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# Good management practice for deer farm

## 养鹿场良好管理规范

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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 by and is under the jurisdiction of the National Technical Committee 369 on Wildlife Conservation Management and Husbandry Business of Standardization Administration of China (SAC/TC 369).

This standard was drafted under the responsibility of Heilongjiang Institute of Wildlife Research and under the participation of Xinjiang Changji Shenghua Trading Company, Animal husbandry Bureau of Daxinganling Region, Daxinganling Xingan Deer co.LTD.

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# Good management practice for deer farm

## 1 Scope

This standard specifies the principles, technical and management requirements for good management of the site selection and layout, construction facilities and equipment, personnel, feeding input, husbandry management, safety measures, deer farm sanitation, deer farm epidemic prevention, identification, document and file management of deer farms.

This standard is applicable to newly built, rebuilt or expanded captive deer farms. It can also be used as a reference for the departments of administrative licensing, quality management certification of deer farms, and those engaged in deer breeding teaching, scientific research and management.

This standard does not apply to the free-range, semi-free-range deer farms.

## 2 Normative References

The following referenced documents are indispensable for the application of this standard. For dated or numbered references, only the version cited or numbered applies to this document. For undated or unnumbered references, the latest edition of the referenced document (including any amendments) applies to this document.

GB 5749 Standards for Drinking Water Quality

GB 6935 Breeding Stock of Chinese Sika-Deer

GB 6936 Breeding Stock of Chinese Northeast Red deer

GB/T 10647 Feed Industry Terms

GB 13078 Hygienical Standard for Feeds

GB 16548 Biosafety Specification on Sick Animal and Animal Product Disposal

GB 16549 Quarantine Requirement for Livestock and Poultry at the Places of Production

GB 18596 Discharge Standard of Pollutants for Livestock and Poultry Breeding

GB/T 18635 Animal Epidemic Prevention Basic Terms

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GB/T 19525.1 Animal Environmental –Terminology

GB/T 19525.2 Criteria for Evaluating the Environmental Quality of the Livestock and Poultry Farm

NY/T 388 Environmental Quality Standard for the Livestock and Poultry Farm

NY/T 1167 Environmental Quality and Sanitary Control Requirement for the Livestock and Poultry Farms

NY/T 1168 Technical Requirement for Non-Hazardous Treatment of Animal Manure

NY 5027 Pollution-Free Food Drinking Water Quality for Livestock and Poultry

Announcement No. 168 of the Ministry of Agriculture of the People's Republic of China on "Specifications for the use of feed medicine additives"

Announcement No. 1224 of the Ministry of Agriculture of the People's Republic of China on "Specifications for the safe use of feed additives"

Announcement No. 1126 of the Ministry of Agriculture of the People's Republic of China on "List of feed additive varieties"

Announcement No. 278 of the Ministry of Agriculture of the People's Republic of China on "Regulations on withdrawal period of veterinary drugs"

Announcement No. 193 of the Ministry of Agriculture of the People's Republic of China on "List of veterinary drugs and other compounds prohibited for food-producing animals"

Announcement No. 176 of the Ministry of Agriculture of the People's Republic of China on "List of drugs prohibited for feed and animal drinking water"

Announcement No. 1125 of the Ministry of Agriculture of the People's Republic of China on "List of I, II, and III classes animal epidemic diseases"

Announcement No. 1, 2010 of Animal Husbandry and Veterinary Bureau under the Ministry of Agriculture of the People's Republic of China on "National compulsory immunization plan for animal epidemic diseases"

Announcement No. 12, 2007 of Animal Husbandry and Veterinary Bureau under the Ministry of Agriculture of the People's Republic of China on "Technical specifications for prevention and control of foot-and-mouth disease"



Announcement No. 12, 2007 of Animal Husbandry and Veterinary Bureau under the Ministry of Agriculture of the People's Republic of China on "Technical specifications for prevention and control of brucellosis"

Announcement No. 12, 2007 of Animal Husbandry and Veterinary Bureau under the Ministry of Agriculture of the People's Republic of China on "Technical specifications for prevention and control of bovine tuberculosis"

Announcement No. 12, 2007 of Animal Husbandry and Veterinary Bureau under the Ministry of Agriculture of the People's Republic of China on "Technical specifications for prevention and control of rabies"

Announcement No. 12, 2007 of Animal Husbandry and Veterinary Bureau under the Ministry of Agriculture of the People's Republic of China on "Technical specifications for prevention and control of anthrax"

"Veterinary pharmacopoeia of the People's Republic of China"

### 3 Terms and Definitions

The terms and definitions as defined in GB/T 10647, GB/T 18635, GB/T 19525.1 and the following apply to this document. For ease of use, some of the terms and definitions in GB/T 10647, GB/T 18635 and GB/T 19525.1 are repeated below.

#### 3.1 Deer farm

A place that adopts enclosed enclosures keeping a stock of 30 or more red deers (*Cervus elaphus*), 50 or more sika-deers (*Cervus nippon*), 50 or more other deer species, or 40 or more mixed deer species.

#### 3.2 Enclosure

An enclosed animal housing area, also called as animal production area or animal housing area.

#### 3.3 The whole region of deer farm

An area enclosed by fences, meshes or enclosure walls in a deer farm.

#### 3.4 Buffer area of deer farm

An area is keeping up to 500 meters far away from the fences, meshes or enclosure walls of the playground of deer farm, and also has the function of protecting the deer farm from external interference and pollution.

### 3.5 Isolation area

An area where the veterinary room, isolation areas for deers, centralized manure treatment facility and biosafety disposal facility are located.

### 3.6 Non-dirty road

A road specially designed for deer herd transfer, staff walking and delivery of feed within the deer farm.

### 3.7 Dirty road

A road for transporting excrement and other wastes out of the farm.

### 3.8 Deer enclosure and yards

The area for deer living and activities, generally composed of the sheds and yards.

### 3.9 Deer herd

A group of the same species of deer on one farm or grazing ground or in the same transportation vehicle and crate (cage) .

### 3.10 Breeding deer

Adult male or female deer used for reproduction.

### 3.11 Fawn, calf

Male and female deer from birth to weaning.

### 3.12 Young deer

Female deer after weaning to the spring of the following year or male deer after weaning until the initial antler appears.

### 3.13 Growth deer

Female deer from the spring of the following year after birth to body maturity or male deer after the appearance of the initial antler to body maturity.

### 3.14 Adult deer

Male and female deer that have acquired the proper morphology and body structure of adult deer after body maturity (growth and development basically completed).

### 3.15 Deer detaching

Separating an individual deer from the deer herd, or moving a deer herd from one house to another, or grouping the deer herd in one house into several houses for selection, deer antler sawn-off, treatment, artificial insemination and other needs.

### 3.16 Deer product

Products sourcing from deer for food, medicinal, feed, agricultural or industrial use.

### 3.17 Input

Feed, feed additives, water, vaccines, veterinary drugs and other substances put into feeding process.

### 3.18 Deer farm waste

Mainly including deer manure, urine, carcass and related tissues, bedding, expired veterinary drugs, waste feed and scattered deer hair, residual vaccines, disposable veterinary apparatus and instruments, packages, and sewage.

### 3.19 Official veterinarian, OV

The veterinary staff authorized or specially appointed by the national veterinary administrative department.

### 3.20 Resident veterinarian, RV

The veterinary staff employed by a deer farm.

### 3.21 Major animal epidemic

Animal epidemic diseases with high incidence or mortality, which occur suddenly and spread rapidly, and pose a serious risk to the production safety of the deer breeding industry, and circumstances that may cause harm to the public health and safety, including seriously major animal epidemic.

### 3.22 Animal health

All measures taken to prevent and control animal diseases, safeguard animal health and animal environmental sanitation, and ensure that animals and their products are harmless to human health.

### 3.23 Animal epidemic prevention

The general term for the prevention, control and extermination of animal epidemic diseases and the quarantine of animals and their products.

### 3.24 Epidemic spot

A natural unit (sheds, houses, farms and villages) where an epidemic disease occurs, which will become an epidemic focus within a certain period of time.

### 3.25 Epidemic area

The area affected by an outbreak or prevalence of epidemic diseases.

### 3.26 Risk area

The area adjacent to an epidemic area and in danger of introduction of the epidemic disease from the epidemic area.

### 3.27 Vaccination

Inoculation of animals with a vaccine or an immune serum that enables the organisms to produce or passively acquire specific resistance to a certain pathogen.

### 3.28 Preventative vaccination

Organized and planned vaccination of healthy animals to prevent the occurrence and spread of a certain infectious disease in an area which are prone to these disease, or where there is a potential for the certain infectious disease, or the area that is in risk of the certain infectious disease in a neighboring area.

### 3.29 Emergency vaccination

Vaccination of animals that have not been subject to the infectious disease yet in the epidemic and risk areas in the event of the infectious disease, for the purpose of rapid control and extermination of the infectious disease.

### 3.30 Temporary vaccination

Vaccination against the occurrence of infectious diseases in transit or upon arrival at the destination during the introduction and removal of animals.

### 3.31 Non-hazardous treatment

The process of killing pathogens, parasites and weed seeds in livestock and poultry manure by means of high temperature, biological fermentation or anaerobic technology.

### 3.32 Biosafety disposal

Disposal of the carcass, products or appendages of diseased animals by burning, incinerating, burying or other physical, chemical, and biological methods, so as to completely destroy the pathogens carried by them, thus eliminating the disease factors and ensuring the health and safety of human beings and animals.

### 3.33 Non-hazardous excrement treatment facility

A facility specially established for non-hazardous treatment of animal manure.

### 3.34 Biosafety disposal facility

A facility specially established for disposal of animals that have been infected with epidemic diseases as specified by the State and their products, carcasses of animals died of diseases, poisoning or unknown causes, animals that have been tested to be harmful to human and animal health and sick animal products, and other animals and animal products that should be subject to biosafety disposal as specified by the State.

### 3.35 Ramp

A platform or frame with an inclined angle for loading or unloading animals during transportation.

### 3.36 Fawn shelter fence

A site that provides shelter and supplementary feeding for fawn.

### 3.37 Roughage

Forage with a crude fiber content equal to or higher than 18% in dry matter, fed after air drying.

### 3.38 Concentrate supplement

Concentrate feed

Forage formulated with grain seeds with a crude fiber content less than 18% in feed dry matter, by-products of grain and oil processing, alcohol processed with grains, and starch by-products in order to supplement the nutrition of herbivore breeding animals based on roughage forage, green feed and silage.

### 3.39 Body mass index, BMI

Weight (kg) divided by height (m) square.

## 4 Site Selection and Zoning Layout

### 4.1 Site selection

4.1.1 The site shall locate at the area with a good ecological environment and no polluted or not directly polluted by industrial "three wastes", wastes from agriculture, urban household and medical use. It is advisable to choose forest or agricultural areas, not towns or residential areas.

4.1.2 The site shall be far away from the source of drinking water, animal slaughter and processing sites, animal and animal product market, breeding livestock and poultry farms, animal diagnosis and treatment sites, animal farms (animal housing area); away from animal quarantine sites and non-hazardous treatment facilities ; keep away from urban residential areas, culture, education, scientific research and other areas with concentrated population; be away from factories, mines, and areas with serious noise pollution; keep away from roads, railways, airports and other major artery traffics and high-voltage power lines. The shortest distance shall meet the following requirements:

- a) The distance from the source of drinking water, animal slaughtering and processing sites, animal and animal product market shall not be less than 500 m;
- b) The distance from urban residential areas, culture, education, scientific research and other areas with concentrated population, as well as roads, railways and other major artery traffics shall not be less than 500m;
- c) The distance from other breeding livestock and poultry farms shall not be less than 1000 m;
- d) The distance from other animal diagnosis and treatment sites shall not be less than 200 m;
- e) The distance from other animal breeding farms (animal housing area) shall not be less than 500 m;
- f) The distance from other animal quarantine sites, non-hazardous treatment facility, and biosafety disposal facility shall not be less than 3000 m.

4.1.3 The site shall have sufficient water sources to meet the production and domestic water required by the herd size. The water quality for agricultural shall comply with the provisions of GB 5749 or NY 5027, and the water quality for domestic shall comply with the provisions of GB 5749.

4.1.4 The site shall undergo an environmental impact assessment, and there shall be an environmental quality report issued by a department with environmental impact assessment qualification. The environmental quality report shall meet the requirements of GB/T 19525.2.

#### 4.2 Farm layout planning

4.3 The paddocks of deer farm shall be enclosed by fences, meshes or enclosure walls. The paddocks of deer farm shall be divided by function, and at least be divided into deer production area, auxiliary production area, staff using areas and isolation area. A buffer area of deer farm shall be set outside the paddocks of deer farm.

4.4 The deer housing facilities shall be located at the upwind place of prevailing wind direction throughout the year and the highest point in the entire playground of deer farm. Primarily the farm should set up deer shed and paddocks, segregation areas, loading and unloading routes and ramps etc are mainly arranged. The deer production area shall be separated from other functional areas by enclosure walls.

4.5 The auxiliary production area shall be arranged close to the load center of the deer production area. Facilities for water supply, power supply, heating, storage and processing as well as preparation of concentrated feed and roughage forage are mainly arranged, silage silo can also be arranged.

4.6 The staff area shall be located at the sidewind place of prevailing wind direction throughout the year at the deer farm, and shall be arranged in a centralized manner next to the gate of the farm. The following facilities are mainly arranged:

- a) management personnel office, technician office and staff living area;
- b) Personnel and vehicle disinfection facilities;
- c) Product storage room, product processing room, finished product warehouse;
- d) Refrigeration houses, material warehouse, garage and guard room.

4.6.1 The isolation area shall be set up according to the following requirements:

- a) The veterinary hospital is located at the downwind place of the dominant wind direction throughout the year on the deer farm, and the ground elevation is lower than that of the playground of deer farm;
- b) The isolation houses are arranged in the house of deer farm, located at the edge area of the downwind direction of the house, and separated from the deer sheds and yards with enclosure walls;
- c) The centralized manure treatment facility is arranged in an area outside the playground, located at the downwind or sidewind place of dominant wind direction throughout the year at the playground, and the ground elevation is lower than that of the playground, and the distance from the house of deer farm is not less than 100 m;
- d) The biosafety disposal facility is arranged in an area outside of paddocks, and the distance from the paddocks is not less than 500 m. The distance from other animal farms, husbandry districts, breeding livestock and poultry farms, animal slaughter and processing sites, animal isolation sites, animal diagnosis and treatment sites, animal and animal product market, source of drinking water is not less than 3000 m, and the distance from populated areas including urban residential areas and areas where cultural, education and scientific research institutions locate., and other areas with concentrated population,

as well as highways, railways and other major artery traffics is not less than 500 m.

#### 4.7 Road layout

4.8 The clean road and dirty road system, and dedicated lift truck passages for transferring deers shall be set up separately. The clean road and dirty road shall not cross or use in common.

4.9 The dirty road in the playground shall be connected with each functional area without barriers; the dirty roads in the house shall be connected with the deer sheds and yards, loading and unloading roads, and the ramps without barriers; the dirty road shall be connected with the isolation area without barrier.

4.10 The roads in the isolation area shall be constructed according to the following requirements:

- a) The entrance of the veterinary room is connected with the non-dirty road of the playground without barrier, and a special exit is set to connect with the dirty road;
- b) The entrance to the quarantine enclosure is connected with the non-dirty road of the deer sheds and yards without barriers, and a special exit is set to connect with the dirty road;
- c) There are special gates and special passages for dirty roads of veterinary room and isolation houses to connect to the outside of the playground;
- d) The centralized manure treatment facility is connected with the dirty roads of the house without barrier.

#### 4.11 Landscaping

4.11.1 The playground shall be planted with trees, shrubs, turf, flowers, etc. that are suitable for this area. Flowers and trees that are nonhazardous to humans and animals shall be used for greening, and the greening rate shall not be less than 30 %. The bare land that cannot be greened can be hardened by laying flat stones, strip stones or red bricks to minimize dust and prevent the formation of mud in the rainy season.

4.11.2 The buffer area shall be greened with trees suitable for this area, and the width of the green belt shall not be less than 2 m.

4.11.3 The distance between the trees and the outer walls of buildings, enclosure walls, curbside and the edges of open drainage ditches shall not be less than 1 m.

### 5 Building Facilities and Equipment

#### 5.1 Deer sheds and yards

##### 5.1.1 General requirements

5.1.1.1 Deer sheds and yards shall be enclosed to ensure the safety and comfort of people and deer, the normal operation of deer detaching, restraint, antler sawn-off, and deer disease diagnosis and treatment. It can accommodate different species, ages, genders, and individual body sizes of deers, and prevent deer from escaping.

5.1.1.2 Deer sheds and yards shall be equipped with shelters to protect deer from sun and rain, sleeping beds and sports fields, and there shall be fine and roughage forage troughs and water troughs suitable for herd size. Sheds and yards for breeding female deer shall also be equipped with fawn fences.



5.1.1.3 Deer sheds and yards shall be equipped with temperature and humidity control facilities, with good ventilation, lighting and drainage.

5.1.1.4 When rebuilding or building a new deer farm, the capacity of the deer shed and yard shall be designed to be able to accommodate 30–40 adult sika deer and 20–30 adult red deer; The cover area shall meet the following requirements:

- a) At least 15m<sup>2</sup> for each adult sika deer, and at least 20 m<sup>2</sup> for each adult red deer;
- b) At least 10m<sup>2</sup> for each growth sika deer, and at least 15 m<sup>2</sup> for each growth red deer.

#### 5.1.2 Walls

5.1.2.1 The walls of enclosure shall be made of strong, durable and non-toxic materials. The height is not less than 1.8 m, and the thickness is not less than 0.24 m. The surface of the wall is clean, firm and smooth, without any cracks or holes that may harm the deer, and no protrusions such as corner angles, nails, wire knots, rope knots, etc. which may harm the deer.

5.1.2.2 The walls of enclosure shall not be made of fencing materials, such as steel fences, iron pipe fences, concrete column fences, wooden column fences, etc.; or mesh materials, such as woolen mesh, wire mesh, welded mesh, etc.

#### 5.1.3 Ground

5.1.3.1 The ground shall be durable, wear-resistant, good in water permeability, and not easy to produce dust and mud. The ground should:

- a) Minimize dust retention and the formation of mud in the rainy season;
- b) Drain off rainwater and sewage to the maximum extent;
- c) Be Suitable for laying with red bricks, not concrete;
- d) Be hardened by skid-resistant concrete.

5.1.3.2 The ground shall not have:

- a) Cracks, pits or holes that may hurt the deer;
- b) Protrusions that may harm the deer, such as sharp corners, stones, tree stumps, etc.;
- c) Sundries that may harm the deer, such as iron nails, iron wires, discarded syringe needles, syringe tubes etc.;
- d) Accumulated water and manure or other wastes.

#### 5.1.4 Gates

5.1.4.1 The surfaces on both sides of the gate shall be clean, firm and smooth; It shall have no cracks or holes that may harm the deer and no protrusions, such as sharp corners, burrs, iron nails, etc., that may harm the deer;

5.1.4.2 The gate shall not have a door handle, but a latch. The latch shall be located on the side that the deer does not contact frequently, and there shall be no corner angles, burrs, etc., that may harm the deer on the surface.

5.1.4.3 The gate shall be able to be opened inside and outside, with open angle not less than  $90^{\circ}$ , and the distance from the ground is less than 10 cm.

5.1.4.4 The gate with height less than 1.6 m shall be fully enclosed, and gate with height higher than 1.6 m can be reserved with a crack or pore less than 10 cm as observation hole.

5.1.4.5 The gate shall not be of mesh structure such as nylon mesh, wire mesh, or welded wire mesh, or balustrade structure such as rebar or iron pipe.

#### 5.1.5 Feed trough and water trough

5.1.5.1 The size of the feed trough and the water trough shall be adapted to the herd scale of the deer shed and yard to ensure that every deer in the deer shed and yard can access the trough or water trough during feeding or watering, without crowding and trampling.

5.1.5.2 Concentrate feed trough shall be wider and deeper cement trough, wood trough or iron sheet trough. The bottom of the trough shall be arc-shaped, with a smooth surface, no dead angles, and with drainage holes reserved. The trough shall be arranged in the center of the deer sport field along with the central axis, the length shall be 8m~10m, the width shall be 0.8 m~1 m; the distance from the ground shall be 0.3 m~0.4 m for sika deer and 0.5 m~0.8 m for red deer.

5.1.5.3 The roughage forage trough shall be a wider and deeper wooden trough or a wire mesh (with mesh less than 2 cm) trough. The bottom of the trough shall be arc-shaped, with a smooth surface and no dead angles. The height between the trough and the ground is 0.3 m~0.4 m for sika deer and 0.5 m~0.8 m for red deer.

5.1.5.4 The water trough shall be made of wood, bamboo, iron, stone, reinforced concrete and other materials, rather than brick-concrete or stone-concrete materials. The height between the water trough and the ground shall be 0.3 m~0.4 m for sika deer and 0.5 m~0.8 m for red deer. In cold and icy areas in winter, iron or pot-stove water trough shall be used, which can be heated by fire or electricity to facilitate drinking warm water in winter. The water trough shall be arranged near the ground drain outlet. The stove mouth and chimney of the pot-stove water trough shall be located outside the deer sheds and yards.

#### 5.1.6 Fawn shelter fences

5.1.6.1 The fawn shelter should be installed within the mother deer enclosure where it is prevented from wind and rain. The shelter shall be located where it is dry and with sufficient sunshine, and be adjustable and moveable when needed.

5.1.6.2 Materials such as round wood poles, slats, steel bars and steel pipes shall be used. The gaps of the fawn shelter fences shall ensure that fawn can pass normally, and adult deer cannot pass. The height is not less than 1.2 m and the area is not less than 4 m<sup>2</sup>.

5.1.6.3 There shall be soft bedding within fawn shelter fences, there shall be a special feeding trough for the fawn, and a small door shall be reserved for the keepers to enter and exit, check, care, conduct medical treatment, and feed supplementarily.

#### 5.2 Drainage ditches

5.2.1 Drainage ditch shall be located outside the enclosure wall of the deer shed and yard and connected with the outlet of the enclosure wall. The walls of the ditch shall be masonry, the bottom of the ditch shall be tamped, the ditch shall be covered with prefabricated cement slabs.

5.2.2 The design of drainage ditch shall be based on gravity flow to ensure the natural

discharge of rainwater and sewage. The advisable size is 0.4 m deep, 0.3 m wide at the bottom, and 0.4 m wide at the mouth.

### 5.3 Passages

5.3.1 Passages shall be laid at the entrance and outside of the gate of the deer shed and yard, and the passage shall be connected with other deer sheds and yards without barriers to ensure the safe operation of deer detaching, grouping, segregating, loading and unloading, and traffic of conveyance or machine used for feed transportation, sanitation, and veterinary handling.

5.3.2 The passages shall meet the following requirements:

- a) The width is 2.5 m~3 m;
- b) The ground is durable, water-permeable, not easy to produce dirt and mud, with no sundries that may harm the deer, such as iron nails, iron wires, discarded needles, needle tubes, etc., with no cracks, pits or holes that may harm the deer, with no ponding water or manure accumulation or other wastes;
- c) There are no protrusions on the side walls that may harm the deer, such as sharp corners, stones, tree stumps, etc.
- d) The passages paved with concrete shall have anti-skid stripes, the passages paved with wooden boards shall have anti-skid slats, and the surfaces of the passages paved with footpath boards and stone slabs shall undergo anti-skid treatment.

### 5.4 Ramp

5.4.1 The ramp can be made of wood, angle steel keel or steel pipe keel sheet. There are no cracks or holes on the side wall that may harm the deer; there are no protrusions on the inside surface that may harm the deer, such as sharp corners, iron nails, wire knots, knots, etc.; Anti-skid pedals or pedal grooves on the bottom.

5.4.2 One side of the ramp is connected to the passage of the house, and the other side is connected to the transportation tool. The height of the side of the ramp connecting to the transportation tool from the ground shall be adjustable, which can adapt to the height of the floor of any vehicle compartment.

5.4.3 The ramp can be fully enclosed with a roof, or semi-enclosed without a roof. At the entrance and exit, a hinged movable door shall be set up, and it shall be opened outward.

5.4.4 The slope of the bottom of the ramp shall be less than 30°. The distance between the two side walls shall be 0.8 m~1.2 m. For ramp with a roof, the height between the bottom and the roof shall not be less than 1.5 m; for ramp without a roof, the height of the side walls shall be no less than 2 m.

### 5.5 Weighing scale

5.5.1 The deer farm shall be equipped with special weighing scales to facilitate regular weighing of deer and monitor the health, welfare and weight gain of deer. The weighing scale shall have a measuring range of 500 kg and with an accuracy of 1 kg.

5.5.2 The weighing scale shall be able to move freely, easy to enter and exit the deer shed and yard, and be equipped with a weighing scale tray suitable for the deer body size to ensure the comfort of the deer when weighing and prevent damage to the deer.

### 5.6 Disinfection tank

5.6.1 At the entrance of the playground and house, a cement structure disinfection tank with the same width as the door, length of 4 m and depth of 0.3 m shall be set up.

5.6.2 A disinfection tank with the same width as the door, length of 1m, and depth of 0.3 m shall be set at the entrance of the deer shed and yard, and a disinfection pad shall be set inside.

#### 5.7 Concentrate feed and roughage forage storehouses

5.7.1 The storage capacity shall be adapted to herd size. The concentrate feed storehouse shall be fully enclosed, and the roughage forage storehouse shall have a shed structure without walls.

5.7.2 The ground of the concentrate feed and roughage forage storehouses shall be firm, durable, and not easy to generate dust and mud. The shed cover of the roughage forage storehouse shall be firm, durable and prevent rainwater leakage; the walls and ceiling of the concentrate feed storehouse shall be smooth, without cracks, and no particles falling off. The junction of the wall and the ground shall be arc-shaped or other measures shall be taken to reduce dust accumulation and be convenient for cleaning.

5.7.3 The concentrate feed and roughage forage storehouses shall be equipped with power circuit and lighting circuit and concentrate feed and roughage forage crushers that match the electricity shall be installed. For farms that use compound feeds, there is no need to install a concentrate feed crusher

5.7.4 The concentrate feed and roughage forage storehouses shall be dry, ventilated, and have rodent-proof facilities.

5.7.5 The concentrate feed storage room and concentrate feed processing room can be set separately on the deer farm according to needs.

#### 5.8 Concentrate feed preparation room

5.8.1 The concentrate feed preparation room shall be fully enclosed, with good lighting, heating and water supply and drainage facilities. The feed preparation capability should allow feed to be prepared for the whole herd or for a whole day

5.8.2 The floor, walls, ceiling, doors and windows shall meet the following requirements:

a) The ground material is firm, durable, wear-resistant, washable, and not easy to generate dust and mud;

b) The wall and ceiling are flat and smooth, without cracks, and no particles falling off;

c) The junction between the wall and the ground is arc-shaped or other measures are taken to reduce dust accumulation and be convenient for cleaning;

d) The doors and windows are spacious and bright, with good ventilation and aeration;

5.8.3 It can be equipped with storage tanks, mixing tanks, water tanks, pot stoves and other equipment according to actual needs. Ensure cleanliness and hygiene.

5.8.4 There is no need for a deer farm that compound feeds are used to install a concentrate feed preparation room.

#### 5.9 Veterinary room

5.9.1 The area shall not be less than 40 m<sup>2</sup>, the floor, walls, ceiling, doors and windows

shall meet the requirements of 5.8.2, and the room shall be equipped with the following facilities:

- a) Good lighting, heating and water supply and drainage facilities;
- b) Good ventilation, heat prevention and constant temperature and humidity facilities;
- c) Facilities for dynamic electricity, lighting electricity, fire prevention, theft-proof, rodent-proof, mosquito-proof and non-hazardous treatment;
- d) Install disinfection equipment such as ultraviolet disinfection lamps;
- e) Install hand-washing sinks and other sanitary cleaning equipment.

5.9.2 The veterinary room shall be equipped with medicines, medical equipment and storage cabinets. The medicines and medical equipment shall be stored separately, and the storage cabinets shall be locked. The following apparatus, equipment and spare parts shall also be equipped:

- a) Weight measuring instruments such as weighing scales and electronic scales;
- b) Low-temperature storage equipment such as refrigerators and electric freezers;
- c) Microscopic observation instruments such as ordinary microscopes and stereoscopic microscopes;
- d) Medical restraint apparatus;
- e) Personal protective equipment (products) such as masks, towels, gloves, and protective clothing.

5.9.3 All kinds of equipment and instruments shall be clean and hygienic, sterile instruments and equipment shall be disinfected regularly, and other instruments and equipment shall be cleaned regularly.

#### 5.10 Non-hazardous treatment facility

The size of the centralized manure treatment facility shall be adapted to herd size. The biosafety disposal facility shall be provided with obvious signs and isolation facilities such as fences or meshes. Where it is possible, deer farm should be equipped with biosafety disposal equipment, such as incinerators, dryers, and humidifiers, to replace biosafety disposal facility.

#### 5.11 Changing rooms and lounges

The changing rooms and lounges shall be adapted to the number of employees, and the changing room shall be located at the entrance of the house of deer farm. The floors, walls, ceilings, doors and windows of changing rooms and lounges shall meet the requirements of 5.8.2 and the rooms shall be equipped with the following facilities:

- a) Good lighting, heating, heatstroke prevention, and water supply and drainage facilities;
- b) Install disinfection equipment such as ultraviolet disinfection lamps;
- c) Install hand-washing sinks and other sanitary cleaning equipment;
- d) Rodent-proof, theft-proof, mosquito-proof and fire prevention facilities;

e) The number of lockers suitable for the number of employees.

#### 5.12 Product storage room, product processing room and finished product warehouse

5.12.1 Product storage, processing rooms and finished product warehouses can be designed and constructed for the deer farm as required. Product storage, processing rooms and finished product warehouses shall be set up independently. The floor, walls, ceiling, doors and windows shall meet the requirements of 5.8.2, and the following facilities shall be installed:

- a) Fire prevention, theft-- proof, rodent-- proof, mosquito-- proof facilities and alarm facilities;
- b) Drying, ventilation and disinfection facilities;
- c) Good lighting facilities.

In addition to the above facilities, the product processing room shall also be equipped with thermal insulation and heating facilities in winter or heatstroke prevention facilities in summer, water supply and drainage facilities, and sanitation and cleaning facilities.

5.12.2 The product storage room shall be equipped with electronic scales, refrigerators, electric fans, exhaust fans, antler racks, shelves and other equipment. It should maintain clean and hygiene.

5.12.3 The product processing room shall be equipped with an independent antler-frying room and air-drying room. The antler-boiling room shall be equipped with electric-drying or freeze-drying equipment, antler-boiling equipment, and antler-washing equipment suitable for the scale of the product, equipped with electronic scales, refrigerators and workbenches, and ensure that the equipment is clean and hygienic. The air-drying room shall be equipped with antler racks, electric fans, exhaust fans and other equipment suitable for the scale of the product, and the equipment shall be clean and hygienic. The product processing room shall also be equipped with labor protection appliances (products) such as masks, towels, gloves, and work clothings.

5.12.4 The finished product warehouse shall be equipped with racks, shelves and other product placement facilities, electronic scales, refrigerators, hygrothermograph, electric fans, exhaust fans and other equipment, and the facilities and equipment shall be clean and sanitary.

#### 5.13 Other buildings and facilities

5.13.1 The playground shall be paved with transportation roads connecting the deer farming area, auxiliary production area, and business management area, as well as the arterial highway outside the playground. The road surface shall be hardened to ensure the passage of vehicles under various weather conditions and to prevent dust.

5.13.2 The road for transporting deer shall be able to ensure the safe driving of transport vehicles under any weather conditions, and there shall be enough space to move transportation vehicles to approach or leave the ramp by their own power.

5.13.3 The height of the enclosure walls, fences or meshes of the playground shall not be less than 1.8 m, a buffer area shall be set on the periphery, and a greenbelt shall be established.

5.13.4 Offices, canteens, warehouses, garages and other logistic service rooms, water

towers, water tanks and other water storage facilities can be designed and constructed for the deer farm according to actual needs. The water storage capacity shall ensure daily deer drinking water and production and domestic water.

## 6 Personnel

### 6.1 Personnel requirements

6.1.1 The farm veterinarians, technicians, keepers and other personnel employed by the deer farm shall have relevant academic qualifications and occupational qualifications, and receive pre-job training, and obtain the qualifications for employment. They are in good health, no zoonotic diseases, no disability, and no intellectual disability. They must have a strong sense of responsibility and entrepreneur spirit, and love their own work.

6.1.2 The farm veterinarian shall have a veterinary practice qualification certificate issued by the national veterinary administrative department, theoretical knowledge and practical experience in the prevention and treatment of deer disease, and be able to make correct judgments and treatment for actual problems in the prevention and treatment of deer disease, and be no more than 65 years old.

6.1.3 The technician shall graduate above technical secondary school in animal husbandry, wildlife or related majors, have theoretical knowledge and practical experience in deer production, and be able to make correct judgments and treatment for actual problems in deer production, and be no more than 65 years old.

6.1.4 The keeper shall have a high school degree or above, be no more than 50 years old, and have a body mass index no more than 30.

6.1.5 For the deer farm, mechanical repairers, plumbers, heating maintainers, electricians and other skilled workers can be employed according to production needs. The skilled workers shall have corresponding technical grade certificates and professional certificates, and be under 60 years old.

### 6.2 Personnel management

6.2.1 The deer farm shall manage staff health and establish health records. Staff who are in direct contact with deer or deer products shall undertake a health check before taking up their jobs, and then undergo at least one health check every year. People suffering from tuberculosis, brucellosis, foot-and-mouth disease and other zoonotic diseases shall be transferred from work.

6.2.2 Keepers shall maintain personal hygiene, bath frequently, trim their nails frequently, and not wear heavy makeup or strong perfume.

6.2.3 Any people and vehicles from epidemic or suspected epidemic areas are not allowed to enter the farm. No person is allowed to bring livestock and poultry products or live animals into the house of deer farm.

6.2.4 Deer farms shall organize vocational and technical training on a regular basis and establish employee training files. The content of the training shall be adapted to the requirements of the job. In addition to theoretical and practical training, there shall be trainings on relevant laws and regulations, job responsibilities and skills, and the training results shall be assessed. Those who pass the assessment shall be issued with a certificate and take post with certificate.

6.2.5 All the staff on the deer farm shall wear uniform work clothes and shall not take

work clothes out of the farm. Work clothes shall be cleaned and disinfected regularly.

6.2.6 Visitors and untrained people on the farm are not allowed to enter the deer shed and yard. If they are necessary to enter under special circumstances, designated person shall provide guidance on personal hygiene, changing clothes, and visit precautions in advance. Personnel wearing heavy makeup or strong perfume or colorful clothes shall not enter the deer shed and yard.

6.2.7 Smoking, eating, and storage of production irrelevant items such as food, beverages, cigarettes and personal medicines shall be prohibited in the house of deer farm, feed storage and processing and preparation areas, and product processing and storage areas.

6.2.8 Farm veterinarians are not allowed to conduct out-call.

## 7 Feeding Inputs

### 7.1 Feed

7.1.1 The feed shall meet the following requirements:

- a) Hygiene conforms to the provisions of GB 13078;
- b) Has the right colour, odor, taste and structure of the feeds;
- c) Uniform texture, no mold, deterioration, agglomeration, moth-eaten and peculiar smell, odor, foreign body;
- d) The quality of raw materials of concentrate feed shall comply with the provisions of Appendix A;
- e) For raw materials of concentrate feed with a storage period of more than 3 days, the moisture content shall comply with the provisions of Appendix A;

7.1.2 Green feed and dry roughage forage should be the main ingredient, supplemented by concentrate feed. It is advisable to choose various local concentrate feeds, roughage forage and green feeds with low prices, large quantities, wide sources and stable supplies.

7.1.3 The feeds shall be diverse in kinds, sufficient in quantity, balanced in nutrition, and good in palatability, which can ensure the health of the deer and meet the various nutritional requirement for growth, pregnancy, lactation, and resistance to cold.

7.1.4 Feed products from animal sources other than milk and dairy products shall not be used. Do not use by-products of the pharmaceutical industry, hormones, and hormone-like products.

7.1.5 If appropriate, compound feed shall be preferred. The compound feed shall be produced by the manufacturers that has obtained the compound feed production license and meet the relevant quality standards.

### 7.2 Feed additives

7.2.1 Feed additives shall meet the following requirements:

- a) Hygiene conforms to the provisions of GB 13078;
- b) The usage, dosage and application scope comply with the " Specifications for the Safe Use of Feed Additives " and the product label is used;
- c) It has the color, odor, taste and morphological characteristics of the feed additive



product, without moldy, deterioration, agglomeration, peculiar smell, odor and foreign matter;

d) The feed additives have to be from the varieties specified in the "Catalogue of Feed Additives", products that have obtained the feed additive import registration certificate issued by the agricultural administrative department of the State Council within the validity period, or new feed additive varieties approved by the agricultural administrative department of the State Council;

e) Product with a product approval number produced by an enterprise that has obtained a feed additive production license, or an overseas feed additive product that has obtained a product import registration certificate.

7.2.2 In addition to meeting the requirements of 7.2.1, feed medicine additives shall also be used in accordance with the following requirements:

a) Comply with the provisions of " Specifications for the Use of Feed Medicine Additives ";

b) Comply with the relevant provisions of the withdrawal period;

c) Except for the varieties included in the " Specifications for the Use of Feed Medicine Additives " and the feed medicine additives approved by the agricultural administrative department to be used in feed, any other veterinary drug products shall not be added to feed for use;

d) Veterinary API (Active pharmaceutical ingredient) shall not be directly added to feed for use, and shall be made into a premix before being added to feed.

### 7.3 Drinking water

7.3.1 The sanitation of drinking water shall comply with the provisions of NY 5027 or GB 5749.

7.3.2 Drinking water shall not be restricted by time and quantity, and shall be supplied in sufficient quantity and replenished at any time.

7.3.3 Drinking water shall be changed at least once a day and the water shall be kept clean.

7.3.4 The temperature of drinking water in winter shall not be lower than 10 °C.

### 7.4 Veterinary drugs

7.4.1 The veterinary drugs used in the prevention, diagnosis and treatment of deer diseases on the deer farm shall be veterinary drugs produced by veterinary drug manufacturers that have the "Veterinary Drug Production License" and have obtained the "Veterinary Drug GMP Certificate of the People's Republic of China" or those approved to be imported by the veterinary administrative department of the State Council. The quality of veterinary drugs shall comply with the provisions of the "Veterinary Pharmacopoeia of the People's Republic of China" or other relevant national quality standards for veterinary drugs.

7.4.2 Farm veterinarians shall be cautious with using adrenergic, antiasthmatic, anticholinergic and cholinergic drugs, glucocorticoids, and antipyretic analgesics. When such drugs must be used, they shall be used in strict accordance with the purpose, usage and dosage specified in the package insert.

7.4.3 For non-clinical medical needs, anesthetics, analgesics, sedatives, central stimulants, estrogens, androgens, chemical restraints and bone relaxants are not allowed.

When such drugs must be used, they shall be used in strict accordance with the purpose, usage and dosage specified in the drug insert.

7.4.4 The veterinary drugs specified in the " List of Drugs Prohibited for Feed and Animal Drinking Water " and the " List of Veterinary Drugs and Other Compounds Prohibited for Food-Producing Animals " shall not be used.

7.4.5 The farm veterinarian shall fill in the medication record when using veterinary drugs, establish a medication record file and keep it for more than 3 years. The medication record shall include: the name of the medication (trade name and generic name), dosage form, dosage, route of administration, course of treatment, manufacturer of veterinary drug, approval document number, production date, batch number, etc.

7.4.6 The farm veterinarian shall abide by the "Regulations on Withdrawal Period of Veterinary Drugs".

7.4.7 The farm veterinarian shall observe and record the therapeutic effects and adverse reactions of veterinary drugs. When a serious adverse reaction or death that may be related to the use of veterinary drugs is discovered, it shall immediately be reported to the veterinary administrative department of the local government.

7.4.8 Veterinary drugs shall be stored in special medicine cabinets, and shall not be mixed with other equipment and articles. Veterinary drugs with special requirements for temperature and humidity shall be stored in containers that meet the requirements.

7.4.9 Vaccination should be the prioritized choice to prevent diseases for deers.

## 8 Husbandry management

### 8.1 Daily husbandry management

#### 8.1.1 General requirements

8.1.1.1 Deer farm shall divide the productive period of stag into pre-velvet antler growth period, velvet antler growth period, breeding period and recovery period, that of doe into breeding & early pregnancy period, pregnancy period, farrowing & lactation period, fawn lactation period, young deer nursing period and growth period, select feed raw materials according to the nutritional needs at different production periods, and reasonably balance the nutrition.

8.1.1.2 Dry yellow corn stalk, bean stalk silage, dry green grass and dry leaves shall be used as basic roughage forage. The crude protein content of grain feed at different production periods can refer to the relevant contents in Annex B.

8.1.1.3 In addition to compound feed, feed shall be carefully processed and prepared according to the type, particle size and hardness of raw materials. Grains, Leguminosae seeds, roots, tubers and melons & fruits shall not be fed in whole grain or whole piece, but shall be crushed or cooked. Meal expeller and meal solvent shall not be fed directly, but shall be crushed or soaked soft. Roughage forage such as dry yellow corn stalk, bean stalk silage and dry green grass shall not be fed as a whole, but shall be crushed.

8.1.1.4 Deer farm shall keep the feed varieties relatively stable, and gradually transit to new varieties when changing the feed varieties. It shall be changed slowly with no less than 7 days to ensure that deer can adapt to the new feed slowly.

8.1.1.5 Concentrate feed shall be fed regularly in a fixed amount. Refer to the relevant contents in Annex B for the daily feeding amount of concentrate feed at different production

periods, and evenly distribute the daily feeding amount according to the requirements of feeding times at different production periods. The roughage forage shall be supplied in sufficient quantity to ensure that ad libitum feeding is available to deer. The keeper shall fill in the feeding record every day.

8.1.1.6 The grain food shall be fed in an area large enough to ensure that each deer can intake grain feed normally, so as to prevent deer from crowding, rubbing and colliding with each other as well as bullying because of fighting for food. It is advisable to feed concentrate feed first, and then feed roughage forage after all the feed grain is eaten up, or smash the roughage forage, mix and prepare with the concentrate feed according to the ratio of concentrate feed to roughage forage of 1: 3 ~ 1: 5 to feed.

8.1.1.7 When the temperature of deer sheds and yards is higher than 30 °C, measures shall be taken to prevent heatstroke, such as increasing ventilation of deer house, flushing the ground with cold water and implementing sprinkler spray.

8.1.1.8 When the temperature of young deer sheds and yards is lower than -5 °C, that of growth deer sheds and yards is lower than -10°C, and that of adult stag and adult doe is lower than -15 °C, heat preservation measures shall be taken. The following methods can be used for heat preservation:

- a) bedding with soft grass with a thickness of 10 cm ~ 15 cm;
- b) block the airhole on the four walls of the deer sheds and yards;
- c) properly blocking the sheds and yards to avoid wind and snow.

#### 8.1.2 Population management

8.1.2.1 Deer herd shall be kept in grouped according to deer species, weight, male or female, adult or young, strength or weakness. The stag sheds and yards shall be built at the upwind direction to the dominant wind direction throughout the year of the doe sheds and yards, and the young deer sheds and yards shall be built at the downwind direction to the dominant wind direction throughout the year of the doe sheds and yards.

8.1.2.2 Red deer and sika deer shall not be mixed, stag and doe shall not be mixed (except during the breeding period). Adult deer and young deer shall not be mixed (except during the lactation period), strong deer and weak deer shall not be mixed, and healthy deer and sick & weak deer shall not be mixed.

8.1.2.3 The suitable feeding amount for a single deer shed and yard is:

- a) For sika deer:
  - 1) 30 to 35 adult stags;
  - 2) 35 to 40 adult does;
  - 3) 30 to 40 growth deer;
  - 4) 35 to 45 young deer.
- b) For red deer:
  - 1) 20 to 25 adult stags;
  - 2) 25 to 30 adult does;
  - 3) 30 to 35 growth deer;

4) 35 to 40 young deer.

c) For other deer species, it can refer to that of sika deer or red deer according to the body size.

8.1.2.4 The following stag and doe shall be eliminated:

a) velvet antler yield is lower than that specified in Annex B for 3 consecutive years;

b) adult stag growing abnormal velvet antler for 2 consecutive years;

c) adult doe who have been infertile or develop abnormal behaviours and give birth to weak fawns for 2 consecutive years;

d) stag and doe who have been received treatment and nutrition supplementation, while are still thin and weak;

e) stag and doe with serious diseases.

8.1.2.5 The basic information of deer in sheds and yards shall be marked in a prominent position, including deer species, responsible person, herd size, age and so on.

8.1.3 Inspecting in the house of deer farm

8.1.3.1 Keepers shall regularly inspecting deer sheds and yards at least twice a day, and keep records.

8.1.3.2 When inspecting keepers shall focus on observing the compatible situation, health state, activity condition, feeding and drinking, rumination and belching of deer, and check whether the manure, muzzle, body condition, breathing, physical appearance and behavior are normal or not. If any abnormal situation is found, the farm veterinarian shall be notified in time for treatment.

8.1.3.3 When inspecting, keepers shall emphasize on checking the ground, fence, runway, gate and other facilities of the deer sheds and yards, confirm whether there are cracks, holes and sharp protrusions that may harm deer or enable deer to escape, whether there are nails, iron wires, plastic bags, discarded needle tubings, needles and other sundries, whether the gate is closed and whether the latch is inserted tightly. The sundries found shall be removed in time, and if facilities are found to be damaged, relevant personnel shall be notified in time for maintenance.

8.2 Husbandry management of adult stags

8.2.1 Pre-velvet antler growth period and velvet antler growth period

8.2.1.1 The concentrate feed shall be composed of diversified and nutritious varieties with a reasonable proportion. The roughage forage shall be prepared by dark green juicy feed, silage, leaf feed, corn stalk and other agricultural and sideline products.

8.2.1.2 The stags shall be fed in groups according to their age, physical and health status.

8.2.1.3 It shall be fed with concentrate feed and roughage forage 4 times a day in the morning, noon and evening, and supplemented with roughage forage at night.

8.2.1.4 When inspecting, attention shall be paid to observing the deer antler base and velvet antler growth situation of stags, and the deer antler base and velvet antler growth shall be recorded carefully. If it is found that the stag fails to take off the antler base in time, or the new velvet has grown out but the deer antler base delays in falling off, intervention measures shall be taken to remove the deer antler base.

### 8.2.2 Breeding period

8.2.2.1 For the stag of sika deer specie, For the stag of sika deer, body size, appearance, breeding/production performance, offspring conditions and comprehensive evaluation indicators shall comply with the provisions of GB 6935; for that of Manchurian red deer (*Cervus canadensis xanthopygus*), For the stag of sika deer, body size, appearance, breeding/production performance, offspring conditions and comprehensive evaluation indicators shall comply with the provisions of GB 6936; for that of other red deer subspecies, it can be assessed by reference to the provisions of GB 6936 with regards to the size, appearance, body size, production performance, offspring quality and comprehensive evaluation indicators, etc.

8.2.2.2 The extra-class and first-class stags shall be mated with core doe herd and general doe herd, the first-class and second-class stags shall be mated with general doe herd, and the third-class stags cannot be used for breeding.

8.2.2.3 For breeding stags, it is necessary to improve the palatability of feed, feed more dark green juicy feed containing sugar, vitamins and microelements and high quality dry roughage forage, and appropriately reduce concentrate feed. For stags who do not participate in breeding, it shall reduce concentrate feed appropriately.

8.2.2.4 It shall be fed with roughage forage and concentrate feed twice a day, once in the morning and once in the evening.

8.2.2.5 Keepers shall inspecting day and night, carefully observe the breeding situation of stag, accurately grasp the breeding time and keep a good record of breeding.

8.2.2.6 During the breeding period, sika stags shall be exchanged once every 5–10 days, and red deer stags shall be exchanged once every 10–15 days. The replaced stags shall be bred at an interval not less than 20 days. The stags that have been replaced or bred shall be separated, and shall not be grouped with stag that have not participated in breeding.

8.2.2.7 Non-breeding stags and alternative breeding stags shall be kept away from the doe herd and kept in the deer sheds and yards in the upwind direction to the doe herd, so as to prevent stimulation by the doe's odor from oestrus and affecting appetite, and prevent collision and mounting.

### 8.2.3 Recovery period

8.2.3.1 Deers should be fed mainly with roughage forage, and supplemented by concentrated feed. The proportion of energy feed can be increased, and that of protein feed can be decreased. Feed roughage forage with larger volume.

8.2.3.2 It shall be fed with concentrate feed once a day in the morning and evening.

8.2.3.3 The weak, thin and sick & disabled deer shall be selected in time to constitute the old, weak, sick and disabled deer herd, which shall be cared for and managed with additional attention, and fed with digestible concentrate feed and roughage forage with comprehensive nutrition and good palatability.

## 8.3 Husbandry management of adult does

### 8.3.1 Breeding period

8.3.1.1 For the doe of sika deer specie, For the stag of sika deer, body size, appearance, breeding/production performance, offspring conditions and comprehensive evaluation indicators shall comply with the provisions of GB 6935; for that of Manchurian red deer,

For the stag of sika deer, body size, appearance, breeding/production performance, offspring conditions and comprehensive evaluation indicators shall comply with the provisions of GB 6936; for that of other red deer subspecies, it can be assessed by reference to the provisions of GB 6936 with regards to the size, appearance, body size, production performance, offspring quality and comprehensive evaluation indicators, etc.

8.3.1.2 The extra-class and first-class does shall constitute the core doe herd, the second-class and third-class does shall constitute the general doe herd, the does participating in breeding for the first time shall constitute the primary-mating doe group, and other does can constitute the replacement doe group.

8.3.1.3 It shall adopt the mating patterns of one male with a number of females, double males with a number of females or a number of males with a number of females, and there shall be about 20 deer in each breeding herd. Attention shall be paid to observing the performance and behavior of stags with the breeding method of a number of males with a number of females. The stags that are found to be desperately colliding, shall be driven away immediately and separated.

8.3.1.4 It shall supplement enough macroelements, microelements and vitamins, and increase the proportion of dark green juicy feed.

8.3.1.5 It shall be fed with roughage forage and concentrate feed twice a day, once in the morning and once in the evening.

### 8.3.2 Gestation

8.3.2.1 Feed with small volume, good quality, comprehensive nutrition and good palatability shall be selected. The feed in embryonic period and pre-gestational period can be slightly larger in volume, that fed in fetal stage shall be appropriately smaller in volume, and feeding shall be appropriately restricted one month before the birth.

8.3.2.2 It shall be fed with concentrate feed and roughage forage 4 times a day in the morning, noon and evening, and supplemented with roughage forage at night.

8.3.2.3 The doe herd shall be regrouped as appropriate according to the age, body condition and mating date. The doe with similar age, balanced body condition and similar mating date shall be adjusted to the same herd, with 20 to 30 does in each herd, and allocated with 1 to 2 older and temper stags.

8.3.2.4 It shall appropriately increase the amount of exercise for does in the later stage of pregnancy, with no less than 1 hour every day one month before birth.

8.3.2.5 Ten days before birth, fawn shelter fence in the enclosure should be installed, the substrate should be replaced, enclosure should be cleaned and disinfected, and replace the bedding, clean and disinfect the deer sheds and yards. Before giving birth, attention shall be paid to observing the performance and behavior of does, and the farrowing record shall be made. In case of abnormal behavior or suspected dystocia, the farm veterinarian shall be informed in time for treatment.

### 8.3.3 Lactation period

8.3.3.1 The feed shall be diversified with good quality, comprehensive nutrition and strong palatability, and a certain amount of dark green juicy feed shall be fed. The supply of calcium, phosphorus, potassium, chlorine, vitamin A and vitamin D shall be appropriately increased.

8.3.3.2 It shall be fed with concentrate feed and roughage forage by 4 times a day in the morning, noon and evening, and supplemented with roughage forage at night.

8.3.3.3 The deer sheds and yards shall be kept clean and disinfected to prevent mastitis of does and diseases of fawns.

8.3.3.4 During inspecting, the keepers shall pay attention to observing the lactation situation of the does, timely provide guiding lactation or assisted bottle feeding for the weak fawns; care for the does lacking milk or refusing to lactate, and strengthen management and training.

#### 8.4 Husbandry management of fawns

##### 8.4.1 Neonate

8.4.1.1 When a doe gives birth, the keeper shall observe and record the following conditions on the spot:

- a) whether the doe cares for the fawn;
- b) whether the fawn is fed with colostrum;
- c) whether the doe abandons the fawn because of poor motherhood, fright after birth or other reasons;
- d) whether the uterine fluids in the body of fawn is removed in time;
- e) whether the umbilical cord of fawn breaks naturally.

8.4.1.2 In case of one of the following conditions, it is necessary to take remedial measures for the fawns:

- a) If it is abandoned by doe, cannot be fed with colostrum, or the doe suffers from postpartum illness or dies, it shall be raised by a doe with gentle temperament, strong motherhood and high lactation yield or receive hand rearing;
- b) If the fawn's body mucus is not removed, it shall be dried with soft grass or cotton cloth in time, or licked dry by a gentle doe that has given birth, especially the mucus in the mouth and nostrils shall be removed in time to avoid death by suffocation;
- c) If the umbilical cord fails to break naturally, it shall be broken manually.

8.4.1.3 In case of bottle feeding, fresh goat milk or cow milk shall be selected, and the following matters shall be paid attention to:

- a) the milk liquid shall be boiled and sterilized, and be fed in a fixed time and amount at 36 °C and 38 °C;
- b) feeding utensils shall be cleaned and disinfected before use, and cleaned for keeping after use;
- c) bottle feeding for fawn shall be carried out in the feeding room or a single deer shed and yard. When feeding, attention shall be paid to guiding fawns to suck on their own, and feeding by force opening deer mouth is not encouraged;
- d) the fawns within 30 days of age shall be properly supplemented with cod liver oil and vitamins, and added with antibiotics regularly;

e) if the fawn does not defecate or has difficulty in defecation, assisted defecation measures shall be taken;

f) the fawns shall be trained to intake concentrate feed and roughage forage in advance, so as to wean in time.

#### 8.4.2 Lactation

8.4.2.1 The fawn shelter fence shall be clean, dry, sheltered from the wind and sun. The ground shall be bedded with hay, and a supplementary feed trough shall be set up. Clean once a day, and regularly replace the substrate.

8.4.2.2 Drive the fawns regularly to increase their amount of exercise. Observe the mental state, appetite, defecation and other activities of the fawns, and notify the farm veterinarian to take treatment measures in time if the fawn is found to be abnormal.

8.4.2.3 The keepers shall carefully care for the fawns, train and domesticate the fawns anytime and anywhere, so that the fawns will be not afraid of people, and pay attention to discovering and cultivating the potential deer that may be used for major purposes. Don't play with fawns at will to prevent from getting abnormal behaviours.

8.4.2.4 Fifteen days after birth, fawns shall be supplemented with digestible concentrate feed with high nutritional value and good palatability separately. Feed with concentrate feed twice a day, once in the morning and once in the evening.

#### 8.4.3 Weaning

8.4.3.1 After lactating for 80~90 days, the fawns shall be weaned in time. One-time grouping method shall be adopted for weaning. If the lactation period is not completed, it shall be postponed.

8.4.3.2 Ten days before weaning, the concentrate feed and high-quality dark green juicy feed shall be appropriately increased for fawns. Every day, the does and fawns shall be trained to separate, and the fawns shall be trained to develop the habit of independent activities, foraging and rest.

8.4.3.3 At weaning and grouping, every 30 ~ 40 weaned fawns shall be grouped into one herd according to the gender, age in days and body condition, and kept in a deer shed and yard far away from the does. The does can be separated and the fawns can stay in the original house; and it is also acceptable to detach the fawns and leave the does in the house.

#### 8.5 Husbandry management of young deer

8.5.1 The fawns are to undergo the adaptation period of independent life at the first week after weaning, so the keeper shall carefully take care, often enter the deer sheds and yards to call and approach the deer herd, train the fawns, and desensitize them from anxiety.

8.5.2 The post-weaning feeds shall be nutritious, palatable and easy to digest. The feed varieties that are used to feeding during lactation shall be selected, which shall not be changed.

8.5.3 During the first 30 days of weaning, it shall be fed with grain food and roughage forage by 4~5 times a day, and supplemented with roughage forage once at night. After 30 days of weaning, it shall be fed with grain food and roughage forage by 2~3 times a day, and supplemented with roughage forage once at night.

#### 8.6 Husbandry management of growth deer



8.6.1 It shall supply fresh, high-quality, diversified, nutritious and palatable concentrate feed and roughage forage in sufficient quantity to ensure the growth and development of the growth deer.

8.6.2 The growth stags and the growth does shall be fed in herd, with concentrate feed and roughage forage 4 times a day in the morning, noon and evening, and supplemented with roughage forage at night.

8.6.3 It shall strengthen the exercise of growth deer, with daily improving activities time of no less than 2 hours.

8.6.4 Growth stags and growth does shall not be used for mating in breeding. It shall strengthen the care of growth stags in estrus to prevent individual sexual precocious deer from mismatching and avoid casualties.

8.6.5 The spiker antler of the growth stags shall be sawed off in time, and the pedicle shall be reserved for 2 cm.

8.6.6 It shall strengthen the training and domestication of the growth deer, and enhance the adaptability of the growth deer to various complex environments.

## 9 Safety Measures

### 9.1 Personnel safety

9.1.1 Before entering the deer sheds and yards, personnel should pay attention to observe the performance and behavior of deer. If the deer are not afraid of eviction and intimidation with strong aggressive behavior, anyone shall not be allowed to enter the deer sheds and yards.

9.1.2 When entering the deer sheds and yards for feeding, diagnosis and treatment, sawing velvet, cleaning and other operations, face the deer herd instead of turning your back to the deer herd. The following self-protection measures shall be taken when deer's performance and behavior are abnormal:

- a) when a deer is found to show aggressive behavior, pay attention to avoiding it;
- b) when deer are found to display strong aggressive behavior, the operation in deer sheds and yards shall be stopped;
- c) when the herd are frightened and scattered, stand against the wall to keep away from them.

### 9.2 Animal safety

9.2.1 When entering and leaving the deer sheds and yards, personnel shall keep quiet, move gently and steadily, and behave in a friendly manner, avoiding all kinds of disturbance, harassment and intimidation, not speaking loudly or making noise. External visitors shall be prevented from visiting during breeding, pregnancy, lactation and velvet antler growth period.

9.2.2 It shall strengthen the inspecting for stag sheds and yards in estrus, with emphasis on checking whether the gates of deer sheds and yards are firm and whether the walls are in danger of breakage or collapse, so as to prevent stag from escaping.

9.2.3 If it is higher than 26 °C outside, it is raining or snowing, or the ground of the deer sheds and yards is slippery after rain or snow, it is forbidden to carry out operations

such as driving, deer detaching, diagnosis and treatment, restraining, loading and unloading that may disturb the deer herd.

9.2.4 If the ground of the deer sheds and yards is frozen or covered with snow and ice, it shall be removed or anti-skid treatment shall be done before driving, deer detaching, diagnosis and treatment, restraining, loading and unloading, etc.

9.2.5 If deer are found to collide with each other, bully unfamiliar and weak ones, drive them away immediately, and detach the strong deer in time. If deer are found to be timid, walk by the edge, fail to access the trough, and fail to intake feed, detach the weak deer away in time. Sick deer, emaciated deer and disabled deer shall be raised in single herd and single shed and yard.

9.2.6 The regrowth velvet antler or dried antler of stags shall be sawn off in time before estrus.

9.2.7 During estrus and breeding period, the following measures shall be taken to ensure animal safety for stags not participating in breeding:

- a) injecting drugs to inhibit estrus;
- b) moving to the deer sheds and yards far away from the does;
- c) trying to control the body condition, reduce sexual desire, reduce fights and avoid injured or killed.

9.2.8 Deer should not be introduced or transferred if they are:

- a) fawn weaned within 10 days;
- b) does that have been obviously pregnant or pregnant for more than 150 days;
- c) deer with velvet antler or hard antler;
- d) sick deer and injured deer.

9.2.9 When the deer is introduced or transferred out from the deer farm by means of delivery, the following requirements for loading shall be met:

- a) disabled deer cannot be mixed with able-bodied ones;
- b) small deer cannot be mixed with large ones;
- c) emaciated deer cannot be mixed with strong ones;
- d) young deer, growth deer and adult deer cannot be mixed;
- e) the loading density is 100 kg/0.4 m<sup>2</sup>.

## 10 Deer Farm Hygiene

### 10.1 Deer sheds and yards health

10.1.1 The keepers shall clean the deer sheds and yards once a day to keep it free of manure, accumulated water, snow and waste residue.

10.1.2 Before each feeding, the residual concentrated feed and contaminated roughage forage shall be cleared away. Suspended matters in the drinking water tank shall be removed at any time, and the drinking water shall be replaced in time if it is turbid.

10.1.3 When it is higher than 15 °C outdoors, the manger and water tank shall be cleaned once a day, and the floor of the deer sheds and yards shall be flushed once a week.

10.1.4 No living animals other than deer shall be kept in the deer sheds and yards.

## 10.2 Environmental hygiene

10.2.1 Refer to NY/T 388 for the air environmental quality and hygienic indicators of the playground of deer farm and the house of deer farm, and the ecological environmental quality and hygienic indicators of the house of deer farm.

10.2.2 Refer to NY/T 1167 for the quality and hygienic indicators in the playground of deer farm and the house of deer farm.

10.2.3 The birthplace of mosquitoes and flies like puddles around the deer farm shall be cleared in time, and sprayed with drugs regularly to eliminate mosquitoes and flies.

10.2.4 Rats shall be killed with instruments instead of drugs. Dead rats shall be subject to centralized treatment.

## 10.3 Centralized manure treatment

10.3.1 The manure excreted of deer shall be cleaned every day, and transported to the designated manure treatment facility for centralized treatment according to the method specified in NY/T 1168. The hygienic standard of deer manure after centralized treatment shall comply with the provisions of GB 18596.

10.3.2 In the process of collecting and transporting manure, environmental pollution prevention and control measures such as prevention of scattering, loss and leakage shall be taken.

10.3.3 The odor concentration in the manure treatment facility shall comply with the provisions of GB 18596.

## 11 Deer Farm Epidemic Prevention

### 11.1 Disinfection

11.1.1 It is advisable to place dry powder disinfectants, e.g. quicklime, etc., rather than liquid disinfectants in the disinfection tank at the entrance of the house and playground of deer farm.

11.1.2 The liquid disinfectants such as 2%~3% sodium hydroxide solution or 0.2%~0.5% peroxyacetic acid, etc., rather than dry powder disinfectants, such as quicklime, etc., shall be placed in the disinfection tank at the entrance of deer sheds and yards. The disinfectant shall be changed on a regular basis to ensure the effective concentration of disinfectant.

11.1.3 When the outdoor temperature is higher than 15 °C, the floor, enclosure and gate of the deer sheds and yards shall be disinfected once a month, and the manger and water tank shall be disinfected once a week. The disinfection shall be made to the gate, floor, manger, water tank and wall, ect., in the order of "outside first, then inside", "up first, then down", and "lightly polluted area first, then heavily polluted area".

11.1.4 For the disinfection method, spray disinfection may be adopted, i.e. 0.5% peroxyacetic acid or available chlorine (10000 mg/L) disinfectant is sprayed for 3 times continuously with an interval of 1h at the dose of 100 mL/m<sup>2</sup>~300 mL/m<sup>2</sup>. Flame disinfection may also be used.

11.1.5 Before disinfection, the disinfection personnel shall wear protective clothing, caps, masks and gloves, prepare protective equipment, calculate the amount of disinfectant to be prepared according to the disinfection area or volume and the number of items, and pay attention to the content of effective ingredients of disinfectant used to ensure their effective concentration. During disinfection, irrelevant personnel are not allowed to enter the disinfection area.

11.1.6 The devices used by the farm veterinarian for diagnosis and treatment, and the disposal of diseased and dead deer shall be cleaned before and after use, and then disinfected. Disposable devices or articles shall be incinerated and not be reused.

11.1.7 The floor, walls, or other facilities that the diseased or dead deer have stayed on or touched with, shall be thoroughly disinfected after the diseased and dead deer have been removed. Feeds, weeds and medical waste contaminated by diseased and dead deer shall be incinerated.

11.1.8 The feces and urine of diseased and dead deer shall be added with bleaching powder at a rate of 5:1, and after disinfection for 2 h, they shall be buried under 2 m deep and shall not be used as manure. If appropriate, other chlorine-containing disinfectant dry powder or solution may also be used for treatment thereof, but the final available chlorine concentration shall be not less than 40,000 mg/L.

11.1.9 The transportation of diseased and dead deer shall not cause contamination of the ground or road. The vehicle should be covered with plastic. After the transportation is completed, the contaminated plastic cloth shall be incinerated immediately, and the transportation means shall be disinfected immediately.

## 11.2 Vaccination

11.2.1 The deer farm shall formulate a vaccination plan according to the actual situation of the local epidemic disease, and selectively carry out the planned vaccination. For diseases included in the “National Compulsory Immunization Plan for Animal Epidemic Diseases” that are easily infected by deer, the vaccination rate shall reach 100 %.

11.2.2 The vaccine used for vaccination shall meet the requirements of the “Veterinary Pharmacopoeia of the People’s Republic of China” or other relevant national quality standards for veterinary biological products, and obtain the veterinary drug approval number; attention shall be paid to selecting scientific vaccination procedures and vaccination methods.

11.2.3 In areas where certain types of infectious diseases frequently occur, or where there is a potential for a certain infectious disease, or where there is a risk of certain types of infectious diseases from neighboring areas, if deer may be infected, planned vaccination shall be organized to healthy deer against such infectious diseases.

11.2.4 When a certain type of infectious disease occurs on a deer farm, emergency vaccination shall be implemented for that type of infectious disease. Emergency vaccination shall be made to assumed healthy deer from safe area, then to the risk area, and finally to the epidemic area and spot.

11.2.5 Upon introducing or dispatching deer, temporary vaccination shall be carried out according to the epidemic situation of infectious diseases in transportation and at destination.

11.2.6 Before vaccination, please read the vaccine instructions carefully to get the knowledge of the purpose, usage, dosage and precautions, etc., of the vaccine and check

its apparent quality; the vaccine shall not be used when one of the following conditions occurs:

- a) When the vaccine has a damaged bottle, or not tightly-sealed or loose cap or stopper;
- b) When the vaccine has an absent label or incomplete label content, including vaccine name, approval number, production batch number, production date, expiration date, manufacturer, etc.;
- c) When the vaccine is beyond valid period, color changed, precipitated, emulsion is separated or the separation is beyond;
- d) When there is foreign matter, mildew, clots that cannot shake off, peculiar smell, no vacuum, etc.

11.2.7 Before vaccination, vaccinators shall cut their fingernails short, wash their hands with soap, Lysol or bromogeramine solution, and disinfect their fingers with 75% alcohol, and wear work clothes, rubber boots, rubber gloves, masks, and caps, etc.

11.2.8 Vaccines shall be administered by use of clean and disinfected devices, rather than chemical disinfecting apparatus. If the sterilized devices are not used within a week, they shall be re-sterilized before use. For disposable devices, the packaging integrity and period of validity shall be checked; the disposable devices with damaged packaging or beyond the period of validity shall not be used.

11.2.9 During vaccination, the health status of the deer to be vaccinated shall be checked, and the vaccination shall not be allowed or be delayed under any of the following circumstances:

- a) The mental status, appetite or body temperature of deer is abnormal;
- b) Sick, emaciated deer;
- c) Young, old or deer in late pregnancy.

11.2.10 The introduction of domestic animal vaccines shall be preceded by small-scale vaccination tests to confirm that the vaccine is safe for deer before mass vaccination.

### 11.3 Epidemic monitoring, reporting and control

11.3.1 The deer farm shall, in accordance with the national regulations and the epidemic disease situation of the local and surrounding areas, formulate and implement an epidemic monitoring plan and promptly report the monitoring results to the local animal husbandry and veterinary and forestry administrative departments. Diseases included in the "List of I, II, and III classes animal epidemic diseases" shall be subjected to key monitoring, and an emergency plan for important animal epidemics shall be formulated, which shall include:

- a) The responsibilities and composition of the Emergency Command and the division of labor among member units;
- b) Monitoring, information collection, reporting and notification of important animal epidemics;
- c) Confirmation of animal diseases, classification of important animal epidemics, and corresponding contingency plans;

- d) Tracking and epidemiological investigation and analysis of the source of important animal epidemics;
- e) The fund source, materials and technologies reserving and scheduling that are needed for the prevention, control and eradication of important animal epidemics;
- f) Preparation of emergency treatment facilities and professional teams for important animal epidemics.

11.3.2 The farm veterinarian shall take the following control measures to prevent the spread of the epidemic and find out the cause of disease as soon as possible when they find that the deer experience epidemic infection, or suspected infection, or group illness, death, or death of unknown cause:

- a) Quickly isolate the deer that are infected, or suspected of being infected, or diseased in groups, arrange for special management, and take necessary measures to cut off the route of infection to prevent the continued spread of the disease;
- b) Implement thorough disinfection to the places where the diseased deer have stayed and the polluted environment and utensils;
- c) Remove the dead deer carcass from the deer sheds and yards in time;
- d) Block off the playground of deer farm and prohibit people, animals, vehicles or other animals that may carry pathogens from entering or leaving the affected area and surrounding areas;
- e) Immediately carry out thorough disinfection to the deer sheds and yards where the healthy deer herd is located, and their equipment for farming, staff use and transportation.
- f) Notify the local animal husbandry and veterinary administrative department, animal health supervision agency or animal disease prevention and control agency to send personnel to assist in identifying the cause of the disease.

11.3.3 The farm veterinarian shall take these compulsory measures such as blockade, isolation, culling, destruction, disinfection, non-hazardous treatment, emergency vaccination and the like when they find that the deer have suffered from or are suspected of having an animal disease of Category I in the “List of I, II, and III classes animal epidemic diseases”, and shall not take any treatment measures for the diseased animals. They shall immediately report to the local animal husbandry and veterinary administrative department, the wildlife epidemic disease monitoring department, the animal health supervision agency or the animal epidemic prevention and control agency, and initiate the contingency plan for important animal epidemics of their farm.

11.3.4 When the official veterinarian confirms that the deer have suffered from foot-and-mouth disease, the control thereof shall follow the requirements of the “Technical Specifications for Prevention and Control of Foot-and-Mouth Disease” .

11.3.5 When the official veterinarian confirms that the deer have suffered from brucellosis, the control thereof shall follow the requirements of the “Technical Specifications for Prevention and Control of Brucellosis” .

11.3.6 When the official veterinarian confirms that the deer have suffered from tuberculosis, the control thereof may refer to the content of “Technical Specifications for Prevention and Control of Bovine Tuberculosis” .

11.3.7 When the official veterinarian confirms that the deer have suffered from rabies, the control thereof shall follow the requirements of the “Technical Specifications for the Prevention and Control of Rabies” .

11.3.8 When the official veterinarian confirms that the deer have suffered from anthrax, the control thereof shall follow the requirements of the “Technical Specifications for the Prevention and Control of Anthrax” .

11.3.9 The deer farm shall accept and cooperate with the local animal epidemic prevention supervision agency to conduct regular or irregular disease supervision and spot check, general survey, monitoring and other work.

#### 11.4 Prevention and control of diseases of animals introduced and dispatched

11.4.1 If the deer farm introduces breeding deer or producing deer, the farm veterinarian shall be dispatched to the deer farm in advance to conduct an epidemic investigation on the supplier’ s deer farm, get the knowledge of the local epidemic situation, confirm that the supplier’ s deer farm is located in a non-epidemic area, and according to the method specified in GB 16549, carry out a clinical health check to the deer to be introduced to confirm they are healthy and free of infectious diseases.

11.4.2 Deer farms are not allowed to purchase breeding or producing deer from the following deer farms:

- a) The deer farms that has no license for domestication and breeding of wild animals;
- b) The deer farm has no certificate of conformity to the conditions for animal epidemic prevention issued by the competent veterinary department of the local people’ s government at or above the county level;
- c) The deer farms has no animal quarantine certificate issued by the competent veterinary department of the local people’ s government at or above the county level.

11.4.3 Before transportation, the deer to be introduced shall be gathered in the isolation deer sheds and yards of the supplier’ s deer farm for 15 d~30 d of observation. During the quarantine period, the farm veterinarian shall carry out health checks on the isolated deer at any time according to the method specified in GB 16549. Before loading and after unloading, the transporting vehicles and transportation crate(cage) shall be thoroughly cleaned and disinfected.

11.4.4 After the deer are introduced to the farm, quarantine should be conducted for no less than 30 days. During the isolation period, the following measures shall be taken:

- a) Specially assigned persons shall be arranged to raise and manage isolated deer, and that person shall not engage in production activities that have direct or indirect contact with the deer herd on the farm;
- b) Special husbandry equipment, labor tools, and transportation tools shall be arranged; contact or cross-use thereof with those tools on the farm shall be forbidden;
- c) All visitors from outside shall be forbidden, and personnel on the farm are not allowed to enter or leave the isolated deer sheds and yards without the approval of the farm veterinarian.

11.4.5 After the end of isolation period, the isolation deer sheds and yards, breeding equipment, and labor tools shall be fully disinfected.

11.4.6 In the case of dispatching breeding deer to producing deer, the deer farm shall collect the deer to be dispatched in isolation sheds and yards for observation, and report to the local animal health supervision agency for quarantine, and cooperate with the official veterinarian to implement on-site quarantine of such deer. Only the deer that has passed the quarantine and obtained the quarantine certificate and quarantine mark, can they be dispatched.

11.5 Biosafety disposal of diseased deer carcasses, products or appendages

11.5.1 The carcasses, products or appendages of the following diseased deer shall be subjected to biosafety disposal according to the methods specified in GB 16548:

- a) the deer that have confirmed to be infected with the animal diseases listed in the “List of I, II, and III classes animal epidemic diseases” and other diseased deer that seriously threaten the health of humans and animals;
- b) Deer that died of disease, poisoning or unknown cause;
- c) Diseased deer that are, after inspection, poisonous and harmful to humans and animals and need to be destroyed;
- d) The diseased parts that have been surgically or otherwise removed from the deer body;
- e) Diseased deer that are artificially inoculated with pathogenic microorganisms or tested for drugs.

11.5.2 The deer that are infected with other diseases, in addition to animal diseases listed in the “List of I, II, and III classes animal epidemic diseases”, and their fur, unprocessed hooves, bones, horns, antlers, etc., as well as the whole carcass and internal organs, etc., of deer undergoing severe disease and degenerative changes in muscles shall be subjected to biosafety disposal according to the methods specified in GB 16548.

11.5.3 Airtight and leak-proof containers shall be used for transportation of diseased deer carcasses, products or appendages. Before loading and unloading, the place for storage and contact of diseased deer carcasses, products or appendages, transportation vehicles and containers shall be disinfected.

12 Identification, Documents and Records

12.1 Identification

12.1.1 The deer shall be labeled by means of “one deer, one label”, and be coded individually. It is advisable to adopt ear tags for external Identification and chips for internal Identification.

12.1.2 The ear tag code shall be laser engraved or written on the front of ear tag with an indelible marker pen. The code shall be arranged in two lines, i.e. main code in the upper line, sub-code in the lower line. The main code is composed of the 6-digit postal code of the county (city, district) where the deer farm is located, and is arranged horizontally as a rectangle, representing the place of origin; the sub-code is composed of the birth year of deer and the Identification sequence number. The deer farm may make necessary marks in places other than the front of the ear tags as needed.

12.1.3 Labels shall be applied to the fawn within 3 days after birth; the introduced deer shall be labeled on the day when the deer are introduced to the farm; the deer dispatched shall be labeled before leaving the breeding site.



12.1.4 The ear tag shall be applied to the middle of left ear. If another ear tag needs to be applied, it shall be applied to the middle of right ear. Before applying ear tags, disinfection shall be made to the ear tags, ear tag pliers and wearing parts.

12.1.5 When ear tags are severely worn, damaged, or fallen off, new tags shall be added in time, and the new ear tag code shall be recorded in the breeding records.

12.1.6 Ear tags shall not be used repeatedly.

## 12.2 Documents

12.2.1 The deer farm shall establish and improve various rules and regulations, various operating procedures or post responsibility systems in accordance with the actual conditions and management needs of the farm.

12.2.2 Rules and regulations shall include the following:

- a) Provisions on the feed input procurement management, acceptance management, storage conditions, weighing, release and return of remaining materials;
- b) Provisions on the inventory of materials in stock;
- c) Warehouse safety and sanitation management system;
- d) Emergency plan and reporting system for important animal epidemics;
- e) Major production safety accountability system;
- f) System for additives, management and use of veterinary drugs and feeds;
- g) Occupational health and safety system;
- h) Records management system.

12.2.3 Various operating procedures or post responsibility systems shall include the following:

- a) Keepers' operating procedures;
- b) Post responsibility system for farm veterinarians, technicians and keepers;
- c) Post responsibility system for inspecting to the playground and house of deer farm and deer sheds and yards;
- d) Operating procedures for diagnosis and treatment of epidemic disease;
- e) Operating procedures for animal breeding;
- f) Operating procedures for introduction and dispatch of animals;
- g) Operating procedures for disinfection of playground and house of deer farm and deer sheds and yards;
- h) Operating procedures for the non-hazardous treatment of feces and other wastes;
- i) Operating procedures for biosafety disposal of diseased animal carcasses, products and their appendages.

## 12.3 Records

12.3.1 The deer farm shall, with the assistance of farm veterinarians and technicians, establish individual breeding records, husbandry management records, animal epidemic

prevention records, and document records of breeding and producing deer. See Annex C for the table of corresponding records. The deer farm shall also establish breeding archives, records of product, acquiring processing & preservation and sales, income and expenditure records or report table. All kinds of records shall be sorted, bound, and kept by assigned personnel.

12.3.2 The contents of individual records shall include: ID number, birth date or introducing date, sire number, dam number, production record (male deer) or birth record (female deer), mating record, birth weight, adult weight, physical appearance characteristics, etc. When breeding or producing deer are dispatched, the place from or to which deer are dispatched shall be indicated on the individual records, and such records shall be accompanied during dispatch.

12.3.3 Husbandry management records shall include the following:

- a) Deer Species, quantity, breeding records, production records, Identification, source and input or output date;
- b) Feed ingredients and feed additives: source, type, feeding object, feeding time and dosage.
- c) The main nutrients of feed ingredients: inspection report of crude protein, calcium and phosphorus content;
- d) Husbandry management log.

12.3.4 The animal epidemic prevention records shall include the following:

- a) Deer morbidity, diagnosis and treatment, death and non-hazardous treatment;
- b) Veterinary drugs: source, name, application target, drug administration time and dosage;
- c) Quarantine, vaccination, monitoring, and disinfection.

12.3.5 Document records shall include the following:

- a) Laws, regulations and implementation rules related to wildlife conservation and animal epidemic prevention;
- b) Mandatory ordinances, documents, rules, administrative methods, etc., of the State Council, local wildlife competent administrative departments and competent veterinary department;
- c) Staff personnel records, health records, training records;
- d) Accounting vouchers, account books, report form, sales account books of live deer and deer product, and account books of various fixed asset;
- e) Wildlife domestication and breeding license, animal health and epidemic prevention certificate, business license and other licenses.

12.3.6 The preservation time of individual breeding records, husbandry management records and animal epidemic prevention records of breeding or producing deer shall be: no less than 10 years for producing deer records, and permanent preservation for breeding deer records.