GOVERNMENT OF INDIA
MINISTRY OF FISHERIES, ANIMAL HUSBANDRY AND DAIRYING
DEPARTMENT OF ANIMAL HUSBANDRY AND DAIRYING
LOK SABHA
UNSTARRED QUESTION NO. 2613
TO BE ANSWERED ON 5TH AUGUST 2025

IMPROVEMENT IN GENETIC QUALITY AND CROSSBRED CATTLE

2613. SHRI BASTIPATI NAGARAJU:

Will the Minister of FISHERIES, ANIMAL HUSBANDRY AND DAIRYING
मत्स्यपालन, पशुपालन और डेयरी मंत्री
be pleased to state:

(a) whether the Government has launched any programmes or projects specifically aimed at making indigenous and crossbred bovines more resistant to emerging diseases like lumpy skin disease, foot and mouth disease and other zoonotic infections and if so, the details thereof;

(b) the details regarding measures being taken by the Government to scientifically improve the genetic quality of indigenous and crossbred cattle without compromising disease resistance traits;

(c) whether any dedicated research projects or collaborations with national research institutes or universities are being undertaken by the Government to identify genetic markers for disease resistance in Indian cattle breeds and if so, the details thereof and if not, the reasons therefor; and

(d) the details regarding the steps taken or proposed to be taken by the Government to establish new breed development institutes or strengthen existing ones, particularly in disease prone regions, to accelerate scientific breed improvement and disease prevention?

ANSWER

THE MINISTER OF STATE FOR FISHERIES, ANIMAL HUSBANDRY AND DAIRYING

(PROF. S. P. SINGH BAGHEL)

(a) and (d) No Sir, however, Department is implementing the Livestock Health and Disease Control Programme (LHDCP) Scheme, in all States/UTs with the aim of reducing risk to animal health by prophylactic vaccination against diseases of animals, capacity building of Veterinary services, disease surveillance and strengthening veterinary infrastructure which contribute to the improvement and protection of livestock health. Financial assistance is provided to the States/UTs as per the demand for procurement of vaccine doses for carrying out vaccination against Lumpy Skin Disease (LSD) and related disease control activities under Assistance to State for Control of Animal Diseases (ASCAD) of Livestock Health and Disease Control Program (LHDCP). The funds of Rs. 196.61 crore have been released to States/UTs during the year 2024-25. The states/UTs are also supported technically through the visits of Central Expert Teams for on ground support including physical and virtual

meetings for sensitization the states / UTs authorities. The guidelines/advisories for control of LSD including vaccination and treatment have been circulated to States /UTs for implementation so as to control and contain the disease within a definite timeline.

Under Assistance to States for Control of Animal Disease (ASCAD) of LHDCP support is provided to State/UT for establishment and strengthening of Laboratories and Biological Production Units (BPUs) for disease diagnosis and supplementing production of diagnostic kits/vaccines, capacity building and awareness/training topics like Good Animal Husbandry Practices, biosecurity/sanitary measures, vector control etc.

The Crisis Management Plan (CMP) has been developed for Livestock diseases in managing and responding to animal disease outbreaks, ensuring swift containment and mitigation. Standard Veterinary Treatment Guidelines (SVTGs) are formulated for best practices in veterinary care to enhance livestock health and disease control.

Further, the Department provides 100% central assistance to Indian Council of Agricultural Research-National Institute of Veterinary Epidemiology and Disease Informatics (ICAR-NIVEDI), Bengaluru for carrying out sero-surveillance, sero-monitoring, disease warning and alerts are also provided on 15 diseases in local languages to farmers, veterinarians and field officials through National Animal Disease Referral Expert System (NADRES) platform.

(b) In order to complement and supplement the efforts made by the States and Union Territories to scientifically improve genetic quality of indigenous and crossbred cattle population without compromising disease resistance traits, the Government of India is implementing Rashtriya Gokul Mission across the country and following measures have been taken under the scheme:

(i) Nationwide Artificial Insemination Programme: Under the Rashtriya Gokul Mission, the Department of Animal Husbandry and Dairying is expanding artificial insemination coverage to boost the milk production and productivity of bovines.

(ii) The Department of Animal Husbandry and Dairying has established sex sorted semen production facilities and implementing Accelerated Breed Improvement Programme using sex sorted semen with the aim to produce female calves up to 90% accuracy thereby enhancing milch cattle population, breed improvement and farmers' income. Government has launched indigenously developed sex sorted semen technology to deliver sex sorted semen at reasonable rates to farmers.

(iii) Implementation of In-Vitro Fertilization (IVF) Technology: To propagate elite animals the Department has established 23 IVF laboratories. The technology has important role in genetic upgradation of bovine population in single generation. Further, to deliver technology at reasonable rates to farmers Government has launched IVF media.

(iv) Progeny testing and Pedigree Selection: In order to produce high Genetic merit bulls of Indigenous breeds, Department of Animal Husbandry and Dairying is implementing Progeny

Testing and Pedigree Selection programme. HGM bulls of indigenous breeds and crossbreds have been made available to semen stations.

(v) Genomic Selection: To select High Genetic Merit (HGM) animals and to accelerate genetic improvement of cattle and buffaloes, the Department has developed unified genomic chips—Gau Chip for indigenous cattle and Mahish Chip for buffaloes—specifically designed for initiating genomic selection of high genetic animals in the country.

(vi) Multi-purpose Artificial Insemination Technicians in Rural India (MAITRIs): Under the scheme MAITRIs are trained and equipped to deliver quality Artificial Insemination services at farmers' doorstep.

Further, to strengthen infrastructure for taking up holistic and scientific development of bovine population, projects have been sanctioned for establishment/ strengthening of Centre of excellence, existing semen stations, genomic centre; sex sorted semen production facility and IVF labs.

ICAR Institutes are undertaking measures including selective breeding and genetic evaluation to improve genetic quality without compromising disease resistance. The first synthetic breed of cattle Frieswal was developed by inclusion of 5/8 Holstein Friesian and 3/8 Sahiwal genetic makeup.

(c) The Department of Animal Husbandry and Dairying is implementing National Livestock Mission and under the scheme there is a component named 'Research and Development and Innovations, through which funding support to incentivize research activities is given for advancement of livestock species, fodder development, and value addition in livestock and livestock products.

As per ICAR, Animal Science Institutes has undertaken research projects to identify genetic markers for disease resistance in Indian cattle breeds. Following is the details of the project: (i) A project titled "Deciphering the Genetic Basis of Lower Susceptibility of Indigenous Cattle to Bovine Anaplasmosis" has been initiated on March 2024 (for three years duration) at the ICAR-National Bureau of Animal Genetic Resources (NBAGR), Karnal, with funding support from the National Agricultural Science Fund of ICAR and (ii) The All India Coordinated Research Project (AICRP) on Cattle Indigenous Breed (Sahiwal) is being implemented with ICAR-CIRC, Meerut as the Lead Centre. ICAR-IVRI serves as one of the collaborating units under this project, contributing to research and development efforts focused on the genetic improvement, conservation, and sustainable utilization of the Sahiwal breed.

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