

Husbandry Standards for Commercial Rabbit Production

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Rabbit Classification:

Uses include meat, fur production, wool production, laboratory use, pets, & show, rabbits cannot be defined as solely livestock or companion animal as they are a hybrid of each. While a definition of livestock would be beneficial to commercial meat producers doing so would eliminate hobby show breeders and pet owners due to zoning laws. In addition many hobby rabbit breeders also utilize their rabbits as a food source, while using their herd for show and sell some as pets. Some commercial breeders also show rabbits. Therefore rabbits should have their own unique classification as a multi-purpose animal. Zoning laws and any other legislation applied to rabbits need to address this unique and special classification.

Rabbit Breeder Classification

Commercial Use of Rabbits

Webster's Dictionary defines commercial as: *1 a : occupied with or engaged in commerce or work intended for commerce*
2 a : viewed with regard to profit

A commercial rabbit breeder is best defined in regard to their intent rather than by numbers. Therefore a commercial rabbit breeder is one who raises rabbits with the intent to run a business and obtain profit. A commercial rabbit breeder can further be classified as a pet breeder or a meat breeder. While some commercial meat breeders may sell the occasional pet rabbit their main focus is breeding to produce rabbits for food. Commercial pet rabbit breeders would have their main commercial focus on fulfilling demand in the pet market. This type of commercial breeder is regulated under the Animal Welfare Act administered by the USDA. Regulations for commercial pet breeders regarding animal care can be found on the USDA website or by contacting them.

Existing law example: Commercial breeder shall mean any person, firm, partnership, corporation, or other association which engages in breeding animals for the purpose of sale or transfer of animals for compensation. Hobby breeders are excluded from this classification. (2)

Animal Welfare: In recent years more attention has been paid to the animal rights movement whose goal is to eliminate all animal use. Legislators and the general public mistakenly look to animal rights organizations as the authority on animal welfare. However when it comes to animal use these organizations are philosophically opposed to all use as well as inexperienced in farming techniques and unfamiliar with farming issues. Therefore these organizations are not qualified to comment on or draft proper and humane husbandry standards.

As a result many of the so-called humane farming standards drafted by these groups are inaccurate and actually promote inhumane farming. Farming practices that are viewed as "inhumane" by the general public are usually the result of a lack of understanding by the non-farming public. If one does not raise animals one cannot understand the "why" behind many practices and misunderstanding results.

This document has been drafted by PhD's, researchers, and rabbit breeders who understand rabbits and have long term working relationships with the species. These standards were drafted to be humane, as the foremost ideal in the mind of the breeder is to treat their animals humanely. An animal that is suffering is not a productive animal.

The Australian code for livestock production looks at 5 basic requirements in humane animal production:

<http://www.biosecurity.govt.nz/animal-welfare/codes/companion-animals/index.htm>

- *freedom from thirst, hunger and malnutrition,*
- *provision of appropriate comfort and shelter,*
- *prevention or rapid diagnosis and treatment of injury, disease or infestation with parasites,*
- *freedom from distress,*
- *ability to display normal patterns of behaviour.*

Existing Law example: Humane care of animals means, but is not limited to, the provision of adequate ventilation, sanitary shelter, and wholesome and adequate food and water, consistent with the normal requirements and feeding habits of the animal's size, species, and breed. Inhumane care includes any act, omission, or neglect which causes unjustifiable physical pain, suffering, or death to any living animal. (2)

The Rabbit:

Breed	Size (4)	Examples
Dwarf Breeds	2-3 lbs adult weight	Netherland Dwarf, Polish
Small Breeds	3-6 lbs adult weight	Dutch, Florida White, Mini-Rex
Medium Breeds	6-9 lbs adult weight	Rex, Californian,
Large Breeds	9-11 lbs adult weight	Satin, New Zealand
Giant Breeds	Over 11 lbs adult weight	Checkered Giant, Flemish Giant

Most breeds used for commercial meat production are medium sized with New Zealand whites and Californians as the most popular breeds. Other breeds may be used we are just providing the most common for informational purposes. A complete listing of recognized rabbit breeds for show purposes can be found in the American Rabbit Breeders Association Standard of Perfection along with weight ranges and ideal weights.

The Facility:

1) Housing facilities. Rabbits can be kept indoors or out, year round. The **comfort zone** for a rabbit is 50-60 degrees Fahrenheit (7, 15). The comfort zone does not mean the animal's environment must be kept at these temperatures. The comfort zone is the point at which temperatures below or above it cause the animal to expend energy to maintain body temperature. (15) Rabbits are able to withstand below freezing temperatures and can handle the cold better than excessive heat. Indoor and outdoor housing facilities for animals should be maintained in accordance with normal facility maintenance practices, should protect the animal from injury; and should contain the animal.

Acceptable structures to contain a rabbitry: Garage, shed, porch, basement, hutch, barn, open-sided barns, other structures as well (21). Much depends on the climate where the rabbitry is located. Warmer climates will likely be more concerned about cooling rather than heating whereas a rabbitry in a colder climate will be designed to retain heat.

The difference between an indoor rabbitry and an outdoor rabbitry can be easily defined by it's need for mechanical means to ensure proper ventilation. An open sided barn although resembling

an indoor rabbitry would actually be defined as an outdoor facility because it would not require a mechanical means such as a fan to bring fresh air in.

A variety of caging systems are also used in either indoor or outdoor facilities, these can include single tiered or stacked cages. Floors in indoor rabbitries do not have to be made of concrete. Concrete can actually contribute to excessive ammonia and humidity in a rabbitry. (15) Some rabbitries employ single tier cages hanging over a pit to collect the manure, which is then shoveled out at regular intervals. However the time interval can even be annually or quarterly or more frequently. Some such set-ups will leave the manure and instead cultivate worm beds which adds some additional income. Either method is acceptable husbandry practice. Use of dirt floors is also acceptable as is other types of flooring material.

Outdoor rabbitries typically use hutches to house the rabbits or take the form of an open barn. There are other non-traditional methods of housing rabbits which meet standards for humane farming practices as well.

Existing Law:

Structural strength. Indoor and outdoor housing facilities for rabbits should be structurally sound and should be maintained in good repair, to protect the animals from injury, to contain the animals, and to restrict the entrance of other animals. (6)

Ventilation. Indoor housing facilities for animals should have the ability to be ventilated by mechanical means with fresh air either by means of windows, doors, vents, or fans. Ventilation need not run 24 hours consecutively as it's primary purpose is to provide fresh air to reduce ammonia odors and moisture build-up which will be influenced by a number of varying factors.

-Poor ventilation signs: condensation and ammonia odor (4). Despite attempts to reduce the amount of ammonia produced by rabbits some will always be present (26). Detectable ammonia odor should be kept to a minimum but factors such as humidity and temperature will have an effect as much as frequency of waste removal. Obviously an overpowering smell of ammonia would be an indication of a management problem however at present we do not have a good method to measure what is an allowable level of ammonia in a rabbitry and individuals have varying tolerance levels for the amount of detectable ammonia in the air.

A properly designed ventilation system will have the following characteristics (19):

- Remove excess moisture
- Remove harmful gases
- Controls temperature and fluctuations
- Mixes incoming air with air in the room
- Reduces the concentration of disease producing organisms

At this time we do not know the necessary number of air changes per hour for rabbits. We have found recommendations as low as 2 ACH up to 10-15 ACH.

Indoor Facility

(a) Heating and Cooling. Indoor housing facilities for rabbits need not be heated. Heating during the winter may actually increase the amount of ammonia in the rabbit's environment (26). Air conditioning is also not a requirement for proper housing. Breeders use other means to cool the rabbit's environment including water walls, trees, swamp coolers, misters, frozen water bottles, shade cloth or solar screens, exhaust fans, or soaker hoses on barn roof. (30) One can never completely prevent problems with either extremes of temperature. Air conditioning may also restrict the necessary amount of proper ventilation required by rabbits for a healthy environment.

(b) Ventilation. Indoor housing facilities for rabbits should be adequately ventilated to provide for the health and comfort of the animals. Such facilities can be provided with fresh air either by means of windows, doors, fans, or vents and should be ventilated so as to minimize odors, and moisture condensation.

(c) Lighting. Indoor housing facilities for rabbits should have ample light, by natural or artificial means, or both, to allow for routine inspection of the rabbits. Some breeders will employ artificial light for a period of time to try and keep does in production year round. This is not a requirement nor is supplying artificial light. "Optimal lighting conditions for rabbit production have not been established." (15) Primary enclosures should be so placed as to protect the rabbits from direct sun.

Outdoor Facility

Rabbits can tolerate low temps and excessive cold, they must be kept dry as a wet rabbit will not be able to maintain body temperature.

(a) Shelter from sunlight. Outdoor housing facilities should provide each animal with a section of shade that protects from direct exposure to the sun. When sunlight is likely to cause overheating or discomfort, sufficient shade should be provided to allow all rabbits kept outdoors to protect themselves from the direct rays of the sun.

(b) Shelter from rain or snow. Rabbits kept outdoors should be provided with access to shelter to allow them to remain dry during rain or snow.

(c) Protection from predators. Outdoor housing facilities for rabbits should be fenced or otherwise enclosed to minimize the entrance of predators.

(d) Drainage. A suitable method should be provided to rapidly eliminate excess water.

Primary Enclosures-Cages

Definition: Primary enclosure means any structure or device used to restrict an animal or animals to a limited amount of space such as a building, room, pen, run, cage, aquarium, hutch, stall, paddock, pasture, or animal transfer vehicle. (2)

Cage Size:

-The primary enclosure should be constructed and maintained so as to provide sufficient space for the animal contained therein to make normal postural adjustments and have full freedom of movement.

Weanlings, replacement juniors, quarantined rabbits, or mothers newly removed from their litters may be kept in smaller temporary cages such that they can make normal postural adjustments and have full freedom of movement.

Minimum cage heights can be 12" to 18" (15,17)). At look at catalogs from 3 popular rabbit equipment companies (Bass Equipment, KW Cages, and Klubertanz) finds cage heights are 14"-18". Cages sizes available from these companies start at 18"x24" and increase. The common rule of thumb measurement for calculating cage size is to figure $\frac{3}{4}$ sq ft per lb of adult body weight. (4), (15)

-Primary enclosures should be constructed so as to permit the animal within them to remain dry.

-The floors of the primary enclosure that are not a solid surface usually are constructed using 16 or 14 gauge wire 1" x $\frac{1}{2}$ " design. Slatted flooring Or 1/2 x 1/2 hardware cloth is also acceptable.

Solid flooring may contain litter such as pine shavings to absorb moisture and urine.

-Primary enclosures should be structurally sound and maintained in good repair to protect the rabbits from injury, to contain them, and to keep predators out. Primary enclosures are not expected to always maintain a pristine like new appearance. Discoloration due to exposure to urine or rust is acceptable as long as it does not negatively affect the rabbit contained within.

-Primary enclosures shall be constructed and maintained so that the rabbits contained therein have convenient access to clean food and water as required

-All wire cages are humane, the feet of a rabbit is protected by a thick pad of hair to prevent sore hocks (20). Sore hocks are caused by a number of different factors usually several of these factors occurring together (25), (29). These factors include an inherited predisposition, disease condition, management issues such as high humidity, dirty environment in the cage, and rough surfaces on the cage (25). A rabbit being housed on a wire floor with or without a solid section to stand on is not the cause of sore hocks. An all wire floor is very sanitary as the rabbit is kept away from its wastes and the environment tends to stay dry. Rabbits adapt quite well to being housed in cages (32).

-A suitable nest box containing clean nesting material shall be provided in each primary enclosure housing a female with a litter at least until the litter begins coming out of the box, around 15-21 days. (15) The longer a nestbox is used the greater the chance of eye infections and other disease problems (15). Suitable nesting material includes softwood shavings. There is no evidence softwood shavings contribute to liver damage or cancer, or respiratory problems. (31) Suitable material for the nestbox itself includes plywood or metal (21). The size of the nestbox will vary based on breed size with an 18"x10"w x 10" h suitable for most commercial breeds (21). The nestbox need only be large enough for a doe to kindle and nurse her young. A larger than necessary size encourages does to sit in their nestbox thereby soiling it and threatening the health of the offspring. Also if the babies have too much room it increases the chance of a litter becoming separated and one group missing feedings from the doe.

Separation of Rabbits.

Group housing rabbits is not recommend for breeders. Problems encountered when group housing includes disease problems, fighting, management problems, false pregnancies, fur pulling, and difficulty identifying individuals (22). Aggressive behavior by group housed rabbits in a study included fighting which caused eyelid and scrotal injuries (22). Rabbits urinated on each other, pulled fur, exhibited mounting behavior, and there were incidences of false pregnancies (22). In a study on group housing (22) fighting caused 41% of the reported conditions requiring treatment. The threat of disease spread is also a factor in the decision not to group house rabbits. Rabbits do fine individually housed. Evidence exists that suggests in the wild females stay isolated from each other (22).

- Rabbits under quarantine or treatment for a communicable disease should be separated from other rabbits and other susceptible species of animals in such a manner as to minimize dissemination of such disease.

Sanitation

Existing Law example: Sanitation means the maintenance of conditions conducive to health and involves bedding changes as appropriate, cleaning, and disinfection. Cleaning removes excessive amounts of dirt and debris, and disinfection reduces or eliminates unacceptable concentration of microorganisms. To sanitize therefore, means to make physically clean, and to the maximum degree practical, remove and destroy agents injurious to health. (2)

-Waste disposal. Provision should be made for the removal and disposal of animal and food

wastes, bedding, dead animals, and debris.

-Cleaning of primary enclosures. Primary enclosures should be kept reasonably free of excreta, hair, cobwebs and other debris by periodic cleaning. Calcium build up on cages where the rabbit urinates is acceptable as it is very difficult to eliminate all of it. Measures should be taken to prevent the wetting of rabbits in such enclosures if a washing process is used.

-Primary enclosures for rabbits should be sanitized as needed-Traditionally breeders clean cage trays once per week, twice if housed on solid bottom cages. The actual cage is cleaned on an as needed basis.

Depending on the area of the country you live in (such as Arizona where the air is dry) and the set-up of your rabbits, weekly cleaning is not always necessary. i.e. breeders in areas where the air is dry you only need to clean under the cages every 4-6 weeks. The 'troughs' are on dirt, and because the ground and air is dry, the vast majority of moisture either evaporates or soaks into the ground very quickly, keeping ammonia odor to a minimum. Despite attempts to reduce the amount of ammonia produced by rabbits some will always be present (26). Detectable ammonia odor should be kept to a minimum but factors such as humidity and temperature will have an effect as much as frequency of waste removal. Obviously an overpowering smell of ammonia would be an indication of a management problem however at present we do not have a good method to measure what is an allowable level of ammonia in a rabbitry.

-In primary enclosures equipped with solid floors, soiled litter should be removed and replaced with clean litter at least once each week.

-If primary enclosures are equipped with wire or mesh floors, the troughs or pans under such enclosures in general are cleaned about once each week. If worm bins are used under such enclosures they should be maintained in a sanitary condition but are cleaned out less frequently.

-Prior to the introduction of rabbits into empty primary enclosures previously occupied, such enclosures should be sanitized

-Primary enclosures for rabbits can be sanitized by washing them with hot water (180° F) and soap or detergent as in a mechanical cage washer, or by washing all soiled surfaces with a safe and effective disinfectant, or by cleaning all soiled surfaces with live steam or flame.

-Pest control. An effective program for the control of insects, ectoparasites, and avian and mammalian pests should be established and maintained. Routine prophylactic deworming is unnecessary for rabbits (32).

-Waste Disposal: Provisions should be made for the regular and safe removal and disposal of animal and food wastes, bedding, dead animals, and debris, so as to minimize vermin infestation, contamination, odors, and disease hazards.

Existing Law example:

CITY OF PALACIOS: The owner or person in possession of animals shall keep yards, pens, and enclosures in which such animals are confined in such a manner so as not to give off odors offensive to persons of ordinary sensibilities residing in the vicinity, or to breed or attract flies, mosquitoes, or other noxious insects, or, in any manner, to endanger the public health or safety, or create a public nuisance. (1985 Code of Ordinances, Chapter 2, Section 12A)

Feeding

Adequate feed and water means food and water which is sufficient in amount and appropriate for a rabbit to prevent starvation, dehydration, or a significant risk to the rabbit's health from a lack of food or water. (2)

Adequate feed means palatable, non-contaminated, and nutritionally adequate feed that is fed according to the species requirements.

-Storage of feed. Supplies of feed can be stored in sealed containers or other containers that protects the feed against insect and rodent infestation and/or contamination. Commercial rabbitries often purchase feed in bulk and it can be stored in bulk feed tanks or even as it is delivered from the feed store in nylon bulk feed sacks. (15)

-Feeding. All animals should be fed at least once a day. The feed should be accessible, free from contamination and/or insect and rodent infestation, and shall be of sufficient quantity and nutritive value to meet the minimal daily requirements for the condition and size of the animal as set forth by the commercial feed industry or by a licensed veterinarian.

Rabbits do not need constant access to feed as this can lead to obesity and health problems (21). Again the amount fed per day is determined on an individual basis.

-All feed receptacles shall be kept clean and sanitized as needed. If self feeders are used for the feeding of dry feed, measures should be taken to prevent molding, deterioration or caking of the feed.

Water

-All watering receptacles should be sanitized as need to prevent algae build up or contamination.

If environmental temperatures fall below the freezing level the breeder may have to take steps to ensure the rabbits are receiving enough water to allow for proper feed intake to maintain body temperature. **It is not a requirement to keep water unfrozen at all times.** Practical experience has shown that rabbits do not have to have continuous access to unfrozen water to maintain proper health. (21)

If water bowls freeze the breeder may water rabbits more frequently and also provide fresh water at feeding time. Since rabbits often chew electrical cords keeping water bowls unfrozen using some sort of heater or heat tape may not be safe or practical. Those with automatic watering systems may use heat tape or cable to keep lines unfrozen, some may also be able to allow a continuous drip to keep it from freezing. But for some climates the temperatures would not allow for continued use of an automatic water system over winter. The amount fed may have to be increased and straw or hay may be used in the cages.

Weaning Requirements

Minimum age to sell means at an age that no longer requires parental nurturing for survival, or at an age that can be sustained from nutritional food given by persons who are knowledgeable in the practice of hand feeding. Commercial meat breeders often wean rabbits at 4-5 weeks of age. Practical experience and research has shown that 4 week old rabbits are able to survive without parental nurturing. Wild rabbits from which domestics have retained many behaviors, wean their babies at 4 weeks so the nest is ready for the next litter that was conceived after kindling the first. Thus far there is nothing to suggest domestic rabbits need to stay with their mothers longer than 4-5 weeks.

Selling rabbits as pets is different due to the numerous stresses of moving from breeder to store to pet owner so that is why sales of **pet** rabbits is often set at a minimum of 8 weeks of age. State laws or the USDA regulate age at which a pet rabbit can be sold and those who would fall under such regulation should check those sources for regulation of pet rabbit sales.

Breeding

Typically commercial rabbitries use an intensive breeding schedule however rabbits unlike other

livestock are naturally built for intensive breeding. According to Rabbit Production one needs an estimated 5 litters per year from each doe to met expenses. Breed back schedules vary and can be as short as 24 hours after kindling (15). Many producers use a 14 or 21 day breed back schedule while new rabbit raisers are advised to use a 35 or 42 day schedule. (15) Based on results from the Professional Rabbit Meat Assoc 2004 breeder survey commercial breeders usually produce 5-8 litters per doe per year.

The rabbit's reproductive system is different from most animals. They do not have heat seasons rather they are induced ovulators-eggs are released during mating. Also it has been observed among wild rabbits that the doe will kindle a litter and then remate producing another litter 31 days later. If a rabbit does not have adequate nutrients to maintain good health they can reabsorb a litter so there is a natural process to ensure the doe stays healthy and productive. (15) It is common to kept does in production to avoid fertility problems or problems giving birth. Females not bred at regular intervals can easily accumulate fat which hampers their ability to conceive and deliver babies easily. Intensive breeding of rabbits is not cruel but rather a harmonious relationship between nature and livestock production.

Identification:

Commercial breeders use a variety of methods to identify rabbits including tattoos, cage cards, and marking pens these are all acceptable methods. Tattooing a rabbit is not inhumane and does create a permanent identification method that travels with the rabbit. Producers are encouraged to check with processors before picking a particular method in case the processor has certain requirements.

Health care:

Proper animal health care means a program of disease control and prevention, veterinary care if required, and humane euthanasia. The animal health care should be sufficient to prevent unnecessary physical pain or suffering. (2) It is important to note that due to a lack of education about rabbit disease a breeder is often more knowledgeable than their local veterinarian. Due to this most breeders treat disease problems themselves. In many cases of common rabbit disease a breeder will have the rabbit euthanized thereby reducing the risk to the rest of the herd. If a medical problem falls outside the realm of the breeder's knowledge an experienced veterinarian may be consulted if the animal is suffering and the breeder wishes to attempt to cure the condition rather than euthanize it. Breeders should also have a written plan of medical care that outlines potential problems and treatments.

Cage Enrichment

"It is reasonable to assume that any system that adversely affects the animal's welfare will also reduce its productivity" (15)

Ensuring animals involved in livestock production are able to express "natural" behaviors has become a hot button topic. Again the rabbit producer wants to ensure their animals are raised humanely and methods of rabbit production used do their best to ensure the safety and health of the animal within the producer's ability to implement them. Although the domestic rabbit is descended from the European wild rabbit they do not necessarily have the same behavioral requirements. A marked difference between wild and domestic rabbits is their response to confinement. While wild rabbits seldom do well confined domestic rabbits thrive. A confined wild rabbit usually exhibits signs of stress and may not mature sexually. (15) The process of domestication which has gone on for perhaps a couple thousand years has produced an animal that is much calmer when confined. This is important to understand because while some behaviors are similar between wild and domestic rabbits not all are. One cannot say a domestic rabbit has to be able to mimic all the behaviors of a wild rabbit when attempting to develop standards for cage "enrichment".

At this time we lack evidence that rabbits actually require anything special to enrich their environments. Some breeders provide toys such as a block of wood to chew, pinecones, empty cans to toss, or even simply hay or straw. One study found that providing chew sticks or an empty can was sufficient (24). One study that examined the effects of providing straw for cage enrichment found that after initial interest by the rabbits they quickly lost interest in the straw. (16) Another study discussed rabbits displaying “natural behaviors” which included hopping, standing on their hind legs, and social interaction (23). Rabbits utilized in current rabbit production settings are able to display these behaviors with the possible exception of social interaction. More research has to be done in order to accurately set standards for cage enrichment assuming anything more is really necessary.

-Group housing vs. single housing: Rabbits are territorial by nature so when grouped together often fighting occurs (15), (22). Due to their powerful hind legs and claws fighting can lead to very serious injury or death so group housing is not advised. However the use of wire cages does allow for rabbits to see and hear other rabbits and that may well be all the social interaction a rabbit requires. During breeding bucks and does are allowed to interact. Does and offspring are allowed to interact socially until the babies are weaned. Due to the natural behaviors of rabbits that include fighting it is more humane to keep rabbits physically separated from each other.

-Digging and burrowing: Wild rabbits rely on burrows for protection from predators. Studies that compared the behaviors of wild and domestic rabbits have found that domestics are less vigilant to danger and don't seek shelter in burrows as well as spent their resting periods above ground. (15) Therefore it is not necessary to provide the rabbit with an environment where they can dig burrows.

-Housing rabbits outside on the ground: In a study comparing rabbits kindled and finished inside in cages, kindled inside in cages then moved to an outdoor pasture pen, and rabbits kindled and raised in a movable pasture pen the authors found the rabbits raised and finished inside in cages had higher growth rates, final weights, carcass weights, and finished faster than rabbits in the other two groups (18). Based on this research we see no reason to recommend breeders change from housing rabbits in wire cages inside a barn to some sort of old fashioned pen on the ground. Rabbits housed in pens on the ground in groups would also have a greater risk of parasites than their counterparts in sanitary wire cages as well as incidences of fighting and risk of serious injury.

Transport To Slaughter

Rabbits shall be delivered to the processing area in transport cages or other equipment that is of sufficient size to accommodate the size of the rabbit being presented for slaughter. Cages must be in good repair, free of broken wire, rough areas, sharp projections, and other protrusions to avoid injury to the poultry. Rabbits delivered for slaughter shall be held in a location with adequate ventilation to prevent overheating and shall have protection from exposure to adverse weather conditions. .

“Containers for transporting rabbits should be ventilated and large enough to allow the animals to turn around and lie down, but small enough to prevent bruising. Containers should be designed and maintained to allow rabbits to be put in and taken out without injury. Precautions should be taken to protect the rabbits from wind and rain and from excessively cold or hot conditions during transportation. Rabbits should not be held in transit for more than 24 hours unless they are provided with food and water.” (11)

Humane Euthanasia :

Acceptable methods include: Cervical Dislocation (8), (11), (15) Stunning by Blow to the head (7), (9), (12), (13), (15), captive bolt (8), bullet shot to head, electricity (electrocution or use for stunning) (8), (12), (13), and carotid artery severance (8). Chemical methods are also approved (8), (14) but due to concerns about tainting the rabbit meat are generally not used in commercial production.

The RSPCA Australia policy statement on humane euthanasia states that “an animal must be either killed instantly or instantaneously rendered insensible to pain until death supervenes.” Their 2001 edition establishes basic criteria for determining if a method is humane. These are:

- Death without panic, pain, or distress
- Instant death or unconsciousness
- Reliability for both single of large numbers
- Simplicity and minimal maintenance
- Minimal environmental impact
- Minimal emotional impact on operators or observers

The authors of the these standards believe that the methods we have listed as acceptable meet the above criteria. Following is a look at federal legislation concerning humane euthanasia.

<http://www.fsis.usda.gov/OPPDE/rdad/FSISDirectives/6900.2Rev1.htm>

US Humane Methods of Slaughter Act of 1978. (7 U.S.C. 1901 *et seq.*)

Sec. 1902. - Humane methods

No method of slaughtering or handling in connection with slaughtering shall be deemed to comply with the public policy of the United States unless it is humane. Either of the following two methods of slaughtering and handling are hereby found to be humane:

(a) in the case of cattle, calves, horses, mules, sheep, swine, and other livestock, all animals are rendered insensible to pain by a single blow or gunshot or an electrical, chemical or other means that is rapid and effective, before being shackled, hoisted, thrown, cast, or cut; or

(b) by slaughtering in accordance with the ritual requirements of the Jewish faith or any other religious faith that prescribes a method of slaughter whereby the animal suffers loss of consciousness by anemia of the brain caused by the simultaneous and instantaneous severance of the carotid arteries with a sharp instrument and handling in connection with such slaughtering.

“Rabbits that are processed in commercial facilities undergo electrical stunning, which renders the animal unconscious, and then are decapitated. In smaller processing facilities or on-site slaughter, however, manual methods are used. Two methods have been recommended for manual stunning (Arrington and Kelly, 1976; Sandford, 1986). The first method is cervical dislocation. When performed by a competent person, cervical dislocation renders the rabbit unconscious immediately. The second method involves the use of a blunt stick to strike the rabbit behind the ears at the base of the skull. Generally, cervical dislocation is the preferred method for manual stunning. Welfare problems arise when inexperienced personnel attempt to perform the stunning. Care should be taken to properly train personnel before they attempt to manually stun a rabbit. Trainees should learn the proper way to handle the rabbit to reduce excitability and stress; observe the technique being performed by a competent individual; and perform the technique under supervision until competence is attained.” (7)

“Recommendations - When properly executed, manual cervical dislocation is a humane technique for euthanasia of poultry, other small birds, mice, rats weighing <200 g, and rabbits weighing <1 kg. In heavier rats and rabbits, the greater muscle mass in the cervical region makes manual cervical dislocation physically more difficult; accordingly, it should be performed only with mechanical dislocators or by individuals who have demonstrated proficiency euthanating heavier animals.” (14)

Animal Cruelty & Neglect Issues

Inspection of Premises: Should only be done during reasonable daylight business hours with the permission of the breeder or a properly executed search warrant.

-To determine if an animal is underweight and/or starving it is important to assess the body condition of the rabbit and determine if food is stored on the property. Absence of food stored on the property is not proof of neglect. One must assess the entire herd, check feed records, or receipts. Note that some breeds are normally slender and racy in body types (Belgian Hares). Rabbits undergoing a molt will lose flesh condition and their coat may look terrible, this is not a sign of neglect. An empty food bowl is not a sign of neglect as rabbits are traditionally fed once per day. Unlimited or free feeding rabbits leads to obesity and health problems. In addition one cannot look at one rabbit that may be lean and determine that there is a problem with the entire herd. Also, it is important to distinguish between a single animal appearing lean and the whole herd. If a single animal is not eating, that may not mean the whole herd is being neglected. An accurate body condition scoring guide has not been developed for rabbits. It is recommended to check with the ARBA Standard of Perfection for a guide to the weight ranges for various breeds. (17)

-During periods of molt it isn't uncommon for a quantity of loose fur to be around the rabbitry and stuck to cages.

-Be aware that odor is caused by urine and tends to be more concentrated in hot humid weather. At 50 degrees ammonia production increases so temperature is a factor in determining if there is too much odor. Find out how often cages are cleaned, noting that it is acceptable to clean cage drop pans once or less per week.

-Check the amount of manure in drop pans or solid bottom cages to assess whether or not the animals are being cleaned regularly. Note that many rabbits use one corner as a bathroom and a pile of poop in that area is not a problem. Also hanging cages over manure pits or worm beds is acceptable and not considered "unsanitary".

References

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- 4 American Rabbit Breeders Assoc Guidebook Raising Better Rabbits & Cavies 2000
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- 8 California Humane Slaughter of Poultry Regulations
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