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THE RAISING OF CAVIES (GUINEA PIGS)

by

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A large number of requests have been received recently for information on raising cavies or guinea pigs. In order to answer these requests in the most complete and accurate manner, this circular has been prepared.

GENERAL INFORMATION ABOUT CAVIES

The cavy (guinea pig) is a domesticated rodent that possibly originated from the "restless cavy," a native of South America. Its clean habits and gentle disposition have made it suitable as a pet or laboratory animal.

Useful as Laboratory Animal:

The cavy became popular as a laboratory animal largely because of its inability to synthesize vitamin C. It is the only animal below the order of primate that requires vitamin C in its diet. Thus in early nutritional studies it was the only source that the laboratory had for assaying this vitamin. Modern methods of chemical analysis have reduced the need for the cavy in this field of research, however. Because of its usefulness in disease research the cavy still enjoys considerable popularity as a laboratory animal. Most medical, bacteriological and nutritional laboratories use them to some extent, but the demand is limited. Because of this limited demand, the market should be thoroughly investigated before starting to raise cavies on a commercial scale.

Not Difficult to Raise:

Cavies are not difficult to raise. They have some peculiarities that must be taken into consideration, however, but most of these are simple and basic. These peculiarities will all be considered under their proper headings. The popular conception of their rapid rate of reproduction has been greatly exaggerated. They do not compare with the rabbit, hamster or the albino rat and mouse in the number of young they produce.

MANAGEMENT FACTORS TO CONSIDERRaising in Colonies Practical:

As cavies can be raised in colonies, this reduces the cost of operation. If the colony room can be kept free of mice and rats, very simple pen construction can be used. Frame pens can be set on the floor or the pens themselves can be floored and raised on legs of any desirable height. One-inch by 12-inch dimension lumber is satisfactory for pen construction.

By making the pens 12 inches deep, no tops are required. A frame pen 3 feet long, 2 feet wide, and 1 foot deep is adequate for a colony of six sows and one boar. A pen this size is large enough for 12 young pigs. The pens for an individual boar or a sow with her young should be about 20 inches long, 15 inches wide by 12 inches deep. Apple boxes, if they are in good condition, can be used for individual pens.

Temperature and Lighting Important:

The colony room should be well lighted and ventilated, but free from drafts. Extreme temperatures must also be avoided. The ideal temperature is about the same as in the home, or roughly 70 F. The most satisfactory humidity range is about 50%. Higher temperatures can be tolerated if the animals are not crowded and if there is adequate ventilation. In cases of low temperatures - near or below freezing - some heat must be provided. A small poultry brooder may be used for this purpose.

Litter Needs Frequent Changing:

The floor of the pen must be covered with bedding or litter. The most satisfactory materials for this purpose are clean wood shavings, oat chaff, or dried beet pulp. The litter must be changed as often as is necessary to keep the pen dry and free of odor. A light covering of litter, frequently changed, is more satisfactory than a thick layer seldom changed. The glazed crocks used in rabbit hutches are satisfactory for feed and water containers. These should be set up on two-inch blocks in order to reduce the contamination from the litter. For watering, a poultry bottle waterer is more satisfactory than a crock.

PURCHASING AND HANDLING BREEDING STOCK

The purchasing of breeding stock must be done with care. Stock should be purchased from reliable and successful breeders. Whenever possible, buy your stock near home. The advantage of this procedure is that if the stock is not satisfactory, it is easy to make an adjustment with the original owner.

Good Breeding Stock Selection Necessary:

In the development of a successful business, attention must be paid to the selection of the future breeding stock. Good records must be kept and the history of the sow must be favorable before any of her offspring are kept for breeders. The pigs that are kept must be large and vigorous and should be from large litters. Sometimes a sow will give birth to only one pig. This individual will usually develop more rapidly than if he were from a larger litter. This pig should not be kept as a breeder, however, as he may carry this unfavorable breeding factor of small litters. Boars from an outside source should be introduced about every two years in order to prevent excessive inbreeding.

Proper Handling of Breeding Stock Important:

The boars reach sexual maturity at an age of about 60 days and the sows at 40 to 50 days. It is not advisable to breed the animals until they are about four months of age. This gives the breeding stock ample time to reach full development. The increased livability of the sows and

pigs will justify the delay. Extending the breeding date beyond four months is not advisable, as the longer the initial breeding is delayed the more difficult it will be to obtain conception.

In developing a colony, one boar should be placed in a pen with six sows, left with them for about 30 days, then removed to an individual pen. The oestrus cycle in the cavy is about 18 days; thus all sows should be mated within 30 days. It is best to give the boar a complete rest and not to put him in a second colony. It is possible to use a boar with a 12 sow colony, but one boar to each six sows will prove more satisfactory.

The gestation period of the sow is variable. Some authorities place the gestation period at 65 days, but it usually varies from 63 to 68 days. The number of young will vary from one to six, with an average of two or three for most colonies. The mortality is usually high in large litters. The sow can be bred within a few hours following the birth of the young. If they are not mated at this time they usually will not breed until the young are weaned, about twenty-one days later. Sows in continuous production will average about 12 pigs a year. They can be used for extensive breeding for about two years and then should be disposed of. Boars may be used up to four years. If a sow fails to reproduce after two successive matings she should be disposed of. Since individual animals will vary, the above figures must be used only as a guide and not a hard and fast rule.

CARING FOR YOUNG PIGS

The young pigs are well developed at birth. Usually they will have their eyes open a few hours after birth and they are fully covered with hair. In case the sow dies, the young pigs may be saved without too much difficulty. Do not try to feed the young pigs for the first 24 hours but keep them in a warm place. On the second day the pigs will usually eat if provided with some soft, palatable food. Rolled oats, fed in a saucer, can be used for the first few days. It may be necessary, however, to feed the young pigs on milk and orange juice for a few feedings to get them off to a good start. This can be done with a medicine dropper. A small amount of green feed must be fed within the first week.

Sows Isolated Before Young Born:

As the sow has only two nipples and very often the litters will exceed three or more in number, the weakest pigs should be hand fed for a few days. In a colony, a sow will often permit young pigs other than her own to nurse. For this reason, a sow should be isolated to an individual pen a few days before the young are born. In cases where the sow has only one pig or where all her pigs die at birth, the extra pigs from large litters can be given to her. She will usually care for them if she is in an individual pen. As soon as the litter is weaned, the male and female pigs should be separated and kept in different pens until they are marketed or reach breeding age.

FEEDING OF CAVIES

Feeding of Cavies differs from other laboratory animals in that they must have vitamin C in their diet. This can be supplied by the feeding of adequate amounts of green feed. Lawn clippings, cabbage, tomatoes, kale, carrots or any of the other garden greens should be a part of the daily diet. Under no circumstances should the animals go over a week without greens. Fall planted kale is one of the best sources of green feed for the winter months. A balanced ration of grain is required in addition to the green feed. For the person operating on a small scale or one just beginning, it may prove more economical and much more convenient to use some of the commercial rabbit feeds. Any of the complete rabbit pellets are adequate for both the breeders and the young. The requirements are about one ounce of feed daily. It is best to feed in the morning and to feed only the amount that the animal will clean up that day. The feed should be stored in a dry, mouse and rat proof bin.

If you do not desire to use a commercial ration, the following grain mixture may be used:

- 2 parts of whole rolled oats
- 2 parts of whole rolled barley
- 2 parts protein supplement such as linseed, soybean or peanut meals
- Cut alfalfa or other legume hay
- Green feed

A salt pool should be in the pen at all times.

DISEASES OF CAVIES

The cavy is susceptible to many diseases. This fact has made it even more useful as a laboratory animal. This fact must also be kept in mind when raising them, as their susceptibility to disease adds to the hazards of the industry. Prevention of disease is primarily a matter of sanitation. The pens, feeding crocks, and drinking vessels must be kept clean at all times. Cavies are susceptible to many of the paratyphoid organisms, thus, contamination of their pen by rats, mice, and other animals, as well as birds, must be avoided. Pneumonia is also common in cavies, but can be prevented by avoiding drafts and dampness of the quarters.

There are some parasitic diseases of cavies, but these can be prevented by proper sanitary measures. Frequent changing of the litter and cleaning of the drinking and watering vessels will do more toward the elimination of disease than any amount of medication of the water or spraying of the pens. If a deodorant or disinfectant is desirable, the chlorine products are the best for this purpose. The ordinary laundry bleach is satisfactory for use in disinfecting the crocks or scrubbing the floors. Cresota products should not be used in pans or for cleaning vessels.