

**GOVERNMENT OF INDIA
AGRICULTURE
LOK SABHA**

UNSTARRED QUESTION NO:151
ANSWERED ON:20.02.2006
RESEARCH AND DEVELOPMENT FOR AGRICULTURE
Vijay Krishna Shri

Will the Minister of AGRICULTURE be pleased to state:

- (a) whether world class research facility are required to be developed in the country in the field of Bio-technology; and
- (b) if so, the fresh initiatives taken by the Government in this regard and the achievements made as a result thereof during the last and current year?

Answer

THE MINISTER OF STATE IN THE MINISTRY OF AGRICULTURE (SHRI KANTI LAL BHURIA)

(a) Yes, Sir.

(b) The Indian Council of Agricultural Research (ICAR) has taken several initiatives for developing research facilities like infrastructure, equipment and training, in its different institutes and the State Agricultural Universities for enhancing the productivity and production of crops, livestock and fish through biotechnological interventions. Development of human resource through training in specific areas in the world class national and international laboratories, international collaborations, identification of priorities and action plan through meetings/workshops etc., development of network programmes are already being undertaken. In addition to the biotechnological work being undertaken at various ICAR institutes, a National Research Centre for Plant Biotechnology, New Delhi and a National Research Centre on DNA Fingerprinting, New Delhi are already working on the aspect. Recently, action has been initiated to develop Indo-US collaborative research programmes focusing biotechnology as major field of research collaboration. A scheme 'National Fund for Basic and Strategic Research' has also been sanctioned.

Major achievement in the area of agricultural biotechnology are:-

Molecular detection techniques developed for testing of transgenic crops.

DNA fingerprinting of 31 crop species done.

DNA vaccine against brucellosis of goat developed.

Gene for blast resistance in rice tagged.

Three bacterial leaf blight resistance genes for multiple resistance pyramided.

Molecular genetic studies using DNA marker system has been established in different species of livestock using micro satellite and RFLP methods as a prelude to practicing marker assisted selection.

Isolated, cloned and sequenced many economically important genes of indigenous livestock species.

Standardized embryo technology in buffalo, cattle and goat and put into practical use.

Developed Poly Chain Reactions (PCR) based and monoclonal based diagnostics for major infections of livestock.

Developed a recombinant vaccines against anthrax and sold to private entrepreneur.

Developed molecular diagnostic kit for early diagnosis of white muscle syndrome in giant freshwater prawn.

A diagnostic PCR kit for identification of dreaded White Spot Syndrome Virus (WSSV) in shrimp has been developed and has been commercialized.

Technology for in-vitro pearl production in the Indian pearl oyster, Pinctada fucata and the Haliotis varia through tissue culture method has been developed.