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Farm Animal Welfare Requirements Cashmere Goat

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Foreword

The standard is drafted in accordance with the rules of GB/T 1.1-2009.

The standard is proposed by International Cooperation Committee of Animal Welfare, China Association for the Promotion of International Agricultural Cooperation.

The standard is guided by China Association for the Promotion of International Agricultural Cooperation.

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Introduction

0.1 General Provisions

This Standard is specially formulated to ensure the sound and sustainable development of animal husbandry and to fill the void in farm animal welfare standards in China.

This Standard is based on the international advanced concept of farm animal welfare and existing science, technology and socio-economic conditions in China, and stipulates the requirements for farm animal welfare-friendly production.

This Standard includes the requirements for farm animal welfare in the whole process of husbandry, cashmere fiber harvesting (shearing and combing), transport and slaughter of cashmere goats.

0.2 Basic Principles

The Five Freedoms of animal welfare are the basis of the series of standards for farm animal welfare.

- a) Freedom from hunger or thirst by ready access to fresh water and a diet to maintain full health and vigor;
- b) Freedom from discomfort by providing an appropriate environment including shelter and a comfortable resting area;
- c) Freedom from pain, injury or disease by prevention or rapid diagnosis and treatment;
- d) Freedom from fear and distress by ensuring conditions and treatment which avoid mental suffering;
- e) Freedom to express normal behavior by providing sufficient space, proper facilities and company of the animal's own kind.

Farm Animal Welfare Requirements Cashmere Goat

1 Scope

This Standard specifies the terms and definitions of welfare-friendly cashmere goat husbandry, feeding and drinking, farming environment, management, health, harvesting fiber (shearing and combing), transportation and farm transfer, humane slaughtering, traceability and recording.

This standard is applicable to animal welfare management in large-scale cashmere goat farms and to cashmere goat transportation, slaughtering and processing in China. Other cashmere goat keepers may refer to it.

2 Normative References

The following documents are essential for the application of this document. For dated references, only the versions with the dates listed are applicable to this document. For undated references, the latest version (including all amendments) is applicable to this document.

GB 5749 Standard for Drinking Water Quality

NY/T 682 Technical Specification for Design of Livestock Farm Area

NY/T 1168 Technical Specification for Harmless Treatment of Livestock Manure

NY / T 2799 Green Food: Livestock Meat

NY/T 2893 Technical Specification for Feeding and Management of Cashmere Goats

NY / T 3469 Operating Procedures for Livestock Slaughtering Sheep

NY/T 472-2013 Guidelines for Use of Veterinary Drugs in Green Food

NY/T 471-2018 Guidelines for Use of Feeds and Feed Additives in Green Food

NY/T 473-2016 Guidelines for Livestock Health and Epidemic Prevention in Green Food

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 Cashmere Goat

Cashmere goat is a type of goat that has double layer coats (lower layer of down fiber, upper layer of coarse fiber), and produces both cashmere fiber (dominant) and meat.

3.2 Farm Animal Welfare

Farm animals should be taken good care of in the process of husbandry, transportation, slaughter and handling. They are provided with appropriate nutrition and environmental conditions. They are treated well scientifically and handled correctly. The pain and stress response of animals should be reduced and the quality of life and health of animals should be improved.

3.3 Environmental Enrichment

Measures to continuously enrich and improve the living environment of animals to meet their needs.

3.4 Abnormal Behavior

Behaviors inconsistent with the normal habits of cashmere goats.

3.5 Housing Production System

A farming method conducted in an area with specialized farming facilities in which goat feeding and management depends fully on people.

3.6 Grazing Production System

A farming method in which cashmere goats mainly graze pastures, eat and drink freely, and can be fed a certain amount of supplementary feeds when nutrition intake is insufficient in winter and spring.

3.7 Semi-Housing Production System

A farming method with characteristics of both housing and grazing production systems.

3.8 Shearing Cashmere Fiber

A process of shearing guard hair and down fiber from cashmere goats using shearing equipment during the cashmere shedding stage.

3.9 Combing Cashmere Fiber

A process of using a special comb to manually comb cashmere goats to obtain down fiber that has separated from the skin during the cashmere shedding stage.

3.10 Humane Slaughter

A slaughter method (including pre-slaughter treatment) to reduce stress, fear, pain and limb injury of animals.

3.11 Euthanasia

When an animal suffers great pain due to disease or injury, its life is ended in a humane way, minimizing the pain, fear and stress of the animal, making it lose consciousness and sense of pain in the shortest time.

4 Feeding and Drinking Water

4.1 Feeding

4.1.1 Forage grass, feed and feed additives used in goat farms should meet the requirements of NY/T 5032.

4.1.2 Feed sources should be traceable. Feed purchased by the goat farm shall have written records of the ingredients and content provided by the supplier. When mixed on-farm, the feed formula and ingredient list shall be kept.

4.1.3 Goat farms must not use spoiled, moldy or contaminated forage grass (or feed), and animal-derived feeds other than dairy products are prohibited.

4.1.4 Goat farms should provide diets that meet the nutritional needs of cashmere goats according to their breed, physiological stage and health condition, and keep feeding records.

4.1.5 The proportion of concentrate and roughage in the diet should be appropriate with enough fibrous matter for goats to ruminate.

4.1.6 Goat farms should avoid sudden changes in forage grass (feed) type and quantity fed. If changes are necessary, there should be a gradual transition with a transition period longer than 7 days.

4.1.7 It is not allowed to use hormone growth promoters or non-therapeutic antibiotics for growth promotion. The use of medicated feed should be clearly marked and recorded.

4.1.8 Before slaughter, the relevant regulations on drug withdrawal periods should be strictly adhered to, and the regulations of NY / T 5030 should be followed.

4.1.9 Housing production system

a) In goat sheds or exercise yards, feed troughs should be placed at suitable heights. The number and length of feed troughs should be matched with the number of goats kept to ensure that all goats can eat at the same time without crowding.

b) The design, installation and maintenance of feeding equipment should be convenient for production management, minimizing the risks of feed pollution, environmental pollution and accidental injury to sheep.

c) The feeding equipment should be kept clean and surplus feed and feed polluted by feces and urine should be cleaned in a timely way.

4.1.10 Grazing production system

a) When the season, climate and grazing area is suitable, the grazing production system should prevail. Effective measures should be taken to prevent goats from eating poisonous and harmful plants.

b) Based on the concept of sustainable development, managers should give full consideration to the carrying capacity of grassland, and reasonably allocate grassland resources to meet the nutritional needs of goats. When the pasture cannot maintain goats in good condition, appropriate supplementary feed should be provided.

4.1.11 Semi-housing production system

Refer to relevant requirements in articles 4.1.9 and 4.1.10 of this Standard.

4.2 Drinking Water

- 4.2.1 Sufficient, clean and fresh drinking water should be provided. Drinking water quality should meet the requirements of NY 5027.
- 4.2.2 In the housing production system, sufficient drinking facilities should be provided to ensure that goats have sufficient water to drink at all times.
- 4.2.3 In the grazing production system, if natural water sources are used, potential disease risks should be evaluated. If there is no natural water source, drinking water facilities should be set up to ensure that the water supply or water sources can meet the demand of goats.
- 4.2.4 Drinking ice water should be avoided in winter.
- 4.2.5 Drinking water facilities should be designed to prevent kids from drowning.
- 4.2.6 The drinking water equipment should be cleaned regularly, and the water supply system should be maintained and disinfected regularly to ensure that the drinking water is clean and pollution-free.
- 4.2.7 Goat farms should have emergency water supply measures in case normal water supply is interrupted by drought, freezing or dysfunction.
- 4.2.8 When drugs or anti-stress agents need to be added to drinking water, they should be used accurately under the guidance of veterinarians, and records of their use should be made.

5 Farming Environment

5.1 Goat Sheds and Facilities

- 5.1.1 The construction of goat farms should conform to NY/T 682 and relevant animal welfare requirements.
- 5.1.2 The layout of the goat farm should meet the requirements of biosafety. Each functional area should have distinct boundaries in which a green belt can be set up.
- 5.1.3 Vehicle and personnel disinfection facilities should be set at the entrance of the goat farm.
- 5.1.4 Auxiliary production areas should have hay barns, feed raw material storehouses and feed processing workshops that match the number of goats raised.
- 5.1.5 Clean roads and dirt roads should be set up in the goat farm with separate entrances and exits, and no intersection between them.
- 5.1.6 Slatted floors should not be used in kidding houses.
- 5.1.7 Goat farms should be equipped with special care areas for weak, disabled, injured and sick goats and these areas should be separated from other goat sheds.
- 5.1.8 Goat sheds, facilities and equipment in the sheds should be made of non-toxic and safe materials, should be insulated to retain warmth and keep out heat, and the ground and walls should be easy to clean and disinfect.
- 5.1.9 The facilities used should be inspected and maintained frequently to prevent injury to goats.
- 5.1.10 Noise in goat sheds should not exceed 70dB.
- 5.1.11 Sheds should be set up for goats in the grazing production system to ensure the safety and animal welfare requirements of the goats under adverse weather conditions and to ensure that goats are free from the threat of wild animals.

5.2 Stocking Density

- 5.2.1 Goat sheds should provide enough space for goats to move and rest, meeting the welfare requirement of free movement of goats.
- 5.2.2 See Table 1 for the minimum space requirements for goat sheds.

Table 1 Minimum Space Requirement for Goat Sheds

Category	种公羊	育成公羊	成年母羊	育成母羊	Kids
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	Breeding bucks	Bucklings	Adult does	Doelings	
Total area (m ² /head)	4~6	1.5~2	1.5~2	0.8~1.2	0.5

5.3 Temperature, Humidity and Ventilation

5.3.1 Appropriate temperature should be maintained in the goat sheds at no more than 30°C in summer and no less than 0°C in winter. The suitable temperature range is as shown in Table 2.

Table 2 Suitable Shed Temperature for Various Flocks

Shed Type	Range of suitable temperatures (°C)
成年羊舍 Adult goat shed	5~25
育成羊舍 Yearling goat shed	5~25
Kidding shed	18~23

5.3.2 Goat sheds should be effectively ventilated so as to avoid high temperature, high humidity, cold condensation and drafts.

5.3.3 Good air quality should be maintained in goat sheds so as to have no distinct peculiar smell or dust in the sheds.

5.4 Lighting

5.4.1 There should be enough light in the goat sheds, and natural light should be provided. The ratio of the window area on the sunny side of a shed to the ground area in the shed shall not be less than 1:15.

5.4.2 Goat sheds should be equipped with lighting equipment, and the luminance at the level of the goats' heads should be 100 lux.

5.5 Activity areas

5.5.1 In the housing production system, an outdoor exercise area should be built. The area of the exercise area should be more than 2.5 times larger than the area of the goat sheds. The width of the entrances and exits of the exercise area should not be less than 1.5 m.

5.5.2 The floor of the exercise area should be level and dry. It should be slightly sloped with good drainage and be easy to clean.

5.5.3 In areas with high temperatures in summer, either trees should be planted or sun shades should be installed in the exercise area, and drinking facilities should be set up. Effective measures should be taken to protect the trees.

5.5.4 The height of the fence around the exercise area should be ≥ 1.2 m, and the height of walls around the exercise area should be between 1.2m to 1.5m.

5.6 Environmental Enrichment

5.6.1 In goat farms, soil mounds, steps, raised platforms, stumps and other environmental enrichment materials should be installed to meet the behavioral requirements of cashmere goats.

5.6.2 When the grassland environment is suitable, the grazing production system should be adopted to suit the biological habits of cashmere goats.

5.6.3 Does and kids should be provided with conditions to be together so as to satisfy their expression of natural behaviors.

5.7 Waste Treatment

Dung storage sites and waste disposal sites suitable for the farm size should be built. The

waste should be disposed in a timely way in accordance with the requirements of the NY/T 1168 standard.

6 Husbandry Management

6.1 Personnel Requirements

- 6.1.1 Operators and managers should have certain professional knowledge and animal husbandry management capacities. They should receive training on animal welfare and animal husbandry skills, master professional knowledge on animal health and welfare, be able to use it skillfully in the management process, and have the ability to deal with emergencies.
- 6.1.2 Technical personnel should be proficient in professional skills, be familiar with relevant management systems, biological characteristics and behavioral habits of cashmere goats, receive training on animal welfare and relevant skills in cashmere goat husbandry and management, and have the ability and capacity to guide production activities.
- 6.1.3 Keepers should have a strong sense of responsibility, receive training on animal welfare and relevant skills in cashmere goat husbandry management, understand the biological characteristics and behavior habits of cashmere goats, master basic knowledge of health- and welfare-friendly husbandry, be able to use it skillfully in the production process, and be able to discover and deal with abnormal behaviors in a timely way.
- 6.1.4 Large-scale farms or breeding farms should have animal husbandry veterinarians and archivists.
- 6.1.5 Employment in goat farms should be implemented in accordance with the “Labor Law of the People's Republic of China” and other relevant regulations. Employee management and assessment systems should be formulated. Employees’ remuneration and benefits, and staff health and safety should be ensured.

6.2 Reproduction

- 6.2.1 When a doe is mated for the first time, its body weight should have reached more than 70% of its adult body weight, or it should be over fifteen months old. The first mating age of a buck should be over eighteen months old.
- 6.2.2 Before mating, suitable breeding does should be selected from the herd, and old, sick or disabled does, does with poor motherliness, and does with low production performance should be removed.
- 6.2.3 Breeding intervals should be controlled so that the interval between two mating activities is not less than 8 months to ensure the body condition recovery of does and the normal growth of kids.
- 6.2.4 If natural mating is used, the ratio of bucks to does should be 1:30~1:50.
- 6.2.5 If artificial insemination is used, the operator should be skilled, gentle and fast, so as to minimize the stress response of and injury to goats.
- 6.2.6 Pregnant does should be carefully kept and managed so as to ensure body condition and protect the fetus.
- 6.2.7 Does should enter the kidding shed (area) before delivery, and the kidding area should be effectively insulated.
- 6.2.8 During the delivery process, a veterinarian or experienced keeper should take care of the doe, provide midwifery and nursing help for the doe and newborn kids, and sterilize the umbilical cord of kids.

6.3 Lactation

- 6.3.1 Strengthen nutrition supply to lactating does to meet their nutritional needs.
- 6.3.2 Natural methods or manual assistance should be adopted to ensure that the kid can have colostrum within 2 hours after birth.
- 6.3.3 Lactation management measures should be formulated for kids so that kids that are unable to suckle sufficient milk are manually fed. Does that reject their kids should be kept with its kids in a separate pen, and receive manual support to learn suckling. After it has been confirmed that the doe accepts its kids and can breastfeed normally, they can go back to the original herd.
- 6.3.4 Seven to fifteen days after birth, the kid should be trained to feed. The amount of supplementary feed should increase daily as it gets older, and kids should feed freely.
- 6.4 Weaning
 - 6.4.1 In the housing production system, kids should not be weaned until they are 2.5 months old. In the grazing system, kids should not be weaned until they are 3.5 months old. Alternatively, under normal feeding management and kid growth conditions, kids can be weaned when they reach 35% of their adult weight.
 - 6.4.2 The feeding management of weaned kids should be strengthened to avoid stress and ensure their normal growth.
 - 6.4.3 After weaning, male and female kids should be kept in different groups.
- 6.5 Daily Management
 - 6.5.1 Response plans should be made for various emergencies that adversely affect animal welfare, such as natural disasters and extreme weather.
 - 6.5.2 Keepers should observe the daily behavior of goats at all times, and take effective measures to deal with abnormal behavior.
 - 6.5.3 Metal wires, plastic, cloth strips, wool and other objects that may be accidentally eaten by goats in goat sheds, activity areas, pastures and the surrounding environment should be removed whenever found.
 - 6.5.4 Gentle methods should be adopted in daily management of goats to avoid frightening them.
 - 6.5.5 Hoofs should be trimmed regularly to prevent lameness.
 - 6.5.6 The duration of treatments provided to goats (such as injections, oral medicine administration, medicated baths, etc.), ear labeling, weighing, loading and transportation, etc. should be shortened as much as possible.
 - 6.5.7 Appropriate isolation measures should be taken for new bucks to avoid fighting. However, the isolation period should be limited to the time necessary for the goats to become familiar with each other and reduce aggressive behavior.
- 6.6 Grassland Management
 - 6.6.1 For grassland management, adhere to the principle of "protect by using and use by protecting" in order to align utilization and protection and realize sustainable utilization.
 - 6.6.2 Based on the characteristics of grassland, regular maintenance should be carried out to maintain a good ecological environment and production capacity.
 - 6.6.3 In grazing systems, strictly control the stocking rate either by determining the livestock number based on available forage or by determining the forage amount based on the animal requirements, and by taking measures such as restricted grazing, rotational grazing in designated areas, rest from grazing and grassland improvement to prevent grassland degradation and realize sustainable utilization of grassland.
 - 6.6.4 When grassland or feed crops are threatened by pests or rodents, biological methods and physical pest control should be used. When monitoring shows that pests or diseases are

harmful to pasture crops and other methods cannot control them, spray pesticide only in the target area. If there is a risk of spray drifting to non-target areas, do not spray.

- 6.6.5 Poisonous grass should be cleared and controlled in the grazing area.
- 6.6.6 Cashmere goat husbandry activities should not cause pollution to soils or water sources in the pasture, and should not cause damage to the surrounding environment.
- 6.6.7 Effective management measures should be taken in the pasture to maintain the ecological balance of wild plants and wild animals.

Note: Wild animals do not include mice or voles.

6.7 Identification

- 6.7.1 Marking methods should be used that cause no pain or transient pain and marking materials should be safe and hygienic.
- 6.7.2 Use ear tags when permanently marking goats.
- 6.7.3 When temporarily marking goats, ensure that the marking materials are not harmful or polluting to goats, wool or the environment.
- 6.7.4 When marking creates an injury, the injured part should be disinfected.

6.8 Non-therapeutic Operations

- 6.8.1 Goats should not undergo procedures such as castration or dehorning. If these have to be carried out, the method that minimizes goats' pain should be adopted as soon as possible, and hemostasis and post-operative anti-inflammatory care should be applied.
- 6.8.2 When carrying out non-therapeutic operations outdoors, the operation site should be clean and sanitary, and the environment and weather conditions should be considered. Avoid having operations in muddy or dusty pastures, low temperatures, or during rainy or humid weather.
- 6.8.3 After the operation, the operated goats should be kept separately, and the farming area should be cleaned up. It should be observed whether wounds continue to bleed or have abscesses and if any abnormality occurs, it should be dealt with in a timely way.

6.9 Catching and Driving Goats

- 6.9.1 Establish a good relationship between humans and cashmere goats. When catching a goat, it should be driven to a pen or fence. The person should approach the goat slowly, quickly grasp its hind legs or horns, and support its head and neck with both hands. Keepers should not catch goats by chasing them or grabbing their wool.
- 6.9.2 When moving a goat after catching it, do not drag the goat or grab its wool, skin, ears, tail or head to lift it. It is forbidden to abuse cashmere goats in any manner.
- 6.9.3 Driving goats by rough means such as whips, sticks, stones or shouting loudly is forbidden.

7 Health

7.1 Health Plan

- 7.1.1 Health plans should be formulated in accordance with NY/T 1168, NY/T 5030 and NY/T 5339. The content should at a minimum include:

- Biosafety measures;
- Disease prevention and control measures;
- Drug use and residue control measures;
- Safe treatment measures for goats that have died of disease and for waste;

-Other measures related to animal welfare and health (feed, feeding, management, environment, etc.)

7.1.2 The implementation of the health plan should be inspected regularly, and the inspection records should be archived. The health plan should be updated or revised according to the implementation status and relevant requirements.

7.1.3 Immunization and pest treatment for goats should be carried out according to the plan, and the records of prevention measures should be made. Sampling or decontamination should be carried out for specific epidemic diseases.

7.2 Health Management

7.2.1 Veterinarians and keepers should check the health of goats every day and solve any problems found in a timely way.

7.2.2 Sick or injured goats should be quarantined in a timely way. Effective treatment, nursing, observation and careful feeding should be carried out and treated goats should be checked at least twice a day.

7.2.3 Under the guidance of a veterinary pharmacist, veterinary drug products should be used in a standardized way in accordance with the requirements of the NY/T 5030 standard. Veterinary drug products should meet the “Quality Standard for Veterinary Drugs”, and the storage and use of veterinary drug products should be records.

7.2.4 Extra care should be taken when handling kids, pregnant goats and injured or sick goats. Does should not be dewormed during pregnancy.

7.2.5 For sick goats that do not respond to treatment or that may suffer greatly for a long time, euthanasia should be carried out as soon as possible.

7.2.6 Attention should be paid to the nutrition and feeding management of goats so as to improve their health and immunity.

7.3 Biosafety

7.3.1 Cashmere goats should bear vaccination markings after approval by a veterinarian.

7.3.2 Biosafety management systems should be conscientiously implemented, and goat farm management personnel and keepers should regularly receive biosafety management training, fill in biosafety system implementation records, and make regular checks and patrols.

7.3.3 Conduct regular farm inspections to assess possible biosafety violations and/or potential violations and rectify as necessary.

7.3.4 While meeting production requirements, try to reduce access points to the farm as far as possible, strictly control vehicle access, and disinfect vehicles coming in and out of the farm.

7.3.5 Strictly control the entry of irrelevant personnel into the farming area, and personnel entering the farming area should have the necessary protection and disinfection.

7.3.6 Newly purchased goats should be kept in a special quarantine area on the farm for 30 days. They can enter the husbandry area only after they have been confirmed as disease-free after quarantine and clinical observation. Goat with epidemic diseases should be treated in accordance with the “Animal Epidemic Prevention Law of the People's Republic of China”. After quarantine, the quarantine area should be disinfected.

7.3.7 Strengthen the implementation of systems for health management in the quarantine area for sick goats, and for safe treatment of goats that have died of diseases and waste. It is prohibited to throw away the bodies of diseased goats or to use them to feed other animals.

7.3.8 It is forbidden to raise other livestock or animals (except sheepdogs), especially cloven hoofed animals.

7.3.9 Take safety precautions to strictly prevent wild animals from entering the farm, and

prevent the spread of epidemic diseases and the risk it poses to goats' lives.

- 7.3.10 In the grazing production system, it is forbidden to herd goats in areas affected by epidemics or in polluted grasslands. Rationally plan and utilize the grassland and transit pathways. Adopt rotational grazing, and control biological pollution caused by goats to grassland and water sources.
- 7.3.11 When grazing in grasslands, pay attention to the risks posed by wild animals and poisonous plants to goats.
- 7.3.12 In case of any epidemic disease on the farm, report the situation in a timely way according to the requirements of the "Animal Epidemic Prevention Law of the People's Republic of China", and take effective measures to prevent and control the epidemic.

8 Harvesting fiber (shearing and combing cashmere)

8.1 General provisions

- 8.1.1 Down fiber should be harvested in its shedding stage according to its natural production cycle.
- 8.1.2 Effective protective measures should be taken in the process of harvesting fiber, and goats should be treated gently. To avoid injury to goats' skin in the process of harvesting fiber, it is allowed to properly restrain the goat. The duration of the restraint should be as short as possible, so as to reduce the stress and minimize the pain of goats.
- 8.1.3 Fiber harvesting should be done by dividing the flock into subgroups based on sex, age, physiological status (lactating, dry, pregnant) and health status of goats. The fiber of pregnant does should be harvested after kidding.
- 8.1.4 For cashmere goats with good down fiber density and high cashmere yield, the fiber should be sheared.
- 8.1.5 In the process of fiber harvesting, the goat should be handled carefully to avoid injury.
- 8.1.6 If there are skin injuries during fiber harvesting, they should be treated in a timely way. The injured goat should be observed for one week to confirm recovery.
- 8.1.7 If the weather becomes cold after fiber harvesting, goats should be dressed in goat clothing or kept in the shed to avoid them suffering from cold.

8.2 Timing

- 8.2.1 The best time to harvest fiber is when the down around the head, ears and eyes of the goat begins to shed, and when the root of the down on the body begins to separate from the skin.
- 8.2.2 Harvest fiber when the climate is warm and the temperature is stable. Suspend fiber harvesting if there are rainy days, snowy days or severe weather conditions.

8.3 Site

- 8.3.1 The fiber harvesting site should be located near the pasture or goat farm, in an area with a clean and tidy floor that is spacious, bright, and free from pollution and noise.
- 8.3.2 Fiber harvesting should be carried out in a special shed, that protects from wind and that is spacious with good lighting. The indoor temperature should be 15~20°C.
- 8.3.3 The fiber harvesting site should be clean and level. The floor should be made of cement, brick or wood. Canvas or plastic film can also be used to cover a soil floor.
- 8.3.4 Contaminants and hazardous substances in the fiber harvesting site should be removed before fiber harvesting. The fiber harvesting site should be cleaned and disinfected the day before fiber harvesting and every day after fiber harvesting.

8.4 Personnel

- 8.4.1 The fiber harvesting operators should be trained in fiber harvesting skills and animal welfare related knowledge to make sure that they are capable of this work.
- 8.4.2 A veterinary technician should be at the fiber harvesting site to treat goats injured by fiber harvesting in a timely way.

8.5 Appliances

- 8.5.1 Electric shearing equipment should be used for shearing cashmere fiber. The equipment should be tested before use.
- 8.5.2 Before combing cashmere fiber, check the sharpness of the comb tip. If it is too sharp, grind it down to prevent skin damage when combing cashmere.
- 8.5.3 Trauma treatment items such as trauma drugs, disinfectants (iodine) and surgical sewing needles should be at hand.

8.6 Preparation of Goats

- 8.6.1 Goats can drink a small amount of water before fiber harvesting, and it is advisable for goats to be fasted for 8~12 hours, so as not to damage gastrointestinal and other internal organs if goats struggle during fiber harvesting.
- 8.6.2 Before fiber harvesting, the number of goats to be combed or sheared within four hours can be driven to a pen or fence near the fiber harvesting shed.

8.7 Shearing Cashmere Fiber

- 8.7.1 When using ropes to restrain a goat, soft ropes should be used and the rope should not be tied too tightly, so as to avoid poor blood circulation or other injuries. When shearing bucks, it is forbidden to bind three legs or to use legs or feet to step on their chest, abdomen, limbs, head or neck.
- 8.7.2 When a goat is turned over during cashmere shearing, the physical condition of the goat should be observed at all times. In case of discomfort (such as acute rumen inflation, intestinal volvulus, dyspnea, etc.), the shearing should be stopped immediately, the rope should be removed, and medical rescue measures should be taken.
- 8.7.3 Special tools for shearing should be pushed forward to the head and neck from the boundary line between the back leg and the back at an angle of about 30 degrees; then move along this line to the abdomen and the back. After shearing one side, turn the goat over and shear the other side as above.
- 8.7.4 The shearing action should be light and smooth, and the skin should be stretched to make it as smooth as possible in case of wrinkles. The cashmere should be sheared off evenly in one go, and the stubble length should not exceed 0.5 cm.
- 8.7.5 During shearing, the injury rate should not be more than 10%, and the number of injuries per goat should not be exceed two.
- 8.7.6 Shearing of each goat should be completed within 15 min.
- 8.7.7 After shearing, the goat should be released from restraint and put back to the flock as soon as possible.

8.8 Combing Cashmere Fiber

- 8.8.1 After restraining the goat, the fiber tips should be cleaned. Use a thin comb to comb along the fiber, gently clean bits of grass, dung and dirt from the goat's body from top to bottom, and smooth the fiber.
- 8.8.2 Use a comb to comb from the head, applying even strength. The comb should be held at an angle of 30-45 degrees to the goat's body.
- 8.8.3 When combing cashmere, be light and stable, keep close to the skin, be fast and even, and no yanking is allowed to prevent damage to follicles on the skin. The back cross of goats

is the most vulnerable part, so be extra careful when combing this part.

- 8.8.4 After finishing combing with a coarse-tooth comb, comb against the fiber with a fine-tooth comb, and comb the other side after the first side is finished.
- 8.8.5 Combing of each goat should be completed within 30 min.

9 Transport and farm transfer

9.1 Preparation before transport

- 9.1.1 Transport vehicles should pass their annual inspection, and have guardrails and relevant facilities and equipment required for safe transport.
- 9.1.2 Transport vehicles should be disinfected and cleaned. For outward-bound vehicles, a transport permit should be issued by the local quarantine department.
- 9.1.3 Goats transported to other places must pass the quarantine inspection of the local animal quarantine department and must have an animal quarantine certificate.
- 9.1.4 Drivers and escorts should have experience in transporting goats and have received training on animal welfare.

9.2 Transport Process

- 9.2.1 The cargo bed of transport vehicles should be divided into a number of small pens, such that each pen has enough space for goats to stand up and lie down.
- 9.2.2 See Table 3 for the minimum vehicle area required to load different types of goats.

Table 3 Minimum Vehicle Area Required to Load Different Types of Goats

Type	Area for each goat (m ²)
Adult Buck	0.4~0.5
Adult Doe	0.3~0.4
Pregnant Doe	0.4~0.5
Yearlings	0.2~0.3

- 9.2.3 During transport, keep air circulation in the cargo bed, drive smoothly, avoid emergency braking, observe the goats regularly and deal with abnormal situations in a timely way.
 - 9.2.4 In case of extreme weather, measures should be taken to reduce the stress response of goats.
- ### 9.3 Farm Transfer
- 9.3.1 Before transfer of goats between grazing locations, plans should be made that consider the timing of transfer, weather conditions, the destination, the transfer route, grazing en route, drinking water, rest areas, transfer equipment and preparations for emergency situations.
 - 9.3.2 During farm transfers, weather conditions should be monitored. Effective measures should be taken to reduce injury and stress to goats in response to various emergencies such as natural disasters or extreme weather that may have adverse effects on animal welfare.
 - 9.3.3 During long-distance transfers, kids and pregnant does should be taken care of.

10 Humane Slaughter

10.1 Qualification Requirements

- 10.1.1 Slaughtering companies should be approved by the relevant departments and have the relevant national qualifications.
- 10.1.2 The person in charge of the slaughtering company should have received training on animal welfare knowledge and be responsible for implementing the regulations on humane slaughter.
- 10.1.3 Slaughterhouse line workers should have been trained and should be skilled workers.

10.2 Slaughtering Requirements

- 10.2.1 Slaughter equipment should be safe, efficient, hygienic and reliable.
- 10.2.2 The slaughtering company should provide goats with a holding shed to protect them from direct sun exposure and severe weather conditions. The holding shed should have enough space, a dry lying area, drinking facilities and drinking water for goats to drink freely.
- 10.2.3 Goats to be slaughtered should have animal quarantine certificates.
- 10.2.4 According to the NY/T 3469 standard, humane slaughtering should be carried out to minimize the pain and discomfort of goats.
- 10.2.5 After slaughter, the goat meat should be inspected by a professional in accordance with the NY / T 2799 standard.

11 Tracing and Recording

- 11.1 The whole process of welfare-friendly farming, fiber harvesting, transport and slaughter of cashmere goats should be recorded and records should be kept that enable traceability.
 - 11.2 Breeding goat archives in goat farms should be kept permanently.
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