

Mini Review

Environmental conditions and animal’s welfare from the perspective of animal science

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ABSTRACT:

The aim of this review is studying environmental conditions and animal welfare from the perspective of animal science. The welfare of animals is the quality of life that the animal thinks to it. Animals develop cognitive- emotional systems of welfare needs to confront variable environment. Animal scientists consider animal feelings and the ability to cope with the environment as animal welfare. The role of Rancher’s behavior in livestock welfare and productivity has received serious attention from researchers in recent years, because rancher’s behaviour and interactions have considerable effects on livestock’s behavior, welfare and productivity. Therefore understanding the behaviour of rancher’s and the factors that contribute to this behaviour are necessary. The results indicated that when the relationship between human and animal improves, welfare and productivity level in animal increases in a way that the quality of Rancher’s behavior has considerable impact on welfare and productivity level of animals under their care.

Keywords:

Animal’s welfare, rancher’s behavior, rancher’s intention, animal sciences.

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Article Citation:
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Environmental conditions and animal’s welfare from the perspective of animal science
Journal of Research in Biology (2016) 6(8): 2142-2148

Dates:
Received: 08 Sep 2016 **Accepted:** 20 Nov 2016 **Published:** 01 Dec 2016

Web Address:
[http://jresearchbiology.com/
documents/RA0635.pdf](http://jresearchbiology.com/documents/RA0635.pdf)

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INTRODUCTION

Life network is organized in a way that the life of any creature has unbreakable bond with the life of other creatures and any unconscionable interference in this network challenges the survival of generations of all creatures including human. On the other side of this cyclic human performance not only leads to destruction of forests and pastures but also confronts species of animals with the challenge of extinction and destruction. According to UN environmental specialists every day the generation of more than 50 kinds of animals and plants becomes extinct on earth. According to the research conducted by this department, industrial development is considered the most important factor of destruction of living creatures generation on earth. Nature system is organized in a way that cleaning up many contaminations is done through animal species, therefore the lack or decrease in their numbers disturb natural cleaning system and as a consequence it is considered a threat to the health of mankind and it is necessary for the world to take considered measures. Animals are one of the most important ecosystems that their rights have attracted environmental advocates more than any other entity.

Organic agriculture is an agricultural system in which environmental, social, economic aspects, sustainable production, food, clothing and wooden products are improved. In organic agriculture by using plants, livestock and environment features the quality of agricultural system and environment are protected and improved (Dinpanah and Akhavan, 2014).

Common standards of organic agriculture state that an important and principled goal of organic agriculture is giving all life conditions to animals with respect to fundamental aspects of intrinsic behaviors in them and it is stated as a general principle in organic animal husbandry that all livestock breeding and management techniques should be accompanied by animal health and welfare. Therefore animal's welfare is

an important issue in organic agriculture. On the other hand animal's welfare concerns in organic agriculture are in ecocentric ethics framework. Ecocentric ethics assign values to environmental system, biodiversity, and existing species in the environment compared with people in the system (Lund *et al*, 2004). In fact choosing ecocentric ethics support existing concerns in organic systems and it reveals potential problems of animal's welfare (Lund and Rocklindsberg, 2001).

Animal's welfare concerns in organic agriculture in ecocentric ethics framework is based on the fact that farm animals are part of human societies therefore humans have a series of obligations and moral duties to animals that they must do. Actually in ecocentric point of view humans are in a perspective that they are only one of the species with high population in the ecosystem and they don't have more benefits than other species and this point of view creates a moral agreement between farmer and animals that causes animal's welfare. Different people propose different definitions of farm animal's welfare. For instance Aton considers welfare in five kinds of rescues, rescue from hunger and thirst, rescue from suffering and discomfort, rescue from pain, hurt and disease, rescue from displaying normal behavior and rescue from fear and anxiety (Carenzi and Verga, 2009).

Broom regards health as an important and important part of animal welfare. In 1991, he also found poor welfare indicators in reducing life expectancy, impaired fertility, reproductive disorders, body injury, disease, immunosuppression, adrenal gland activity, and adrenal secretion (Broom, 1991).

When scientists looked at a variety of animal welfare issues, they prioritized the spectrum of physiological and behavioral indices in animal welfare, and on the other hand, researchers believe that welfare implies conditions that are provided by humans for animals. Doubtlessly, the closest people to farm animals are livestock breeders and livestock keepers are largely responsible for the care and maintenance of their

livestock, on the other hand, human interactions have had significant effects on the behaviour, physiology and productivity of livestock. Hence, the role of farmers in the field of welfare and farm productivity has been considered in recent years.

In the recent years, livestock production had been under great pressure from the society to prevent inappropriate outcomes in livestock breeding (for example, abusive behavior in slaughterhouses in the United States), and to evaluate and improved animal production methods (Place and Mitloenhher, 2014).

It leads the movement of animal rights to a rapidly developing. One of the important achievements of this movement is the issue of environmental and animal welfare, which ultimately led to significant changes in the European rules of animal husbandry. The welfare of animals is a concept that has been interpreted differently, and so its precise and scientific definition is simply not possible. As an example, citizens and ordinary people consider animal welfare as having a natural life on the animal, which this normal life means being able to move freely and gain access to pasture for the animal (Boogaard *et al.*, 2008).

Animal Scientists believed that animal welfare is on animal emotion and ability to cope Animal welfare is to do with emotional state experienced by animals: the nonappearance of strong negative emotions, normally called suffering, and (perhaps) the occurrence of positive feelings, for the most part called joy. In any evaluation of welfare, it is these emotions that ought to be assessed. Since feelings are subjective, they can't be investigated straightforwardly. In any case, there are various techniques by which animals can be 'asked' what they feel about the conditions under which they are kept and the processes to which they are subjected. These strategies include preference tests, trailed by motivational tests to evaluate how critical the animal's decisions are. Estimations of debilitated biological functioning, particularly those connected to decreased

health and expanded physiological anxiety reactions, can give great confirmation of goodwill. Reducing the welfare of the livestock not only reduces the daily weight in breeding pigs and the amount of milk in barley cows but also reduces reproduction. Welfare also improves egg production in chickens, improves growth in pigs, improves milk production in cows, and improves meat production in calves. In contrast, violent behaviour with milk cows has increased fear in cows and ultimately led to a reduction in their milk production. Researchers believed that negative human behavior with livestock causes their anxiety and fear for humans and this stress disrupts livestock growth and yield. Therefore, the observance and livelihood of livestock are economically important and valuable.

Since the ranchers are close to livestock, whereupon, their role in the field of farm animal welfare and productivity has been seriously addressed in recent years. Providing additional, gentle contacts by the stock-person to veal calves leads to an improvement of the human-animal relationship; gentled calves showed less fear, as evidenced by more approaches toward, and less avoidance of, the stock-person and unfamiliar people. In addition to the monetary importance, there are animal welfare considerations for decreasing the occurrence of mastitis, as it is hurting for the cow. From the farmer's perspective, knowing that production animals are suffering may significantly compromise personal happiness and the legitimacy of farming, thus bringing consequences beyond the purely economic effects. Dairy farmers are considered as an important human element in the health, well-being, breeding, and management of farm animals.

On the other hand, the decisions of livestock breeders to select breeding systems affect livestock behavior. Decisions on the welfare of farm animals and the determination of living conditions for farm animals are crucial for understanding farmers' decisions and their behavior in the field of animal welfare (Hansson and

Lagerkvist, 2014).

The relationship between farmers' perceptions and animal welfare

Researchers consider the main factor in conducting a behaviour as a person's intent to do that. The intent is a motivating factor that influences behavior (Yazdanpanah *et al.*, 2014). Many researchers have noted that attitudes and empathy of farmers are expected to impact human-animal-interaction, thereby disturbing their deeds towards animals. Farmers' attitudes will also affect dairy cattle management and consequently relate to production and health of the animals. Farmers who want to improve and safeguard animal welfare could benefit by improving how animals are managed. Previous researches suggested a relationship between attitude and behaviour of livestock breeders as well as between their behavior and management decisions (Kielland *et al.*, 2010).

Farmers attitudes about livestock are the strongest predictor of their behavior; in other words, their attitudes toward the intent of their livelihoods and then the determination of human behavior in dealing with animals. Colmen *et al.* (2000) showed that farmers 'attitudes towards pigs would predict cattle breeders' behaviour towards pigs. People with negative attitudes toward pigs are more likely to be harassed by those with positive attitudes.

Aims to perform practices of various types can be anticipated with high precision from attitude towards behaviour, subjective standards, and observed behavioral control; and these goals, together with impression of behavioral control, represent huge variety in real behaviour. Mentalities, subjective standards, and observed behavioral control are appeared to be identified with suitable arrangements of behavioral, normative, and control convictions about conduct, yet the correct idea of these connections are as yet dubious (Ajzen, 1991).

Ethical norms also determine the intention and behavior of livestock breeders to provide animal welfare.

Dairy farmers have a clear ethical commitment and a clear responsibility to prevent animal suffering and the perceived ethical perception of a long-term behavior has been implicated as a decisive factor in behavior. State of mind towards behavior, individual standards with reverence to the performance and observed control over the behavior are frequently found to guess behavioral intents with a high degree of accurateness. In sequence, these intentions, along with perceived behavioral control, can account for a significant quantity of modification in behavior.

Godin *et al.* (2005) showed that participants whose intents were more aligned with their moral norm, more likely to behave, compared with those who had intentions more aligned with their attitude. Still, more investigation showed that this moderation outcome was only present when members interpreted the behaviour in moral terms (Godin *et al.*, 2005) .

Another factor that can affect the behaviour of livestock breeders is judgment or belief in the probable consequences or outcome of behaviour; because people refrain from doing behaviours that have no incentive for them. People perform behaviours that give them a sense of satisfaction and self-esteem and refrain from behaving with dissatisfaction. In fact, if everything is equal, one will choose behaviours that will maximize the positive results and minimize the negative outcomes. Physical results include delightful and haphazard effects, material losses, and expected benefits from imagery. Reducing the welfare of the livestock not only reduces the daily weight in breeding pigs and the amount of milk in barley cows but also reduces reproduction. Welfare also improves egg production in chickens, improves growth in pigs, improves milk production in cows, and improves meat production in calves. In contrast, violent behavior with milk cows has increased fear in cows and ultimately led to a reduction in their milk production (Lensink *et al.*, 2000).

The rancher's identity himself is another reason

for influencing his behaviour. "Self-Identity" which is recognized as a pivotal factor in both psychology and sociology, refers to distinguished aspects of individual himself. Self is a set of identities of a role that a person takes on the role of social structure. Therefore, in general, their identity is a label that people use to describe themselves as well as a vital factor influencing individual behavioral intentions (Cook *et al.*, 2002).

In fact, his identity refers to how much a person observes behaviour as an important part of his own self-concept. In the context of animal welfare, self-identity points to a personal opinion about what the personality and the existence of a rancher entails.

The social cognition theory

The theory of social cognition provides a theoretical framework for understanding psychological mechanisms that affect human thoughts, emotions, and behaviour. The theory of social recognition explains how people gain and sustain behavioural patterns. This theory is one of the broadest theories used to change behaviour. The theory of social cognition is characterized by individual, behavioural and environmental factors that affect human behaviour. In this theory, individual factors influence self-efficacy that affects behavior.

Behavioural factors include primary and long-term goals, while environmental factors consist of barriers and supporting factors. In this theory, the behaviour is not only influenced by experience, but learning would be accomplished through observing others' behavior of others. The central core of constructing the theory of social cognition is self-efficacy. Self-efficacy is defined as one's confidence in doing a particular behaviour (Ramirez *et al.*, 2012).

Bandura argues that if people believe they can deal with a problem, they are more likely to feel more committed to doing things. Considering social support and obstacles behaviors are influenced by environmental factors. Social support is linked to how would others assistants facile and influence certain behaviors.

Environmental barriers, such as personal, social and structural constraints, are direct barriers to behavioral change, and in fact, more barriers are much likely to engage in behavioral change. Simplifying factors and obstacles are among structural factors that are included in the social aspects of the theory of social theory and potentially predict both goals and behavior.

Barriers also include factors that affect welfare behaviors for livestock by the rancher and lead to rancher's avoidance from behaving. Accordingly, Figure 2 wholly demonstrates the theory of social cognition (Thogersen and Gronhoj, 2010).

The idea of natural behaviour is a key component in animal welfare. It stresses that animals, notwithstanding minimum enduring, need positive encounters. Natural behaviour in the scientific system translates the welfare evaluation that natural behaviour can be perceived as a behaviour that animals tend to show in natural conditions on the grounds that these practices are agreeable and advance biological function. The welfare of animals is the quality of their life. Animals have created psychological emotional systems of "welfare needs" to manage an evolving environment. Animals don't have just physiological needs, for example, the requirement for food, water, and warm solace. They additionally need to play out certain natural behaviours, for example, looking for or settling in pigs, and scratching or dripping for chickens. All needs should be considered keeping in mind the end goal to survey public welfare. Fulfillment and dissatisfaction can be measured by logical data about seriousness, span, and rate of performance measures (welfare) for example, behavioral estimations or pathologic physiology. The positive welfare esteem relates with the behaviour of animals in characteristic conditions, in priority tests and consumer tests. Negative welfare values is identified with stretch, disappointment, anomalous conduct, hostility and diminished wellness. stress, frustration, abnormal behavior, aggression and reduced fitness.

CONCLUSION

Studies showed that when the relationship between humans and animals improves, the level of well-being and productivity in the animal actually increases in such a way that the quality of livestock breeders has a great influence on the welfare and productivity of animals under their care. If the farmer realizes that carrying out activities that increase the wellbeing of the animals will be easy for him, he will have a greater intention for the welfare of his livestock. When a farmer thinks that livestock welfare activities are an important part of his livestock livelihood, he has a greater willingness to deal with the welfare of the livestock. When the farmer predicts the results of improving livestock welfare and understands that welfare behaviours will also benefit the livestock owner more, he will have more intention on livestock welfare. Also, when the husbandman has a positive attitude towards the welfare of the livestock, he shows more about welfare behaviors.

The variables of cognitive attitudes and ethical norms of livestock breeders in relation to livestock welfare have a strong relationship with livestock's intention in relation to livestock welfare. Also, the results showed that livestock cognitive attitudes have a significant role in predicting the intention of livestock breeders in relation to livestock welfare in the theory of planned behavior.

SUGGESTIONS

Regarding the attitude of livestock breeders in their intentions, it is suggested to improve their attitude towards the welfare of their livestock by displaying films, installing posters and visiting livestock breeders. Considering the role of livestock breeders in their self-efficacy in livestock welfare, various livelihoods for livestock breeders can be made so that they can improve the welfare of their livestock by simply understanding behaviors.

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