

Chapter 6

Entrepreneurial Approach to Biotechnology Policies and Development in India

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ABSTRACT

Biotechnology is globally recognized as a rapidly emerging and far-reaching technology. It is aptly called “technology of hope”, as its promising to be powerful enabling technology that can revolutionize agriculture, healthcare, industrial processing and environmental sustainability. The recent advances in life sciences unfold a scenario energized and driven by the new tools of biotechnology. There are number of therapeutic biotech drugs and vaccines that are marketed and many are in clinical development. In addition, there are a large number of agro-biotech and industrial biotech products that have enormously helped mankind. Biotechnology sector in India is gaining global visibility and tracked for emerging investment opportunities. Through in depth analysis based on published reports and secondary data with grounded theory approach the chapter aims not only to trace the development of biotechnology and reviews policies but also to elucidate through cases the entrepreneurial approach adopted for biotechnology development in India.

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INTRODUCTION

In recent years new technologies have emerged propelling further the progress of industries in the developed countries. Biotechnology is identified as one of that cluster which plays a leading role (Colombo, 1991). With biotechnology, low volume high cost new products, clean and faster bioprocesses and environmental services are promised. Because of its bright application potentials and because of its intense advertisement, biotechnology is the topic of the day discussion, not only in the developed countries, but also in the developing countries. Asian region in general and India in particular is not exempted from such an enthusiasm. So then what is biotechnology? It is a field of study that seeks to generate new products and processes using the concepts and methods of modern biology. It blends the principles and practices of biochemistry, genetics, and microbiology. Although the roots of this technology are ancient and have been employed in fermentation processes for hundreds of years, “biotechnology” as a new science was rejuvenated by developments in molecular biology, genetic engineering, and cell chemistry. Over the past 15 years, biotechnology has provided opportunities to create and support many new industries. Now these bio industries are beginning to be highly profitable. For developing countries, the promise of biotechnology is particularly strong. Biotechnology promises many positive benefits (Bruche, 2012). Among the projected positive outcomes of advances in biotechnology are:

- Biotechnology will be able to complement better conventional technologies.
- Improved nutrition brought about by increases in farming and agro-industrial production, and the use of fermentation techniques in food processing.
- Better integration of food production with the production and consumption of bioenergy, especially in small rural communities.
- Improved production of livestock, and better health of domestic animals.
- Improved diagnosis and prevention of human diseases, as well as improvements in public health.
- Increases in income and employment opportunities.
- Improve pollution control.

Thus, all these factors will have far-reaching consequences. Hence, through in depth analysis based on published reports and secondary data with grounded theory approach the chapter aims not only to trace the development of biotechnology and reviews policies but also to elucidate through cases the entrepreneurial approach adopted for biotechnology development in India.

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