

Comments

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SECTION TWO

BIOTECHNOLOGY IN LATIN AMERICA

COMMENTS

Luis Ramiro Alfonsin

By His Excellency Mr., Ambassador of Argentina to the EEC

It is an honour for me to be able to participate in this Seminar on Biotechnology in Europe and Latin America' in the company of a group of scientists, industrialists and government officials.

Some aspects of biotechnology are presented as one of the most stimulating sciences of our time.

In Latin America, one has managed to successfully manipulate some of the most traditional aspects of biotechnology, such as the improvement of plant and animal species.

Our progress is not as obvious in other sectors of more recent discoveries such as new genetic engineering techniques.

Some scientists agree that progress in biotechnology will have a negative effect on developing countries. Others think that it will be difficult for poor countries to benefit from numerous advances which take place in this sector.

I personally think that no futurologist feels at his ease when his forecasts do not come true. But whatever the final result, Latin America will not be able to remain outside the development of biotechnology. This is why I enthusiastically congratulate the organisers of this seminar for their idea to gather men and women of both continents showing an interest in these themes.

Many of the businesses created to use genetic engineering for the discovery of new processes or products have resulted from the vision and enthusiasm of the scientists who have imagined the potential results from these recently introduced tools. It seems that it was not very difficult for these pioneers to communicate their enthusiasm to investors willing to take the risk and to accompany them in their dreams. This was followed by hardship, frustrations, and elusive results for which one has had to make an effort in order not to be despondent. This is how this young industry has

had to mature in a very short time and without giving way to despair, has had to learn to be satisfied with more realistic objectives or be more patient, but always keeping in mind the possibility of making surprising discoveries.

One sees today an industry which is starting to move steadily, even if this sector is not suitable for people without courage or for those who do not want to take risks.

I imagine that from the point of view of the scientist, the researcher, the present climate of biotechnology is something like an ideal environment. It appears as an enormous sector presenting great possibilities which researchers, as well as entrepreneurs and scientific research policy makers, should distance before deciding where to direct the efforts and the resources, which are always limited.

It is certain that Europe will attempt to dedicate itself to highly sophisticated small scale productions wherein costs and ingredients coming from plants or animals have a relatively small importance.

I think that there are three different sectors in which biotechnology can bring fundamental advances for humanity.

Undoubtedly what is most important is the pharmaceutical sector which appears to present an almost unlimited range of possibilities both for medicines as well as for diagnoses. Possible progress in the pharmaceutical sector is the one most stimulating our imagination and our hope. Results which were hardly envisageable have been obtained this century. This brings to mind insulin, tissue plasminogen activator, vaccines against malaria or Chagas' disease which preoccupies us so much, or more efficient vaccines against foot and mouth disease and of course, the whole area of immunology and fight against cancer.

A different fundamental sector for biotechnology is the production of basic chemical products from material of organic origin. One should start to be ready for the time of scarcity of reserves of raw materials. For several decades, Argentina has produced acetone, butane and ethane from cereals and sugar through fermentation. Brazil produces large quantities of ethane through fermentation of sugar. Microbial processes could help to solve problems relating to environmental contamination and at the same time produce fuel and chemical products. In contradiction to these advances, it is surprising to see large projects proposed that are based on European

agricultural production which is produced at terribly high cost and which requires enormous subsidies in order to be able to be used for these industries. It seems to me more reasonable to install these industries in countries with a more efficient system of agriculture where the investors will not depend on political change, protectionism or to subsidies.

The other interesting sector for biotechnology is agricultural production. Possibilities for improvement are also nearly infinite and the needs of humanity are very urgent in this sector. However, Europe also needs to correct immediately the expensive inefficiency of its agriculture. It would be wrong to continue to produce at exceedingly high costs whilst sheltering itself inside a protectionism which causes prejudices. Europe needs to start looking for new varieties of cultures which do not require as many fertilisers or pesticides to be ready when the time comes to honestly compete at a world level. The research in new symbiotic systems has to be intensified which will enable the exploitation of atmospheric nitro-gens for surface plants reducing costs and water contamination. It is very interesting to discover new varieties adaptable to zones of little rainfall or finding methods of cultivation which reduce water requirements. The utilisation of bacteria in the fight against the effect of frost seems very promising and it should be possible to introduce new cultures to areas having short summers. Europe could profit from annual cultures producing cellulose at acceptable costs. It is also interesting to find saline resistant cultures.

The European consumer will want many agricultural products to regain the flavour and the quality they had in the past and which were lost because of technical methods that can be only used in the community market which allows high prices independent of quality.

With so much work to be achieved, it does not seem reasonable to devote efforts and scarce funds to try to increase production by high cost technical methods which make it impossible to resist honest competition. The Latin American technicians want to collaborate in this scientific research. Latin American agriculturists are not afraid to compete on an equal footing with European agriculturists. It is not possible to compete with funds from the North American Treasury or Community budgets.

This does not mean that Latin America must give up participating in the development of sophisticated techniques. On the contrary, we feel obliged to reduce the gap which separates us from the industrialised

countries in the biotechnological sector, as well as in other scientific and industrial sectors, especially if we take into consideration the fact that the development of some products, without economic interest for the developed countries, may be of vital importance for us.

Europe and Latin America can collaborate and be complementary in this exciting adventure of biotechnology. I think that there will be advances in research, development and production which could be realised at a lower cost in Latin America than in Europe.

This first meeting will help to make experts from both continents familiar with each other. I expect that this meeting will be successful. Interesting ideas for all participants will be brought forward. I hope that at the end of the meeting they will already be thinking of the next seminar. Along these lines, I allow myself to urge the organisers, enriched by the experience gained during this meeting, to continue with the idea of maintaining this kind of contact which will certainly be of great interest to both regions.