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Monitoring the various type of animal behaviour in dairy farm

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The concept of animal behaviour is everything doing by the animal, including movement and all other activities. It is characteristics for assessment of health and welfare of animal. Animal behaviour consists of all the activity of animal interacts with other organisms and the physical environment. Change in the activity of an animal in response to a stimulus both external and internal cue. To fully understand a behavior, we want to know what causes it, how it develops in an individual, how it benefits an organism, and how it evolved. There are two main type of animal behaviour that is innate and learned.

Innate behaviour

The innate behaviour is the result of genetically inherited and hardwired into animal from birth. Innate behaviors are show automatic response to external stimuli.

learned behaviours

These behaviour are learn in life not genetically inherited, not hardwired into the individual organism from birth. Learned behaviour is dependent on various environmental and social factors. There are four types of learned behaviour:

1. Habituation:- learned behaviour that occurs when an organism ceases to react to a given stimulus the way it normally would, due to repeated exposure.
2. Imprinting:- This is a behaviour that is usually learned early in life and often involves infants and their parents
3. Classical conditioning:- Which was made famous by Ivan Pavlov's experiments with dogs, occurs when a reaction to one stimulus becomes associated with another, unrelated stimulus due to conditioning.
4. Operant conditioning:- Which occurs when a certain behavior is reinforced or discouraged through rewards or punishments.

Systems of behavior

A group of behavioral patterns with a common general function comprises a behavioral system. It differs from species to species and animal to animal. There are nine behavioral system of animal.

1. Ingestive behavior
2. Eliminative behavior
3. Sexual behavior
4. Care-giving and care-seeking behavior
5. Agonistic behavior
6. Allelomimetic behaviour
7. Gregarious behavior
8. Shelter- seeking behavior
9. Investigative behavior

1. **Ingestive behavior:** - It consist feeding and drinking behaviour of animal. It is a complex process that includes psychological factors, neuronal mechanisms, metabolic processes and gastrointestinal mechanisms that convey neural and humoral signals to the central nervous system. It directly linked to physiological and anatomical systems of animal. variation in grazing behavior may involve differences in the ability to forage offer, frequency of drinking, time allocated to grazing, eating rates, heat tolerance, and shade-seeking behavior.
   - A hunger system comprises:
   - Perceptual mechanisms for recognizing food
   - Central hunger mechanism for integrating causal factors for eating and coordinating necessary movements

- Motor mechanisms for locating and integrating food
- Feeding behavior of different animal.
  - Young –suckling, Birds - pecking, Later – species specific
  - In cattle wrap tongue around grass then jerk their heads forward so that grass is cut by lower teeth due to lack of upper incisors
  - Sheep graze –closer to ground
  - Goats –like sheep but also browse
  - Ruminants –Regurgitate/ruminate
  - Horses: Teeth in upper and lower jaws –bite off grass or take a mouthful of grain, then chew and swallow it
  - Pigs: Teeth in upper and lower jaws: rooting

2. **Eliminative behaviour**: Eliminative behaviors of farm animal linked to the ecology. This behaviour includes frequencies and distribution over time and space for urination and defecation in surrounding. Normal defecation stance for both male and female: tail is extended away from the posterior region, the back arched and the hind legs placed forward and apart. The eliminative behaviour of dairy animal is important for animal welfare and pertains to excreta waste management. During the 24 hr daily cycle, cattle normally urinate about 9 times and defecate 12-18 times.
3. **Sexual behaviour**:- Sexual behaviors related to the attractivity, proceptivity and receptivity of females, as well as physiological and environmental factors that affect both male and female sexual behaviour. Attractivity refers to the female's stimulus value in evoking sexual responses by the male. Proceptivity is different reactions by the female toward the male which constitute her assumption of initiative in establishing or maintaining sexual interaction. Receptivity is defined in terms of female responses necessary and sufficient for the male's success in achieving intravaginal ejaculation. Sexual behaviour is more intense on pasture or range than under the confinement. Captivity has the effect of producing many distortions of sexual behavior.
4. **Care giving (**Epimeletic**) and care seeking (Et- Epimeletic) behaviour: -** it is also known as Epimeletic and Et-epimeletic behaviour. This behaviour is important for the welfare and survival of the offspring. Young animals cannot function independently of their parents. They largely confined to females, so called maternal behavior. Every species young has its own cry to call for help when isolated or in trouble.
   Intensification –offspring removed from parental care earlier and earlier –Calves within 3 days, result –modern farming practices do not focus on mothering ability during genetic selection
5. **Agnostic behavior: -** This includes fight, flight and other reactions associated with divergence. Normally this behavior is biggest problem in animal production systems. Males tend to be more aggressive during mating season, castrated at an early age. Territorial animals show agnostic behavior so as to ensure sufficient space between individuals and herds. Controlled in production systems to maintaining males in single herds

Species difference:

- Bulls: paw the ground & bellow, Putting heads together and butting, Different mature bulls –fight (hierarchy)
- Sheep-_Rams backing off and charging, Butting (dangerous)

6. **Allelomimetic behavior :-** Mutual mimicking behavior (group-coordinated behavior). Two or more animals do the same thing at the same time that is graze together, walk together, run away together etc. Two important functions: –Maintains integrity of the social group, gives safety to the group, Animal eat more in groups. Herd animals more calm in groups than on won. Allelomimetic behaviour will under certain conditions result in social facilitation.
7. **Gregarious behavior**:-
   - Flocking or herding instinct of certain species.
   - Closely related to allelomimetic behavior
   - Differs among species
   - Within species: Breeds
   - Roam in large groups
   - Small groups within
8. **Shelter-seeking behavior**
   - Most animals will seek an environment where they are comfortable
   - Cover under trees, sheds, shade cloth
   - Sheep use each other –can smother is in too large groups
9. **Investigative behavior**
   - New environment is investigated differently by different species
   - Some species make use of smell, other use vision

- Important to give animals opportunity to first explore their environment before working with them
- Weaning shock in young animals can be minimized by rather moving the mother to a new environment

Conclusion

It can be concluded that fully understand the behaviour of animal to predict animal comfortness and welfare. Feeding behavior is a series of decisions about how to behave so as to find, ingest and digest food. Docile animals yielded significantly more milk per milking, with the best milking ability in the shortest milking time.

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