

potential to impact upon social, ethical and economic values, has earned it the status of the third technological revolution of this century.

Two similar observations can be made about Spanish and Canadian trade:

- 1) Full potential has not yet been realized,
- 2) Important business opportunities are now beginning to emerge as a critical mass of know-how and economic interest is established.

Before reviewing areas of biotechnology where definable business opportunities are appearing in Canada and Spain, an overview of the major biotechnological industries will precede a comparative analysis of Spanish and Canadian markets.

II. BIOTECHNOLOGY: A Current Perspective

The perspectives and the terminology used in this report recognize the increasing involvement in biotechnology of professionals who do not necessarily have a life-sciences or engineering background. Biotechnology is not an industry or a sector^o. Nor it is new. Indeed some of the biotechnology products (wine, cheese, bread, etc.) are several thousand years old. Biotechnology is a set of multidisciplinary technologies whose application affect a vast number of industries. There are many official definitions of biotechnology according to international institutions or national origins. For example, Australia, Canada, Germany, France, Japan, Holland, the OECD, the European Federation of Biotechnology, the International Union of Pure and Applied Chemistry, etc., all have their own definition of biotechnology. It appears however, that a number of countries have adopted the following definition: "Biotechnology is the synthesis of multiple disciplines including Genetic Engineering, Chemical Engineering, and Industrial Microbiology with the market forces to create products and services".

The biotechnological revolution taking place in the last decade of the 20th Century is being reported in newspapers and financial publications. Molecular biology first suggested revolutionary cures and enormous markets in the mid-1970s. But not until the late 1980s did the right combination of circumstances occur to put this new knowledge into commercial ventures. The relentless pace brought about by the application of new biotechnological methods into such sectors as pharmaceuticals, wastewater treatment, food processing and agri-culture, makes it difficult to portray definitively the present status of biotechnology.

^o The above is not a superficial observation. It is surprising the number of documents and publications, particularly those arising from financial and market analysts who use the term "biotechnology industry" (sic). This confusion leads to poor business data and predictions as industrial sectors and production volumes are indiscriminately lumped together.