BIOTECHNOLOGY AND STRATEGY FOR DEVELOPING HUMAN RESOURCES IN HỒ CHÍ MINH CITY

by MINH TÂM

On March, 11, 1994, Prime Minister Võ Văn Kiệt signed the decree No 18/CP on "Developing biotechnology in Vietnam from now until 2010". This is the second decree of the government after the one on developing informatics, on the plan to develop key sciences and technology.

Up till now, biotechnology has been applied to agricultural production, food and foodstuff processing and protection of the environment in HCMC. One of the outstanding results of this application was the doubling of the Đà Lạt potato yield by method of multiplying. Recently, after the flood in 1994, orange and tangerine orchards in the Mekong Delta were severely damaged by pest, dozen billions were lost, HCMC biotechnology has succeeded in producing a new anti-virus seedlings of orange and tangerine by micro-grafting technique. Due to biotechnology, quality of Vietnam coconut jelly can bear comparison with that from Philippines (whose biggest buyer is Japan), and if customers are found, HCMC can mass-produce this product.

The biotechnology is based on development of various sciences, thus the biotechnology can only has meaning if we can apply effectively achievements of various sciences to production of certain products or improve living conditions. However, the biotechnology will lose its meaning if there is no appropriate investment in training experts in biotechnology. Doctor Nguyễn Đình Huyên, President of HCMC Association of Biotechnology, said in the workshop of "Biotechnology" held in HCMC in April 1995: "When a scientist leaves his (or her) laboratory for making studies abroad, he (she) seems to be appointed to another office. He chooses subject and institute by himself and forgets temporarily about his responsibility to his organization. When his studies are done, if he finds no area to apply his knowledge to, he will wait for the next chance to make his studies abroad".

This situation has made many internationally-funded projects become inapplicable because many scientists, after being trained in foreign countries and returning home, have worked for other organization and all money spent on their studies vanished into thin air. According to Doctor Huyên, there are three solutions to this situation:

- Both short- and long-term training courses should be based on real demands.
- In order to carry out this plan effectively, HCMC government can meet all expenses of having experts trained in foreign countries and watch over result of their studies, instead of depending on foreign aid.
- Taking foreign training courses should be connected to the responsibility for developing home organization.

Realities of biotechnological education in HCMC shows that the classic biotechnology is stressed on too much: microbiology, applied biochemistry, growing and transplanting tissue necessary for multiplying new plant strains. In addition, only a few Vietnamese students show interest in biology and biotechnology. This is an opposite tendency compared with developed countries. Just because of this, Doctor Hồ Huỳnh Thùy Dương from HCMC University suggested that some basic knowledge about biotechnology should be introduced to secondary education in order to provoke interest and encourage pupils to choose biotechnology as a subject of study in university. Doctor Thùy Dương also said that we should invite foreign experts to teach biotechnology in Vietnam in order to help us bridge the gap between Vietnam and the world in this subject.

It's worth noting that in the development of the biotechnology in the world and Southeast Asian countries in the past 15 years, the private sector played an important role. This feature is easy to understand. Unlike oil or heavy industry, the biotechnology requires a small starting capital and has a specific market. It is appropriate to small and medium businesses and capable of adapting to ever-changing conditions of the economy.

Developing the private sector comprising companies with foreign capital and technology is the best way to form the biotechnology in Vietnam. Doctor Huyên petitioned the Government to favor foreign investors who want to realize biotechnological-intensive projects. He said that: "If we want foreign and local investors to do business in biotechnological area, we should make law on industrial property. New biotechnological inventions could only be applied to production if all violations of this law are punished".

Training experts in biotechnology is a base for doing reasearches, applying to production and absorbing new technology. In the US, it is estimated that in 2000, there will be one million people working in biotechnological area, 75,000 of which will be postgraduates and some 30,000 will be graduated from universities every year. In Vietnam, and in HCMC to be precise, biotechnological education is carried out at HCMC University and HCMC Polytechnic. Students graduated from HCMC University are good at biology, molecular biology, biotechnology but not good at practicing because they have no equipment necessary for conducting experiments and have no chance to come into contact with production line. On the other hand, students graduated from HCMC Polytechnic are good at manual skill but not good at genetics. Thus in HCMC there is no university that can produce experts in biotechnology in its strict sense. This is one of the first challenges facing HCMC authorities in making a strategy for developing human resources■