indirectly to counteract these effects³.

The advance of biology in the last few years has been spectacular. The 20th century has been especially important regarding these accomplishments regarding the knowledge of living beings (animals or microorganisms) in their natural habitats. Above all, it has been clear that all living beings have in common a type of organic macromolecules named nucleic acids (deoxyribonucleic acid-DNA- and ribonucleic acid -RNA-) which are the main element, the molecular unit of biology. Both host the essence of life and its projection from parents to children in a way of inheritance⁴. This great discovery, made in the middle of the 19th century, curiously from experiments made out of bacteria, shown the crucial role of DNA in the transference of information and inheritance. Since then, the availability of biological tools (each time more tools and each time more useful) has allowed advances leading to a new branch of Biological Science called Genetic Engineering or Recombinant DNA Technology with the objective of recombining to originate the so-called “Genetically Modified Organisms”, from which the “Genetically Modified Foods” arise⁴.

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