



Three Day National Seminar on Higher Education in India : Challenges and Prospects

13,14,15 December,2011



Social Impact of Genetic Engineering and the Recent Trends

Biotechnology (BT) and its allied subjects including Genetic Engineering is revolutionizing the field of Health care, Agriculture, Large scale industrial processes and Environment conservation. Billions of dollars are pumped in to this fascinating scientific sector by both public and private sector enterprises all over the world for reaping the BT benefits. Genetic engineering and Biotechnology could deliver an array of useful and unique products including products for disease diagnosis and therapy, disease and pest resistant high yielding agriculture crops, eco-friendly remediation for polluted ecosystems and substances and real substitutes for chemical pesticides, insecticides and fertilizers. In the industrial production sector Biotechnology is providing green technology services by reducing polluting byproducts to the bare minimum. Though it was initially felt that products from this technology is going to be expensive, in the course of the time it proved that biotech products are cost effective.

This is one side of the story and breakthroughs in the research and development sector in this fascinating area resulted in raising the eyebrows of many because of the many ethical, social and legal issues resulted out of the biotech products, processes and services. When Biotechnology introduced recombinant products including human insulin and other biologicals the common public wholeheartedly accepted it and when the same scientists started animal cloning experiments, people started raising doubts about what will be the outcome if scientists intent to clone humans. As a result of Humans Genome project the entire genetic makeup of the humans are now available and this can be used and misused at the hands of corporate profit making bodies posing threat to the privacy and freedom of an individual. Unethical practices for bypassing infertility including surrogate wombs are a threat to basic ethics and human civilization. Genetic engineering practices in agriculture for enhanced food production resulted in many transgenic crops including BT Brinjal, BT Maize, etc. These products though unnecessarily, invited the wrath of many peasant organizations and NGOs mainly because of the lack of proper awareness among them. But on the other side, it is a fact that most of these transgenic plants are the products of transnational corporations and the common public never wanted to trust them. So a good deal of public sector involvement in the Biotech business sector

is very much needed for a people oriented dissemination of technology for achieving food security. In the BT sector a balanced approach is very much required with better Governmental Control over the research in this area giving special emphasis to ethical, social and legal issues. The impact of genetic technology on humanity is far more than all the scientific developments in human history. Genetic engineering does have the ability to change the thinking and behavior in many human societies. The point we need to discuss in depth is whether the fruits of this hi-technology should be denied to the common public citing the ethical and social impacts and if not what will be our strategy to regulate the BT business and research affairs.

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