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Behavioural Abnormalities in Farm Animal

Dr. Mukesh Kumar Swami[1*], Dr. Abhishek Singh Tomar[1], Dr. Dileep Singh[1], Dr. Dharam Navadiya[1], and Dr. M. M. Islam[2]
[1]M.V.Sc. Scholar, Department of Livestock Production Management, College of Veterinary Science & A. H., Kamdhenu University, Anand, Gujarat, India
[2]Associate Research Scientist and Head, Pashupalan Sanshodhan Kendra, VASREU, Kamdhenu University, Ramna Muvada, Gujarat, India

Abstract: Behavioural disorders in farm animals are complex problems that affect farm profitability, production, and animal welfare. Genetics, the environment, managerial techniques, health problems, and social interactions are a few of the variables that might cause these disorders. In-depth discussion of common behavioural problems in farm animals is provided in this review, which covers topics such as aggression, pica, stereotypical behaviours, cannibalism, isolation, fearfulness, tail biting, feather pecking, and repetitive movement disorders. To promote the welfare of farm animals and maximise farm productivity, it is imperative to comprehend the underlying reasons of these behaviours and put suitable prevention and management techniques into place.

Keywords*:* livestock, farm animals, behavioural disorders, welfare, prevention, management

Introduction

A key component of the systems that enable animals to adjust to their physical and social environments is behaviour. Animal behaviour encompasses all an organism's interactions with its physical surroundings and other creatures. While some behaviours are learnt, others are innate. Common vices of farm animals include rolling their eyes, licking their lips, sucking, inter-suckling calves, inter-suckling adults, pulling wool, eating wool, rubbing their heads, kicking, and sucking and eating solid items. The two most frequent causes of all vices are poor eating habits and physical inactivity. One of the most frequently used indicators of unsatisfactory welfare in agricultural animals is stereotypes. Stereotypies appear to develop because of stress as well as the incapacity to carry out certain crucial activities that are exclusive to a species. Behaviour disorders differ depending on the species and circumstances.

Behavioural abnormalities in large ruminants

The most typical stereotyped behaviour in cattle is tongue rolling. After being weaned, calves demonstrated tongue play, including sticking their tongues into their nostrils and sucking and licking items that stuck out. Dairy farms may also witness heifers or cows self- or cross-sucking. To stop self-sucking, several surgical methods are employed. These methods consist of ventral and lateral glossectomy. Dairy farms also sometimes witness inter-sucking, which is the practice of an individual animal touching another member of the group in the udder area with its mouth. Breeds may have an impact on inter-sucking in cows. Inter-sucking in cows may be influenced by breeds. Amount, availability and balance of concentrate and roughage also influence inter- sucking (Lidfors and Isberg, 2003). Calves are most commonly prevented from cross-sucking by being housed in separate housing systems. Cow inter-sucking can be prevented by attaching an anti-self-milker or bull ring on the cow's muzzle. Another way to deter cows from inter-sucking is to tether them. Other strange behaviours exhibited by cattle include biting, chasing, butting, rubbing up against objects, cleaning the ground and equipment, and bar biting. Loose housing was less likely to witness bar biting than the tie-stall. Another possibility is a mineral deficit.

Behavioural abnormalities in small ruminants

- **Sheep:** Wool biting in sheep is very common on farms. It is also known as "wool pulling," "wool eating," or "wool chewing." Wool biting is common in a stressful setting, and releasing these animals to the pasture often lessens this odd activity. Overcrowding in an intensive system can produce stressful situations that cause sheep to bite their wool. Mineral or salt deficiencies may cause aberrant behaviour in sheep. Increasing fibre in the diet may lessen the likelihood of wool biting in

sheep. Wool chewing can cause alopecia, wool damage, anorexia, stunted growth, pica, and emaciation. Sheep's may develop hair balls in their stomachs due to their inability to digest wool. Homosexuality is an unusual behaviour in sheep that affects up to 30% of all rams. Ewes can kidnap others' lambs before their own parturition and then reject their own when it is born. Self-suckling is demonstrated in goats that abort late in pregnancy. Sheep may abandon or neglect their offspring. Ewes that consume a low protein diet may abandon their progeny.

- **Goat:** Goats exhibit abnormal behaviours such as butting, fence jumping, pica (eating non-food items), udder sucking, biting, and chewing. In goats, early weaning, boredom, or stress conditions enhance Udder sucking. goats sucking on the udders of their pen mates, which can cause mastitis and reduced milk production. Proper weaning practices, environmental enrichment, and separating affected animals (Luginbuhl *et al.*, 2000). Goats may develop the habit of biting or chewing on their pen mates or other things in their environment, causing injury and damage. such behaviours develop due to boredom, stress, or teething in young goats. Goats are recognised for their agility and curiosity, which frequently lead to behaviours such as fence jumping around. This can lead to escape and injury. such behaviour due to Boredom, inadequate fencing, lack of forage, or desire to explore. this behaviour corrected by Providing higher and more secure fencing, environmental enrichment, and adequate forage (Jorgensen *et al.*, 2007). Butting is a normal behaviour in goats that helps to establish dominance and order among the herd. However, severe, or violent butting can result in injuries to both goats and handlers.

Behavioural abnormalities in swine

Tail biting is common in captive pigs. Tail biting is most often caused by overcrowding and boredom. Pigs may bite their tails in response to unpleasant or stressful situations on the farm. Tail biting outbreaks can also emerge because of respiratory disease and lameness in a pen. Pigs are more likely to bite their tails during warm and humid conditions. Pigs are more likely to bite their tails on slatted floors with no bedding, low salt diets, and low iron soil. Tail biting is common among growing pigs kept in confinement. Tail biting can cause haemorrhages, leading other pigs to nibble on the wounded tail. Infection in the wound might lead to abscess formation. Breeds such as Landrace are more prone to developing this unnatural tendency of tail biting. Amputation of the distal part of the tail (tail docking) has become a common approach for preventing tail biting in pigs. Tail-biting can be regulated by removing individuals from a group. Reducing stocking density can prevent tail biting in pigs. Sham chewing is also observed in pigs on farms. Pigs in this condition exhibit jaw motions but no food in their mouth. This disorder results from the lengthy confinement of sows in stalls. When all the food has been consumed, the jaw moves rapidly. It can be avoided by providing straw and sawdust for sowing. Primiparous gilts are more likely to engage in cannibalism. This happens when a sow is stressed after giving birth. Farrowing boxes have been shown to effectively reduce cannibalism. Sow behaviour stereotypes include bar and tether biting. It can be avoided by making straw or sawdust available for sowing. Early weaned piglets may display belly-nosing. It is mostly seen in piglets that are weaned before 21 days of age (Gardner *et al.*, 2001). Belly-nosing is the repeating rooting motion on another piglet, comparable to stroking a sow's udder. It can cause lesions on the recipient piglet. It may be linked to hunger. It can be avoided by feeding straw to the piglets.

Behavioural abnormalities in equine

Horses frequently exhibit aggressive behaviour such as chasing, neck wrestling, kicks, bites, and other threats. The most prevalent stereotypic behaviours reported in horses include crib-biting, wind sucking, weaving, stall kicking, pawing, head shaking, wood chewing and polydipsia. Suboptimal environments, stress, inadequate food, and infections can all contribute to these tendencies.

Cribbing involves the horse grasping an object in the stall (e.g., water bucket, stall door), flexing its neck and sucking air into its pharynx. Wind sucking involves the same set of actions, with the exception that the horse does not actually hold a stationary item. Some horses will aspirate and swallow air. A wind sucker strap helps avoid wind sucking. Feeding highly appetising foods, such as grains and molasses, has been linked to cribbing behaviours. Crib biting can cause hay indigestion in horses due to reduced saliva production. It may also cause stomach ulcerations and colic in horses. The upper jaw's incisor teeth show symptoms of severe wear. Horses fed a diet high in grains and poor in grass are more likely to exhibit crib biting. Crib biting in horses can be avoided by using a hinged collar that prevents the horse from arching its neck by exerting pressure to the throat, oesophagus, and poll. Using straw bedding and a

fibre-rich diet may help minimise crib biting in horses.

Stall walking and weaving are also common in confined horses. Weaving is the horse shifting its weight from one front leg to the other and a lateral movement of the head and neck that typically happens before eating. Weaving happens when confined horses anticipate an exciting or stressful event but are unable to exit their confinement. Mirrors and window access can lessen weaving among horses. Wood chewing occurs when a horse eats on wooden surfaces such as fences or stall walls. This behaviour can cause property damage and splinter intake, both of which can cause stomach problems. Wood chewing abnormalities occur due to Nutritional deficiencies, boredom, and lack of forage. Tail rubbing involves the horse rubbing its tail against objects, which can lead to hair loss and skin irritation.

Behavioural abnormalities in poultry

Chickens commonly exhibit aggression and feather pecking (plucking). They may be linked to congestion, stress, and competition for resources like food. Cannibalism is also observed in hens due to a lack of fibre in their diet. Feather pecking is most common in birds fed a pelleted or crumbled diet. Methionine a lack can cause feather picking in hens. Some odd behaviours observed in birds include egg eating, litter eating, and head shaking. Egg eating occurs when hens eat their own eggs or those of other hens. This behaviour affects egg production and, if not treated swiftly, can become a long-term problem. Nutritional inadequacies (especially calcium and protein), overcrowding, insufficient nesting sites, and boredom. Toe and beak pecking involves birds pecking at the toes and beaks of their flock mates, leading to injuries and stress. Vent pecking occurs when birds peck at the cloacal area of another bird, which can result in severe injury and illness. Overcrowding, nutritional inadequacies, and environmental stressors can all contribute to this type of pecking behaviour.

Conclusion

Behavioural abnormalities in farm animals present significant challenges to animal welfare, farm productivity, and overall profitability. These behaviours, ranging from aggression and pica to stereotypical actions and cannibalism, are often indicative of underlying issues related to genetics, environment, management practices, health problems, and social interactions. For large ruminants such as cattle, behaviours like tongue rolling and inter-sucking can be mitigated through proper housing, dietary adjustments, and, in some cases, surgical interventions. In small ruminants like sheep and goats, addressing wool biting, udder sucking, and fence jumping involves managing stress, improving diet, and ensuring adequate space and enrichment. Swine exhibit behaviours such as tail biting and sham chewing, which can be controlled by optimizing environmental conditions, reducing stocking density, and providing suitable materials for exploration and rooting. Equine vices like crib-biting, wind sucking, and weaving require interventions that include dietary adjustments, environmental modifications, and, in some cases, the use of physical restraints or behavioural training. Poultry behaviours such as feather pecking, cannibalism, and egg eating highlight the need for proper nutrition, reduced stress, and adequate space to prevent overcrowding. Providing appropriate environmental stimuli and addressing nutritional deficiencies are crucial steps in minimizing these vices. Ultimately, improving animal welfare not only benefits the animals themselves but also enhances farm productivity and sustainability. Continued research and the development of innovative management practices will be essential in addressing these behavioural abnormalities effectively and promoting the overall health and well-being of farm animals.

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