

GOVERNMENT OF INDIA
MINISTRY OF FISHERIES, ANIMAL HUSBANDRY AND DAIRYING
DEPARTMENT OF ANIMAL HUSBANDRY AND DAIRYING
LOK SABHA
UNSTARRED QUESTION NO. 1898
TO BE ANSWERED ON 11TH MARCH 2025

ARTIFICIAL INSEMINATION

1898. SHRI GURJEET SINGH AUJLA:

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

- (a) whether the success rate of artificial insemination in India is only around 30% compared to 60-70% in the USA and Europe and nearly 100% in Brazil, what concrete steps is the Government taking to improve its efficiency and effectiveness;
- (b) whether the Government acknowledge that the import of Brazilian bull semen for crossbreeding could lead to genetic erosion of India's indigenous cattle breeds, which are vital for sustainable dairy farming;
- (c) the measures being implemented to safeguard and promote indigenous breeds while enhancing milk production for the country especially in Punjab; and
- (d) whether technological advancements, scientific interventions, and policy initiatives are being introduced to improve artificial insemination success rates in indigenous cattle, ensuring India's self-reliance in dairy production and if so, the details thereof?

ANSWER

THE MINISTER OF STATE FOR FISHERIES, ANIMAL HUSBANDRY AND DAIRYING

(PROF. S. P. SINGH BAGHEL)

(a), (c) and (d) The success rate of Artificial Insemination in the country is ranging from 32%-35% as per data reported by the States on Bharat Pashudhan portal. The following steps, in the form of technological advancements, scientific interventions and policy initiatives have been undertaken by the Department of Animal Husbandry and Dairying for enhancing efficiency and success rate of Artificial Insemination among bovines including indigenous breeds in the country.

(i) Nationwide Artificial Insemination Programme: The programme aims at enhancing AI coverage and to deliver quality Artificial Insemination Services (AI) at farmer's doorstep with semen of high genetic merit bulls including indigenous breeds.

(ii) Progeny testing and Pedigree selection programme: This programme aims to produce high genetic merit bulls, including bulls of indigenous breeds. Progeny testing is implemented for Gir, Sahiwal breeds of cattle, and Murrah, Mehsana breeds of buffaloes. Under the Pedigree selection programme Rathi, Tharparkar, Haryana, Kankrej breed of cattle and Jaffarabadi, Nili Ravi, Pandharpuri and Banni breed of buffalo are covered. Disease free high genetic merit bulls produced under the programme are made available to semen stations across the country including Punjab.

(iii) Strengthening of semen stations: In order to attain qualitative and quantitative improvement in semen production, strengthening of semen stations is covered under Rashtriya Gokul Mission. The Department of Animal Husbandry and Dairying has formulated Minimum Standard Protocol for semen production and constituted Central Monitoring Unit (CMU) for evaluation and grading of semen stations across the country including Punjab.

(iv) Multi Purpose Artificial Insemination Technicians in Rural India (MAITRI): MAITRIs are trained and equipped to deliver quality Artificial Insemination services at farmers' doorstep. Further, assistance is made available to States and Union Territories for refresher training of artificial insemination technicians and professionals including for Punjab.

(v) Sex Sorted Semen: The Department has established sex sorted semen production facilities at 5 government semen stations located in Gujarat, Madhya Pradesh, Tamil Nadu, Uttarakhand and Uttar Pradesh. 3 private semen stations are also producing sex sorted semen doses. So far 1.17 crore sex-sorted semen doses from high genetic merit bulls have been produced including bulls of indigenous breeds and made available for Artificial Insemination.

(vi) Accelerated Breed Improvement Programme using sex sorted semen: This program aims to produce female calves with up to 90% accuracy, thereby enhancing breed improvement and farmers' income. Programme is implemented in all States including Punjab. Government has launched indigenously developed sex sorted semen technology to deliver sex sorted semen at reasonable rates to farmers.

(vii) Implementation of In-Vitro Fertilization (IVF) Technology: To propagate elite animals of indigenous breeds, the Department has established 22 IVF laboratories. The technology has important role in genetic upgradation of bovine population in single generation. Funds have been released to Punjab for establishment of IVF labs at Patiala and Ludhiana; both the labs are now operational. Further, to deliver technology at reasonable rates to farmers, Government has launched indigenous IVF media.

(viii) 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 merit animals of indigenous breeds in the country.

(b) In order to ensure the protection of indigenous breeds from indiscriminate breeding, breed purity test of all imported germplasm is conducted in the country. To regulate import of germplasm and to avoid ingress of genetic disorders into the country Department has formulated guidelines for import and export of bovine germplasm.