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Technical regulation of fox artificial insemination

狐人工授精技术规程

(English Translation)

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard was proposed and managed by the National Technical Committee for Wildlife Conservation, Management, Operation and Utilization (SAC/TC369).

This standard was drafted. Harbin Institute of Specialty Products, Heilongjiang Academy of Agricultural Reclamation Sciences, Heilongjiang Pratt & Whitney Specialty Products Co., Ltd.

1 Scope

This standard specifies the technical requirements for artificial insemination of blue foxes and silver black foxes. Other foxes can be used in reference.

This standard applies to breeding of artificially-bred foxes in breeding farms and artificial insemination stations.

2 Terms and definitions

The following terms and definitions apply to this document.

Fresh Semen Diluent

Formulated with diluent, nutrient and additives as main ingredients, suitable for fresh sperm that can be fertilized when stored at 33 °C ~ 37 °C for 3h Solution.

Sperm motility

The percentage of sperm in the sperm that moves in a straight line in the semen, commonly known as the sperm motility rate.

Sperm concentration

The total number of sperm contained in a unit volume of semen is also called the sperm concentration.

Sperm deformity rate Percentage of spermatozoa with morphological variation of head, body, and tail in a unit volume of semen.

Number of effective sperms the total number of spermatozoa in a normal sperm motion in the semen sample tested, that is, the number of spermatozoa with fertility.

External observation methods of estrus identification A method for judging whether estrus and estrus are in accordance with the characteristic behavior, mental state, and vulvar changes of the female fox, referred to as external view Chafa.

Artificial insemination an animal breeding technique that uses auxiliary equipment to artificially deliver semen into the uterus of an estrus female fox to conceive it.

3.1 Planning

Before artificial insemination begins, a plan should be prepared, pre-selected supplies (see Appendix A), and design record sheets (see D.1 to D.3 in Appendix D).

3.2 Insemination operation room

3.2.1

The operation room should be located near the wind direction of the fox farm, with an area of 15m² ~ 25m², which requires safety, ventilation, heat insulation and sanitation.

Lighting, electrical outlets and consoles.

3.2.2

The operation room shall be divided into a dressing room, a sperm collection and insemination room, and a semen detection and processing room, with a partition in the middle.

3.2.3

The wall and floor of the operating room shall be made of ceramic or hard waterproof materials which are easy to disinfect.

3.2.4

The operating room should be equipped with ultraviolet disinfection lamps and temperature control equipment, and the temperature should be controlled at 18 °C ~ 25 °C.

3.3 Supplies preparation

3.3.1

Prepare medicines and equipment before insemination (see Appendix A).

3.3.2

The dressing room shall be equipped with clothes hangers, shoe racks, sinks or sinks.

3.3.3

The sperm collection and insemination room should be equipped with Baoding stand, water basin, towels, washing and disinfecting drugs, vaginal dilation tube, insemination needle, 1mL ~ 10mL Injectors, scissors, waste collection bins, etc.

3.3.4

The semen detection and processing room shall be equipped with an operating table, a collection cup, a thermometer, a microscope, a glass slide, a cover glass, a dropper, and a thermostatic water bath Pots and washing and disinfecting supplies.

3.3.5

Estrus identification should be equipped with alcohol cotton balls, cotton swabs, microscopes, glass slides, etc., and resistance testers should be equipped.

3.3.6

The environment and equipment cleaning and disinfection shall be equipped with test tube brushes, continuous syringes, distilled water, washing and disinfecting drugs, drying boxes, disinfection cabinets and Autoclaves, etc.

3.4.1 Environment

For the first disinfection before the start of artificial insemination, it is advisable to use fire alkali or quicklime for disinfection outside the operating room and 1% to 4% sodium hydroxide or 0.1% to indoor 0.2% Xin Jie Er disinfection solution, in the future indoors should be disinfected with ultraviolet light every day, should not use odor disinfection drugs.

3.4.2 Equipment

3.4.2.1

The artificial insemination equipment should be selectively cleaned and disinfected according to the material.

3.4.2.2

Wash before disinfection. Various equipment and utensils should be cleaned and disinfected before and after use. Wash with water and detergent before cleaning.

Dirt is then rinsed with water. Utensils in contact with semen should be rinsed with distilled water at least twice before drying.

3.4.2.3

After the metal and glass utensils are soaked and brushed with disinfectant, they are dried in a 120 ° C drying oven for more than 2 hours.

3.4.2.4

Plastic products (such as plastic vaginal dilatation tubes) can be washed in accordance with the above procedure, then immersed in 75% alcohol for 1 to 2 hours, and then distilled Wash with water, and then dry in a drying box at 60 °C ~ 80 °C according to the material.

3.4.2.5

Towels and work clothes used for wiping the fox's genital area can be sterilized by high-pressure steam sterilizer after washing.

3.4.3 Personnel

Operators should strictly disinfect before and after artificial insemination. The sperm collector should cut his nails, wash his hands with soapy water, and rinse with water.

Wash and dry, wear disposable gloves, and work clothes.

4 Staff requirements

4.1

The staff consists of estrus appraisers, Baoding staff, insemination assistants and insemination staff, and no zoonotic disease is required.

4.2

One or two estrus appraisers. The number of personnel should be determined according to the number of female foxes and their working capabilities.

It is necessary to train the breeder to make a preliminary determination of the estrus status of the female fox under his control.

4.3

One Baoding staff member, who is a full-time Baoding fox for sperm collection and insemination in the operating room.