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CHINCHILLA RAISING

INTRODUCTION

The chinchilla is native to the Andes region of South America. In the early part of the twentieth century skins of this animal were shipped into Europe and the United States by the bale. Trapping reduced the numbers so drastically that the supply of pelts from South America (the only source at that time) dwindled and practically disappeared from the market. Before the South American countries passed laws prohibiting the exportation of live chinchillas, or their pelts, a United States mining engineer in Chile in 1923 trapped and shipped out 11 live animals which became the foundation stock for chinchilla farming in this country. Release was later obtained for making additional shipments from South America. In the late twenties and early thirties enough animals were produced from the original 11 to allow an expansion of chinchilla ranching and the tempo of the industry picked up. The late thirties saw considerable interest in chinchillas and the formation of a national chinchilla breeders association. World War II brought a cessation of live animal sales, but immediately following the war interest in the industry was renewed. The number of animals and ranchers increased swiftly, reaching a peak in 1954, the year that ranch raised pelts were first introduced, through public auction. This signalled a decline in livestock speculation and the beginning of a reasonable stable industry of producing pelts for market. Today the industry is world-wide, and there are several thousand ranches and more than one million chinchillas. These animals are being raised for their fur, for sale as breeding stock, and for use in medical and biological research.

Experimental work on chinchillas by the Federal Government has been too limited to serve as a complete source of information for raising these animals. The suggestions in this leaflet have been obtained from successful breeders and literature distributed by the Empress Chinchilla Breeders Cooperative, Inc. and others.

DESCRIPTION

The chinchilla is a small animal somewhat resembling the common squirrel, but its body is rounder and shorter, and the tail is not as long or as bushy. It is a vegetarian, thereby creating little odor when the pen and surroundings are kept reasonably clean. The chinchilla has numerous whiskers on each side of its nose which it relies on, along with its nose and highly developed sense of hearing, to warn it of obstacles in its path. The chinchilla does not have keen eyesight, especially in the light. It is nocturnal, being most active at night. It has large, hairless ears, and occasionally makes noises ranging

from a high-pitched call to a low hiccuping sound. The hind legs of the chinchilla are made for jumping or hopping and enable it to propel itself with remarkably quick movements. The forepaw is small, with four fingers and a thumb, and may be used as a hand for holding food and conveying it to the mouth. The chinchilla sometimes emits a faint odor when frightened.

The various species differ somewhat as to length and size ear, length of tail, and general conformation and size of body. Individuals weigh from 13-16 ounces at 6 months and from 18-35 ounces at maturity. The female is slightly larger than the male. The fur of the most desirable animals is very soft, fine, and silky. The surface color is bluish-grey with a natural luster and a smooth, even appearance.

The most common specie of chinchilla is the Lanigera. Its tail is about half as long as its body. The Costina and Brevicaudata (short-tailed specie) are present to a limited extent in a few herds.

GETTING A START

Animals of a prolific strain, having the desired fur characteristics are the only type that should be considered for foundation stock. Chinchillas identified by tattoo marks in the ears and accompanied by data as to ancestry are preferable. Records will prevent misunderstandings and breeding stock should be purchased from a reputable breeder.

The Department of Agriculture does not maintain a list of chinchilla breeders. For more information on the industry, write to the breeders association referred to above. A breeder should keep himself informed through national organizations and various trade journals.

HOUSING

Small groups of chinchillas may be kept temporarily in basements, small utility buildings or unused garages. These places, when kept dry and free of drafts, though well ventilated, may prove satisfactory. However, on a permanent basis, chinchillas should be kept in outside structures, preferably isolated from other activities. Some chinchilla housing is air-conditioned and heated. Climate is a determining factor in the type of housing required. Chinchillas suffer in prolonged heat with little air circulation where temperatures exceed 80°F., but are not as seriously affected by cold or freezing weather except at littering time. About 65°F. is considered the optimum temperature, though colder weather may be desirable for animals to be pelted. Chinchillas should be protected from disturbances by dogs and other animals.

PENS AND NEST BOXES

A large variety of pens and nest boxes are being used. Some of them previously were rather elaborate, but the present trend is for simplicity and accessibility. Small all-wire pens or combination wood-and-wire pens, similar to those for mink and rabbits, are quite popular. If a wooden framework is used it should be on the outside, or the edges protected with metal stripping, to keep the animals from gnawing it. Wire floors of hardware

cloth, or wire mesh, are commonly used. Some breeders report that hard-ware cloth floors become contaminated and require more frequent cleaning. Welded wire mesh, galvanized after welding, is the preferred wire for chinchilla cages. The mesh size most commonly used is 1/2" x 1". Larger mesh, 1" or 1" x 2", may be used for the sides and top of pelting pens but may allow escape of young in breeding pens. About 2 or 3 square feet of floor space per animal is considered adequate.

Though wire-floored nest boxes for littering and nursing females are being used, the preference seems to be for solid floors, some of which are hinged. Some littering trays cover the whole bottom of the pen, others only part of it. Bedding of shavings or straw is used with the latter type. Nest boxes are usually 10 to 12 inches square, 15 or more inches deep, and provided with a lid. The size and shape of the nest box is largely a matter of personal preference. Some use is made of removable nest boxes attached to the outside of the pen to give the caretaker ready access to the animals without opening the pen. Many ranches use littering trays which are put inside the pens and eliminate the need for outside nest boxes.

Several companies make pens and other equipment for chinchillas. Information on them can be obtained from trade journals or chinchilla associations.

OTHER EQUIPMENT

If hay is fed, a rack should be provided. A dish, trough, or self-feeder of a type the animals cannot easily contaminate is needed in feeding grain or pellets. The animals may be watered from open containers, inverted bottles like those used in a small-animal laboratory or from an automatic watering system accommodating each individual cage. In large units where an automatic watering system is sometimes used, it saves labor and insures a constant supply of fresh water, but must be protected from freezing in cold climates. A rectangular box about 10 to 12 inches or a round pan about 4 inches deep, in which the animals can roll and dust themselves is essential. Metal cans or ratproof bins which are verminproof are important in feed storage. Scales that weigh accurately to ounces or fractions of ounces are sometimes used to keep the breeder informed on the progress he is making with his methods of breeding and feeding.

BREEDING

Chinchillas will breed after 6 months of age. This may sometimes vary depending on the rapidity of their growth and general development. Maturity is reached at about 14-18 months of age. The female chinchilla comes into estrus (is receptive to the male) about every 28 days. In spite of this year-round cycle there are seasonal fluctuations in breeding and littering. Chinchillas mate more readily in the winter and spring months, but young are produced in every month of the year. Two types of breeding programs are practiced, pair mating and polygamous breeding. In either type of mating the male may be left continuously with the female. If the male is removed at littering he may be returned in a few hours.

Polygamous breeding is most commonly used and is the recommended method. It involves the use of one male for a number of females, one male to four or five to seven females being considered a good ratio. In this type breeding the male travels at will between the individually caged females, who wear collars slightly larger than the entry hole to their pen. Polygamous breeding has the advantages of distributing the influence of an exceptional male throughout the herd and of reducing the number of males needed.

A gelatinous "stopper" or "plug," 1/2 to 1 1/2 inches long, in the pen indicates that breeding has taken place. However, this is sometimes eaten or falls through the wire bottom to the refuse below. A record should be made of the time the litter is to be expected. In the Lanigera or Costina allow 111 days from breeding and in the Brevicaudata, 128 days. The female will often rebreed within 24-48 hours after littering in the spring, and occasionally after producing a summer litter. From one to six young are produced in a litter; the industry average being slightly less than 2. Three are not uncommon and often 4 and sometimes 5 are born. Six in one litter is rare. Evidence indicates that the average female will produce 2 to 3 young per year that will reach priming age. Females are capable of three litters per year, but the average number of litters per normal health female is slightly under two.

FEEDING

Feeding the simplest and most regular diets gives the best results. Successful ranchers feed fresh pellets, manufactured by a reliable feed mill, in conjunction with clean alfalfa or timothy hay, plus regular fresh, clean water. Feeding tidbits and elaborate supplemental feeds may upset the nutritional balance of the diet and should therefore be avoided.

Whenever new types of feeds are to be used, introduce them slowly so that the animals may become gradually accustomed to them. Be sure the hay is free from harmful sprays and from the eggs of intestinal parasites, such as tape worms and pin worms, which are frequently found in the feces of domestic animals.

Chinchillas need a properly balanced diet. As a general guide, a diet containing approximately the following proportions is recommended: 15 to 20 percent crude protein, 4 percent fiber, 45 percent nitrogen-free extract, and 6 percent minerals. Some large milling companies make a chinchilla diet in pellet form which provided the necessary nutrients and is satisfactory for maintenance and production.

The animals should not be overfed, but females which are pregnant or suckling young need more than others. Feed chinchillas according to their individual requirements. Do not throw feed on the floor (where solid bottom cages are used) but place it in containers where it cannot easily become contaminated. A plentiful supply of fresh water should be constantly available to the animals.

CARE AND MANAGEMENT

A breeder who knows his animals individually and keeps each one in good shape gets best results. This requires regular inspection by an observant person. A pair of scales is sometimes used to check the condition of the animals. If an animal is listless, and the cause cannot be determined immediately, a veterinarian should be called.

Premises and pens should be kept sanitary. Chinchillas like to dust themselves. They should have a pan, box, or commercially available dust baths containing very fine sand and pulverized clay or gumbo earth. Fuller's earth is frequently used. Dust baths may be placed in the pens daily for short periods or two or three times a week, depending on the climate. In high, dry climates too frequent use may remove too much of the natural oils from the fur.

When a litter is expected, many chinchilla raisers prefer to keep the room temperature at 70° to 75°F. If the animals are housed out of doors a special maternity room may be provided during cold weather. Some breeders place about 3 inches of bedding in a nest box with a solid floor, in which case temperatures slightly below freezing are not harmful. Individual heating elements are unnecessary, but some measures should be taken to insure comfort of the mother and young in unheated rooms, open sheds, or where nest boxes with wire floors are used. Newborn chinchillas must not be subjected to drafts.

During the first few days after they are born, chinchillas should be carefully observed to make sure they are well nourished. Examine the mother to see if her nipples are sore or have been bitten, and whether the young are taking all the milk.

Orphan young, or those needing supplemental feeding can be fed warmed evaporated milk diluted with an equal amount of water, using a medicine dropper. For the first two or three days the feedings should be small and spaced at about two hour intervals. From the third day on, feedings can be placed every three hours and may be reduced on the fifth day to four or five feedings daily. Some ranchers add several drops of corn syrup or multivitamins to the milk formula and find them helpful in promoting growth and preventing intestinal disturbances.

Good records are essential in any successful livestock enterprise. Keeping a simple yet comprehensive breeding record card for each female is a good system. The card should provide space for recording the date of mating, male number, date of littering, number of young, tattoo number, remarks, and possibly other information. Provide a place for listing the grading or evaluation of each individual. A card for recording their breeding record is also desirable. Satisfactory record cards are usually obtainable from associations, supply houses, or feed manufacturers or made by the rancher himself.

Each chinchilla should have an identification number tattooed in its ear. It is best to do this shortly before weaning time. Tattooing instruments

may be obtained from small-animal supply houses.

DISEASES AND AILMENTS

Fur-Chewing. Though not a true disease or ailment, fur-chewing causes considerable concern and loss of profits on chinchilla ranches. Fur-chewing is identified when chinchillas chew the fur on other animals, or their own. Fur-chewing in rabbits can be alleviated by increasing the roughage in the diet, sometimes by raising the protein level of the diet. Thus far, the type, or quality, of diet has not been shown to be a factor in the chinchilla fur-chewing habit. More research is necessary to solve this problem.

Malocclusion-or "buck teeth". The teeth of the chinchilla grow at a rapid rate and proper occlusion plus chewing exercise is necessary to keep them ground properly. If the teeth do not contact properly they will become unevenly worn and the animal cannot eat properly. The front teeth may become so long that the animal is unable to close its mouth or to use its back teeth to chew food. Filing or clipping the teeth may give temporary relief. However, this condition may be inherited, in which case elimination of the strain that produces the condition is advisable.

Skin Disease. The most common skin disease is that caused by fungus. It is a form of ringworm which is highly contagious and transmissible to man. It results in loss of fur in patches; red, scaly areas of the skin; loss of weight and droopiness. It may be controlled and cured with available fungicides, but infected animals should be isolated and all loose fur burned. It may be necessary to dispose of infected animals and treat all other animals in the herd if a severe outbreak occurs.

Other Diseases. These would include enteritis, respiratory infections such as pneumonia, middle ear infection, eye infections, bloat, mastitis and uterine infections. Many of these are difficult to identify or diagnose and veterinary advice should be sought whenever you are in doubt.

FUR

The fur of the chinchilla is very fine and silky. Close examination shows that a fur tuft composed of 50 to 75 fibers and one coarser guard hair usually comes from the common pore but individual follicles. Chinchilla's fur has a definite white banded effect that can best be seen by blowing it gently. The tips of the fibers are black, giving a veiled effect. The general appearance of the fur is gray with a deep blue-gray underfur. A mottled appearance is undesirable. Clearness of color is essential for good pelts. The color may vary from light to dark. Chinchilla shows are excellent places to obtain current information on the best types of animal to breed.

Chinchilla raising depends upon a satisfactory commercial market for the pelts. As previously indicated, a pelt market was first established in the mid-1950's. Since then there has been a gradual increase in the demand for quality chinchilla fur and pelt prices have been fairly stable. To maintain pelt values, prime skins of good quality must be offered to the fur trade in

large numbers. The best matched bundles are usually obtained by pooled or cooperative marking. Better pelts are being produced as knowledge of selective mating progresses and management and feeding practices improve. Chinchilla skins are satisfactory for loose wraps, capes, jackets, neckpieces, muffs and fitted coats.

In 1965-66 pelts marketed by United Chinchilla Associates, Inc., representing over half of all pelts sold, averaged about \$15 per pelts. However superior quality pelts representing about 23 percent of the total marketed by the association brought an average price of \$25 per pelt. This emphasizes the desirability of producing high quality pelts, not only to increase returns, but to maintain the position of chinchilla as a luxury fur. Further information on the pelt market and sale of pelts can be obtained from chinchilla associations.

Chinchilla fur in most animals becomes prime in December through March, although the time varies with the locality and the time of birth. As a general rule animals born before July 1 will prime up the first winter. Young animals should be segregated into age groups as they are weaned, so they can be handled more efficiently in uniform groups while reaching prime. Mature animals shed their fur in the late spring and summer before becoming prime during winter. The best prime condition is considered by some to be obtained at temperatures of 40° to 45°F. Some breeders use normal temperatures for priming, and some experiments are being conducted with light control at normal temperatures to bring the animals into prime. During the shedding and prevent the development of fur mats which will damage the new fur and lower the value of the pelts. Complete primeness of a pelt may be determined by blowing into the fur on the back of the neck and along the spine. If the skin is prime it will be a pale flesh color, or creamy white. If not, it will be blue. It is best to harvest the skins while they are prime. If they are allowed to go over prime, the fur will more readily slip during the dressing process.

Chinchillas may be killed for pelting by injecting nembotal or strychnine, breaking their necks, electrocution, or the use of calcium cyanide. In using cyanide remember, what will kill an animal will also kill a man. Use this method with extreme caution and respect. Perform the operation out-of-doors and use an air-tight box into which the animal can be placed with some cyanide crystals. The animals killed with cyanide should be shaken well and allowed to air before they are skinned. After killing, animals should be chilled briefly before pelting. This sets the fur and makes it easier to handle.

Pelting may be performed on a table top, although no special boards, springs, or clips are necessary. These items are helpful as the pelting operation grows. If possible, pelting should be done in a cool room. Care is necessary at all times to keep grease, oil and blood from soiling the fur. A liberal use of fine hardwood sawdust or corncob meal throughout the operation will help. The fingers should be kept dry by using sawdust freely, and used whenever possible will occur unless care is not exercised when cutting is necessary.

Information on proper pelting techniques can be obtained from the national association.

In packing for shipping, place the raw skins leather to leather and fur to fur. Group about 12 (or less) between 2 pieces of corrugated cardboard and wrap securely to avoid shifting. The outside can be wrapped in craft paper and is then ready to mail.

