A hutch that rabbits want

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Introduction

The design of rabbit hutches has seen considerable improvements over the years from a simple rectangular cage and night box to a complex two-storey hutch filled with toys, ramps and hiding places. Enriching the hutch environment is beneficial to the welfare of the animal and results in a more contented and manageable pet.

Rabbits are commonly kept as pets and are useful laboratory animals. In a household situation, their management, including feeding and housing requirements appears straightforward - kitchen scraps, water and a simple rectangular hutch seems to suffice. However, by altering certain features, the immediate environment can be considerably enriched and provide the rabbit with a more interesting abode. Knowledge of the natural habitat of wild rabbits and observing their behaviour in a captive situation can be helpful aids to enriching their environment through improvements to current hutch designs.

Conventional rabbit hutches

Rabbit hutches traditionally consisted a rectangular cage with one end enclosed to act as a refuge and night house. The dimensions of the cage and position within a backyard varied according to the availability of space.

Enriched rabbit hutch designs

Endeavours to enrich the hutch environment have included provision of various toys and additions to the hutch design itself. By creating a more complex environment, rabbits in multi-animal enclosures experience less aggressive interactions between individuals. Hubrecht, Beeston, Cubitt, Gunn-Dore, Grey, Hawkins, Howard, McBride, Moore, Ostle, Wickens, der Weduwen and Wills (1999) supplied rabbits with artificial warrens in the form of clay pipes. They also constructed shelves within the cage and provided objects for concealment in multi-rabbit pens so that contact between individuals was minimised. The level of aggression between rabbits was markedly reduced in the enriched cages while dominant individuals principally utilised the shelves. Rabbits engaged in play behaviour when wire balls were introduced to the cage with less stereotypical behaviour (seen before enrichment) being observed. Hubrecht et al. (1999) concluded that the quality of the space rather than the quantity is the factor to consider when constructing housing for rabbits.

Enriching the environment by increasing the area available is another aspect that requires consideration when housing rabbits. Hansen and Berthelsen (2000) and Gerson (2000) compared the levels of stress and content in rabbits housed in conventional and enriched hutches. Hansen and Berthelsen (2000) placed rabbits in enriched cages that contained a shelter box and raised height at the back of the cage. The behaviour of the rabbits was observed and the time spent performing each behaviour was used to indicate the level of restlessness and stress. Rabbits were also placed in an open-field arena and observed for behavioural elements and stress levels when recaptured. Hansen and Berthelsen (2000) reported that rabbits from the enriched cages changed behaviours less frequently, performed more active movements (such as jumps), exhibited fewer abnormal behaviours such as bar-biting and gnawing and were less timid and stressed when recaptured in the arena. They inferred from these results that rabbits from enriched environments were less restless and stressed and coped better with changes to their surrounding environment.

Rather than using the box as a nesting site, rabbits in the enriched cages were inclined to use it as a platform to survey their surroundings during a disturbance (Hansen and Berthelsen, 2000). They also tended to settle down quicker post-disturbance than rabbits in conventional

cages, perhaps due to their advantaged position and ability to evaluate their surrounds. In the wild, rabbits will rear and use natural rises to gain a better view of the landscape (Gibb, 1993), thus the box may mimic a 'natural' situation.

Gerson (2000) created an enriched environment by joining two traditional cages with a ramp, increasing the size of the hutch in a vertical direction rather than horizontal. Individual behaviours were summed to determine the overall demeanour of rabbits in traditional and modified hutches. Rabbits were thus assessed as being contented, discontented or neutral. Each rabbit was housed in both traditional and modified cages over the course of the experiment. Their results indicated that rabbits were more content while in modified cages. The modified cages create not only a more complex environment but may also represent an increase in escape routes and thus security for the rabbit.

Increasing the height and length of the cage will enable the rabbit to rear and jump with less inhibition. The length of the cage should be at least three to four times the length of a rabbit bound. However the longer the cage the better (Gerson, 2000; WCVH, 2000; Parsons, 2001a). The height of the cage at any point should accommodate a rearing rabbit with its ears pricked (WCVH, 2000). Provision of sufficient room to move gives the rabbit more freedom, but increases bone strength and prevents skeletal and spinal abnormalities (Lehmann, 1984 and Weiser, 1984 cited in Gerson, 2000; Drescher, 1992 cited in Hansen and Berthelsen, 2000).

General hutch features and placement in the backyard

The hutch should be situated in a sheltered, low humidity position out of direct sunlight and drafts (Parsons, 2001b). It should be well ventilated to prevent respiratory problems and build up of heat. The cage should be constructed with a mesh small enough to prevent cats and dogs from touching the rabbit and an insect-proof screen to protect the rabbit against mosquitoes carrying myxomatosis (Burkes backyard, 2000). The hutch should not be positioned near standing pools of water that may be potential breeding areas for mosquitoes. A timber night box is desirable since metal boxes get too hot in summer and too cold in winter. Bedding, such as hay, organic matter and newspapers, can be placed in the night box and changed when required. Rabbit manure needs to be removed regularly; the whole hutch can be hosed out once a week (Burkes backyard, 2000).

Slatted plastic floors or solid floors are easiest on the rabbits' feet (Parsons, 2001a) although a thick bedding of hay, a towel or board will suffice. Any area where the rabbit could potentially harm itself, such as gap in the flooring or under ramps, needs to be covered appropriately. Shelves can be added to allow the animal to rest, play and observe the surroundings (Parsons, 2001b). A sturdy outer exercise yard can provide the rabbit with greater freedom and a chance to explore outside the confines of their cage. Water and feed bowls should be stable and cleaned regularly. If possible, attachment to the cage mesh is desirable.

Conclusions

Careful consideration when preparing a rabbit hutch can ensure that the rabbit has an interesting, comfortable and safe environment. Providing the rabbit with multiple objects, particularly those imitating 'natural' conditions can reduce levels of stress and restlessness and create a more contented animal.

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