

वर्षा जोशी  
Varsha Joshi



सत्यमेव जयते



अपर सचिव  
भारत सरकार  
मत्स्यपालन, पशुपालन एवं डेयरी मंत्रालय  
पशुपालन एवं डेयरी विभाग  
कृषि भवन, नई दिल्ली-110001

Additional Secretary  
Government of India  
Ministry of Fisheries, Animal Husbandry & Dairying  
Department of Animal Husbandry and Dairying  
Krishi Bhawan, New Delhi-110001

D.O No. N-05/15/2022-DADF-Deptt

Dated: 30<sup>th</sup> January, 2023

*Respected colleague,*

As you may be aware that Artificial insemination is crucial for enhancing milk production and productivity of bovine through use of high genetic merit bulls which are free from disease and all known genetic disorders. However, if AI programmes are not being implemented using semen of disease free bulls it may lead to spread of diseases like Brucellosis, Tuberculosis, Johnes Disease, Infectious Bovine Rihnotracheaitis (IBR) etc at rapid rate among bovine population. To maintain disease free status at semen stations, bulls are required to be tested regularly as per the schedule mentioned in the Disease prevention Protocol developed by Government of India. Most of the private semen stations do not follow Disease Prevention Protocol (DPP). Bulls available at these private semen stations are procured from the field without following protocol for disease testing and quarantine. Bulls procured from unorganised bull production programmes are major source of spread of diseases.

2. In order to prevent and control spread of infectious and contagious diseases among animals through use of semen draft rules titled Minimum Standard Protocol for semen stations for prevention and control of infectious and contagious diseases spread through semen rules, 2022 has been prepared by the Department. These rules have been prepared in the exercise of the powers conferred by section 42 of the Prevention and Control of Infectious and Contagious Diseases in Animals Act, 2009. As per requirement of section 42 of the aforementioned act rules have been pre-published on the website of this Department at link <https://dahd.nic.in/sites/default/files/Public%20Notice%20on%20draft%20rules.pdf> for seeking comments/ inputs from all stakeholders. Copy of the draft Rules is enclosed herewith.

4. It is requested that wide publicity may be given to the draft rules pre-published by the Department.

*With deep regards,*

Yours sincerely,

  
(Varsha Joshi)

All the Principal Secretaries/Secretaries/Commissioners/ Animal Husbandry Department of State Governments /UTs as per the list .

All the Managing Directors of Milk Federations as per the list/

Vice Chancellor veterinary Universities

All the Members of the Consultative Committee

F. No. N-05/15/2022-DADF-Deptt  
Government of India  
Ministry of Fisheries, Animal Husbandry & Dairying  
Department of Animal Husbandry and Dairying  
New Delhi, the 25<sup>th</sup> January 2023

**PUBLIC NOTICE**

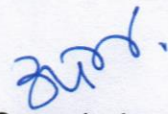
**ON WEBSITE OF MINISTRY OF FISHERIES, ANIMAL HUSBANDRY AND DAIRYING, DEPARTMENT OF ANIMAL HUSBANDRY AND DAIRYING**

SOLICITING SUGGESTIONS/ COMMENTS/ INPUTS FROM THE STAKEHOLDERS ON THE DRAFT "MINIMUM STANDARD PROTOCOL FOR SEMEN STATIONS FOR PREVENTION AND CONTROL OF INFECTIOUS AND CONTAGIOUS DISEASES THROUGH SEMEN Rules, 2022".

In exercise of the powers conferred by section 42 of THE PREVENTION AND CONTROL OF INFECTIOUS AND CONTAGIOUS DISEASES IN ANIMALS ACT, 2009, the Ministry of Fisheries, Animal Husbandry and Dairying, Department of Animal Husbandry and Dairying has prepared draft rules PREVENTION AND CONTROL OF INFECTIOUS AND CONTAGIOUS DISEASES THROUGH SEMEN titled MINIMUM STANDARD PROTOCOL FOR SEMEN STATIONS FOR PREVENTION AND CONTROL OF INFECTIOUS AND CONTAGIOUS DISEASES THROUGH SEMEN Rules, 2022. A copy of the draft Bill is attached herewith.

3. The salient features of the draft Bill are Annexed.

4. As a part of pre-legislative consultative process, the suggestions/ comments/ inputs from the stakeholders are solicited within a month from the date of issue of the notice on e-mail id: [acsheep@nic.in](mailto:acsheep@nic.in).

  
Joint Commissioner  
Department of Animal Husbandry and Dairying  
Room No.479, Krishi Bhawan,  
New Delhi-110001 Email: [acsheep@nic.in](mailto:acsheep@nic.in).

डॉ. भूषण त्यागी  
संयुक्त आयुक्त (सी.डी.)  
मत्स्य पालन, पशुपालन और डेयरी मंत्रालय  
पशुपालन और डेयरी विभाग  
कृषि भवन, नई दिल्ली-110001

## Draft Rule

[To be published in the Gazette of India, Extraordinary, Part II, Section 3, Sub-section (i)]

Government of India  
Ministry of Fisheries, Animal Husbandry & Dairying  
Department of Animal Husbandry and Dairying  
New Delhi, the December 2022

NOTIFICATION G.S.R (E) In exercise of the powers conferred by section 42 of THE PREVENTION AND CONTROL OF INFECTIOUS AND CONTAGIOUS DISEASES IN ANIMALS ACT, 2009, the Central Government hereby makes the following rules for PREVENTION AND CONTROL OF INFECTIOUS AND CONTAGIOUS DISEASES THROUGH SEMEN

1. Short title and commencement.- (1) These Rules may be called MINIMUM STANDARD PROTOCOL FOR SEMEN STATIONS FOR PREVENTION AND CONTROL OF INFECTIOUS AND CONTAGIOUS DISEASES THROUGH SEMEN Rules, 2022

(2) They shall come into force on the date of their publication in the Official Gazette.

2. Definitions.- In these Rules, unless the context otherwise requires,—

(a) "Act" means the Prevention and Control of Infectious and Contagious Diseases in Animals Act, 2009

(b) "Disease Prevention Protocol" means the standards prescribed by the Central Government from time to time and to be adhered by semen stations intending to use bovine bulls for semen production, semen storage and distribution in accordance with disease testing protocols attached at schedule-I;

(c) "Semen Station" means a premise, where a facility is setup for production, processing, storage and distribution of bovine semen;

(d) "Artificial Insemination" or "AI" means the process of depositing disease free bovine semen in the body of the uterus of a mature bovine female with the intention of making it pregnant;

(e) "AI Technician" means a person who possesses requisite qualification, skill and experience, as prescribed by the Government of India, to perform artificial insemination in bovines;

(h) "Bovine" means and include cow and its progenies and buffalo and its progenies;

### 3. Central Government

(i) The Central Government shall prescribe Disease Prevention Protocol and disease testing protocol for bovine bulls available at all semen stations in the country.

(ii) Disease prevention protocol laid down by Government of India shall be modified from time to time on basis of the recommendations made by experts working in the field.

(iii) Central Government shall nominate experts to undertake surprise visit of semen stations on implementation of disease prevention protocol and disease testing protocol for bulls available at semen stations.

(iv) Central Government shall identify and notify labs for disease testing of bulls available at semen station.

(v) Central Government shall develop online portal to submit request for disease testing of bulls as per diseases listed under the PCICDA Act, 2009 to labs already identified and notified. Labs shall submit disease testing report to concerned State Government within 30 days of receipt of request of disease testing from semen station.

#### **4. State Department of Animal Husbandry**

(i) State Department of Animal Husbandry shall direct all the semen stations to undertake testing of bulls through labs notified by Government of India attached at schedule-II.

(ii) State Animal Husbandry Department shall register all semen station operating under their jurisdiction only after satisfying that bulls available at semen stations are free from all diseases as listed under PCICDA, Act 2009.

(iii) State Animal Husbandry Department shall allow only registered semen stations to supply/store / sale semen doses in the State.

(iv) State Animal Husbandry Department shall treat all unregistered semen stations as 'infected areas' under section 20 of the Prevention and Control of Infectious and Contagious Diseases of Animals (PCICDA) Act 2009, and take action against them as prescribed under the Act.

#### **5. Exemptions:**

(i) 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 to the farmers.

#### **6. Appeal:**

(i) Any person aggrieved by an order of the State Animal Husbandry Department 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 these rules, may file an appeal with the Central Government (Department of Animal Husbandry & Dairying)/ Appellate Authority within thirty days from the date on which the order is communicated to him.

(ii) Provided that the Central Government (Department of Animal Husbandry & Dairying) 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.

(iii) The Central Government 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.

(iv) Pending disposal of an appeal, the Central Government 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.

**7. Penalties:**

- (i) 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 disease free bulls or contravenes with any of the provisions of these Rules shall be liable to penalty/ fine as prescribed under section 32 of THE PREVENTION AND CONTROL OF INFECTIOUS AND CONTAGIOUS DISEASES IN ANIMALS ACT, 2009.

**FORM "A"**

**Application for registration/renewal of registration of Semen Station under the MINIMUM STANDARD PROTOCOL FOR SEMEN STATIONS FOR PREVENTION AND CONTROL OF INFECTIOUS AND CONTAGIOUS DISEASES THROUGH SEMEN Rules, 2022**

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 MINIMUM STANDARD PROTOCOL FOR SEMEN STATIONS FOR PREVENTION AND CONTROL OF INFECTIOUS AND CONTAGIOUS DISEASES THROUGH SEMEN Rules, 2022

Name of Authorised Person:

Designation:

Place:

Date :

Signature

**FORM "B"**

**Certificate of Registration of Semen Station under the MINIMUM STANDARD PROTOCOL FOR SEMEN STATIONS FOR PREVENTION AND CONTROL OF INFECTIOUS AND CONTAGIOUS DISEASES THROUGH SEMEN Rules, 2022**

<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 MINIMUM STANDARD PROTOCOL FOR SEMEN STATIONS FOR PREVENTION AND CONTROL OF INFECTIOUS AND CONTAGIOUS DISEASES THROUGH SEMEN Rules, 2022  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 )

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

**Schedule-I and II**



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GOVERNMENT OF INDIA

DEPARTMENT OF ANIMAL HUSBANDRY & DAIRYING

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## CONTENTS

<b>LIST OF ABBREVIATIONS .....</b>	<b>ERROR! BOOKMARK NOT DEFINED.</b>
<b>INTRODUCTION .....</b>	<b>ERROR! BOOKMARK NOT DEFINED.</b>
DEFINITIONS.....	9
DETAILS OF THE TESTS TO BE CONDUCTED.....	10
<b>MINIMUM STANDARDS FOR BIOSECURITY ...</b>	<b>ERROR! BOOKMARK NOT DEFINED.</b>
A. MINIMUM STANDARDS FOR INFRASTRUCTURE.....	12
B. MINIMUM STANDARDS FOR PERSONNEL.....	12
C. MINIMUM STANDARD FOR PRACTICES.....	12
D. MINIMUM STANDARDS FOR COMPLIANCE .....	12
E. MINIMUM STANDARDS FOR DOCUMENTATION .....	12
F. MINIMUM STANDARD FOR SEMEN PROCESSING LABORATORY.....	12
QUARANTINE STANDARDS .....	13
<i>Annex-A: Quarantine of adult bulls of unknown health status.....</i>	<i>13</i>
<i>Annex-B: Quarantine of adult bulls of known health status and those shifted     between farms of the same management.....</i>	<i>15</i>
<i>Annex-C: Quarantine of calves between two months of age and sexual maturity ..</i>	<i>16</i>
<i>Annex – 1: Testing and management of bTB .....</i>	<i>18</i>
<i>Annex-2: Testing and management of JD .....</i>	<i>20</i>
<i>Annex-3: Testing and management of BB .....</i>	<i>22</i>
<i>Annex-4: Testing and management BGC.....</i>	<i>23</i>
<i>Annex-5: Testing and management of Bovine Trichomonosis.....</i>	<i>24</i>
<i>Annex-6: Management of FMD.....</i>	<i>25</i>
<i>Annex-7: Testing and management of IBR.....</i>	<i>26</i>
<i>Annex-8: Testing and management of BVD .....</i>	<i>27</i>

## Introduction

The disease prevention protocol has certain requirements in Biosecurity and Animal Health – termed as mandatory requirements. The semen stations have to compulsorily fulfill so as to qualify these requirements for registration. The Biosecurity and Animal Health Standards is therefore important and vital component to contain spread of diseases in the country.

## Definitions

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Bull	Adult male cattle or buffalo used for collection of semen.
Bull Calf	A male cattle or buffalo which has not yet reached puberty.
Known health status	Animals sourced from a semen station or rearing station that is strictly adhering with the disease testing standards.
Standards for production of disease free frozen semen	Diseases in the context of FSS are those set of diseases whose causative organism should not be present in the semen– or preferably in the bull. These diseases include BB, bTB, JD, BGC, Trichomonosis, FMD, IBR and BVD.
Quarantine station	A farm where bulls or bull calves are isolated and examined to assess their health status before shifting them to the semen station or rearing station. A series of clinical and laboratory examinations, vaccinations and medications etc. are to be undertaken during quarantine.
Rearing station	A farm where bull-calves or young bulls, coming from quarantine station are reared till they attain the sexual maturity and subsequently get shifted to the semen station. A series of clinical and laboratory examinations, vaccinations and medications etc. are to be undertaken during the stay of bull calves at the rearing station to maintain their optimum health status.
Semen station	A farm along equipped with semen processing facilities where adult bulls are housed for semen collection and processing. A series of clinical and laboratory examinations, vaccinations and medications etc. will be undertaken during the maintenance of bulls at the semen station.
Unknown health status	Animals sourced from a village or a farm where all the animals of the farm or the village have not been tested/screened against the 'diseases' as mentioned in the Annexes.

### Details of the tests to be conducted

Disease	Test	Sample	Tested at or by officers of
Brucellosis	ELISA	Serum	CDDL /RDDL / NDDB
TB*	DTH-Tuberculin PPD	Intra-dermal on the bull	Semen station / CDDL /RDDL
JD*	DTH- Johnin PPD	Intra-dermal on the bull	Semen station / CDDL /RDDL / NDDB
Trichomonosis	Agent identification	Preputial washings /scrappings	CDDL /RDDL / NDDB
Bovine Genital Campylobacteriosis	Agent identification	Preputial washings/ scrappings	CDDL /RDDL / NDDB
IBR	ELISA	Serum	CDDL /RDDL / NDDB
	Real Time PCR	Semen	CDDL /RDDL / NDDB
BVD	Ag ELISA	Serum	CDDL /RDDL / NDDB
	PCR	Serum	CDDL /RDDL / NDDB
FMD sero-monitoring	ELISA	Serum	PD-FMD / NDDB

\* TB and JD testing by DTH at Quarantine Station as well as Rearing Station shall be performed by the officers of the Semen Station. However, the testing at the Semen Station by DTH shall be done by the Officers of the CDDL /RDDL /CALF (NDDB).

All the tests shall be conducted by the officials of CDDL /RDDL / CALF (NDDB) / as the case may be Test reports from other agencies will not be considered

Teasers and other animals resident in the semen stations are also subjected to similar disease testing, vaccination and medications for maintaining their health status.

**The Standards for Biosecurity (SB) shall be mandatorily complied by the FSS to qualify for registration. The SB are classified under the following :**

- 1) Infrastructure**
- 2) Personnel**
- 3) Practices**
- 4) Compliance**
- 5) Documentation**
- 6) Semen Processing Laboratory**

#### **A. Minimum standards for Infrastructure**

1. Physical separation of high bio-secure zone (bull sheds, collection arena and semen processing lab) from other areas of the FSS by a solid boundary wall.
2. Availability of appropriate *size*functional 'Tyre-dip' and 'foot bath' at entry point into the FSS.

#### **B. Minimum standards for Personnel**

1. The FSS is under the direct supervision of a veterinarian.
2. A veterinarian is designated as the Biosecurity Officer of the semen station.

#### **C. Minimum standard for Practices**

1. Demarcation of bio-secure zones (High, medium and low) with signage.

#### **D. Minimum standards for Compliance**

1. The FSS is free from bTB, JD, BB, BGC, Trichomonosis & FMD at the time of assessment. (*IBR & BVD also once included in MSP*)
2. Animals are inducted into the FSS only after quarantine as per quarantine standards outlined in Annexes A to C.
3. Ring vaccination (10 Km) and routine vaccination (in FSS) is carried out as per schedule.

#### **E. Minimum standards for Documentation**

1. Disease test reports conforming to the prescribed testing schedules of disease testing (as per Annexes 1 to 5) are available. (*Annexes 7 & 8 also once IBR & BVD becomes part of MSP*).
2. Vaccination reports of FSS and ring vaccination zone conforming to prescribed schedules available.

#### **F. Minimum standard for Semen Processing Laboratory**

1. Bacterial loads in the semen shall be within acceptable limits.

## Quarantine Standards

### Annex-A: Quarantine of adult bulls of unknown health status

<b>Quarantine period</b>	Minimum 60 days or long enough to allow at least two tests for all diseases in the context of the FSS to be performed during quarantine with a minimum interval of 30 days between the two tests. In case of TB and JD the interval between the two tests should not be less than 42 days. Perform one test within the last 30 days of the extended quarantine.	
<b>Shifting of bulls from the quarantine</b>	Within 30 days from the date when the last negative test was performed.	
<b>Action on finding a positive result</b>	BB, TB, JD, BGC, Trichomonosis	Cull / remove the positive bull and put all the remaining bulls under extended quarantine.
	IBR	All semen stations should aim to maintain IBR negative bulls. In positive herds, sero-positive and sero-negative animals should be separately housed and the semen from sero-positive bulls and sero-negative bulls shall be processed separately. Each semen batch collected from IBR sero-positive animals shall be tested by real-time PCR as per OIE protocol. Semen positive by real-time PCR shall be destroyed by autoclaving. Only real-time PCR negative semen shall be used in the field.
	BVD	Bulls positive by Ag ELISA shall be isolated and tested again after 2 months and if positive shall be culled/removed. No extended quarantine required for other animals.
<b>Extended quarantine</b>	For a period of minimum 60 days or long enough to allow at least two tests for the diseases mentioned above to be performed, from the day last positive bull was culled/ removed. Perform one test within the last 30 days of the extended quarantine. The intra-dermal tuberculin/ johnin test for TB/JD test can be undertaken on the same animals after a minimum interval of 42 days from the last test.	
<b>Action on finding a</b>	In quarantine, if the bulls are housed and managed :	

**positive  
during  
extended  
quarantine**

- Individually - Remove only the positive bull.
- In groups (not more than 3 animals in each group) – Remove all bulls in the group in which positive bull was detected.
- Free and not in groups- Remove all the bulls.



**Annex-B: Quarantine of adult bulls of known health status and those shifted between farms of the same management**

<b>Quarantine period</b>	Minimum 30 days during which at least one test for all MSP diseases should be performed
<b>Shifting of bulls from the quarantine</b>	Within 30 days of the last negative test
<b>Action on finding a positive result</b>	Same as "A" above
<b>Extended quarantine</b>	For a period of minimum 30 days from the day last positive bull was culled/ removed. Perform one test within the last 30 days of the extended quarantine. The intra-dermal tuberculin/ johnin test for TB/JD test can be undertaken on the same animals after a minimum interval of 42 days from the last test.
<b>Action on finding a positive during extended quarantine</b>	<p><u>In quarantine, if the bulls are housed and managed:</u></p> <ul style="list-style-type: none"> <li>• <u>Individually</u> - Remove only the positive bull.</li> <li>• <u>In groups (not more than 3 animals in each group)</u> – Remove all bulls in the group in which positive was detected.</li> <li>• <u>Free and not in groups</u>- Remove all the bulls.</li> </ul>

**Annex-C: Quarantine of calves between two months of age and sexual maturity**

<b>Quarantine period</b>	Minimum 60 days or sufficient to allow at least two tests for each of the MSP diseases to be performed with a minimum interval of 30 days between the tests. In case of TB and JD the interval between the two tests should not be less than 42 days.	
<b>Shifting of calves from quarantine</b>	Within 30 days of negative results.	
<b>Action to be taken on finding positive calf</b>	TB, JD	Remove the positive calf and put all the remaining calves under extended quarantine.
	BGC and Trichomonosis	Tests conducted only on calves older than 6 months. Remove the positive calf and put all the remaining calves under extended quarantine.
	BB	Remove the positive calf irrespective of age and extend the quarantine period for the remaining calves. OR If the positive calf is less than 9 months old, isolate the calf till it is 9 month old and retest. Calf positive at retesting should be removed.
	IBR	The IBR serological status of the dam need not be considered while selecting the male calf. Serological status of the bull calves shall be assessed from 6 months of age onwards. Sero-positive and sero-negative animals should not be mixed and shall be housed separately while in quarantine. Test by Real-Time PCR each batch of semen collected throughout the period the sero-positive animal is maintained at the semen station. Semen batches found positive for IBR should be destroyed.
<b>Extended quarantine</b>	For a period of minimum 30 days from the day last positive calf was removed. Perform one test within the last 30 days of the extended quarantine. The intra-dermal tuberculin/ johnin test for TB/JD test can be undertaken on the same animals after a minimum interval of 42 days from the last test.	
<b>Action on</b>	<u>In quarantine, if the male calves are housed and managed :</u>	

**finding a positive during extended quarantine**

- Individually - Remove only the positive calf.
- In groups (not more than 3 animals in each group) – Remove all calves in the group in which positive was detected.
- Free and not in groups- Remove all the calves.

## Annex – 1: Testing and management of bTB

<b>Name of test</b>	Delayed Hypersensitivity – Single Intra Dermal (SID) Test
<b>Reagent used</b>	Bovine tuberculin PPD
<b>Testing done</b>	On site, where animals are housed
<b>Eligible animals</b>	All animals aged 6 weeks and above.
<b>Result criteria</b>	<p><b>Positive:</b> Increase in skin thickness of 4 mm or more, or presence of clinical signs viz. exudation, necrosis, pain and inflammation of the lymphatic duct of that region or the lymph node, 72 hours post-inoculation.</p> <p><b>Negative:</b> Increase in skin thickness less than 2 mm &amp; without clinical signs viz. exudation, necrosis, pain, inflammation of the lymphatic duct of that region or the lymph node, 72 hours post-inoculation.</p> <p><b>Inconclusive:</b> Increase in skin thickness more than 2mm &amp; less than 4mm, absence of above clinical signs, 72 hours post-inoculation.</p>
<b>Action to be taken on inconclusive animal</b>	<p>Immediate isolation from the rest of the herd. Semen collection should be stopped temporarily till tested negative.</p> <p>Only if the animal is negative during the re-testing after 42 days, it may be allowed with rest of the herd and semen released from quarantine.</p>
<b>Action to be taken on Positive animal</b>	Immediate isolation and removal from herd (within 2 days)
<b>Frozen semen doses of the inconclusive animal</b>	<p>Semen collection may be stopped during isolation.</p> <p>The frozen semen doses since last negative test should also be kept under quarantine.</p> <p>If found positive on re-testing, destroy all the frozen semen doses since last negative test.</p>
<b>Frozen semen doses of the positive animal</b>	Destroy frozen semen doses of the positive animal since the last negative test.
<b>Positive herd testing</b>	Testing not before 42 days after culling of last positive animal.
<b>Negative herd testing</b>	Six monthly ( $\pm$ 1 week) testing after last whole herd negative testing.
<b>TB free herd</b>	Herd found negative on two consecutive tuberculin tests carried out at an interval of 6 months, the first being performed 6 months after the culling of last affected animal. If frequency of testing is less than two in a year, the testing should establish that all animals in the herd have been negative for the last 6 months beginning from 6 months after culling the last affected animal.

## Annex-2: Testing and management of JD

<b>Name of test</b>	Delayed Hypersensitivity – Single Intra Dermal (SID) Test, or ELISA
<b>Reagent used</b>	Johnin PPD for DTH, or Serum antibody ELISA kit
<b>Testing done</b>	On site, where animals are housed – for DTH CDDL/RDDL/NDDDB for ELISA
<b>Eligible animals</b>	All animals aged 6 weeks or above
<b>Result criteria (DTH)</b>	<p><b>Positive:</b> Increase in skin thickness of 4 mm or more, or presence of clinical signs viz. exudation, necrosis, pain, and inflammation of the lymphatic duct of that region or the lymph node, 72 hours post-inoculation.</p> <p><b>Negative:</b> Increase in skin thickness less than 2 mm &amp; without clinical signs viz. exudation, necrosis, pain, inflammation of the lymphatic duct of that region or the lymph node, 72 hours post-inoculation.</p> <p><b>Inconclusive:</b> Increase in skin thickness more than 2mm &amp; less than 4mm, absence of above clinical signs, 72 hours post-inoculation.</p>
<b>Action to be taken on inconclusive animal (DTH)</b>	<p>Immediate isolation from the rest of the herd. Semen collection should be stopped temporarily till tested negative.</p> <p>Only if the animal is negative during the re-testing after 42 days, it may be allowed with rest of the herd and semen released from quarantine.</p>
<b>Action to be taken on Positive animal</b>	Immediate isolation and removal from herd (within 2 days)
<b>Frozen semen doses of the DTH inconclusive animal</b>	<p>Semen collection may be stopped during isolation.</p> <p>The frozen semen doses since last negative test should also be kept under quarantine.</p> <p>If found positive on re-testing, destroy all the frozen semen doses since last negative test.</p>
<b>Frozen semen doses of the positive animal</b>	Destroy frozen semen doses of the positive animal since the last negative test.
<b>Positive herd testing</b>	Testing not before 42 days (by DTH) and 30 days (by ELISA) after culling of last positive animal.
<b>Negative herd testing</b>	Six monthly ( $\pm$ 1 week) testing after last whole herd negative testing.
<b>JD negative herd</b>	Herd found negative on two consecutive johnin tests (DTH) or ELISA tests, carried out at an interval of 6 months, the first being performed 6 months after culling of the last affected animal. If frequency of testing is less than 2 in a year, the testing should establish that all animals in the herd have been negative for the last 6 months beginning from 6 months after culling the last affected animal.

### Annex-3: Testing and management of BB

<b>Name of test</b>	Enzyme Linked Immunosorbent Assay (ELISA)
<b>Sample required</b>	Serum
<b>Eligible animals</b>	All animals. However, animals up to 9 months of age may have maternal antibodies.
<b>Action to be taken on the positive animal</b>	Immediate isolation and removal from herd after castration (within 2 days)
<b>Frozen semen doses of the positive animal</b>	Destroy frozen semen doses of the positive animal since the last negative test.
<b>Positive herd testing</b>	Testing 30 to 60 days after culling of last positive animal.
<b>Negative herd testing</b>	Six monthly ( $\pm$ 1 week) testing after last whole herd negative testing.
<b>BB free herd</b>	Herd found negative on two consecutive annual tests. If the frequency of testing is more than one in a year, the testing should demonstrate that the herd has been negative for the last one year.

#### **Annex-4: Testing and management BGC**

<b>Name of test</b>	Agent –Identification
<b>Sample required</b>	Preputial scrapping/ Preputial washing/ semen
<b>Eligible animals</b>	Animals above 6 months of age for crossbreds and 1 year and above for indigenous and buffalo breeds
<b>Positive animal</b>	Immediate isolation and removal from herd (within 2 days)
<b>Frozen semen doses of the positive animal</b>	Destroy frozen semen doses of the positive animal since the last negative test.
<b>Positive herd testing</b>	Minimum of 30 days after culling of last positive animal.
<b>Negative herd testing</b>	Annual ( $\pm$ 1 week) testing after last whole herd negative testing.
<b>Bovine Genital Campylobacteriosis free herd</b>	All animals are negative on two consecutive annual testing.

### **Annex-5: Testing and management of Bovine Trichomonosis**

<b>Name of test</b>	Agent –Identification
<b>Sample required</b>	Preputial scrapping/ washing
<b>Eligible animals</b>	Animals above 6 months of age for crossbreds and 1 year and above for indigenous and buffalo breeds
<b>Action to be taken on Positive animal</b>	Immediate isolation and removal from herd (within 2 days)
<b>Frozen semen doses of the positive animal</b>	Destroy frozen semen doses of the positive animal since last negative test.
<b>Positive herd testing</b>	Minimum of 30 days after culling of last positive animal.
<b>Negative herd testing</b>	Annual ( $\pm$ 1 week) testing after last whole herd negative testing.
<b>Bovine Trichomonosis free herd</b>	All animals are negative on two consecutive annual testing.



## Annex-6: Management of FMD

<b>Immediate action to be taken on detection of FMD</b>	Immediate disinfection of premises and fomites. Destruction of contaminated feed & fodder by burning.
<b>Frozen semen doses of FMD infected animal</b>	Destroy frozen semen collected from infected animal up to one month prior to onset of outbreak in the FSS.
<b>Action to be taken on FMD infected animal</b>	<ul style="list-style-type: none"> <li>• Isolate the affected bull immediately</li> <li>• Affected bull is treated and rested (no semen collection) for 90 days after recovery from clinical symptoms.</li> </ul>
<b>Animals in the affected farm but not affected by FMD</b>	No semen collection from healthy bulls during the outbreak and up to one month after the last case has recovered.
<b>Semen Sale</b>	If frozen semen sale is from the same campus of the SS where FMD is reported, suspend semen sale till 30 days after the last case has recovered.
<b>FMD outbreak in areas surrounding the SS</b>	
<b>Ring vaccination</b>	Arrange immediate ring vaccination within a radius of 5 Km around the focus of infection starting from the perimeter towards the focus.
<b>Disinfection</b>	Disinfection of the roadsides adjacent to the farm on a daily basis with 4% sodium carbonate solution.
<b>Movement of fodder</b>	Stop all fodder movement through areas of infection.
<b>Animal movement</b>	Stop animal movement of semen station through areas of infection.
<b>Movement of farm labour</b>	Labourers from infected villages shall not be allowed into animal or agricultural farm area.

## Annex-7: Testing and management of IBR

<b>Name of the test</b>	Enzyme Linked Immunosorbent Assay (ELISA), Real-time PCR
<b>Sample (s) required</b>	Serum for ELISA, semen for real-time PCR
<b>Induction of new animals into herd/semen stations</b>	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.
<b>Sero positive bulls at IBR positive semen station</b>	Action in order of priority:- (i) Immediately cull sero-positive animals and castrate them. (ii) If culling is not possible, immediately isolate the animal and process and store their semen separately. Test each ejaculate by real-time PCR (rt-PCR). Semen positive by real-time PCR shall be destroyed by incineration. Use only semen that has tested negative by rt-PCR . (iii) Test all animals at three months interval.
<b>Action to be taken on bulls at the IBR free Semen Stations**</b>	(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.
<b>Documentation</b>	Records of all ejaculates collected from sero-positive bulls, the results of real-time PCR, details of real time PCR positive ejaculates destroyed and details of agencies where semen has been distributed shall be maintained.

\*\*Please refer to the Guidelines for progressive IBR/BVD control roadmap for semen stations planning to have a IBR free herd.

### Annex-8: Testing and management of BVD

<b>Name of the test</b>	Enzyme Linked Immunosorbent Assay (ELISA) for detection of antigen (Ag-ELISA)/real time PCR(rt PCR)
<b>Sample</b>	Serum
<b>Induction of new animals into herd/semen stations</b>	<p>Test the animal for Persistent Infection (PI) by testing two times at an interval of at least 30 days by Ag-ELISA. Test by rt-PCR instead of Ag-ELISA for animals up to 6 months of age.</p> <p>If the animal is positive on both the tests, the animal is considered positive for PI. Only PI negative animals shall be inducted.</p>
<b>Action to be taken for PI positive animals</b>	Immediately isolate and cull
<b>Semen doses of PI positive animals</b>	Destroy by incineration frozen semen doses of the PI positive bulls.
<b>Bulls at the semen stations</b>	<p>(i) Test all bulls for PI (if not already tested for PI status) by testing two times at an interval of at least 30 days. If the bull is positive on both the tests, the bull is considered positive for PI. All PI positive bulls shall be culled immediately.</p> <p>(ii) Test all new bulls entering the semen station for PI. Only PI negative bulls should enter the semen station.</p>