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Judith Samson

Abstract

Ostriches farmed in Canada often have particular behavioral problems that are brought about by periods of extreme confinement during winter months. Although they still perform normal species specific behaviors such as twirling, kanteling, and kicking, abnormal behaviors become prominent when excessively confined. They include for all age groups of ostriches, feather-picking, behavioral stargazing, dietary indiscretion, pica, anorexia and adipsia, and aggression. These abnormal behaviors initiated by inadequate husbandry techniques, eventually become medical problems because of their severity.

Résumé

Problèmes de comportement des autruches élevées au Canada

Les autruches élevées au Canada présentent souvent des problèmes de comportement reliés aux périodes de confinement extrême auxquelles elles sont soumises au cours des mois d'hiver. Même si elles présentent les comportements caractéristiques de leur espèce, tels que tournis, galopades et ruades, les comportements anormaux deviennent plus marqués lorsqu'elles sont confinées à un espace restreint. Pour les autruches de tous âges, on note alors des manifestations telles que becquetage, tête fixe, écarts alimentaires, pica, anorexie, adipsie et agression. Ces comportements anormaux, reliés au départ à des techniques d'élevages inadéquates, se transforment éventuellement en problèmes médicaux à cause de leur gravité.

(Traduit par docteur André Blouin)

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Currently, there is an attempt worldwide to domesticate ostriches mainly for meat and leather by-products. Although some subspecies of ostriches have been domesticated for over a century in Africa to supply the feather market (1), other subspecies have lived in captivity for just over one generation. Some birds have adapted very well to such unnatural environments, as evidenced by their excellent growth and egg production. However, others have performed poorly, as shown by their stunted growth, difficulty in reproducing, and frequent injuries.

Ostriches raised in cold climates, such as Canada, should be selected for docility, calmness, and stress tolerance, in addition to sound production parameters, because of the required prolonged winter confinement. If ostriches are to become a viable agricultural alternative, they will have to be reared intensively in confined environments. These large birds have very particular physiological and behaviorial needs. Production on a large scale will only succeed if those needs are met.

This paper focuses on those behavioral problems most often encountered in ostriches raised under confined conditions in Canada. Ostriches exhibit several behaviors that are not observed in other livestock. These must be acknowledged and understood in order to interpret subtle variations in health status.

Normal behaviors

Normal behaviors pertain to activities of daily living, such as, communication, socialization, grooming, feeding, and sexual activities. They are normally expressed similarly by all members of a species.

Activity-related behaviors

Twirling

Twirling is a behavior in which an ostrich will twirl around, often until dizzy. This behavior is most often noticed in the morning when birds are let out of their indoor enclosures. Sick birds rarely twirl.

Thermoregulatory

In order to dissipate heat, birds will open-mouth breath and open their wings. They have no sweat glands. Conversely, to keep warm, birds will often bed down covering their legs with their wings. Interestingly, it has been anecdotally documented that birds will freeze to death outside, even though they have access to a warm barn. Hence the need to purposefully confine ostriches indoors during the winter.

Pecking

Pecking is a normal exploratory behavior in ostriches and is a predominant behavior in birds along with sitting, walking, eating, and drinking (2). It is, however, mainly an indiscriminate behavior with ostriches because they attempt to eat almost anything.

Grooming

Ostriches lack an uropygial gland thus feather preening is not a predominant behavior. Dust or sand baths are the preferred method of grooming in these birds.

Trembling

Trembling is a behavior that resembles shivering. It is often noticed in birds suffering from stress, such as, when cornered or transported. Thus, it can be a manifestation

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of anxiety and should not automatically be interpreted as an indication of hypothermia.

Social behaviors

Threat

In a typical threatening posture, the bird will stand tall with tail erect, hissing, wings slightly open, and feathers puffed up, especially around the neck. This behavior is usually noticed in juvenile and adult birds of both sexes, although most often exhibited by males.

Kick

A forward leg kick is most often performed by juvenile and adult birds, especially during the breeding season. It is an outward sign of aggression.

Vocalization

Two distinct sounds can be heard in an ostrich flock: distress calls and booming. A distress call, which is somewhat similar to that of a pigeon's prolonged throat call, is most often emitted by chicks in distress, such as, when they become separated from the flock or transported. Booming is a sound produced by mature males that serves to establish territorial boundaries and warn other birds to stay away.

Submission

An ostrich exhibiting submission will run away from an aggressive bird or drop to the ground without defending itself. An overly submissive bird paired with an aggressive one may die from stress, injury, and exhaustion.

Sexual behaviors

Clucking and fluttering

A breeding hen may express her physiological readiness to breed by emitting a clucking sound made by rapidly opening and closing her beak. Simultaneously, she may flutter her wings by dropping them low and forward, and vibrating them in sequence.

Kanteling

This is a typical male territorial behavior in which the bird drops to his hocks, and fans both wings forward and backward while hitting his head on each side of his spine.

Abnormal behaviors

Feather-picking

This is a behavior in which a bird will aggressively peck feathers from the back and tail area of penmates. It is often brought about by stress, overcrowding (5), boredom, and frequently follows a strong seasonal pattern in juvenile and adult birds, being most severe in winter months because of prolonged confinement. No repellent seems to be totally efficacious in stopping this behavior. Once a bird has lost significant amounts of plumage, it is usually best to put a blanket on its back to allow for feather regrowth and provide protection from the cold. In young chicks, a genetic component has been suggested for this behavior, as some hatchlings will start feather pecking when only a few days old.

Toe and face pecking

Excessive toe and face pecking can lead to mutilating wounds where entire eyelids are pecked out. This aberrant behavior is most notorious in young chicks. Although causes are unknown, it has been suggested that stress, overcrowding, and boredom are predisposing factors. It is imperative that aggressive chicks be removed from pens, as this behavior can become contagious. The aggressive chicks should then be placed with older and taller chicks that can run away unharmed.

Behavioral stargazing

In this aberrant behavior, a bird will continually lift its head up and back to the extent that it eventually touches its spine. The behavior is directly related to confinement. Severely affected birds will have difficulty walking, eating, and drinking, because of the abnormal position of the head. A diagnosis can be quickly confirmed by putting affected birds outside. If confinement stress is the cause, the head will be straightened up almost immediately. This type of stargazing should be differentiated from the one induced by thiamine deficiency reported in poultry.

This behavior occurs commonly in inadequate facilities where pens are too small and too dark. Affected birds should be allowed outside as much as possible, placed in larger facilities, and put on a sedative during severe bouts. Because birds are outside for most of the summer, this behavior is rarely noted during that season.

Anorexia and adipsia

Cases from several farms have been documented where entire pens of birds will go off feed or water. Birds can develop aversions to either feed or water containers, or the location of such containers, to the point of ignoring them completely. If these birds are not supplied with an alternative, they will starve or dehydrate themselves to death. Similarly, they can develop an aversion to feed or water per se, such as, when the feed is mouldy or the water contaminated with high chlorine levels. Again, even after correction of the initial problem, birds may still die of anorexia or adipsia if not given alternate feed or water containers, because the aversion to the previous containers is so great.

Dietary indiscretion

Contrary to popular belief, ostriches do not seek out and eat only what is good for them. If that were true, we would not have so many cases of impaction (3,4) and hardware disease. Ingestion of foreign material is prominent in birds of all ages and is initiated by stress or curiosity. This behavior can lead to impaction, gastric stasis, and perforation of the digestive tract by sharp objects. Material commonly ingested includes whole alfalfa, sawdust and straw used as bedding, hardware used in pen and fence construction, rocks, grit, and sand. To prevent occurrence of gastrointestinal problems from dietary indiscretion, it is best to choose the bedding material with care to keep stress levels to a minimum. Sweeping pens with a metal detector on a regular basis is a good idea to prevent hardware disease.

Pica

The ingestion of feces seems to be a normal behavior in young ostriches. Hatchlings in the wild will actively search out adult feces, presumably to colonize their gut and thus facilitate absorption of food. However, in captive situations, this behavior may become excessive, especially if birds are raised on a solid substrate,

such as cement, and are not provided with environmental stimulation. Excessive fecal ingestion can lead to the accumulation of fecal material inside the beak, thereby interfering with the normal uptake of food. This fecal material seems to predispose chicks to respiratory problems, as they are inhaling air through this contaminated mass. To prevent excessive pica, feces should be removed from pens on a regular basis, and chicks provided with toys or appropriate fibrous material in small amounts to peck at.

Aggression

Aggression can be manifested toward other ostriches or people. This behavior, in which one bird will intensely pursue and attempt to kick another bird, is most frequently observed with the onset of puberty. Ostriches can succumb from injuries or exhaustion when constantly pursued by an aggressive bird. Thus, overly aggressive birds should not be allowed to continue this behavior and should be separated from their victims. Pen modifications can be made to reduce the likelihood of birds injuring one another. This can include rounding of fence corners to prevent a bird from being trapped, addition of large round bales of hay in the outdoor enclosure as visual barriers, and physical separation of birds for parts of the day.

Aggression towards people is more common in breeding males. They will display threat by puffing their feathers, slightly opening the wings, and erecting the tail. Further aggressive behavior will ensue by pushing the breast bone against a person and attempting a forward kick with one of their legs. With experience, one rapidly learns to interpret signs of aggression and position oneself safely in pens.

Of all the behaviors mentioned, dietary indiscretion, manifested in the form of proventricular-ventricular impaction, is one of the commonest health problems and the most life-threatening behavior in ostriches, especially younger ones (6). All of the behavioral problems discussed in this paper are usually most prominent during periods of confinement. If housing facilities are appropriate and management techniques excellent, abnormal behaviors will be nonexistent. Once an aberrant behavior has started, medical treatment will often be necessary to correct the resulting physical damage. Therefore, veterinarians will be of most help to ostrich clients by assisting them in the implementation of a flock health program that includes prevention of abnormal behaviors.

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