Guidelines for export /import of bovine germplasm (Revised 2011)

The import and export of the cattle/ buffalo germplasm is under restricted list and is allowed against the license issued by Directorate General of Foreign Trade, Ministry of Commerce on the recommendation of this Department.

Introduction of temperate dairy breeds in the country for crossbreeding indigenous non - descript cattle has been accepted for quite some time now. In pursuance to this, the need has been felt by number of State Governments/ Organisations to import exotic germplasm to produce the quality cross-bred animals. With the extension of the breeding programme and the artificial breeding network, a surge in the demand for the exotic germplasm is also expected. Accordingly, the import of the germplasm must be from the sires, which have been progeny tested and are in active use in the cattle breeding from which such germplasm are being sourced.

There is a definite demand for the germplasm of Indian breeds of cattle and buffalo in South America, South Asia and other countries. Keeping in view our responsibility towards conservation of the rich diversity, it is important to broadly categorize the germplasm of cattle and buffalo meant for breeding purposes and further for the export purposes. Imposing a complete ban on the export of Indigenous germplasm because of conservation concern would actually be counterproductive. Such a ban will only encourage the flow of germplasm through illegal trade and in a country with such huge land border it will be impossible to control such flow through illegal trade. It can be used for the upgradation of the indigenous stock.

Accordingly, it has been felt that some guidelines should be put in place for processing such applications for import and export of germplasm so that unrestricted drainage of the quality germplasm from the country may be controlled. The aim of the preparation of this interim guideline is to streamline the procedure and ensure quicker and more transparent method for processing the applications received for the export/import of the bovine germplasm.

Interim Guidelines for export /import of bovine germplasm

Guidelines for the Import of bovine germplasm:

1. **Import of bovine germplasm will be permitted for breeding purpose only.**

2. Eligibility of Importers

2.1. The institutes/organizations capable of keeping and maintaining the performance records of exotic germplasm should only be permitted to import bovine germplasm and these institutions will be evaluated by the Department of Animal Husbandry, Dairying and Fisheries (DADF) for grant of permission.

2.2 No objection certificate from the concerned State Government should be submitted along with the application for imports.

2.3 Complete genetic and production data /information with respect to the germplasm to be imported should be submitted to this Department along with application for imports. The justifications for import and future roadmap for utilization of imported germplasm should be supplied with other documents.

2.4 **The import should be based on the standard lactation yield, milk fat, protein, somatic cell count (SCC) and in addition to other milk component character standards. The type evaluation should form the integrated component of selection.**

2.5 The feeding schedule of the animals from the importing country should be supplied with other documents.

2.6 The institutes/organization permitted to import bovine germplasm must maintain records to ensure traceability of imported germplasm and must submit post import information from the date of import to the date of disposal in prescribed proforma (Annexure-I to IV) to Department of Animal Husbandry, Dairying and Fisheries and State Governments.

2.7 The guidelines formulated by OIE, Codex Alimentarius and IETS should be strictly adhered to while importing the genetic material.

2.8 The pre and post import quarantine measures for live animals and germplasm should be strictly adhered to according to GOI health protocols.

3. Screening Committee:

3.1 All the applications for the import of germplasm will be examined by 'Trade and Investment Matter Committee' of the Department of Animal Husbandry, Dairying and Fisheries (DADF).

4. Veterinary Certificates:

4.1 The imports should be regulated as per the provision of Livestock Importation Act, 1898 amended from time to time and as per the protocols/ veterinary certificates for import of cattle and buffaloes, gonads/ embryos/ semen as prescribed by DADF and as amended from time to time.

5. Order of import:

5.1 For import of germplasm, the order of preference should be frozen semen and frozen embryos. Import of live animals shall be allowed only if there is a strong

justification. Import shall be based on the assessment of the domestic requirement of bulls and bull mothers and their availability in the country.

6. Standards for Import of Germplasm:

Semen:

6.1.1 Semen from progeny tested sires with positive sire indices/breeding value for volume of milk fat, protein and conception rate.
6.1.2 Daughters' average standard lactation yield above 9000 kg in HF and 6000 kg in Jersey.
6.1.3 Average milk fat above 3.5% or above 315 kg for standard lactation yield in HF and above 4.5% or above 270 kg in Jersey.
6.1.4 Average protein % or total protein per lactation above average of that breed in that country.
6.1.5 Average somatic cell count (SCC) below the prescribed limit average of that breed in that country.
6.1.6 Reliabilities for production characters should be more than 80% for both HF and Jersey.
6.1.7 Sires should be improver for type characters like udder and feet conformation.

6.2 Bulls should be free from all known genetic disorders including bovine leukocyte adhesion disease (BLAD), deficiency of uridine mono-phosphate synthetase (DUMPS), citrulinemia (deficiency of argino-succinate synthetase) and Factor XI.

6.3 Sexed semen should be from credible sources and should meet the standards given under item No. 6.1 to 6.2. The percentage of error of sex should not be more than 5% and there should be no reduction in fertility in using sexed semen of any bull against its prescribed fertility for normal semen use.

Embryos:

6.4.1 Embryos should be from donor cows with minimum standard 1st lactation yield above 11,000 kg in HF and above 7,000 kg in Jersey.
6.4.2 Average milk fat above 3.5% or 385 kg for standard lactation yield in case of HF and above 4.5% or above 315 kg in case of Jersey.
6.4.3 Average protein % or total protein for standard lactation yield above average of that breed in that country.
6.4.4 Average somatic cell count (SCC) below the prescribed limit average of that breed in that country.
6.4.5 Semen of sire used for inseminating donor for embryo production should meet the specifications for semen given under item 6.1.1 to 6.1.7.

Live germplasm:

6.5.1 **Young bulls born to dams with standard 1st lactation yield above 11,000 kg in HF & 7000 kg in Jersey.**
6.5.2 Average milk fat above 3.5% or 385 kg for standard lactation yield in HF & 4.5% or 315 kg in Jersey.
6.5.3 Average protein % or total protein for standard lactation yield above average of that breed in that country.
6.5.4 Average somatic cell count (SCC) below the prescribed limit average of that breed in that country.
6.5.5 Y**oung bull should fulfill all other health and breeding soundness criteria for selection.**
6.5.6 Sire of young bull should meet the specifications for semen given under item 6.1.1 to 6.1.7.

6.6.1 Early pregnant heifers with pregnancy not more than 4 to 5 months at shipping;
6.6.2 Born to dams with standard 1st lactation yield above 11000 kg in HF & 7000 kg in Jersey, average milk fat above 3.5% or 385 kg for standard lactation yield in HF & 4.5 % or 315 kg in Jersey;
6.6.3 Average protein % or average protein for standard lactation yield above average of that breed in that country;
6.6.4 Average somatic cell count (SCC) below the prescribed limit average of that breed in that country; and
6.6.5 Sire of heifer should meet the specifications for semen given under item 6.1 to 6.3.

Import of germplasm of indigenous breeds:

6.7 In case of import of germplasm of indigenous breeds either in the form of semen, embryos or live animal, they should fall in top 20% in performance merit in the country; the merit of the imported animals should be higher than those animals available in the country.

Guidelines for Export of bovine germplasm:

1. Export of live animals (bovine) and bovine germplasm will be permitted for breeding purposes only.

2. The export of germplasm will be allowed subject to the fulfillment of following conditions:-

2.1 For export of germplasm, order of preference should be frozen semen, frozen embryos and lastly live animals.

2.2 Animal should conform to breed characteristics.

2.3 Milk production records of breed averages will be considered during export of live animals. However elite animals (top 20% of the production level) of each breed having best milk production level should not be exported. The export component should not exceed 5% of animals of the concerned breed estimated as qualified for export per year.

2.4 However, export of live animals of some of the indigenous breeds categorised as **threatened/ endangered** shall not be allowed.

2.5 Countries which are interested in importing bovine germplasm (live animals, semen, ova, embryo and gonads) will provide their import policy documents and health protocols to Govt. of India. The exporting agency from India will comply with the rules and regulations as intimated by DADF.

2.6 The export of germplasm (semen, ova & embryos) of all the breeds may only be permitted to only those countries, which are willing to have similar arrangements on reciprocal basis.

2.7 The health certificate requested by the importing authorities will be provided by the registered Veterinarian authorized by DADF.

2.8 Exporting agency/ State Government will keep the detailed data on the exported animals and shall regularly inform DADF.

2.9 For export of Embryo/ ova, the collection and processing techniques as stipulated under section 3.3 Appendix 3.3.1.1 to 3.3.1.13 and micro- manipulation of the Bovine Embryos at Appendix 3.3.3.1 to **3.3.3.5** of the OIE Terrestrial Animal Health code **(2005)** as amended from time to time may be adhered to.

2.10 Similarly the collection and processing procedure of semen as per section 3.2, Appendix 3.2.1.1 to 3.2.1.10 of the OIE Terrestrial Animal Health code (**2005)** as amended from time to time may be complied.

2.11 The **animals with National Institute/NDDB**, registered animals with CHRS or State Government or Livestock Development Boards, shall be eligible **for considerations** for export of germ-plasm.

2.12 Preferential treatment shall be given to the SAARC countries in terms of the number of animals and breeds to be exported especially from Central Cattle Breeding Farms (CCBFs).

ANNEXURE-I

Format for submission of post-import information on bovine germplasm

1. Name of the organisation:
2. Address with telephone/fax numbers:
3. Year-wise and breed-wise number of bovine germplasm imported since 1980 onwards

(a) Bulls:
(b) Heifers:
(c) Embryos:
(d) Frozen Semen:
(e) Others:

4. Country of origin of the imported germplasm:
5. Cost on CIF basis:
6. Purpose of importation:
7. Identification No., date of birth and pedigree details: (preferably by RFID tags for imported animals).
8. Name and address of the Farms/Semen Stations where the germplasm were stationed:
9. Best, average and life time lactation yield (in case of milch animal), number of frozen semen doses produced (in case of male stock) during life time/after importation and average production per year:
10. Age at culling/disposal of the imported animal as well as reason and mode of disposal:
11. Report of congenital anomalies in progeny, if any:
12. No. of lactation/calf born during life time/after importation (in case of heifer/cows):
13. Traceability of progeny of imported stock and progeny records in terms of distribution, location, production records and disposal.
14. Other relevant information, if any.

Annexure-II

Imported frozen doses usage bull wise:
Name of the Agency:
Quarter of reporting

S. No.	Bull No.	No. of imported doses used	Conception rate on first AI basis	Overall conception rate	Calves born		Any genetic defect observed	No. of male and female calves alive
					Male	Female		
Total								

Annexure-III

Performance of female born

S. No.	Name of the District	No. of daughters calved	Average age at first calving	Average lactation yield of daughters
Total				

Annexure-IV

Performance of male born gone for semen production

S. No.	Name of the District	No. of males gone for semen production
Total		