

**REVISED DRAFT BILL**

**BOVINE BREEDING  
(REGULATION OF PRODUCTION &  
SALE OF BOVINE SEMEN AND  
ARTIFICIAL INSEMINATION  
SERVICES)  
ACT, 2013**

**GOVERNMENT OF INDIA  
DEPARTMENT OF ANIMAL HSUBANDRY  
DAIRYING & FISHERIES**

**BOVINE BREEDING (REGULATION OF PRODUCTION & SALE OF BOVINE SEMEN AND ARTIFICIAL INSEMINATION SERVICES) ACT, 2013**

*An Act To regulate bovine breeding activities including use of bovine breeding bulls for production of bovine semen, production, processing, storage, sale and distribution of bovine semen, and artificial insemination services in bovines for improving the productivity of bovines in the country and for matters connected therewith.*

WHEREAS it is expedient to make provision for the regulation of Bovine Breeding through artificial insemination in the country and for matters connected therewith or ancillary thereto;

AND WHEREAS Parliament has no power to make laws for the States with respect to any of the matters aforesaid except as provided in articles 249 and 250 of the Constitution;

AND WHEREAS in pursuance of clause (1) of Article 252 of the Constitutions, resolutions have been passed by all the Houses of the Legislatures of the States of \_\_\_\_\_, and \_\_\_\_\_ to the effect that the matters aforesaid should be regulated in those States by Parliament by law.

*BE it enacted by Parliament in Sixty one Year of Republic of India as follows:-*

**CHAPTER I**

**PRELIMINARY**

**1. SHORT TITLE, EXTENT AND COMMENCEMENT**

- (i) This Act may be called THE BOVINE BREEDING (REGULATION OF PRODUCTION & SALE OF BOVINE SEMEN AND ARTIFICIAL INSEMINATION SERVICES) ACT, 2013.
- (ii) It extends, in the first instance, to the whole of the States of \_\_\_\_\_, and \_\_\_\_\_; it shall also extend to such other States as may adopted this Act by resolution passed in that behalf in pursuance of clause (1) of Article 252 of the Constitution.
- (iii) It shall come into force in a State or Union Territory to which it extends, or may become extended in future, on such date as the

Central Government or the State Government as the case may be, may, by notification in the Official Gazette, appoint and different date may be appointed for different provisions of this Act (effective date) or for different States or Union Territories.

**2. DEFINITIONS---** In this Act, unless the context otherwise requires, -

- (a) **“Advisory Committee”** means the committee that is formed by the Central Government under section 3 of this Act;
- (b) **“Artificial Insemination”** or **“AI”** means the process of depositing bovine semen in the body of the uterus of a mature bovine female with the intention of making it pregnant;
- (c) **“AI Technician”** means a person who possesses requisite qualification, skill and experience, as prescribed by the Central Authority, to perform artificial insemination in bovines;
- (d) **“Artificial Insemination Service Provider”** means a person (and includes a Firm, Limited Liability Partnership (LLP), Company, Producer Company, Institution, NGO, Breeders’ Association, Trust, Department of Central/State Government, Co-operative Society, Livestock Development Board/Agency) who undertakes artificial insemination service in bovines;
- (e) **“Bovine Breeding”** means breeding activities in bovines that include the use of bovine bulls for production of semen, production, processing, storage and distribution of bovine semen, and providing AI services to bovines;
- (f) **“Bovine”** means and include cow, bull, bullock and buffalo, (male or female);
- (g) **“Breeding Policy”** means a state policy, duly notified by the respective state government, for maintaining and developing different breeds of cattle and buffaloes in different agro-climatic zones of the state and a mechanism for enforcement of these policies in the state.
- (h) **“Certified Bull”** means a bovine bull meeting the prescribed standard for semen production and is included as certified bull, in the Certificate of Registration of a semen station or any Bovine Bull certified to be of prescribed standard for semen production by the Central Authority, from time to time.

- (i) “**Central Authority**” means the authority appointed by the Central Government for the purposes of this Act.
- (j) “**Premises**” means any land, premises, yard, building, or vessel or vehicle or any other location that is used for bovine semen production and/or for providing bovine AI service;
- (k) “**Prescribed Standards**” means the standards prescribed by the Central Authority, from time to time and to be adhered to by those seeking a certification of registration namely:
  - (i) semen stations intending to use bovine bulls for semen production in accordance with methods and parameters attached at Schedule I and Schedule II;
  - (ii) semen stations intending to produce, process, store and distribute bovine semen in accordance with procedures and parameters attached at Schedule III; and
  - (iii) AI service provider intending to provide AI services in accordance with procedures and parameters attached at Schedule IV;
- (l) “**State Authority**” means an authority appointed or designated, by the State Government, for the purpose of this Act;
- (m) “**Registered veterinary practitioner**” means a graduate in veterinary science registered under the Veterinary Council Act, 1984.
- (n) “**Semen Station**” means a premises, where a facility is setup for production, processing and storage of bovine semen;
- (o) “**Semen Bank**” means a premises, where a facility is setup for storage and distribution of bovine semen and/or liquid nitrogen.

## **CHAPTER II**

### **APPOINTMENT AND FUNCTIONS OF ADVISORY COMMITTEE, CENTRAL AUTHORITY AND STATE AUTHORITY**

#### **3. Bovine Breeding Advisory Committee:**

(i) The Central Government shall constitute and appoint an Advisory Committee to exercise the powers conferred on and perform the functions assigned under this Act to be called as the Bovine Breeding Advisory Committee. The Chairman of the Advisory Committee shall be the Commissioner, Animal Husbandry, GOI and the Committee shall consist of the following members:-

- a. Three Representatives one each from ICAR/IVRI/NDRI (ex-officio members)
- b. One Representative from NDDB (ex-officio member)
- c. Two Representatives from State Governments
- d. Two representatives from Livestock Development Boards / Agencies from states other than the states represented under point "c"
- e. Two Representatives from Cooperatives
- f. One Representative each from NGO and private industry engaged in bovine breeding
- g. A member secretary to be appointed by GoI.

Members of the Advisory Committee shall have experience in different facets of bovine breeding.

(ii) The Chairman and the ex-officio members of the Advisory Committee, other than a member-secretary, shall hold office for a term of three years from the date of their nomination and shall be eligible for reappointment of further period of three years. Other members of the Committee shall be nominated on rotation basis from different states, boards, cooperatives, NGOs, and shall hold the office for three years.

(iii) The Advisory Committee shall advise the Central Authority on all matters related to fixing prescribed standards and evaluation procedures for breeding bulls, semen stations, storage and distribution of bovine semen and artificial insemination services and prescribing training curriculum, qualification and experience of AI technicians and recognition of the training institutes.

4. **Appointment of Central Authority-**

- (i) The Central Government, in consultation with the Advisory Committee may, by notification in the official gazette, appoint a Central Authority to exercise the powers conferred on and perform the functions as assigned under this Act.
- (ii) The Central Authority shall be a person from the administration who has been associated with the subject and is either holding or has held the position of not below the rank of Secretary to the Government of India, or a person of eminence having special knowledge and practical experience in the field of animal breeding/husbandry and the term of his office shall be for five years or until he reaches the age of 65 years whichever is earlier.
- (iii) The Central Authority shall form a panel of experts having relevant professional experience of minimum 10 years in the field of animal breeding/husbandry in any institution of repute. They may be assigned the work of conducting inquiry or inspection of semen stations, AI service providers, AI training institutes and to perform such other functions, under this act, as and when it is required by the Central Authority.
- (iv) The Central Authority shall perform the following functions:
  - (a) on the recommendations of the Advisory Committee lay down, modify and prescribe the standards and norms with regard to bulls, semen stations, AI service providers, AI training centres and AI technicians;
  - (b) register semen stations;
  - (c) certify the bulls for semen production;
  - (d) inspect, survey and search, semen stations, AI service providers and training institutes.
  - (e) receive the annual returns from the semen stations and AI service providers.
  - (f) ask for periodical reports, data and information with regard to bovine breeding, semen production, certified bulls, activities of AI service providers, and such other activities provided under this Act, from semen stations, semen banks, AI service providers and State Authorities;

- (g) collect, compile, maintain and publish information and statistical data relating to bovine breeding, semen production and certified bulls;
- (h) recognise laboratories for analysis of semen, blood and other such samples;
- (i) design the course curriculum for class room and practical training for AI technicians to be provided by recognised AI Training Institutes and to issue guidelines from time to time;
- (j) plan and cause to be executed a nation-wide programme for bovine breeding activities;
- (k) advise the Central Government on any matter concerning the activity of the bovine breeding;
- (l) provide technical assistance and guidance to the State Authorities;
- (m) check, inspect and coordinate the activities of State Authorities;
- (n) act as appellate authority under the Act;
- (o) maintain national registry of certified bulls and semen production;
- (p) exercise the powers and perform the functions of a State Authority for a Union Territory;
- (q) exercise the powers and perform such of the functions of the State Authority as may be specified in an order made under sub-section\_\_\_ of section \_\_\_\_\_;
- (r) perform such other functions as may be prescribed.

## **5. Appointment of State Authorities:**

- (i) The State Government in consultation with the Central Authority/ Advisory Committee, shall, by notification in the official gazette, appoint or designate a State Authority to exercise the powers conferred on and perform the functions as assigned under this act.

- (ii) The State Authority shall be a person who is not below the rank of Secretary in the DAHD in the State Government or a person working or retired as head of any institution of National Importance, or being a person having special knowledge and practical experience in respect of matters relating to animal breeding/husbandry and the term of his office shall be for five years or until he reaches the age of 65 years whichever is earlier.
- (iii) The State Authority shall appoint a team of experts having relevant professional experience of minimum 10 years in the field of animal breeding/husbandry in any institution of repute, for the purpose of conducting inquiry or inspection of AI service providers, AI training institutes and to perform such other functions, under this act.
- (iv) State Authority shall perform the following functions:
  - (a) register AI service providers;
  - (b) inspect, survey and search any of the premises where activities related to AI service provider is going on;
  - (c) receive the annual returns from AI service providers and to maintain records & data thereof;
  - (d) grant recognition to the AI training institutes and to submit a list of the recognized AI institutes to the Central Authority;
  - (e) collect and maintain, information and statistical data with regard to activities of AI service providers, AI training institutes and the AI technicians in their jurisdictional area and to submit all these data to Central Authority from time to time;
  - (f) plan and cause to be executed a State-wide programme for bovine breeding activities;
  - (g) advise the State Government on any matter concerning the activity of the bovine breeding;
  - (h) furnish all or any of the record as asked by the Central Authority;
  - (i) exercise the powers and perform all such activities and functions as may be prescribed by the Central Authority or the State Government from time to time.



## **6. Experts and other employees of Authority**

- (i) Subject to such rules as may be made by the Central Government or the State Government, as the case may be in this behalf, the Central Authority and a State Authority may appoint such number of officers and employees as it considers necessary for the efficient performance of its functions.
- (ii) The Central Authority or a State Authority may by general or special order and subject to such conditions, as may be specified in the order, delegate to any officer of the authority such of its powers and functions under this act as it may deem necessary.

## **7. Powers to give directions**

- (i) In performance of its functions under this Act-
  - (a) the Central Authority shall be bound by such directions the Central Government or the Bovine Breeding Advisory Committee may give to it and
  - (b) every State Authority shall be bound by such direction as the Central/State Government or the Central Authority may give to it.
- (ii) Where the Central Government is of the opinion that the State Authority has defaulted in complying with any directions given under section 7(i) and as a result of such default, it has become necessary or expedient so to do in the public interest, it may, by order, direct the Central Authority to perform any of its functions of the State Authority in relation to such area for such period and for such purposes, as may be specified in the order.

## **8. Power to obtain information.**

- (i) The Central Authority or a State Authority, as the case may be, to perform the functions conferred on it by or under this Act, or any officer empowered by it on this behalf may take such steps as may be necessary in order to obtain any required information from any semen station, AI service provider, AI training institute or AI technician.
- (ii) The Central Authority and/or the State Authority may give directions requiring any person in-charge of any establishment, premises, where any activity relating to Bovine Breeding is carried out or who in its opinion is contravening any of the provisions of this Act and/or the Rules made there under, to furnish such information and in such form as may be specified in the directions.

### **CHAPTER III**

#### **CERTIFICATION OF BULLS, REGISTRATION OF SEMEN STATIONS, ARTIFICIAL INSEMINATION SERVICE PROVIDERS**

##### **9. Certification of Bulls and Registration of Semen Stations :**

- (i) On and from the date of commencement of this Act, no person (including any Firm, Limited Liability Partnership (LLP), Company, Producer Company, Institution, NGO, Breeders' Association, Trust, Department of Central/State Government, Co-operative Society, Livestock Development Board/Agency), shall establish and operate a semen station for production of bovine semen doses for artificial insemination without obtaining a certificate of registration from the Central Authority and;
- (ii) Existing Semen stations shall apply to the Central Authority for grant of registration for semen production within three months from the effective date of this Act.
- (iii) On and from the date of commencement of this Act, no semen station shall carry out semen production from any bull other than those certified as of prescribed standard, for semen production, by the Central Authority.
- (iv) Every application for registration/renewal under sub-section (i) and (ii) shall be made to the Central Authority in Form "A" along with the prescribed fees.
- (v) When an application for obtaining registration for a new semen station has been made to the Central Authority, the Central Authority may provisionally permit, in writing, to set up the new semen station pending an issuance of a final registration certificate. Such provisional permission shall be valid for a period not exceeding 24 months from the date of its issue within which the applicant shall arrange for inspection by the Central Authority to demonstrate the compliance to the requirements. The applicant may apply for an extension of the duration of provisional permission due to reasons beyond his control. The Central Authority may subject to verifying the reasons for delay grant an extension of period not exceeding six months. The semen station set up shall not do commercial operations without obtaining the final registration certificate and unless an inspection has been carried out to ascertain the requirements as specified in Schedule I, Schedule II and Schedule III and as per the instructions issued by the Central Authority from time to time.

- (vi) On receiving an application for obtaining registration for an existing semen station, the Central Authority may provisionally permit, in writing, to the semen station to operate pending an issuance of a final registration certificate provided the tests referred to in sub section (vii) B (1) have been conducted with negative results. Such provisional permission shall be valid for a period not exceeding 12 months from the date of its issue within which the applicant shall arrange for inspection to demonstrate the compliance to the requirements as specified in Schedule I, Schedule II and Schedule III and as per the instructions issued by the Central Authority from time to time.
  
- (vii) On the receipt of request for inspection for grant of registration for a new semen station or existing semen station, the Central Authority shall send a team of experts for such enquiry/inspection, and after satisfying itself that
  - (a). the semen station:
    - 1. has premises for the quarantine of bovine bulls that comply with Part 1 of Schedule I;
    - 2. has premises for the rearing of bulls that comply with Part 2 of Schedule I;
    - 3. has premises for the housing of bulls and the collection, processing, quality control, and quarantine of semen doses that comply with Part 3 of Schedule I, and
    - 4. has premises for the storage of semen doses that comply with Part 4 of schedule I;
  
  - (b). every bull used in the semen station for production of semen doses:
    - 1. has tested negative to the tests set out in :
      - i. Schedule II Part 1 prior to its entry to a quarantine station;

- ii. Schedule II Part 2 during quarantine period at a quarantine station;
  - iii. Schedule II Part 3 during rearing at a rearing station, and
  - iv. Schedule II Part 4 at a semen station;
2. Conforms to breed characteristics and meets the minimum standards for various traits in terms of quantity and quality as specified by the Central Authority and as modified and notified from time to time;
- (c). the semen station conforms to the minimum operating standards for:
1. bull housing and management as laid down in Schedule III, Part 1, and
  2. semen collection, processing, quarantine, storage, distribution and quality assurance as laid down in Schedule III, Part 2;
- (d). the semen station shall provide the details of the bull, whose semen doses it would like to produce, sell, distribute or proposes to distribute, to the AI service providers in a format given in Schedule III, Part 3;

shall grant the certificate of registration to a new semen station or existing semen station clearly specifying the name and address of the Station, Registration number of the semen station, individual identification number of bulls used as certified bulls for semen production, name of the responsible officer for the semen station and any such other terms and conditions as it may deem appropriate as in Form B. The certificate of registration granted to any bull shall be cancelled any time in its life, if it does not meet the conditions specified

under Section Vii – B. The Certificate of Registration granted under this section shall be for a period of two years.

- (viii) The semen station shall apply for renewal of the registration to the Central Authority at least three months before the expiry of period specified in the Certificate of Registration. The Central Authority after satisfying itself that the conditions of registration issued under sub-section (vi) have been adhered to, shall renew the registration for a further period of two years within three months of the date of application by the applicant. If the renewal certificate is not issued within three months, it may be regarded as approval till communicated otherwise.
- (ix) If any new bovine bull that meets the prescribed standards for semen production is inducted in the semen station, the details of such bovine bulls shall be communicated to the Central Authority at least one month prior to their induction, in Form-J for certification of the said bulls by the Central Authority. If the approval is not received within one month, it may be regarded as certified till approval till communicated otherwise. Death / culling of registered bull should be informed to the Central Authority.
- (x) The Central Authority may issue the Certificate of Registration or the Renewal thereof subject to such conditions as it may deem fit or proper, for the purpose of this Act.
- (xi) The Central Authority may after giving the applicant an opportunity of being heard and for reasons to be recorded in writing refuse to grant or renew the registration.
- (xii) The Central Authority shall send a team of experts to inspect a semen station as and when desired, but at least once in a year, to ensure compliance of the conditions of certification of registration granted under sub-section (vi).

## **10. Registration of Artificial Insemination Service Provider :**

- (i) On and from the date of commencement of this Act, no person (including any Firm, Limited Liability Partnership (LLP), Company, Producer Company, Institution, NGO, Breeders' Association, Trust, Department of Central/State Government, Co-operative Society, Livestock Development Board/Agency), semen stations, shall provide Artificial Insemination Services without obtaining a registration certificate from the State Authority.
- (ii) Existing Artificial Insemination Service Providers shall apply to the State Authority for grant of registration for providing AI Services within three months from the effective date of this Act.
- (iii) Every application for registration/renewal under sub-section (i) and (ii) shall be made to the State Authority in Form "C" with prescribed fees.
- (iv) On receipt of any such application for grant of registration or renewal the State Authority shall send a team of experts constituted by the State Authority for such enquiry/inspection, and after satisfying itself that the Artificial Insemination Service Provider:

  - (a) has arrangements for receiving, storing and distributing semen as laid down in Schedule IV Part 1;
  - (b) obtains semen only from certified bulls of semen station registered under the Act;
  - (c) engages AI technicians, who hold such qualifications and experience as prescribed by the Central Authority from time to time for providing the artificial insemination services and who provide AI services on behalf of it, follows SOP for AI Service (Schedule IV Part 2) and maintains records as prescribed by the State Authority;
  - (d) provides AI services as per the approved Breeding Policy of the respective State governments;

- (e) conforms to the guidelines as laid down in Schedule-IV Part 2;

shall grant the certificate of registration to the Artificial Insemination Service Provider clearly specifying the name and address of the AI service provider, Registration number of the Service provider, name of a responsible officer employed by the Service provider and any such other terms and conditions as may deem appropriate as in Form D. The Certificate of Registration granted under this section shall be for a period of two years.

- (v) Every application for renewal of registration shall be made three months before expiry of the period specified in the registration certificate. The State Authority after satisfying itself that the conditions of registration issued under sub-section (iv) have been adhered to, shall renew the registration for a further period of two years within three months of the date of application by the applicant. If the renewal certificate is not issued within three months, it may be regarded as approval till communicated otherwise.
- (vi) The State Authority may issue the Certificate of Registration or the Renewal thereof subject to such conditions as it may deem fit or proper, for the purpose of this Act.
- (vii) The State Authority may after giving the applicant an opportunity of being heard and for the reasons to be recorded in writing refuse to grant or renew the registration.
- (viii) The State Authority may send a team of experts to inspect facilities/arrangements of receiving, storage and distribution of semen, records of semen procurement and usage, qualification, experience and working of AI technicians employed by the Artificial Insemination Service Provider as and when desired, but at least once in a year, and to ensure compliance to the conditions of registration issued under sub-section (vi).

## **11. Registration of AI technicians**

- (i) On and from the date of commencement of this Act, no person shall act as AI technician and provide his services for any AI service provider unless he:
- possesses requisite qualification and experience as prescribed by the Central Authority;
  - has undergone the prescribed training from any recognised AI Training Institutes, and
  - has registered himself with any registered semen station or registered AI service provider.
- (ii) On an application by AI technician in Form E along with the supporting documents of his qualification & experience, the semen station or the AI service provider shall register with them, the AI technicians who possesses requisite qualification and experience as prescribed by the Central Authority and have undergone the prescribed training from any recognised AI Training Institute, and shall issue a certificate of registration in Form F.
- (iii) The existing AI technicians, within one year from the date of commencement of this act, shall undertake the required training from the recognised training institute. The AI technician, after giving an undertaking-cum-affidavit to complete his AI training from a recognized institute, shall be allowed to register himself as provided under sub-section (ii).
- (iv) The AI technicians shall perform Artificial Insemination as per the procedure & guidelines issued by Central Authority and also as per the provisions of the State Breeding Policy and shall provide necessary information in the prescribed format to the AI service provider or semen station where he is registered, failing which their registration shall be suspended till the necessary rectifications are carried out.

## **12. Recognition of Artificial Insemination Training Institutes (AI training institutes)**



- (i) Any person (including any Firm, Limited Liability Partnership (LLP), Company, Producer Company, Institution, NGO, Breeders' Association, Trust, Department of Central/State Government, Co-operative Society, Livestock Development Board/Agency) may apply to the State Authority for grant of recognition to a AI Training Institute and its renewal thereof.
  
- (ii) Every application for grant of recognition and renewal under sub-section(i) shall be made to the State Authority in Form 'G' with prescribed fees.
  
- (iii) On receipt of any such application for grant of recognition or renewal, the State Authority shall send a team of experts constituted by the State Authority for such enquiry/ inspection, and after satisfying itself that the AI Training Institution;
  - (a) follows the standard curriculum and duration for class room and practical training as approved and modified by the Central Authority from time to time (Schedule V Part 1);
  - (b) has arrangements for class rooms with teaching aids and hands on training in palpating reproductive organs outside and in live animals and carrying out artificial insemination as laid down in Schedule V Part 2;
  - (c) has arrangements with AI Service providing organisations to provide practical training to its trainees for the duration approved by the Central Authority;
  - (d) has a registered veterinary practitioner under whose supervision the institute imparts training;

shall grant certificate of recognition to the Artificial Insemination Training Institute clearly specifying the name and address of the Training Institute, Registration number, name of a responsible officer employed by the Training Institute and any such other terms and conditions as may deem appropriate as in Form 'H'.

- (iv) The Certificate of Recognition granted under sub-section (iii) shall be for a period of two years. Every application for renewal of Recognition shall be made three months before expiry of the period specified in the Recognition certificate. The State Authority after satisfying itself that the conditions of Recognition issued under sub-section (iii) have been adhered to, shall renew the Recognition for a further period of two years within three months of the date of application by the applicant. If recognition is not granted in three months it may be regarded as recognized till communicated otherwise.
- (v) The State Authority may issue the Certificate of Recognition or the Renewal thereof subject to such conditions as it may deem fit or proper, for the purpose of this Act.
- (vi) The State Authority may after giving the applicant an opportunity of being heard and for the reasons to be recorded in writing refuse to grant or renew the Recognition.
- (vii) The State Authority may send a team of experts to inspect the infrastructure, class room and hands-on training facilities deployed by the Training institute as and when desired, but at least once a year, to ensure the compliance of terms & conditions, guidelines and course curriculum in the institute.
- (viii) During the period of recognition the AI institute shall follow the course curriculum as approved and revised from time to time by the Central Authority. On successful completion of the course by the AI technician, the AI institute shall issue a certificate of training to the said AI technician. The AI institute shall send the name and other details of the persons who have successfully completed the AI training, on the prescribed format, to the State Authority, within one month thereof.
- (ix) The AI training institute shall adhere to the guidelines given by the State Authority and shall comply the terms & conditions of recognition, failing which the State Authority after giving the person an opportunity of being heard and for the reasons to be

recorded in writing, may withdraw the recognition of the training institute.

**13. Regulation of Sale of Semen**

- (i) No semen station or AI service provider shall sell or distribute the bovine semen doses to any person other than the registered AI service provider or the registered AI technician or to a person as may be authorised by the Central Authority or the State Authority, as the case may be.
- (ii) Same as provided in sub-section (i) above, no semen station or AI service provider shall sell the bovine semen doses, in contravention of the Breeding Policy of the concerned State.

**14. Exemptions:**

- (i) An owner or custodian of animals who carries out artificial insemination of his own animals or of those of which he has permanent custody shall be exempted from the obligations of holding a certificate of registration for Artificial Insemination Service Provider or a certificate of registration as AI technician.
- (ii) Registered veterinary practitioners shall be exempted from the obligations of holding a certificate of registration for Artificial Insemination Service Provider.
- (iii) Any semen production facility set up by research institutes or universities for the purpose of research and training shall be exempted from the obligation of holding a registration certificate for semen station so far as such research institutes or universities use the semen doses only on the animals owned by them and are not engaged in the activity of selling or distribution of semen doses or providing commercial AI delivery services.

**15. Fee for issue or renewal of registration & recognition:**

- (i) The non-refundable fee for issue of a certificate of registration and recognition and its renewal under this act shall be as under:

- (a) registration fee for each semen station, Rupees one lakh only;
  - (b) renewal fee for each semen station-Rupees Ten Thousand only;
  - (c) registration fee for each AI service provider- Rupees fifty thousand only;
  - (d) renewal fee for each AI service provider Rupees Ten Thousand only;
  - (e) recognition fee for each AI Training Institute-Rupees Fifty Thousand only;
  - (f) renewal fee for each AI Training Institute-Rupees Ten Thousand only;
  - (g) Bulls Certification fee for each bull-Rupees Two Hundred only.
- (ii) The above registration, recognition and renewal fee may be revised by the Central Authority from time to time.

**16. Duplicate registration certificate:**

If a registration/recognition certificate issued under this Act is defaced, lost or destroyed, the Central Authority or the State Authority, as the case may be, may, if satisfied, grant a duplicate registration/recognition certificate to the applicant on payment of a fee Rs. 1,000/- in respect of certificate of registration for semen station, AI service provider and AI Training Institute and Rs. 100/- for Bull Certification.

**17. Revocation of certificate of registration/recognition:**

If the Central Authority or the State Authority, as the case may be, is satisfied, either on a reference made to it in this behalf or on enquiry report or otherwise that:-

- (i) the certificate of registration/recognition granted by it under this Act, for semen station, or AI service provider or AI Training Institute and AI technician has been obtained by misrepresentation or fraud; or
- (ii) the holder of the certificate of registration/recognition has, without reasonable cause, failed to comply with the conditions subject to which the certificate has been granted or has contravened any of the provisions of this Act or has not complied with the conditions as laid down in the Schedules,

then, without prejudice to any other proceedings to which the holder of the certificate may be liable under this Act, the Central Authority or the State Authority, as the case may be, may, after giving the holder of the certificate of registration/recognition an opportunity to show cause, may:

- (a) revoke the certificate of registration/recognition giving reasons for such revocation; or
- (b) may suspend the certificate of registration/recognition till the holder of the certificate complies with all the required conditions to the satisfaction of the Central Authority or the State Authority, as the case may be; or
- (c) may impose such other conditions to be complied by the holder of certificate of registration/recognition and/ or
- (d) may take undertaking from the holder of the certificate of Registration/Recognition, to comply with the provisions of the Act.

**18. Restrictions on new or existing Semen Stations, AI Service Providers, AI Training Institutes.**

- (i). Where any Semen Stations, AI Service Providers, AI Training Institutes is established or operating or have taken steps for operations, without the Registration or Recognition of the Central Authority or the State Authority, as the case may be, the Central Authority or the State Authority, as the case may be, may serve on the person operating or have taken steps for operations, a notice imposing any such conditions, as are applicable for registration or recognition of such Semen Station,

AI Service Provider or AI Training Institute , as the case may be, under the provisions of this Act.

- (ii). Where under this Act, any conditions have been imposed on any person, while granting the Certificate of Registration or Recognition or renewal thereof, or under section 18(i) above, and such person has failed to comply such conditions, the Central Authority or the State Authority, as the case may be, after giving such person opportunity of being heard, revoke the Certificate of Registration or Recognition or renewal thereof and shall take such steps against such person as prescribed under this Act.

## **19. Appeal:**

- (i) Any person aggrieved by an order of the State Authority refusing to grant or renew a certificate of registration or recognition or revoking or suspending the certificate of registration or recognition under the provisions of this Act, may file an appeal with the Central Authority within thirty days from the date on which the order is communicated to him.
- (ii) Any person aggrieved by an order of the Central Authority refusing to grant or renew a certificate of registration or recognition or revoking or suspending the certificate of registration or recognition under the provisions of this Act, may file an appeal before such authority (Appellate Authority) as the Central Government may think fit to constitute, within thirty days from the date on which the order is communicated to him.
- (iii) Provided that the Central Authority or the Appellate Authority, as the case may be, may entertain the appeal after the expiry of period of the said 30 days if the Authority is satisfied that the appellant was prevented by sufficient cause from filing the appeal in time.
- (iv) The Central Authority or the Appellate Authority, as the case may be, after giving a reasonable opportunity of being heard to the appellant, shall decide the appeal within three months or as expeditiously as possible.
- (v) Pending disposal of an appeal, the Central Authority or the Appellate Authority, as the case may be, may direct that the order

refusing to grant or renew a Certificate or the order of revoking or suspending the certificate of registration/recognition or imposing the fine shall not take effect until the appeal is disposed off.

## **CHAPTER IV**

### **20. Power to modify Schedules and Annexure.**

Notwithstanding anything contained in this Act the Central Authority on the recommendations of the Advisory Committee, shall have the power to modify the prescribed standards, schedules and annexure and Fees for registration and renewals for certificates of Registration under this Act, by notification in the Gazette of India.

### **21. Power to inspect, search and seizure:**

- (i) The Central Authority or the State Authority or any officer or members of team of experts authorised by them in this behalf, with a view to securing compliance with the terms and conditions of the registration and any provisions of this Act, or for the purpose of inspection and enquiry, may
  - (a) enter, inspect and cause or conduct search of any place of business or premises of the semen station or artificial insemination service provider or training institute in which it has reason to believe that any activity in contravention of the provisions of this act is going on or there is any contravention of any of the provisions of this Act or rules made thereunder or the holder of certificate is doing activities in violation of the conditions of registration issued under this Act;
  - (b) collect samples of semen, blood or any other material used in semen production or AI services, from the premises of any semen station or AI service provider or training institute and have such samples analysed by a laboratory authorized in that behalf by the Central Authority and shall also seize any bulls there from which are not duly certified for semen production; or make such other enquiry as may be required, take statements of the holder of the certificate of registration and other persons working there at such premises and to check the records thereof.
- (ii) The provisions of the Code of Criminal Procedure, 1973 (Act 2 of 1974) relating to search and seizure shall, so far as may be, apply to searches and seizures under sub-section (i).



- (iii) Every person who holds the certificate of registration for semen station and AI service provider or a certificate of recognition for training institute under this Act, or a AI training institute or AI service provider shall be bound by any direction or order issued by the Central Authority or the State Authority, as the case may be, in pursuance of any of the provisions of this Act and shall comply with such direction or order and any failure on his part to comply with such direction or order shall be deemed to be a contravention of this Act.

## **22. Maintenance of records & Submission of Returns:**

- (i) Every person who holds a certificate of registration under this Act shall maintain such books, accounts and record relating to his business in such form as may be specified by the State Authorities in this behalf.
- (ii) Every semen station and AI service provider shall maintain a register containing therein the name, address, contact details and the qualification & experience of all those AI technicians, registered with them. The Register so maintained and the application and supporting documents of the experience and qualification of the AI technicians shall be made available for the inspection of the Central Authority or the State Authority, as the case may be. A list of all such AI technician shall be submitted along with the half-yearly returns submitted by them to the State Authority.
- (iii) Every person who holds a certificate of registration for a semen station shall submit to the Central Authority a half yearly return in duplicate in respect of the semen station in Form I and with respect to new bulls proposed for registration in Form J .
- (iv) Every person who holds a certificate of registration as an AI service provider shall submit a half yearly return to the Central Authority or State Authority, as the case may be, in duplicate in respect of number of AI technicians engaged and number of inseminations carried out in Form K.
- (v) Every person who holds a certificate of recognition as an AI Training Institute shall submit to the Central Authority or State Authority, as the case may be, a half yearly return in duplicate giving a list of AI technicians trained and name of the registered veterinary practitioner under whose supervision the training was imparted in Form L.

### **23. Power to give directions**

Notwithstanding anything contained in any other law, but subject to the provision of this Act, and to any directions that the Central Government or the Central Authority may give in this behalf, the Central Authority or the State Authority, as the case may be, may in exercise of its power and performance of its functions under this act, issue any directions in writing to any person, officer, or authority, and such person, officer or authority shall be bound to comply with such directions. The powers to issue directions under this section include the power to direct;

- (i). the closure, prohibition or regulation of any operation, process or activity related to Bovine Breeding, AI services, training or
- (ii). the stoppage or regulation of supply of electricity, water or any other service.

### **24. Power to make application to Courts for restraining apprehended bovine breeding activities in contravention of this Act.**

- (i) Where it is apprehend by the Central Authority or the State Authority, as the case may be, that any person is engaged in the bovine breeding activity or providing, AI services or, AI training in contravention of the provisions of this Act and/or Rules made there under, the Central Authority or the State Authority as the case may be, make an application to a court of Metropolitan Magistrate or Judicial Magistrate First Class for restraining the said person to carry out the said activity.
- (ii) On receipt of an application under sub-section (i), the court may pass an order restraining any person to carry out the said activity or give such directions or pass such order as it may deem fit.

### **25. Penalties:**

- (i) Whoever fails to comply with any direction given under section 23 in such time as may be specified in the direction or fails to comply with any order or direction issued by a court under section 24 shall, in respect of each such failure and on conviction, be liable to pay fine which may extend to Rupees fifty thousand and in case the failure continues, with an additional fine which may extend to Rupees Five thousand for

everyday during which such failure continues after the conviction for the first such failure.

- (ii) Whoever carries out the production of semen at any premises, place or centre or semen station or provides artificial insemination services without holding a valid registration certificate or holds a registration certificate that has expired its validity period or carry on production activity of semen from other than the certified bulls or contravenes with any of the provisions of this Act, shall be liable to penalty/ fine which may extend to one lakh rupees.
- (iii) Whoever has been granted a certificate of registration as semen station or AI service provider under this Act and has contravened any of the provisions of this Act or failed to maintain the prescribed standards laid down in Schedules of the Act, shall be liable to a penalty/fine which may extend to one lakh rupees.
- (iv) The penalties/fine so imposed, may be recovered from the person concerned, as arrears of land revenue or of public demand.

**26. OFFENCES BY COMPANIES** (including any Firm, Limited Liability Partnership (LLP), Company, Producer Company, Institution, NGO, Breeders' Association, Trust, Co-operative Society, Livestock Development Board/Agency)

- (i) Where an offence under this Act has been committed by a company, every person who at the time the offence was committed was in charge of, and was responsible to the company for the conduct of, the business of the company, as well as the company, shall be deemed to be guilty of the offence and shall be liable to be proceeded against and punished accordingly:

Provided that nothing contained in this sub-section shall render any such person liable to any punishment provided in this Act if he proves that the offence was committed without his knowledge for that he exercised all due diligence to prevent the commission of such offence.

- (ii) Notwithstanding anything contained in sub-section (1), where an offence under this Act has been committed by a company and it is proved that the offence has been committed with the consent or connivance of, or is attributable to any neglect on the part of, any director, manager, secretary or other officer of the company, such director, manager, secretary or other officer shall also be deemed to be guilty of that offence and shall be liable to be proceeded against and punished accordingly.

Explanation--For the purpose of this section,--

- (a) "company" means any body corporate, and includes a firm or other association of individuals; and
- (b) "director" in relation to a firm means a partner in the firm.

## **27. OFFENCES BY GOVERNMENT DEPARTMENTS.**

Where an offence under this Act has been committed by any Department, Agency or Organization of the Central or State Government, the Head of the Department, Agency or Organization as the case may be, shall be deemed to be guilty of the offence and shall be liable to be proceeded against and punished accordingly:

Provided that nothing contained in this section shall render such Head of the Department liable to any punishment if he proves that the offence was committed without his knowledge or that he exercised all due diligence to prevent the commission of such offence.

## **28. COGNIZANCE OF OFFENCES**

No court shall take cognizance of any offence under this Act except on a complaint made by--

- (i) Central Authority or the State Authority, as the case may be, or any officer authorised in this behalf by it; and
- (ii) no court inferior to that of a Metropolitan Magistrate or a Judicial Magistrate of the first class shall try any offence punishable under this Act.
- (iii) No prosecution for offences punishable under this act shall be instituted except with the previous sanction of an officer

authorised in this behalf by the Central Authority or the State Authority, as the case may be, by Notification.

## **Chapter V**

### **Miscellaneous**

#### **29. Report of Recognized Laboratory**

Any document purporting to be a report signed and issued by a recognised laboratory, maybe used as evidence of the facts stated therein in any proceedings under this act.

#### **30. Local Authorities to assist**

All local authorities shall render such help and assistance and furnish such information to the Central Authority and the State Authority as it may require for discharge of its functions and shall make available for inspection and examination such records or documents as may be necessary.

#### **31. Returns and Reports**

The Central Authority shall furnish to the Central Government, and a State Authority shall furnish to the State Government and to the Central Authority, such reports, returns, statistic, and other information with respect to its funds or activities as that government, or, the Central Authority may, from time to time require.

#### **32. MEMBERS, OFFICERS AND SERVANTS OF CENTRAL AUTHORITY AND STATE AUTHORITY TO BE PUBLIC SERVANTS**

All members, officers and servants of the Central Authority and the State Authority, as the case may be, when acting or purporting to act in pursuance of any of the provisions of this Act and the rules made thereunder shall be deemed to be public servants within the meaning of section 21 of the Indian Penal Code.

#### **33. BAR OF JURISDICTION**

No civil court shall have jurisdiction to entertain any suit or proceeding in respect of any matter which an appellate authority constituted under this Act is empowered by or under this Act to determine, and no injunction shall be granted by any court or other authority in respect of any action taken or to be taken in pursuance of any power conferred by or under this Act.

### **34. PROTECTION OF ACTION TAKEN IN GOOD FAITH**

No suit or other legal proceedings shall lie against any member or officer of Central Authority and State Authority in respect of anything which is in good faith done or intended to be done in pursuance of this Act or the rules made thereunder.

### **35. POWER OF CENTRAL GOVERNMENT AND THE STATE GOVERNMENT TO MAKE RULES**

The Central Government or the State Government, as the case may be, may, in consultation with the Central Authority, make rules in respect of the matters specified under this Act.

### **36. POWER TO REMOVE DIFFICULTIES**

- (i) If any difficulty arises in giving effect to the provisions of this Act, the Central Government may, by an order published in the Official Gazette, make such provisions not inconsistent with the provisions of this Act as may appear to be necessary for removing the difficulty:
- (ii) The Central Government or the Central Authority may issue such guidelines to the State Authority as it deems fit for the purpose of implementation of the provisions of this act.

## FORM "A"

### Application for registration/renewal of registration of Semen Station under the Bovine Breeding Act, 2013

1. Applicant's Name :
  
2. Applicant's full address with email ID, Ph.No., Fax No. etc. :
  
3. Names of the Directors, Proprietors, partners, owners, etc., of Applicant :
  
4. Location of semen station:
  
5. Proposed / Installed annual semen production capacity (lakh doses per year):
  
6. Breed wise list of breeding bulls proposed for semen collection (in prescribed format):
  
7. List of persons engaged and their qualification:
  
8. Registration number of semen station, in case of renewal with copy of the registration

I/we hereby undertake to comply with all the provisions of the Bovine Breeding Act, 2013.

Name of Authorised Person:

Designation:

Place:

Date :

Signature



**FORM "B"**

(See Clause 3(6))

**Certificate of Registration of Semen Station under the  
Bovine Breeding Act, 2013**

<b>This registration shall be displayed in a prominent and conspicuous place of business premises</b>	
Name and Address of the holder of Certificate of Registration :	Registration Number:
Location of Semen Station	Registration valid from _____ to _____ (Two years)
List of certified bulls attached.  Registration is granted subject to the provisions of the Bovine Breeding Act, 2013.  The holder of registration certificate shall comply with all the directions and conform to the specifications issued by the State Authority from time to time.	

Place: \_\_\_\_\_

\_\_\_\_\_

(State Authority)

Date: \_\_\_\_\_

**FORM "C"**

**Application for registration/renewal of Registration of Artificial Insemination Service Provider under the Bovine Breeding Act, 2013**

1. Applicant's Name :
2. Applicant's full address :
3. Names of the Directors, Proprietors, partners, owners, etc., of Applicant:
4. Proposed / Existing Area of Operation: State:-----, Name of Districts:-----  
State: -----, Name of Districts:-----
5. List of Artificial Insemination Technicians engaged by the Applicant (prescribed format):
6. Registration number of Artificial Insemination Service Provider, in case of renewal with copy of the registration

I/we hereby undertake to comply with all the provisions of the Bovine Breeding Act, 2013.

Name of Authorised Person:

Designation:

Place:

Date :

Signature

**FORM "D"**

(See Clause 4(4))

**Certificate of Registration of Artificial Insemination Service Provider  
under the Bovine Breeding Act, 2013**

<b>This registration shall be displayed in a prominent and conspicuous place of business premises</b>	
Name	Registration Number:
Address of the holder of registration certificate:	Registration valid from _____ to _____ (Two years)
Registration is granted subject to the provisions of the Bovine Breeding Act, 2013.  The holder of registration certificate shall comply with all the directions and conform to the specifications issued by the State Authority from time to time.	

Place: \_\_\_\_\_

\_\_\_\_\_

(State Authority)

Date: \_\_\_\_\_

**FORM "E"**

**Application for registration/renewal of Registration of Artificial Insemination Technician under the Bovine Breeding Act, 2013**

1. Applicant's Name:
2. Applicant's full address:
3. Applicant's Education:
4. Training undergone- name of institute, duration, certificate awarded:
5. Number of years of experience as AI technician:
5. Proposed / Existing Area of Operation: State:-----, Name of Districts:-----Name of villages:
6. Registration number of Artificial Insemination Technician, in case of renewal with copy of the registration

I/we hereby undertake to comply with all the provisions of the Bovine Breeding Act, 2013.

Name of Authorised Person:

Designation:

Place:

Date :

Signature

**FORM "F"**

**Certificate of Registration of Artificial Insemination Technician  
under the Bovine Breeding Act, 2013**

<b>AI technician shall carry this Registration Certificate while he provides AI service</b>	
Name	Name of registered AI service provider to whom registered:  Registration Number:
Address of the holder of registration certificate:	Registration valid from _____ to _____ (Two years)
Registration is granted subject to the provisions of the Bovine Breeding Act, 2013.  The holder of registration certificate shall comply with all the directions and conform to the specifications issued by the State Authority from time to time.	

Place: \_\_\_\_\_  
  
(AI Service Provider)

Date: \_\_\_\_\_

**FORM “G”**

**Application for registration/renewal of Registration of Artificial Insemination Technician Training Institute under the Bovine Breeding Act, 2013**

1. Applicant’s Name :
  
2. Applicant’s full address :
  
3. Names of the Directors, Proprietors, Partners, Owners, etc., of the Applicant:
  
4. List of Artificial Insemination Technicians trained by the Applicant (prescribed format):
  
5. Registration number of Artificial Insemination Training Institute, in case of renewal with copy of the registration

I/we hereby undertake to comply with all the provisions of the Bovine Breeding Act, 2013.

Name of Authorised Person:

Designation:

Place:

Date :

Signature

**FORM "H"**

(See Clause 5(4))

**Certificate of Registration of Artificial Insemination Technician  
Training Institute**

**under the Bovine Breeding Act, 2013**

<b>This registration shall be displayed in a prominent and conspicuous place of business premises</b>	
Name	Registration Number:
Address of the holder of registration certificate:	Registration valid from _____ to _____ (Two years)
Registration is granted subject to the provisions of the Bovine Breeding Act, 2013.  The holder of registration certificate shall comply with all the directions and conform to the specifications issued by the State Authority from time to time.	

Place: \_\_\_\_\_

\_\_\_\_\_

(State Authority)

Date: \_\_\_\_\_

**FORM "I"**

**Half Yearly Return**

**For Semen Station**

1. Registration No: \_\_\_\_\_ Date of Issue:  
\_\_\_\_\_
2. Name of the holder of Certificate of Registration:  
\_\_\_\_\_
3. Address of the Holder of Certificate:
  
4. Name of Semen  
Station: \_\_\_\_\_
5. Address of Semen Station:
  
6. Period of reporting: \_\_\_\_\_
7. Months (April –September) / October-March) \_\_\_\_\_
8. Present Capacity of Semen Production (Semen doses in lakh): \_\_\_\_\_
9. Number of bulls under semen collection: \_\_\_\_\_
10. Details of bulls under semen collection:

**A. Certified bulls under semen collection:**

Identification No. of Bull	Breed	Doses produced

**B. Bulls proposed for certification**



Identification No. of Bull	Breed

C. Bulls proposed for certification

Identification No. of Bull	Breed

D. Herd Strength

	Opening	Closing
Males:		
Quarantine		
Rearing		
Training		
Collection		
Layoff		
Isolation		
Females:		

E. Details of diagnostic tests conducted for the entire herd :

Disease	No. of animals tested	No. of animals found positive	Disposal details
TB			

JD			
Brucellosis			
IBR			
Campylobacteriosis			
Trichomoniasis			

11. Quarantine facility :

Has the semen station a quarantine station?: Yes / No

Capacity of quarantine station (no. of bulls): \_\_\_\_\_

12. Rearing facility ;

Has the semen station a rearing station?: Yes / No

Capacity of the rearing Station (no. of bulls): \_\_\_\_\_

**FORM-J**

**(Details of new bulls proposed  
for certification)**

1. Registration No. of Semen Station: \_\_\_\_\_ Date of Issue: \_\_\_\_\_
2. Name of the holder of Certificate of Registration:  
\_\_\_\_\_
3. Address of Holder of Certificate:
  
4. Name of Semen Station: \_\_\_\_\_
5. Address of Semen Station:
6. Details of bulls proposed for certification:

Sr. No	Bull ID	Age	Breed	Negative as per Schedule II-B (1) <b>(Yes/No)</b>	Meeting minimum production standards as per guidelines issued by GOI <b>(Yes/No)</b>

We certify that the above information is true and correct.

Place

Date

**Name of Authorised person:**

**Signature:**

**FORM "K"**  
**Half Yearly Return**  
**For AI Service Provider**

1. Registration No: \_\_\_\_\_ Date of Issue: \_\_\_\_\_

2. Name of the holder of Certificate of Registration:  
 \_\_\_\_\_

3. Address of Holder of Certificate:

4. Name of AI Service Provider: \_\_\_\_\_

5. Period of Reporting: \_\_\_\_\_

6. Months (April –September) / October-March) \_\_\_\_\_

7. Sources, usage and stock of semen doses:

Name of semen Station	Breed	No. of doses purchased	No. of doses used	No. of doses in stock

8. Area of operation: State: \_\_\_\_\_,  
 Districts: \_\_\_\_\_

State: \_\_\_\_\_,  
 Districts: \_\_\_\_\_

9. Number of AI technicians engaged: \_\_\_\_\_

10. Performance :

Fresh inseminations				Total AIs				Conception %	
Ind. Cattle	CB	Buf.	Total	Ind. Cattle	C B	Buf .	Tota l	Fresh AI	Total

11. No. of veterinarians engaged: \_\_\_\_\_

We certify that all AI technicians engaged by us meet the criteria of qualification and experience prescribed by the Authority to perform artificial insemination in bovines. We also certify that all information provided above is true.

Place:

Date:

Name of Authorised person:

Signature

**FORM "L"**

**Half Yearly Return**

**For AI Training Institute**

1. Registration No: \_\_\_\_\_ Date of Issue: \_\_\_\_\_
2. Name of the holder of Certificate of Registration:  
\_\_\_\_\_
3. Address of Holder of Certificate:
4. Name of AI Training Institute: \_\_\_\_\_
5. Name of Registered Veterinary Practitioner who is responsible for training:
6. Names and qualification of other faculty members:
7. Period of Reporting: \_\_\_\_\_
8. Months (April –September) / October-March) \_\_\_\_\_
9. Number of AI technicians trained: \_\_\_\_\_

10. List of AI technicians trained:

Sr. No.	Name of AI technician granted certificate	Permanent address	Name of Registered AI service provider with whom the AI technician is registered

We certify that all AI technicians trained by us have passed the final examination in the course and undergone the practical training as

prescribed by the Authority to perform artificial insemination in bovines. We also certify that all information provided above is true.

Place:

Date:

Name of Authorised person:

Signature



## **Schedule I**

### **Construction and design of facilities of semen station**

#### **Part 1**

##### **Quarantine Station**

The quarantine station must:

- a. Be at least one kilometer away from the main semen station;
- b. Be constructed so that contact with other livestock is prevented;
- c. Be such that it can be easily cleaned and disinfected.

#### **Part 2**

##### **Rearing Station**

The rearing station:

- (1) Must not have any direct contact with the main semen station;
- (2) Must be constructed so that contact with other livestock is prevented;
- (3) Must be such that it can be easily cleaned and disinfected.

#### **Part 3**

##### **Main Semen Station**

The main semen station must:

- (1) Have bull housing facilities having individual pen with adequate loafing area and are separated from the semen collection and processing facilities;
- (2) Have bull isolation facilities;
- (3) Have semen collection and processing facilities;
- (4) Have semen quarantine facilities, which may not be at the same site;
- (5) Be constructed so that contact with other livestock is prevented;
- (6) Be such that all bull housing, semen collection, semen processing and semen quarantine facilities can be easily cleaned and disinfected.

## **Part 4**

### **Semen Storage**

The semen storage room must:

- (1) Be such that it can be easily cleaned and disinfected;
- (2) Be well ventilated;
- (3) Have appropriate loading and unloading facilities for containers.

## **Schedule II**

### **Minimum Health Requirements at Semen Stations**

#### **Part 1**

##### **Health Requirements prior to Quarantine**

Bulls, bull calves and their dams procured from any source shall be tested for TB, JD and Brucellosis. Bulls, bull calves and their dams shall be free from TB, JD and Brucellosis, and physical deformities.

#### **Part 2**

##### **Health Requirements at Quarantine Station**

Bull calves destined to be shifted to the Rearing Station or Bulls destined to be shifted to the Semen station should be placed under a minimum quarantine of 90 days in a separate quarantine station. During this period, a series of compulsory examinations and tests shall be carried out. Only after negative results, the bull shall be admitted to the rearing station / semen station.

- a) The quarantine station shall be located in a place, which is effectively separated from the main semen station and is at least 1 km away.
- b) The equipment used in handling, feeding, watering and cleaning the animals in the quarantine station shall not be shared with any other part of the semen station.
- c) The floor, ceilings, walls, iron pipes and all implements of the quarantine station shall be thoroughly disinfected with 4% washing soda solution at least two days before the arrival of a new group of animals.
- d) Only those animals that have met the requirements mentioned at Part 1 shall be allowed entry to the quarantine station.
- e) Each new bull or bull calf in the quarantine station shall be tested, as mentioned in Annex I through Annex VI against Bovine Tuberculosis

(TB), Johne's disease (JD), Brucellosis, Infectious Bovine Rhinotracheitis (IBR), Campylobacteriosis and Trichomoniasis. All tests shall be done by an agency or disease diagnostic laboratory mentioned in Annex I through Annex VI.

- f) If any bull is found positive for TB, JD or Brucellosis, the positive bull shall be removed immediately without retesting. The remaining bulls shall be further tested twice for that particular disease at an interval of 60 days. If any bull is found positive, all animals in that batch shall be culled. As regards animals positive for IBR, culling shall be made based on isolation of virus for IBR.
- g) During quarantine, all animals shall be karyotyped to eliminate use of bulls with chromosomal defects.
- h) During quarantine, HF and their crosses shall be tested to be free from genetically transmitted diseases like Factor XI deficiency syndrome, Bovine Leukocyte Adhesion Deficiency (BLAD), Citrullinemia and Deficiency of Uridine Monophosphate Synthase (DUMPS).
- i) During quarantine, the bulls shall be vaccinated against FMD, HS, BQ, Theileriosis and Anthrax. However, vaccinations against bacterial diseases shall be done only if there is an outbreak or prevalence of a particular disease.

After successful quarantine, all bulls or bull calves shall be shifted to the rearing station or the semen station.

### **Part 3**

#### **Health Requirements in Rearing Station**

1. Only those bull calves that have met the conditions set out in Part 2 shall be allowed to enter in the rearing station.
2. The bulls shall be vaccinated against FMD, HS, BQ and Anthrax. However, vaccinations against bacterial diseases shall be done only if the area is endemic to a particular disease.
3. The bull calves of exotic breeds and their crosses shall be vaccinated for Theileriosis once in a lifetime.
4. Testing for bulls against Tuberculosis, Johne's disease, Brucellosis, IBR, Campylobacteriosis and Trichomoniasis shall be carried out as mentioned in Annex I through Annex VI.

## **Part 4**

### **Health Requirements in Semen Station**

1. Only those bulls that have met the conditions set out in Part 2 or those coming from the rearing station of the semen station fulfilling the conditions set out in Part 3 shall be allowed to enter in the rearing station.
2. The semen station shall have a well-defined bio-security protocol for entry of visitors, vehicles, stray animals, equipment, material, manpower working at the station, disposal of dead animals etc. Female animals should not be kept in the same premises.

### **3. Vaccination Schedule**

The bulls shall be vaccinated against FMD, HS, BQ and Anthrax. However, vaccinations against bacterial diseases shall be done only if there is an outbreak or prevalence of a particular disease.

To reduce lay off time, the bulls shall be vaccinated on the rest day or the day after completing semen collection. Sexual rest may not be required unless otherwise febrile condition is noticed.

The semen station shall arrange for carrying out ring vaccinations for all animals against FMD, HS and BQ within a radius of 10 km around the semen station. Vaccinations against HS and BQ shall be carried out in the areas having incidence of these diseases.

4. Testing protocols for bulls against TB, JD, Brucellosis, IBR, Campylobacteriosis and Trichomoniasis are given below in Annex I to Annex VI.
5. Management of FMD shall be as detailed in Annex VII.
6. It must be ensured that the results are made available to the concerned semen station within the stipulated time period.
7. There should be an accreditation authority to accredit these laboratories with a periodic frequency.
8. There should be an apex reference laboratory for verification of the results if any station is not satisfied with the results of regular testing laboratory.
9. None of the semen production station should be allowed to test its bulls at its own / related laboratory.

## **Schedule III**

### **Part 1**

#### **Bull Housing and Management**

##### **Housing**

Bull sheds should have spacious individual pens with adequate loafing area, manger and water trough with access to drink water all the time. In hot and humid areas, during the summer a cooling system with sprinklers and fan is required particularly for buffaloes and exotic bulls. Disinfectants like formalin or phenyl based compounds should not be used in the bull sheds. Instead, compounds containing Gluteraldehyde should be used. Spraying of **Sodium Carbonate** (4%) solution should be carried out weekly. The floor should be sterilized at least once a year using a blowlamp or by burning straws. There should be an isolation shed for separating ailing / sick bulls for treatment at one corner of the farm. Bulls once diagnosed as infected with infectious / contagious disease should be removed immediately from the semen station.

Female stock should not be housed near the bull station.

##### **Management of Bulls**

- a) The coat of the bulls should be kept clean and well groomed. The hooves should be regularly trimmed.
- b) The length of the tuft of hairs at the prepuce orifice should be cut to about 2 cm.
- c) Douching of the prepuce with sterile normal saline solution may be done every ten days. Prepuce should also be washed with sterile normal saline solution, a day prior to semen collection. Disposable gloves and a separate sterilized nozzle should be used for each bull.
- d) A scientific feeding schedule should be followed for the bulls.

## **Schedule III**

### **Part 2**

#### **Semen Collection and Processing and Semen Quarantine, storage and distribution**

##### **1. Semen Collection**

- a) Ideally, the floor of the collection yard should be made of concrete layer at a depth of one foot from the ground level. A mixture of sand and limestone should be used to fill up to ground level and pressed firmly. Alternatively, a good quality rubber mat (with interlocking arrangement) or coir mat should be put into the concrete groove of the mounting area for adequate cushioning effect. After collection, the area must be thoroughly cleaned and odourless disinfectant solution (Colloidal iodine) be sprayed in the collection area.
- b) On the day of collection, prior to semen collection, the bulls should be properly washed and cleaned. At the collection arena, the prepuce should be cleaned externally with a sterilized napkin soaked in normal saline to remove any sand or dust particles before taking collection. A separate napkin should be used for each bull.
- c) The person responsible to carry out preputial wash must use disposable gloves and separate sterilized nozzle for each bull to avoid transmission of IBR infection from one bull to another.
- d) The bulls shall be sexually prepared by giving two / three false mounts followed by two minutes restraint and the total time limit should be not more than 12 minutes. The duration of each false mount shall be for 1 to 2 minutes.
- e) Sterilized bull aprons should be used to avoid the penis touching the hindquarters of the dummy. A fresh apron should be used for each ejaculate.
- f) Preferably veterinarians shall take semen collection. If semen is collected by staff, a veterinarian shall remain present to supervise the collection process. While taking collection, it shall be ensured that AV is not thrust on the penis of bull, instead the penis should be guided to AV.

- g) Before every collection, the semen collector shall either wash his hands with 0.1% Savlon solution or use disposable gloves or do both. The semen collector shall not touch the penis.
- h) Immediately after collection, the AVs shall be thoroughly cleaned by non-spermicidal neutral detergent. Separate AVs shall be used for each mounting. The AV shall be changed even if the bull has inserted its penis without successful ejaculation. The same AV shall not be used twice. The AVs shall always be kept inverted and the collection tube shall be covered with felt / water jacket (plastic bottle filled with warm water at 34° C) to avoid cold shock. The open end of sterilized AVs shall be covered with aluminium foil, which would be removed at the time when bulls are ready for giving semen.
- i) Preferably 10” size AVs shall be used for cattle and 8“ to 9” size for buffaloes to ensure semen is ejaculated in cone. For buffaloes goat AVs can also be used. The cone shall be of top quality Neoprene rubber.
- j) If it is extremely essential to use a lubricant, separate sterilized glass rods should be used to smear K-Y Jelly on each AV.
- k) The AV shall not be shaken after ejaculation; otherwise lubricant and debris may mix with the semen samples.
- l) The entry of visitors/ staff / labourers shall be strictly prohibited in the collection arena at the time of semen collection and inside the semen laboratory.
- m) Protective clothing (barn coat) and gumboots shall be used by the Veterinarians and personnel while taking semen collection. Gumboots and barn coat should be washed daily immediately after completion of semen collection work.
- n) Semen must be obtained from a bull having normal libido. While taking two ejaculations the semen station shall keep a gap of 10 to 12 minutes between two ejaculates, depending upon the refractory period of the bull. (To harvest more quantity of semen, interval between two ejaculates shall be kept for 40 to 45 minutes. After taking first ejaculate, the bull shall be taken back to the shed for feeding and watering and again brought back for taking second ejaculate. However, care shall be taken to use a fresh & sterilised apron during second ejaculate)

- o) In general semen stations should follow a norm of minimum two ejaculates per collection and a minimum two collections per bull per week for taking annually at least 90 collections and 180 ejaculates from each adult bull.

## **2. Evaluation & Processing**

- a) The tube containing the freshly collected semen should be capped with aluminium foil as soon as it is placed in the pass box before transferring to the laboratory. The collection tube shall be kept capped until processed.
- b) As soon as the neat semen is received, it should be kept in a thermo-controlled water bath at 34° C under a Laminar Unit, after recording the weight / volume of semen.
- c) After examination of sperm concentration and initial motility, semen samples should be diluted with dilutor maintained at 34° C.
- d) Semen samples showing less than 500 million sperm per ml should be discarded.
- e) Semen samples selected for freezing should have a minimum of 70% initial progressive motility. Final dilution of semen keeping a minimum of 20 million spermatozoa per dose shall be done in appropriate flasks with the dilutor maintained at 34° C.
- f) Filling and sealing of semen straws should be done under a Laminar Flow Unit using sterile straws, filling nozzles and fresh rubber tubing. Rubber tubing should be used only once.
- g) After freezing is over the straws should be collected from the racks using scoop tongs.

### *3. Colour Specifications :*

**All semen stations should follow the following common colour codes**

:



1.	Jersey	-	Yellow
2.	Holstein	-	Pink
3.	Indigenous	-	Orange
4.	HF Crossbred	-	Pistachio Green (light green)
5.	Jersey Crossbred	-	Salmon
6.	Sunandini	-	Blue
7.	Buffalo	-	Grey

If any of the above coloured straws is not available, then a transparent coloured straws shall be used.

#### **4. Printing of Straws**

Information regarding bull number, breed, name of the organization, year, batch no. (as per the day of the year), ejaculate no., etc. should be printed on each straw.

All semen stations should use the following printing abbreviations:

Jersey	-	JY		Farm No. / Name
Holstein	-	HF		Breed
HF Cross	-	CB HF		Name of Institute
Jersey Cross	-	CB JY		Batch No. / Date of Prodn.
Sunandini	-	SUN		
Sahiwal	-	SAH		
Red Sindhi	-	RS		
Kankrej	-	KANK		
Gir	-	GIR		
Tharparker	-	THAR		
Rathi	-	RATHI		

Haryana	-	HAR		
Murrah Buffalo	-	MBF		
Surti Buffalo	-	SBF		
Jaffrabadi Buffalo	-	JBF		
Mehsana	-	MSNB		

### **5. Post thaw motility**

After freezing, the semen straws should be stored in a separate container. Post-thaw motility of semen should be examined at 24 hours. For a minimum concentration of 20 million per dose, minimum acceptable post thaw motility should be 50%. Semen doses below 50% progressive motility should be discarded.

### **6. Quality Checks for frozen semen**

This includes:

- (i) Quarterly testing of random samples from each batch for bacterial load using standard plate count (The standards for acceptable colony forming unit in processed semen is 5000 CFU per ml as per OIE norm. If the bacterial load exceeds the OIE limit, the semen doses are to be discarded.)

Neat semen as well as frozen semen should not have uncountable CFUs. Semen showing crowded CFUs should be subjected to testing for pathogenic organisms.

- (ii) Hypo osmotic swelling test (HOST) – every day four to six samples
- (iii) Incubation test – everyday four to six samples
- (iv) Acrosome integrity test by Giemsa staining - for all bulls at least once in a quarter shall be mandatory. Alternatively wet smear of semen shall be examined using DIC microscope
- (v) Percent Intact Acrosome – all bulls to be covered once a quarter
- (vi) Sperm Concentration – randomly two samples per week each for cattle and buffalo.

- (vii) Neat semen should be examined at an interval of every six months for morphological abnormalities particularly for crossbred bulls.
- (viii) Morphological examination of sperm of young bulls must be carried out (at least six samples at weekly intervals) before introducing them in the herd. Semen should not be used if the sample contains a total abnormality of more than 20% and head and mid-piece abnormality (alone) of 7%.

Quality check of semen straws drawn randomly from the long storage at periodic intervals should be done as a part of quality assurance

## **7. Information System**

- a) Batch wise records of Volume of semen, density, motility, sperm concentration, dilution rate, total extended volume, post-thaw motility (24 hrs), total number of doses produced, etc. should be maintained.
- b) Details of semen supplied to various agencies including post-thaw motility at the time of dispatch.
- c) Fertility data of bulls, conception rate, records of the progeny associated with any genetic defect, percent male / female born, etc.
- d) Report on microbiological examination of semen samples.
- e) Records of all quality tests for neat and frozen semen samples

## **8. Frozen Semen Storage and Quarantine**

1. Frozen semen storage room should be a well ventilated all weather safe area.
2. Semen doses produced before 30 days from the date of dispatch should only be supplied for field use.
3. Semen goblets should be transferred to the bulk storage containers with proper recording of position in the canisters. After each dispatch, records redefining the position of remaining doses should be updated. A proper foolproof identification system for frozen semen container, canister, goblet and level of storage should be ensured so that a bull's semen can be traced with ease.
4. All transfers of frozen semen straws into the goblets should take place immersed under liquid nitrogen, in a polystyrene / thermocol box filled with liquid nitrogen

5. Reference samples of semen doses dispatched should be retained.
6. Precaution should be taken to see that each goblet has sufficient space for liquid nitrogen. Mini straws need special care and should not be exposed above liquid nitrogen even for a short time (10 seconds) as they get warm faster and irreversible damage to sperm viability is caused.
7. Liquid Nitrogen should be replenished at regular intervals to ensure the maintenance of level

**Schedule III**

**Part 3**

**Pedigree Certificate of Bull**

**State Authority:** \_\_\_\_\_

Date certificate issued: \_\_\_\_\_

Name of Semen Station/Owner:

Address of Semen Station:

Name of Bull:

Bull ID No.:

Breed of Bull:

**Performance Data:**

**A. Bull's Performance Data:**

<b>Particulars</b>	<b>First lactation Yield Kgs.</b>	<b>Fat%</b>	<b>Fat Yield Kgs.</b>	<b>Protein %</b>	<b>Protein Yield Kgs.</b>
No. of daughters					
Average of daughters					
Breeding value					
Reliability					

**Fertility data :**

**Type Data :**

**B. Bull's Dam Performance Data:**

Dam ID No.:

Dam Breed :

Dam's Performance:

<b>Lactation No.</b>	<b>Lactation days</b>	<b>Total lactation yield Kgs</b>	<b>305 Day Yield</b>
<b>1</b>			
<b>2</b>			
<b>3</b>			

**Breeding value:**

Lactation yield :  
Fat% :  
Fat yield :  
Protein% :  
Protein Yield :

**C. Bull's Sire Performance Data:**

<b>Particulars</b>	<b>First lactation Yield Kgs.</b>	<b>Fat%</b>	<b>Fat Yield Kgs.</b>	<b>Protein %</b>	<b>Protein Yield Kgs.</b>
No. of daughters					
Average of daughters					
Breeding value					
Reliability					

**Fertility data :**

**Type Data :**

## **Schedule IV**

### **Part 1**

#### **Minimum Standards for Semen Storage and Distribution for AI Service Provider**

1. Semen storage room should be stored in a well ventilated, all weather safe storage area.
2. The service provider should ensure a proper foolproof identification system for each semen container, canister, goblet and level of storage maintained both in storage and distribution containers so that a bull's semen can be traced with ease.
3. Details of semen supplied to various agencies including post-thaw motility at the time of dispatch should be recorded. After each dispatch, records redefining the position of remaining doses should be updated.
4. While transferring, goblets containing semen should be well identified and precaution should be taken to see that each goblet has sufficient space for liquid nitrogen. Mini straws need special care. They should not be exposed above liquid nitrogen even for a short time (10 seconds) as they get warm faster and cause irreversible damage to sperm viability.
5. All transfers of semen straws into the goblets should take place immersed under liquid nitrogen, in a polystyrene / thermocol box filled with liquid nitrogen
6. Liquid Nitrogen should be replenished at regular intervals to ensure the maintenance of level

## **Schedule IV**

### **Part 2**

#### **Guidelines for AI service provider**

1. An AI service provider must hold a certificate of registration from the State Authority.
2. AI service provider will engage AI Technicians holding such qualifications and experience as prescribed by the State Authority from time to time.
3. AI technicians shall provide AI Services only if he/she is working under an AI service provider holding a Certificate of Registration from a State Authority.
4. An AI service provider must engage qualified veterinarians (one for minimum 50 AI workers) to supervise the work carried out by the AI technicians and address problems related to repeat breeders.
5. AI service provider must ensure that the AI technician engaged by him to provide AI services puts an ear-tag on each animal inseminated by him, maintains proper records of each insemination carried out in the formats prescribed by the State Authority and submits the same to the AI service provider periodically.
6. AI service provider would maintain proper records of insemination work in the formats prescribed by the State Authority and submit the same to the State Authority periodically in Form "F".
7. AI service provider would follow the Minimum Standards for storage, transport and transfer of semen doses from one container to other as laid down in Schedule IV Part 1 of the Bovine Breeding Act 2013.
8. AI service provider shall procure semen from only those semen stations which have obtained Certificate of Registration from the State Authority.
9. AI service provider shall use only those imported semen doses in its AI programme which have been imported with the approval of



Government of India and shall follow the regulations laid down by Government of India for the use of such semen in the country.

## **Schedule V**

### **Part 1**

#### **Curriculum for AI technician training**

##### **A. Class Room:**

- 1) Different breeds of cows and buffaloes and their production and reproduction parameters
- 2) Conservation and development of indigenous breeds through selective breeding.
- 3) Benefits of Crossbreeding and genetic improvement of dairy animals
- 4) State Breeding Policies and their enforcement specific to the State to which trainee batch belong to
- 5) Introduction to AI, history of AI, natural service (NS) vs AI, advantages and limitations
- 6) External and internal body parts of a dairy animal and their function
- 7) Male reproductive organs & their functions
- 8) Semen, its collection, evaluation, processing, preservation
  - different types of semen packing,
  - structure of mini and medium straws
  - information printed on straw and its importance
  - Breed wise Straw colour codes
- 9) Female reproductive organs & their functions
- 10) Oestrus cycle:
  - Internal and external symptoms at different stages of oestrus cycle
  - Correct time of insemination
  - Determinants of first AI in heifers
  - Methods of heat detection in cattle and buffaloes
- 11) Normal reproductive cycle
- 12) Puberty, Maturity, Breeding, Fertilization, Implantation, Gestation and Calving

13) Ideal calving interval

- Service period, dry period and Inter-calving period

14) Process of insemination:

- Collecting History
- Standard Operating Procedure (SOP)

15) Importance of:

- Proper method of semen withdrawal from container
- Proper thawing
- Proper preparation of AI gun
- Proper site of semen deposition
- Care of animal during & after insemination

16) AI equipment and accessories & their care

17) Liquid nitrogen handling:

- Structure of LN container
- Handling & care of LN container
- Precaution in handling of LN
- Different models of LN containers
- Importance of maintaining cold chain and LN refilling schedule.
- Proper LN level in container & its checking. Evaporation rates and refilling interval of commonly used containers in the field under normal working conditions.
- LN conservation measures

18) Pregnancy Diagnosis

19) Methods of calculating conception rates and factors affecting conception rates

20) Method of drying of animals on completion of 7th month pregnancy.

21) Common reproductive disorders/ diseases, repeat breeding, causes of abortion, etc.

22) Measures to obtain maximum fertility

23) Ear tagging , importance of record keeping

24) Recording formats and submission of records into the INAPH application(offline & online versions) through

- 25) PDA/Netbook/Desktop (training in data entry with dummy data on test server, different flash messages, saving the data, synchronization of data with the server and using action reports in day to day work.
- 26) Starting an AI centre
- 27) Method of non-surgical castration
- 28) Care and management of new born calf and heifers till it becomes pregnant at farmers perception.
- 29) Care and management of Dry Pregnant animals
- 30) Care and management of animals before and after calving, precautions at the time of calving and use of naval kit for disinfection of naval cord
- 31) Importance of Animal housing and general management in getting full expression of genetic capability
- 32) Importance of bio-security measures to be adopted during AI.
- 33) Economically important diseases and their prevention through timely vaccination; various available vaccines; vaccination schedules; importance of maintaining cold chain
- 34) Basic aspects of nutrition and concept of Ration Balancing
- 35) Importance of proper nutrition including feeding of vitamins and mineral mixtures and deworming in fertility management with emphasis on the adverse impact of macro and micronutrients deficiencies on fertility status/reproductive health of animal
- 36) Fodder - varieties, cultivation practices; preservation (hay & silage preparation) and enrichment of straw. Densification and enrichment of fodder.
- 37) Taking AI as a self employed enterprise
- 38) Importance of Animal Insurance; various insurance schemes

39) Various government schemes in the area of animal breeding

40) Role of Information and Communication Technology (ICT) in artificial insemination programme for bovines.

## **B. Case Studies**

- 1) Advantages of AI over natural service.
- 2) Advantages of following SOP for AIT-better conception rate and its impact over a period of five years.
- 3) Record keeping and using INAPH.
- 4) Extension activities related to animal husbandry (activities on Breeding, Health and Nutrition).
- 5) A farmer coming to AI Worker with an animal for insemination with following history of oestrus:
  - 3rd day after heat,
  - On the day of full moon
  - Just on the time of starting of heat
  - Animal with pustular/watery/bloody vaginal discharge.
  - Gestational heat
  - Post partum heat after one month of calving.
  - Heifer in heat with lower body weight.
- 6) Care of young calves till its pregnancy
- 7) Effect/impact of good AI technician Vs inefficient AI technician
- 8) Superstitious believes Vs Scientific method of breeding

## **C. Audio Visual materials:**

- 1) Animal reproduction and AI
- 2) Changing lives
- 3) DO and DONOT of AI
- 4) Hygienic milk and milk product processing and packagining

- 5) Year round fodder production
- 6) Animal health care ( Diagnostics for control and eradication of diseases – FMD, HS, PPR, and avian diseases)
- 7) Improving quality and utilization of poor quality roughages
- 8) Mineral mixture for increased animal productivity
- 9) Organic farming for sustainability and profitability

#### **D. Practical**

- 1) Identification of different female reproductive organs on morbid Genitalia
- 2) Palpation of female genitalia in a Phantom box and passing of AI gun
- 3) Structure of LN container:
  - different models
  - handling & care
  - checking LN level
- 4) AI equipment & accessories:
  - handling & care including sterilisation
- 5) Palpation of female genitalia in live animal
- 6) Passing of AI gun in live animals
- 7) Demonstration of:
  - proper method for withdrawal of straw from containers
  - proper thawing procedure
  - proper preparation of gun
  - correct site of semen deposition
- 8) Pregnancy diagnosis at 90 days & beyond
- 9) Ear tagging
- 10) Record keeping and INAPH

#### **E. Study visits**

Study visits to any of the following places as deemed appropriate for the AI training Institutes

- AI Centre
- Cattle Feed Factory(optional)
- Dairy Farm
- Exhibitions and Krishimela/Pashumela (optional)
- Semen Station
- Dairy processing plant
- Fodder farm/Demonstration farms

**F. Duration of training**

1) AI basic training:

- Class room training along with practical training: 30 days
- Practical training in the field with AI service provider: 60 days

2) AI refresher training:

- Classroom and Practical training -- 7 days

**G. Faculty profile and requirement (for a batch size of 30 trainees)**

**1. Veterinary Officers:**

Minimum two Veterinarians are required with educational qualification of BVSc & AH and 3 years of work experience in AI, Breeding, Health and Management of Cows and Buffaloes along with experience in providing on the job practical training and delivery of lectures.

**2. Support Staff:**

Minimum one support staff is required with graduation in any discipline

**H. Participant profile**

**1. AI Basic Training:**

The participant of this programme should have at least passed in 10<sup>th</sup> standard examination with not less than 18 years of age.

**2. AI Refresher Training:**

The participant of this programme should be a practicing AI technician having at least 1 year relevant work experience and should have undergone AI Basic training.

**I. Tests during Training:**

Class Room Training:

- Fortnightly written test on topics covered.
- Final written test at the end.
  
- Final practical test to evaluate the skills learnt

**J. Pass marks:**

- Minimum three theoretical tests and one practical test may be conducted.
- Minimum 50% in each of the test including the final tests.



## **Schedule V**

### **Part 2**

#### **Facilities at AI Training Institute**

##### **1. Class room facilities:**

For a batch of 30 trainees, there should be a class room having minimum of 600 square feet area. If there are more than 30 trainees, there should be an additional class of 600 square feet area.

Besides class rooms, there should be a laboratory having minimum 500 square feet area for practical classes. This laboratory should have facility to store reproductive organs and keep different models of animals and reproductive organs and space to keep semen and liquid nitrogen storage containers.

Besides, there should be a library having at least 400 square feet area and two administrative office rooms each having 300 square feet area.

##### **2. Teaching aids**

The class room must have minimum the following:

- Adequate chairs and tables for trainees
- White board
- LCD Projector (optional)
- Computer
- Charts
- Charts and Models of reproductive organs
- The centre must have the required semen and LN storage containers, AI guns, and required AI accessories.
- Reproductive organs must be obtained from a nearby slaughter house for palpation and passing a gun.
- Ear tags and ear tag applicators
- Measuring tape for estimation of body weight
- ICT aids (Computer, note books or PDAs, printers etc.,

##### **3. Animal housing facilities for practical training**

- For practice, the centre should have minimum one animal for six students.
- The centre may have its own animals for practical classes or tie up with nearby Gaushala or Panjarapol or slaughter house for practical training. Every trainee must pass AI gun in at least 20 animals during entire period of class room training.
- If the centre has its own animals, there should be a proper shed, a Trevis /an AI crate and a godown to store feeding material. Animals should be replaced every six months.

##### **4. Lodging and boarding facilities for trainees**

- The centre should have proper residential facilities for trainees including kitchen and minimum recreational facilities. Or
- The AI training Institutes may outsource the board and lodging facilities to an external agency through a formal agreement for at least a period of two years. The copy of the formal agreement should be kept for record for requirement at the time of Accreditation process.

#### **5. Understanding with AI service providing organisations for practical training**

- The Centre should have some formal arrangement with AI service providing organisations for its trainees to receive apprenticeship training for 60 days.
- During practical training each trainee should do minimum 75-100 AIs and the same numbers of P.D.s. The AI Centers having such work performance should be selected for apprenticeship training. The trainer of A.I. Technician should have enough experience (3 to 5 years) to impart practical training to trainee A.I. Technicians.
- Trainees should also get opportunities to address farmers meetings to develop confidence and do extension activity effectively.

#### **6. Records/Documents for a AI training Institute**

- 1) Trainees' records of registration
- 2) Trainees' daily attendance record
- 3) Records of successfully completed trainees
- 4) Summary of feedback obtained from trainees
- 5) Annual progress report / Training Brochure(optional)

### Bovine Tuberculosis Management

<b>Screening Test Details</b>	Name	Delayed Hypersensitivity – Single Intra-dermal test
	Reagent	Bovine tuberculin PPD
	Reagents from	IVRI, Izatnagar
	Testing at	Where animals are housed by RDDL/CDDL/NDDB
	Positive result criteria	As per <i>OIE</i> norms  <b>Negative</b> : Increase in skin thickness less than 2 mm & without clinical signs viz. exudation, necrosis, pain, inflammation of the lymphatic duct of that region or the lymph node, 72 hours post-inoculation.  <b>Inconclusive</b> : Increase in skin thickness more than 2mm & less than 4mm, absence of above clinical signs, 72 hours post-inoculation.  <b>Positive</b> : Increase in skin thickness 4 mm or more, or presence of clinical signs viz. exudation, necrosis, pain, inflammation of the lymphatic duct of that region or the lymph node, 72 hours post-inoculation.
<b>Eligible animals</b>		All animals above 6 weeks of age.
	Positive herd	Minimum 60 days after culling of last positive animal

<b>Frequency of testing</b>	Negative herd	Annual test is minimum. Six months ( $\pm$ 1 week) after last whole herd negative testing, desirable.
<b>Action on finding a positive bull</b>	Animal	Immediate isolation and removal
	Semen	Destroy semen doses produced since the last negative test
<b>Tuberculosis free herd (OIE)</b>		Herd found negative on two consecutive tuberculin tests at an interval of 6 months, the first being performed 6 months after the slaughter of last affected animal
<b>Quarantine</b>	Duration of quarantine	Minimum 90 days
	Test schedule	Two tuberculin tests, minimum interval of 60 days between tests.

### Johne's Disease (JD) Management

<b>Screening test Details</b>	Name	Delayed Hypersensitivity test (Skin test)
	Reagent	Johnin PPD
	Reagents from	IVRI, Izatnagar
	Testing at	Where animals are housed by RDDDL/CDDL/NDDB
	Positive result criteria	Increase in skin thickness of over 4 mm (discrete circumscribed swelling), 72 hours post-inoculation
<b>Eligible animals</b>		All animals above 6 months
<b>Frequency of testing</b>	Positive herd	Minimum 60 days after culling of last positive animal
	Negative herd	Annual test is minimum. Six months ( $\pm$ 1 week) after last whole herd negative testing, desirable.
<b>Action on finding a positive bull</b>	Animal	Immediate isolation and removal
	Semen	Destroy semen doses produced since the last negative test

### Bovine Brucellosis Management

<b>Screening Test Details</b>	Name	ELISA, RBPT+CFT
	Sample	Serum
	Reagents from	ADMAS / CDDL / OIE reference lab
	Testing at	CDDL/ RDDDL/NDDB
<b>Eligible animals</b>		All above one year
		In females 14 days after calving or abortion
<b>Frequency of testing</b>	Positive herd	30 to 60 days after culling of last positive animal
	Negative herd	Exactly one year ( $\pm$ 1 week) after last whole herd negative testing
	Negative herd (optional)	Where the disease has been maintaining a very low profile (less than 1 % positive) quarterly or six monthly sample could be collected to minimize losses
<b>Action on finding a positive bull</b>	Animal	Immediate isolate, castrate and remove
	Semen	Destroy semen doses produced since the last negative test
<b>Brucellosis free herd (OIE)</b>		Herd found negative on two consecutive annual tests
<b>Additional testing at sexual maturity</b>		Serum ELISA before bulls are used for semen collection and distribution for AI

<b>Additional testing at sexual maturity</b>		Serum ELISA/SNT before bulls are used for semen distribution in field AI programmes
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## Testing of bulls for management of Infectious Bovine Rhinotracheitis (IBR) in Semen Stations

Name of the test	Enzyme Linked Immunosorbent Assay (ELISA), Real-time PCR
Sample (s) required	Serum for ELISA, semen for real-time PCR
Induction of new animals into herd/semen stations	Only negative animals will be inducted. All the animals to be inducted irrespective of their age should be put on hold and inducted only if test negative after the age of 9 months.
Sero positive bulls at IBR positive Semen Station	Action in order of priority:- (i) Immediately cull sero-positive animals and castrate them (ii) If culling not possible, immediately isolate the animal and process and store their semen separately. Test each ejaculate with RT-PCR. Discard by burning positive ejaculate. Use only negative tested semen.
Action to be taken on bulls at the IBR free Semen Stations	(i) All positive bulls culled immediately (ii) Retest remaining bulls at 30 -60 days after culling last positive animals. Repeat (i) & (ii) until the remaining herd tested negative. Thereafter test at 6 monthly interval. (iii) The negative herd should be tested at 6 monthly interval.



**Testing bulls for management of Bovine Viral Diarrhoea (BVD) at Semen Station**

Name of the test	Enzyme Linked Immunosorbent Assay (ELISA) for antibody detection (Ab-ELISA) for detection of antigen (Ag-ELISA).
Sample (s) required	Serum
Induction of new animals into herd/semen stations	Only negative animals will be inducted.
Action to be taken for positive animals	Immediately isolate and cull
Semen doses of positive animals	Destroy by incineration frozen semen doses of the positive animals since last negative test.
Bulls at the semen stations	(i) All positive bulls for Ag ELISA and Ab ELISA shall be culled immediately. If bulls are positive for Ab ELISA retesting done after 30 days and if titre increases bulls are culled. (ii) Retest remaining bulls at 30 -60 days after culling last positive animals. Repeat (i) & (ii) until the remaining herd tested negative. Thereafter test at 6 monthly intervals. (iii) The negative herd should be tested at 6 monthly intervals.

### Bovine Genital Campylobacteriosis Management

<b>Screening test details</b>	Name	Bacterial isolation & identification
	Sample	Preputial washing, semen
	Testing at	RDDL/CDDL/NDDB
<b>Eligible animals</b>		All male animals
<b>Prevention</b>		Annual sheath lavage
<b>Frequency of testing</b>	Positive herd	30 days after culling of positive animal.
	Negative herd	Exactly one year ( $\pm$ 1 week) after last whole herd negative testing
<b>Action on finding a positive bull</b>	Animal	Treat the animals
	Semen	Destroy semen doses produced since the last negative test

### Bovine Trichomoniasis Management

<b>Screening test details</b>	Name	Agent isolation & identification
	Sample	Preputial washing
	Testing at	RDDL/CDDL/NDDB
<b>Eligible animals</b>		All male animals
<b>Prevention</b>		Annual sheath lavage
<b>Frequency of testing</b>		Annual
<b>Action on finding a positive animal</b>	Animal	Treat the animals
	Semen	Destroy the semen doses produced since the last negative test
<b>Additional testing at sexual maturity</b>		Protozoa isolation before bulls are used for semen distribution for AI

## Foot and Mouth Disease (FMD) Management

<b>Action during FMD outbreak</b>	Animal	Isolate diseased animals till recovery, do not cull.
	Semen	<p><i>Semen from FMD infected bulls :</i></p> <p>Destroy semen collected during one month before onset of outbreak. Do not collect semen from bulls during the outbreak and three months after the last case of FMD in the farm.</p> <p><i>Infected animals must be given 90 days rest</i></p> <p><i>Semen from healthy bulls maintained in FMD infected farm:</i></p> <p>Destroy semen collected during one month before onset of outbreak. Do not collect semen from bulls during the outbreak and one month after the last case of FMD in the farm.</p> <p>Semen, other than the above mentioned periods could be used, if no new case of FMD is observed during three months after the last FMD case in the farm.</p>
	Semen for export	Test each batch by virus isolation and PCR
<b>Vaccination</b>	Oil adjuvant vaccine	<p>As per manufacturer's recommendations in farm and 10 km around the farm</p> <p>Test for seroconversion, by collecting serum on the day of vaccination and 21 days later.</p>